



District Manager
Melissa Morton

VALLEJO FLOOD AND WASTEWATER DISTRICT
REGULAR MEETING AGENDA

APRIL 11, 2023

6:00 P.M.

MEETING AT VALLEJO CITY HALL
COUNCIL CHAMBERS

555 SANTA CLARA STREET,
VALLEJO CA 94590

WWW.VALLEJOWASTEWATER.ORG

Board of Trustees
Robert McConnell (President)
Tina Arriola
Peter Bregenzer
Erin Hannigan
Mina Loera-Diaz
Diosdado "JR" Matulac
Charles Palmares
Rozzana Verder-Aliga

NOTE: IF THE MEETING HAS NOT BEGUN AT 6:00 PM, IT MAY BE DUE TO THE VALLEJO CITY COUNCIL BEING IN SESSION PAST 6PM, AND THE VFWD MEETING WILL BEGIN FOLLOWING THEIR ADJOURNMENT.

Members of the public will be able to participate in-person or remotely via Zoom.

Members of the public interested in participating or observing remotely can join the Zoom webinar: <https://ZoomClosed.CityOfVallejo.net>

The meeting may also be viewed by tuning in locally on Comcast Channel 28, or click this [link](#) to find and follow the meeting livestreamed.

PUBLIC COMMENT: Members of the Public may provide public comments during the Board Meeting in person, via [Zoom](#), or via phone, by dialing (669) 900-6833. For additional instructions on how to make public comment, please click [here](#).

Members of the public shall have the opportunity to comment on any item listed on this notice before or during consideration of that item by emailing as defined above. No other items may be discussed during this meeting.

The District will use best efforts to respond to any requests for disability-related modifications or accommodations, aids or services. Such requests should be made to the Clerk of the Board's office no less than 48 hours prior to the meeting as required by Section 202 of the Americans with Disabilities Act of 1990 and the federal rules and regulations adopted in implementation thereof. Please contact our office at (707) 644-8949.

Any writings or documents related to an agenda item for the open session of this meeting are available for public inspection on our website at www.vallejowastewater.org or at the District offices located at 450 Ryder Street, Vallejo, CA 94590. Note: Meetings are held at City Hall and not at the District's offices.

1. CALL TO ORDER

2. ROLL CALL AND PLEDGE OF ALLEGIANCE

3A. ADJOURN TO CLOSED SESSION

CLOSED SESSION: *May recess to consider matters of pending litigation (GC 54956.9), personnel (GC 54957), labor relations (GC 54957.6), and real property negotiations (GC 54956.8). Records are not available for public inspection*

- A. CONFERENCE WITH LABOR NEGOTIATORS, pursuant to Government Code §54957.6 – Agency designated representatives: District Manager Melissa Morton, Director of Human Resources and Risk Management Alexandria Bell, and Director of Finance/Treasurer Jeff Tucker. Employee Organizations: Teamsters Local 315, and VFWD Management Association

- 3B. RECONVENE TO OPEN SESSION:** *Report on action taken by the Board during Closed Session, if any, pursuant to California Government Code Section 54957*
- 4. COMMENTS ON CONSENT CALENDAR BY MEMBERS OF THE PUBLIC:** *Members of the public wishing to address the Board on Consent Calendar Items are requested to follow the procedures noted [here](#). Each speaker is limited to five minutes. Requests for removal of Consent Items received from the public are subject to approval by a majority vote of the Board of Trustees. Items removed from the Consent Calendar will be heard immediately after approval of the Consent Calendar and Agenda.*
- 5. CONSENT CALENDAR AND APPROVAL OF AGENDA:** *All matters are approved under one motion unless requested to be removed for discussion by the Board, District Manager, or requested for removal by a member of the public, which requires approval by a majority vote of the Board.*
- A. APPROVE MINUTES FROM THE REGULAR MEETING OF MARCH 14, 2023.
- PROPOSED ACTION
Approve the minutes from the regular meeting of March 14, 2023.
- B. APPROVE DISBURSEMENTS REGISTER FOR APRIL 11, 2023
- PROPOSED ACTION
Adopt a resolution approving the Disbursements Register for April 11, 2023.
- C. RECEIVE MONTHLY INVESTMENT REPORT FOR FEBRUARY 2023
- PROPOSED ACTION
Receive the Monthly Investment Report for February 2023 as submitted.
- D. AWARD CONSTRUCTION CONTRACT FOR NEW BEDFORD SANITARY SEWER LIFT STATION PROJECT (CWM004) TO GSW CONSTRUCTION, INC. IN THE AMOUNT OF \$3,422,800.
- PROPOSED ACTION
Award and authorize the District Manager to execute the construction contract for the New Bedford Sewer Lift Station Project (CWP004) to GSW Construction, Inc., of San Francisco, CA for their bid amount of \$3,422,800 and authorize up to \$513,420 in change orders approved by the District Manager, for a total contract amount not to exceed \$3,936,220.
- E. AUTHORIZE STAFF TO ISSUE PROP 218 PUBLIC NOTICE OF PUBLIC HEARING AND PROPOSED RATE INCREASE
- PROPOSED ACTION
Authorize Staff to issue a Notice of Public Hearing in compliance with Proposition 218 for sewer fees
- F. APPROVE THE DISTRICT'S SEWER SYSTEM MANAGEMENT PLAN (SSMP) UPDATE
- PROPOSED ACTION
Approve the District's Sewer System Management Plan update, as required by State Water Resources Control Board, to comply with requirements that will go into effect on June 5, 2023.

G. RECEIVE INFORMATION UPDATE ON MARE ISLAND – MARCH 2023

PROPOSED ACTION

Receive information update on Mare Island.

6. DISTRICT MANAGER'S REPORT

7. **COMMUNITY FORUM:** *Anyone wishing to address the Board on any matter for which another opportunity to speak is not provided on the agenda, and which is within the jurisdiction of the Board to resolve, may follow the procedures noted [here](#). Pursuant to VFWD Rules of Procedure, Community Forum is limited to 15 minutes, with each speaker limited to **three minutes**.*

8. REPORTS BY PRESIDING OFFICER AND TRUSTEES

9. ADJOURNMENT



I, Rachelle Canones, Assistant Clerk of the Board for the Vallejo Flood and Wastewater District declare that the foregoing agenda for the April 11, 2023, Regular Meeting was posted and available for review by the required time as prescribed by law at the District office located at 450 Ryder Street, Vallejo, California. This agenda is also available on the District website at www.vallejowastewater.org.



District Manager
Melissa Morton

VALLEJO FLOOD AND WASTEWATER DISTRICT
REGULAR MEETING MINUTES

MARCH 14, 2023

6:00 P.M.

VALLEJO CITY HALL COUNCIL CHAMBERS
555 SANTA CLARA STREET, VALLEJO CA

[Return to Agenda](#)

Board of Trustees

Robert McConnell (President)
Tina Arriola
Peter Bregenzer
Erin Hannigan
Mina Loera-Diaz
JR Matulac
Charles Palmares
Rozzana Verder-Aliga

1. **CALL TO ORDER** - The regular meeting of the Vallejo Flood and Wastewater District was called to order at 6:00 PM by President McConnell.
2. **ROLL CALL AND PLEDGE OF ALLEGIANCE** – On roll call, present were: President McConnell, Trustee Arriola, Trustee Bregenzer, Trustee Hannigan, Trustee Loera-Diaz, Trustee Matulac, Trustee Palmares, Trustee Verder-Aliga.

Others present were: Melissa Morton, District Manager; Rachelle Canones, Assistant Clerk of the Board; Jennifer Harrington, Director of Environmental Services; Alexandria Bell, Director of Human Resources and Risk Management; Mark Tomko, Director of Engineering; Johnson Ho, Director of Operations and Maintenance; Justin Keating, Director of Field Operations; Jeff Tucker, Director of Finance; Tracy Rideout, Engineering Manager; Claire Collins, Special Counsel; Isalah Barnes, Carollo Engineers;

3A. **ADJOURN TO CLOSED SESSION**

CLOSED SESSION: *May recess to consider matters of pending litigation (GC 54956.9), personnel (GC 54957), labor relations (GC 54957.6), and real property negotiations (GC 54956.8). Records are not available for public inspection*

- A. CONFERENCE WITH LABOR NEGOTIATORS, pursuant to Government Code §54957.6 – Agency designated representatives: District Manager Melissa Morton, Director of Human Resources and Risk Management Alexandria Bell, and Director of Finance/Treasurer Jeff Tucker. Employee Organizations: Teamsters Local 315, and VFWD Management Association – **Item pulled from Agenda**

3B. **RECONVENE TO OPEN SESSION:** *Report on action taken by the Board during Closed Session, if any, pursuant to California Government Code Section 54957. – closed session was pulled from Agenda*

4. **COMMENTS ON CONSENT CALENDAR BY MEMBERS OF THE PUBLIC:** *Members of the public wishing to address the Board on Consent Calendar Items are requested to follow the procedures noted [here](#). Each speaker is limited to five minutes. Requests for removal of Consent Items received from the public are subject to approval by a majority vote of the Board of Trustees. Items removed from the Consent Calendar will be heard immediately after approval of the Consent Calendar and Agenda. **None***

5. **CONSENT CALENDAR AND APPROVAL OF AGENDA:** *All matters are approved under one motion unless requested to be removed for discussion by the Board, District Manager, or requested for removal by a member of the public, which requires approval by a majority vote of the Board.*

Trustee Verder Aliga moved to approve the Agenda and Consent Calendar, noting that the Closed Session and Item 6B are removed from the Agenda.

AYES: President McConnell, Trustees Arriola, Bregenzer, Hannigan, Loera-Diaz, Matulac, Palmares, and Verder-Aliga

NOES: None
ABSENT: None
ABSTAIN: None

- A. APPROVE MINUTES FROM THE REGULAR MEETING OF FEBRUARY 14, 2023.

PROPOSED ACTION

Approve the minutes from the regular meeting of February 14, 2023.

- B. APPROVE DISBURSEMENTS REGISTER FOR MARCH 14, 2023

PROPOSED ACTION

Adopt a resolution approving the Disbursements Register for March 14, 2023.

Resolution 2023-6081

- C. RECEIVE MONTHLY INVESTMENT REPORT FOR JANUARY 2023

PROPOSED ACTION

Receive the Monthly Investment Report for January 2023 as submitted.

- D. AWARD CONSTRUCTION CONTRACT FOR AUSTIN CREEK TRASH CAPTURE PROJECT (CDD001) TO LISTER CONSTRUCTION, INC. IN THE AMOUNT OF \$503,777

PROPOSED ACTION

Award and authorize the District Manager to execute the construction contract for the Austin Creek Trash Capture Project (CDD001) to Lister Construction, Inc., of Vacaville, CA for their bid amount of \$503,777 and authorize up to \$75,567 in change orders approved by the District Manager, for a total contract amount not to exceed \$579,344.

- E. RECEIVE INFORMATION UPDATE ON MARE ISLAND

PROPOSED ACTION

Receive information update on Mare Island

6. ADMINISTRATIVE ITEM

- A. RECEIVE PRESENTATION FROM CAROLLO ENGINEERS AND DISTRICT STAFF ON THE WASTEWATER RATE STUDY

PROPOSED ACTION

Receive presentation on policy options, and provide direction to staff.

Board Members provided feedback, and all agreed with all three of the staff recommendations regarding rate preference, Reduced Rate Program and Upper Lateral Program.

- B. CONSIDER REQUEST BY PRESIDENT MCCONNELL TO CREATE A BOARD AD-HOC COMMITTEE FOR THE PURPOSE OF DISCUSSING AND MAKING A RECOMMENDATION REGARDING MARE ISLAND FLOOD & WASTEWATER INFRASTRUCTURE, FEES AND RESPONSIBILITIES – Item pulled from Agenda

7. **DISTRICT MANAGER'S REPORT** – District Manager Melissa Morton reported that members of the District's Human Resources staff attended the Vallejo High School Career fair in February, and that it was great to see many students interested in a variety of technical fields. The District's Engineering Department is collaborating with the City of Vallejo on the Mare Island infrastructure assessment by reviewing technical memoranda to establish the storm water design criteria, and participating in various meetings to coordinate activities and share data. Ms. Morton added that February was another “no-spill” month owing to the vigilance of the District's Field Operations staff in operating and maintaining our system in a way that protects us from lawsuits.
8. **COMMUNITY FORUM:** *Anyone wishing to address the Board on any matter for which another opportunity to speak is not provided on the agenda, and which is within the jurisdiction of the Board to resolve, may follow the procedures noted [here](#). Pursuant to VFWD Rules of Procedure, Community Forum is limited to 15 minutes, with each speaker limited to **three minutes**.* – One speaker: Daniel Glaze of Mare Island regarding the Western Collector on Tisdate Avenue; Particularly as it relates to possible flooding and mosquito abatement in the summer around the area of this ditch and surrounding redge “ponds” (?); How it is unclear who is responsible for these, requesting President McConnell to instruct staff to provide clarity on this issue. The Board instructed the District Manager to look into this matter and provide an update to the Board.
9. **REPORTS BY PRESIDING OFFICER AND TRUSTEES** – Trustee Hannigan expressed concern regarding the proposed Ad-Hoc Committee in the Vallejo City Council's Agenda for this evening, Trustee Hannigan requested that the City Council and Trustees consider the impact not only to the rate payers on Mare Island, but the City constituents as well, who may be forced to subsidize the repairs, connections, and any upgrades on Mare Island through rates that all residents will pay; and be cognizant of the condition of the sewer and flood water system on Mare Island, that the Trustees are in control of as policy-makers of the District. Further, Trustee Hannigan requested regular reports on the City's Ad-Hoc Committee, at District Board Meetings in order to be transparent.
11. **ADJOURNMENT** – meeting adjourned at 6:52 PM

This is to certify that the foregoing is the true and correct meeting minutes as approved by the Board of Trustees on April 11, 2023

VALLEJO FLOOD AND WASTEWATER DISTRICT
DISBURSEMENTS REGISTER
REGULAR MEETING OF THE BOARD OF TRUSTEES
MEETING DATE: APRIL 11, 2023

Ck Date	Ck No	Vendor Name	Amount	Description
2/27/2023	2349	ACCESS	766.21	DEPT SHRED AND STORAGE 02/2023
	2350	AFLAC	1,169.70	PAYROLL SUMMARY
	2351	ALHAMBRA	1,001.65	WATER SERVICE
	2352	AMAZON CAPITAL SERVICES	452.95	OFFICE SUPPLIES, TOOLS
	2353	AT&T	1,756.39	BAN#9391051754 1/10/23-2/09/23
	2354	AT&T MOBILITY	5,411.40	ACCT# 287301074904 01/03/23-02/02/23
	2355	BAYSHORE BUILDING MATERIALS	133.30	FAC. MAINT SUPPLIES - POLY & WHITE FINISH
	2356	BEARING ENGINEERING CO	2,717.25	BRAKE MOTOR, COUPLING QUADRA FLEX SLEEVE
	2357	BELL PRODUCTS INC	1,684.74	HVAC MAINTENANCE AND REPAIR
	2358	BERT WILLIAMS & SONS INC	139.79	HOSE, TOWELS IN A BOX 200
	2359	BORGES & MAHONEY	278.77	BUFFER SOLUTION PH4 CASE
	2360	DENNIS C BURGESS	38.58	AGR 2007
	2361	RACHELLE CANONES	74.36	DRINKS/FOOD FOR TRUSTEE DINNER, NOE FEE
	2362	CAROLLO ENGINEERS INC	5,004.75	COLLECT SYST MASTER PLAN SVCS THRU 01/31/23
	2363	CDW GOVERNMENT INC	1,917.69	DEMO LENOVO NOTEBOOK, PROJECTOR EQUIP
	2364	CHANDLER ASSET MANAGEMENT INC	877.88	INVESTMENT MANAGEMENT SERVICES JAN 2023
	2365	CINQUINI & PASSARINO INC	4,475.00	ON CALL SURVEY SERVICES - BLDG 68 FLOOR SURVEY
	2366	CINTAS CORPORATION NO 3	973.74	LAUNDRY SERVICE
	2367	CITY OF VALLEJO WATER BILLING	124.64	WATER CHARGES
	2368	CORODATA MEDIA STORAGE INC	166.65	RECORD STORAGE 1/1/23-1/31/23
	2369	CRESCO EQUIPMENT	6,449.42	MULTI-PURPOSE BUCKET SSL/CTL
	2370	DKF SOLUTIONS GROUP LLC	4,800.00	DEVELOP SOP USA/UNDERGROUND UTILITY LOCATING
	2371	EAST BAY TIRE CO	1,343.18	TIRES V244
	2372	EBIX INC	425.00	RISK ENVISION LITE HOSTING FEES 1/1/23-1/31/23
	2373	W W GRAINGER	494.77	ELECT/OPS SUPPLIES
	2374	GRAYBAR	10,358.14	ALTIVAR 630 VARIABLE SPEED DRIVE, PLC EQUIP
	2375	HELIX LABORATORIES INC	15,020.78	COMMANDER ODOR H2S CONTROL
	2376	HYDROSCIENCE ENGINEERS INC	11,170.00	SOLIDS PROCESSING - CORROSION REHAB
	2377	INFOSEND INC	17,474.08	WINTER NEWSLETTER
	2378	ISLAND ENERGY	6,773.77	ENERGY CHARGES
	2379	KELLY MOORE PAINT	231.83	FAC MAINT - PAINT
	2380	KIMBALL MIDWEST	2,212.98	PLANT MAINT SUPPLIES
	2381	LEGALSHIELD	183.64	PAYROLL SUMMARY
	2382	SANDY LI	100.00	CWEA LAB ANALYST, G2 RENEWAL 2/28/24
	2383	LIPPINCOTT SUPPLY CO	31.78	FACILITIES MAINTENANCE SUPPLIES
	2384	LYSTEK INTERNATIONAL LIMITED	8,753.53	BIOSOLIDS DELIVERED TO LYTEK JAN 2023
	2385	MAHONEY'S LITTLE & BIG MAN BACKHOE	1,875.00	LOWER LATERAL REPLACEMENT
	2386	MCMASER-CARR SUPPLY COMPANY	1,783.32	ELECT/FAC MAINT SUPPLIES
	2387	MOSCHETTI INC	90.00	COFFEE
	2388	MOSS RUBBER AND EQUIPMENT CORP	2,774.01	4X20 TT HOSE W/MXF CAMS EE
	2389	MUNICIPAL MAINTENANCE EQUIPMENT	298.36	ROLLER ALUM 4" OD X 3.81
	2390	NAPA VALLEY PETROLEUM INC	69.49	ALUM F.L. CYL. EX
	2391	NEW IMAGE LANDSCAPE COMPANY	1,300.00	LANDSCAPE MAINT - FEB 2023
	2392	OLDCASTLE INFRASTRUCTURE	7,108.85	NET - TECH ASSEMBLY TRASH CAPTURE NET
	2393	OLIN CORPORATION	8,623.40	SODIUM HYPOCHLORITE
	2394	CAMERON WATE	2,650.00	UPPER LATERAL REPLACEMENT
	2395	DOLORES JOHNSON	3,570.00	UPPER LATERAL REPLACEMENT
	2396	STEVEN SIDLE	2,090.00	UPPER LATERAL REPLACEMENT
	2397	PACIFIC GAS & ELECTRIC	5,597.83	GAS/ELECTRIC CHARGES
	2398	PACKET FUSION INC	3,588.75	SIP MIGRATION
	2399	PAN-PACIFIC SUPPLY COMPANY	4,371.54	BLEND TANK MIX PUMP
	2400	PHOENIX NAP LLC	1,104.00	CLOUD BACKUP FOR VEEAM 03/01/23-04/01/23
	2401	PLATT ELECTRIC	600.07	ELECTRICAL SUPPLIES
	2402	POLYDYNE INC	23,218.80	CLARIFLOC WE-2100
	2403	POWERPLAN	57.82	BACKHOE REPLACEMENT KEYS
	2404	QUADIENT LEASING USA INC	1,149.13	POSTAGE METER LEASE 3/6/23-6/5/23
	2405	QUENVOLD'S SAFETY SHOE MOBILES	244.83	SAFETY BOOTS - BOTELLO
	2406	RAMOS OIL CO	24,543.25	FUEL CLEAR DIESEL
	2407	SAFETY-KLEEN SYSTEMS INC	568.80	PARTS WASHER AQUEOUS
	2408	STORM TRAP LLC	10,209.06	TRASH NETS FOR SOLANO AVE.
	2409	VEOLIA WTS SERVICES USA INC	253.70	RENTAL DI MIX BED
	2410	TERRACON CONSULTANTS INC	1,220.00	SS REHAB - AC/SOILS TECH, PE REVIEW, TO#19
	2411	MARK A TOMKO	25.00	LUNCH MEETING NORTH BAY ENGINEER'S CLUB
	2412	TRITON TRUCK REPAIR INC	7,335.33	TRUCK REPAIR SERVICES VEHICLE# 268
	2413	JEFFERY TUCKER	177.06	ASAE CEO SYMPOSIUM PER DIEM, MILEAGE
	2414	TYLER TECHNOLOGIES INC	3,260.00	ERP SYSTEM - PHASE 2 REMOTE IMP - HCM
	2415	UNIVAR SOLUTIONS USA INC	9,601.39	SODIUM BISULFITE
	2416	VALLEY YELLOW PAGES	346.00	ADVERTISING CHARGES
	2417	VISION COMMUNICATIONS	1,039.98	0758310-IN V249 INSTALL / HARDWARE

VALLEJO FLOOD AND WASTEWATER DISTRICT
DISBURSEMENTS REGISTER
REGULAR MEETING OF THE BOARD OF TRUSTEES
MEETING DATE: APRIL 11, 2023

Ck Date	Ck No	Vendor Name	Amount	Description
	2418	WECO INDUSTRIES LLC	8,278.29	NOZZLE WARTHOG MAGNUM SWITCH, SWITCHER HEAD
	2419	WESTERN RENEWABLE ENERGY GENERATION	75.00	ANNUAL FEE
	2420	WOODARD & CURRAN INC	43,645.06	2021 NPDES REG SUPPORT, SPPS PHASE 2 SVCS
	2421	YP WESTERN DIRECTORY LLC	136.76	ADVERTISING CHARGES
		Subtotal	<u>297,868.22</u>	
2/28/2023	2422	BAY AREA AIR QUALITY MGT DIST	3,272.00	PUBLIC NOTICE FEE, OVERBURDENED COMMUNITY FEE
		Subtotal	<u>3,272.00</u>	
3/8/2023	2423	HANNAH LJUNGGREN	491.96	FLIGHT REIMBURSEMENT - APPLICANT INTERVIEW
		Subtotal	<u>491.96</u>	
2/23/2023	2424	STATE OF CALIFORNIA - EDD	2,367.99	Q4 2022 UNEMPLOYMENT INSURANCE (EFT)
		Subtotal	<u>2,367.99</u>	
3/10/2023	2425	A+ WATERWORKS	16,066.58	LOWER LATERAL REPLACEMENT
	2426	AAA WATER SYSTEMS	32,601.00	COMMERCIAL WATER SOFTENER - SOLIDS BLDG
	2427	ABAG POWER	74,899.68	FY23 LEV CHARGE - NAT GAS, FY21/22 TRUE UP
	2428	AMAZON CAPITAL SERVICES	54.56	OFFICE SUPPLIES REQUESTED BY B. KESSLER AT OPS;
	2429	B & G TIRES OF VALLEJO	1,769.28	FREEDOM HAULER ST RADIAL, TIRES
	2430	BEARING ENGINEERING CO	259.63	CONVENTIONAL QD SHEAVE, BUSHING, V-BELT
	2431	BEECHER ENGINEERING INC	2,440.00	ELECTRICAL ENGINEERING SPPS ESDC 1/25-2/24/23
	2432	BELL PRODUCTS INC	1,054.00	BELL PRODUCTS BLDG #67 AIRFLOW SWITCH
	2433	BERT WILLIAMS & SONS INC	829.67	BATTERY, SILICONE HEATER HOSE
	2434	BKF ENGINEERS	2,964.00	TRASH CAPTURE - AUST CRK DESIGN SVCS THRU 1/29/23
	2435	BLUEPRINT EXPRESS CORP	2,112.55	MIPS CONFORMED SETS, COPIES, PRINTS ON BOND
	2436	DENNIS C BURGESS	12.86	AGR 2007
	2437	BURKE WILLIAMS & SORENSEN LLP	24,327.22	LEGAL SERVICES THROUGH 1/31/23
	2438	BRIAN BURKET	307.05	WWETT SHOW PER DIEM
	2439	CALIFORNIA DIESEL & POWER	2,733.58	DIAGNOSE AND REPAIR 2 VEHICLES
	2440	CALTEST LAB	3,736.35	LAB SERVICES
	2441	CAROLLO ENGINEERS INC	19,045.50	SEWER RATE STUDY
	2442	CHANDLER ASSET MANAGEMENT INC	877.88	INVESTMENT MANAGEMENT SERVICES
	2443	TERRY S CHATMAN	3,000.00	COMP LOAN - BEGINNING PD 03/17/2023
	2444	CINTAS CORPORATION NO 3	4,170.35	LAUNDRY SERVICE
	2445	CITY OF VALLEJO WATER BILLING	781.39	WATER CHARGES
	2446	COMCAST	186.56	ACCT# 8155 30 024 1165646
	2447	CORE & MAIN LP	3,378.27	RESTOCK INVENTORY
	2448	CRESO EQUIPMENT	3,087.49	TELESCOPIC BOOM LIFT RENTAL
	2449	DELTA DENTAL PLAN	19,259.73	JAN & FEB 2023
	2450	DEPENDABLE JANITORIAL SVC & SUPPLY	6,608.00	JANITORIAL SERVICES FEB 2023
	2451	DIRECT LINE INC	309.00	BASE RATE FOR MAR 2023
	2452	E & M INC	8,390.00	DEV STUDIO 2023 UNLIMITED SUBS
	2453	EBIX INC	425.00	RISK ENVISION LITE HOSTING FEES
	2454	ELAVON INC	234.06	JANUARY MERCHANT FEES
	2455	EZ TREE INC	14,220.00	TREE SERVICES - REMOVE AND STUMP GRIND
	2456	FEDERAL EXPRESS	32.74	SHIPPING CHARGES
	2457	GLOBALSTAR USA	136.95	ACCT# AC00316588 2/16/23-3/15/23
	2458	GOOGLE INC	748.70	GOOGLE CLOUD 2/1/23-2/28/23
	2459	W W GRAINGER	5,252.99	ELECTRICAL SUPPLIES
	2460	GRAYBAR	817.15	PLC EQUIPMENT FOR SKY VALLEY
	2461	GRAYMONT WESTERN US INC	16,787.21	QUICKLIME SUPPLY AND DELIVERY
	2462	HANSON BRIDGETT LLP	35,555.61	LEGAL SERVICES
	2463	HAZEN AND SAWYER	7,737.50	LOW COST NUTRIENT OPTIONS
	2464	HDR ENGINEERING INC	7,748.61	BIOSOLIDS BUILDING FIRE SYST REPL, MIPS
	2465	INDUSTRIAL SCIENTIFIC CORP	3,292.80	INET GAS MONITORING 2/1/23-2/28/23
	2466	INLAND BUSINESS SYSTEMS	424.33	CONTRACT BASE RATE 2/28/23-03/29/23
	2467	INTERSTATE BATTERY	134.01	MT-59, ATCORE
	2468	JR'S ROAD SERVICE	1,118.48	REPAIR/MAINT - 6 EQUIPS
	2469	KELLY MOORE PAINT	685.67	FACILITIES MAINTENANCE - PAINT
	2470	KIMBALL MIDWEST	2,502.84	PLANT MAINT & FOPS SUPPLIES

VALLEJO FLOOD AND WASTEWATER DISTRICT
DISBURSEMENTS REGISTER
REGULAR MEETING OF THE BOARD OF TRUSTEES
MEETING DATE: APRIL 11, 2023

Ck Date	Ck No	Vendor Name	Amount	Description
	2471	LINDE GAS & EQUIPMENT INC	163.40	FLOW/REG AF 150-580 W/HOSE, NITROGEN 40
	2472	LIPPINCOTT SUPPLY CO	18.64	FAC MAINT SUPPLIES
	2473	MANAGED HEALTH NETWORK	270.00	TR 28810-WKSP CFT. 17
	2474	MCMASER-CARR SUPPLY COMPANY	3,467.55	PLANT MAINT AND ELECTRICAL SUPPLIES
	2475	PAUL R MOORE	307.05	WWETT SHOW PER DIEM
	2476	MOSCHETTI INC	315.00	COFFEE
	2477	MOSS RUBBER AND EQUIPMENT CORP	2,180.14	2PLY BELTS
	2478	MCJUNKIN RED MAN CORPORATION	650.25	LIMITORQUE ACTUATOR INSPECTION
	2479	MUNICIPAL MAINTENANCE EQUIPMENT	1,558.47	CAMERA REPAIR LABOR, LED, BULKHEAD
	2480	NAPA-VALLEJO WASTE MANAGEMENT	147.00	C&D RECYCLING TONS
	2481	NEIGHBORLY PEST MANAGEMENT, INC	115.00	MONTHLY PEST CONTROL
	2482	OLIN CORPORATION	8,612.15	SODIUM HYPOCHLORITE
	2483	AMANDA LEE	2,050.00	UPPER LAT, TWO-WAY & DISTRICT CLEANOUT
	2484	DONNA DOOSE	2,146.00	UPPER LAT, TWO-WAY & DISTRICT CLEANOUT
	2485	JACOB KNUTTE	3,525.00	UPPER LAT, TWO-WAY & DISTRICT CLEANOUT
	2486	KIMBERLY SPEARS	3,600.00	UPPER LAT, TWO-WAY & DISTRICT CLEANOUT
	2487	LUCILLE LIGON	2,050.00	UPPER LAT, TWO-WAY & DISTRICT CLEANOUT
	2488	OLIVE PREVOST	400.00	TWO-WAY CLEANOUT
	2489	PACIFIC GAS & ELECTRIC	12,251.68	GAS/ELECTRIC CHARGES
	2490	PLATT ELECTRIC	167.35	ELECTRICAL SUPPLIES
	2491	POINT 1 ELECTRICAL SYSTEM INC	763.50	MONITORING OF BUILDING 67 MARCH 2023
	2492	ROBERT ANTHONY POLSON	307.05	WWETT SHOW PER DIEM
	2493	POLYDYNE INC	18,575.04	CLARIFLOC WE-2100
	2494	PONDER ENVIRONMENTAL SERVICES INC	3,099.64	SCUM/GREASE: TRANSPORT WASTE TO EBMUD
	2495	PONTICELLO ENTERPRISES CONSULTING ENGINEERS	3,080.00	DEVELOPMENT REVIEW SUPPORT SERVICES
	2496	QUADIENT FINANCE USA INC	243.54	POSTAGE AND LATE FEE
	2497	R & S ERECTION OF VALLEJO INC	285.00	ROLLING STEEL DOOR REPAIR
	2498	RECOLOGY VALLEJO	27,183.04	SERVICES 9/1/22-2/28/23
	2499	SAFETY-KLEEN SYSTEMS INC	2,312.74	CUBIC YARD CARDBOARD BOX, DIESEL FLUID
	2500	VEOLIA WTS SERVICES USA INC	1,142.58	EXCHANGE DI MIX BED
	2501	SVT GRUPPE INC	25,791.50	SECURITY PATROL SVC, SPECIAL SERVICE FEBRUARY
	2502	THE OFFICE CITY	545.78	OFFICE/KITCHEN SUPPLIES
	2503	THOMAS FISH CO	214.20	RAINBOW TROUT
	2504	TPX COMMUNICATIONS	1,398.94	IN HOUSE PHONE 2/23/23-3/22/23
	2505	TRITON TRUCK REPAIR INC	9,115.15	DIAGNOSE AND REPAIR V221
	2506	TYLER TECHNOLOGIES INC	1,304.00	PHASE 2 REMOTE IMP HCM
	2507	UNITED SITE SERVICES OF CALIFORNIA	465.16	GENERAL SERVICES 2/15/23-3/14/23
	2508	VALLEJO ELECTRIC MOTOR	5,137.49	SED TANK DRAIN PUMP MOTOR - JOB #3846
	2509	VISION COMMUNICATIONS	1,850.00	23022001 STREETREK SUPPORT RENEWAL
	2510	VISION SERVICE PLAN (CA)	3,309.76	VISION PRM JANUARY 2023
	2511	VULCAN MATERIALS COMPANY	1,553.53	3/4 IN CL 2 BASE, CUTBACK, ASPHALT DUMP
	2512	WECO INDUSTRIES LLC	5,704.89	(PM) CCTV REPAIRS AND MAINTENANCE
	2513	WEST YOST & ASSOCIATES	5,995.29	NEW BEDFORD WW PUMP STATION DESIGN 1/7-2/3/23
	2514	XEROX CORP	597.15	PHOTOCOPIER LEASE
	2515	YOGA WITH YOUR BOOTS ON	6,800.00	YOGA CLASSES JAN & FEB 2023
	2516	YP WESTERN DIRECTORY LLC	201.75	ADVERTISING CHARGES
		Subtotal	504,088.23	
3/24/2023	2517	ACCESS	672.46	RECORD MGMT DEPT SHRED & STORAGE 3/2023
	2518	AFLAC	584.85	PAYROLL SUMMARY
	2519	ALHAMBRA	242.65	WATER SVC
	2520	AMAZON CAPITAL SERVICES	1,544.68	OFFICE/GENERAL SUPPLIES
	2521	ARMOR LOCKSMITH SERVICES	6,273.96	MORTISE LOCK, PRIMUS REKEY- MASTER KEY/SYSTEM
	2522	AT&T	1,756.39	BAN 9391051754
	2523	AT&T MOBILITY	5,738.53	ACCT# 287301074904 2/03/23-3/02/23
	2524	SEAN BAILEY	100.00	CWEA COLLECT SYST MAINT G2, EXPIRES 12/31/23
	2525	BEARING ENGINEERING CO	776.30	PLANT MAINT SUPPLIES
	2526	BEECHER ENGINEERING INC	1,760.00	BLOOM ENERGY DESIGN REVIEW SERVICES 1/25-2/24/23
	2527	BELL PRODUCTS INC	9,272.14	HVAC MAINTENANCE AND REPAIR
	2528	BERT WILLIAMS & SONS INC	67.54	2 X 50 EXHAUST WRAP
	2529	BRADY WORLDWIDE INC	4,697.09	BASQ214674 BRADY 360 SOFTWARE SUB RENEWAL
	2530	MARY JUNE BROWN	464.63	CREW SUPPLIES
	2531	BRYCE CONSULTING	270.00	HUMAN RESOURCES TECHNICAL SERVICES
	2532	BURKE WILLIAMS & SORESENSEN LLP	30,308.50	LEGAL COUNSEL - PERSONNEL THROUGH 2/28/23
	2533	C OVERAA AND COMPANY	803,722.00	SEARS PT PS REHAB, SO SECONDARY CLARIFIER
	2534	CALIFORNIA CAD SOLUTIONS	8,175.00	MISC PROJECT WORK 12/2022-02/2023
	2535	CALIFORNIA DIESEL & POWER	4,729.61	GENERATOR REPAIR

VALLEJO FLOOD AND WASTEWATER DISTRICT
DISBURSEMENTS REGISTER
REGULAR MEETING OF THE BOARD OF TRUSTEES
MEETING DATE: APRIL 11, 2023

Ck Date	Ck No	Vendor Name	Amount	Description
	2536	CALTEST LAB	1,569.40	LAB SERVICES
	2537	CAROLLO ENGINEERS INC	23,035.25	SEWER RATE STUDY SERVICES THROUGH 2/28/2023
	2538	CDW GOVERNMENT INC	1,563.78	NFSD252-TAPES, MONITOR REPLACEMENT
	2539	CINTAS CORPORATION NO 3	983.62	LAUNDRY SERVICE
	2540	CITY OF VALLEJO	141,447.76	STREET SWEEPING COST REIMB - 22/23 - 4 QTRS
	2541	CITY OF VALLEJO WATER BILLING	6,353.38	WATER CHARGES
	2542	CLEARSTAR INC	175.21	ASSOCIATE ENGINEER EMPLOYMENT VERIFICATION
	2543	COMCAST	186.56	ACCT# 8155 30 024 1240209
	2544	CORODATA MEDIA STORAGE INC	347.19	DOCUMENT SCANNING SERVICES - STORAGE 2/2023
	2545	DKF SOLUTIONS GROUP LLC	8,037.50	DEVELOP SOP - CCTV
	2546	ENTERPRISE FLEET MANAGEMENT	9,961.52	LEASE/MAINT
	2547	ENTHALPY ANALYTICAL, LLC	800.00	EPA METHOD 1668C PCB
	2548	EOA INC	1,002.00	STORMWATER MGMT & REPORTING
	2549	FARMERS & MERCHANTS BANK OF CENTRAL CA	24,592.80	SEARS POINT PUMP STN 1/1-1/31/23 RETENTION
	2550	FEDERAL EXPRESS	65.06	SHIPPING CHARGES
	2551	FULTON PACIFIC	4,605.94	SANDBAGS
	2552	GP CRANE & HOIST SERVICES	919.95	QUARTERLY INSPECTION - 18 CRANES
	2553	W W GRAINGER	5,047.27	ELECTRICAL/FAC MAINT SUPPLIES
	2554	GRAYBAR	11,172.70	REV 900 MHZ RADIO REPLACEMENT, SQUARE D CO
	2555	GRAYMONT WESTERN US INC	8,417.26	QUICKLIME SUPPLY AND DELIVERY
	2556	GSM ENGINEERED FABRICS LLC	6,168.20	BFP BELTS AND ZIPPERS
	2557	HOLT OF CALIFORNIA	6,177.12	PM 2 SERVICE, LOAD BANK TEST ENGINE & GENERATOR
	2558	HYDROSCIENCE ENGINEERS INC	3,060.00	SOLIDS PROCESSING - CORROSION REHAB (ELEC &
	2559	ISLAND ENERGY	3,106.11	SERVICE PERIOD: 02/01/23 - 03/01/23
	2560	KAISER PERMANENTE MEDICAL GROUP	1,265.00	ACCT# 320901273322 DMV/DOT PHYSICAL EXAM
	2561	KIMBALL MIDWEST	2,041.62	FAC MAINT SUPPLIES
	2562	LES SCHWAB TIRE CENTER	1,266.29	V259 TIRES
	2563	LYSTEK INTERNATIONAL LIMITED	3,471.50	BIOSOLIDS DELIVERED
	2564	MATHEWS & SONS AUTOMOTIVE INC	125.68	OIL SERVICE W/ROTATE & BREAK INSP
	2565	ROBERT MCKENNA	312.00	CWEA ELECT/INST TECH, G4, EXP 3/31/2024
	2566	MCMMASTER-CARR SUPPLY COMPANY	1,569.14	FAC MAINT/ELECTRICAL SUPPLIES
	2567	MORGAN ALARM COMPANY INC	156.00	COMMERCIAL QTRLY MONITORING 4/1/23-6/30/23
	2568	MUNICIPAL MAINTENANCE EQUIPMENT	1,264.95	ROLLER MOUNT WELDMENT, ROLLER PLATE, SUPPLIES
	2569	NAPA VALLEY PETROLEUM INC	23.32	ALUM F.L. CYL. EX.
	2570	NEW IMAGE LANDSCAPE COMPANY	1,300.00	LANDSCAPE MAINT MARCH 2023
	2571	OLIN CORPORATION	8,617.07	SODIUM HYPOCHLORITE
	2572	GWENDOLYN EYIKE	500.00	DISTRICT CLEANOUT
	2573	KARIMAH KARAH	1,550.00	UPPER LATERAL REPL & TWO-WAY CLEANOUT
	2574	KATHERINE REYES	2,346.00	UPPER LATERAL REPL, TWO-WAY & DISTRICT CLEANOUT
	2575	MINDY & ROBERT CHIANG	7,300.00	UPPER LATERAL REPL, TWO-WAY & DISTRICT CLEANOUT
	2576	NORM YENNI	44.10	REIMB FOR DIESEL FUEL TO FILL DISTRICT SUMP PUMP
	2577	PACIFIC GAS & ELECTRIC	123,327.37	GAS/ELECTRIC CHARGES
	2578	PANORAMA ENVIRONMENTAL INC	1,070.00	AUSTIN CRK SW TRASH CAPTURE 1/1/23-2/28/23
	2579	PHOENIX NAP LLC	1,104.00	CLOUD BACKUP FOR VEEAM 4/1/23-5/1/23
	2580	PLANT HARMONY	765.73	OWOW INTEGRATED PEST MGMT PROG JAN-FEB 2023
	2581	PLATT ELECTRIC	128.17	ELECTRICAL SUPPLIES
	2582	POINT 1 ELECTRICAL SYSTEM INC	763.50	MONITORING OF BLDG 67 - REISSUE LOST CHECK (#1607)
	2583	POLYDYNE INC	4,643.76	CLARIFLOC WE-2100
	2584	POWER INDUSTRIES	444.77	STRAIGHT REDUCER FITTINGS, GAUGE, HOSE ASSEMBLY
	2585	PROFORMA RESOURCES	1,181.29	FLEECE LINED BEANIES
	2586	PSOMAS	7,319.50	MARE ISLAND PS PROJECT
	2587	R & S ERECTION OF VALLEJO INC	31,711.56	REPLACE BOTH SOLANO GATES AND OPERATORS
	2588	RAMOS OIL CO	19,714.89	UNLEADED REG ETHANOL 10% BLEND, CLEAR DIESEL
	2589	RED WING SHOE STORE	767.07	SAFETY BOOTS - 3 EES
	2590	RESCUE TRAINING INSTITUTE INC	2,579.66	DISTRICT FIRST-AID & CPR/AED, AND OXYGEN TRAINING
	2591	ROCKWELL SOLUTIONS INC	19,922.97	NAVILINE PO#15819 SUBMERSIBLE PUMP, RAIL & CTRL SYS
	2592	SAMBA HOLDINGS INC	541.32	Q LICENSE SUBSCRIPTION 1/1/23-2/28/23
	2593	ERIKA SHEETENHELM	330.00	CWEA LAB ANALYST G2, EXPIRES 3/31/24 & TESTING
	2594	TANNER PACIFIC INC	74,764.00	SEARS PT PS REHAB 1/1/23-2/28/23
	2595	TERRACON CONSULTANTS INC	940.00	SANITARY SEWER REHAB PROJECT SVCS THRU 3/04/23
	2596	THE OFFICE CITY	852.63	KITCHEN/OFFICE SUPPLIES
	2597	TRI-CITY FENCE COMPANY INC	5,189.60	TRI-CITY FENCE SEARS PT REPAIR - QUOTE # 49402
	2598	TRITON TRUCK REPAIR INC	7,178.71	TRUCK REPAIR SERVICES
	2599	TROFOLZ TECHNOLOGIES INC	766.36	KK011968 V1 TROFOLZ
	2600	UNITED SITE SERVICES OF CALIFORNIA	465.16	GENERAL SERVICES 3/15/23-04/11/23
	2601	UNIVAR SOLUTIONS USA INC	13,950.94	SODIUM BISULFITE
	2602	URGENT CARE AND TELEHEALTH	2,160.00	DISTRICT ON-SITE TESTING 08/17/22
	2603	VALLEJO CONVENTION & VISITORS	220.00	ANNUAL MEMBERSHIP DUES
	2604	VALLEJO ELECTRIC MOTOR	5,300.50	REPAIR RECYCLE PUMP MOTOR

VALLEJO FLOOD AND WASTEWATER DISTRICT
DISBURSEMENTS REGISTER
REGULAR MEETING OF THE BOARD OF TRUSTEES
MEETING DATE: APRIL 11, 2023

Ck Date	Ck No	Vendor Name	Amount	Description
	2605	VALLEJO TIMES HERALD	1,157.51	CLASSIFIED ADVERTISING - NOTICE INVITING BIDS
	2606	VALLEY YELLOW PAGES	346.00	ACCT # 990211 ADVERTISING CHARGES
	2607	VEOLIA WTS SERVICES USA INC	273.16	RENTAL DI MIX BED, RENTAL ORGANIC SCAVENGER
	2608	WECO INDUSTRIES LLC	1,429.08	CCTV REPAIRS & MAINT, CAMERA MODULE TEMP REPAIR
	2609	WEST YOST & ASSOCIATES	3,951.68	VISTA COVE PS REV TO#15 1/7/23-2/3/23
	2610	WOODARD & CURRAN INC	10,228.11	SPPS - PHASE 2 SVCS THROUGH 2/24/23
	2611	WOOLY'S ELECTRIC INC	18,500.00	TO#7 TO AGMT 2178 - HW ELECTRICAL
	2612	CHRISTOPHER WRIGHT	105.00	CWEA COLLECT SYST MAINT TECH, G3 EXPIRES 4/30/24
	2613	YP WESTERN DIRECTORY LLC	133.79	ACCT 800438706 ADVERTISING CHARGES
		Subtotal	<u>1,547,332.37</u>	
		Grand Total	<u><u>2,355,420.77</u></u>	

RESOLUTION NUMBER 2023-

**A RESOLUTION TO APPROVE THE DISBURSEMENT REGISTER FOR
APRIL 11, 2023**

BE IT RESOLVED, by the Board of Trustees of the Vallejo Flood and Wastewater District of Solano County, California as follows:

WHEREAS, the District maintains general checking to facilitate operating cash disbursements;

WHEREAS, general checking disbursements must be authorized by the Board of Trustees;

WHEREAS, claims as enumerated on the attached Disbursement Register and for the respective amounts set opposite the name of each person or firm total \$2,355,420.77.

IT IS, THEREFORE, RESOLVED, by the Board of Trustees of the Vallejo Flood and Wastewater District that the Board approves the Disbursement Register for April 11th, 2023.

BE IT FURTHER RESOLVED, that all claims be paid.

ADOPTED by the Board of Trustees of the Vallejo Flood and Wastewater District on the 11th day of April 2023, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

WITNESS my hand and the Seal of said District this 11th day of April, 2023.

MJ BROWN
Clerk of the Board

District Manager
Melissa Morton

April 11, 2023
Consent Item 5C

BOARD COMMUNICATION

TO: THE HONORABLE PRESIDENT AND BOARD OF TRUSTEES

FROM: MELISSA MORTON, DISTRICT MANAGER 
JEFF TUCKER, FINANCE DIRECTOR/TREASURER

SUBJECT: RECEIVE MONTHLY INVESTMENT REPORT FOR FEBRUARY 2023

BACKGROUND AND DISCUSSION

The California Government Code, Section 53607, requires monthly reporting of investments to the Board of Trustees. The composition of investments must conform to the District's investment policy adopted annually, and must be sufficiently liquid to meet cash flow needs for the next six months. The District adjusts its cash and investment book balances to reflect market value. The condensed investment report attached meets applicable reporting requirements.

The portfolio is designed to provide *safety* through balance, diversification, credit worthiness, and volatility reduction; *liquidity* through short-term pools, negotiable deposits, and investment laddering; and *yield (rate of return)* through longer duration, callable governments and higher yielding corporate notes where safe.

The portfolio incorporates the principles of the prudent investor standard and follows policy prepared in accordance with the requirements of the California Government Code. These requirements include public investing objectives, authorized investments, maturities, prohibited investments, reporting requirements, and Board oversight.

The District staff works closely with the Investment Advisor, Chandler Asset Management, to implement an investment strategy that considers the District's historical and anticipated liquidity needs and the current market conditions to maintain safety and maximize yield. Investments are and will continue to be purchased based upon conformance with District policy. All investments within the portfolio meet/met the California Government Code requirements for credit quality, maturity dates, and bond class percentages at the time of purchase.

The District has the financial ability to meet its cash flow requirements for the next six months.

RECOMMENDATION

Receive the Monthly Investment Report for February 2023 as submitted.

ALTERNATIVES CONSIDERED

None

ENVIRONMENTAL REVIEW

This is not a project under CEQA and no environmental review is required.

FISCAL IMPACT

None

PROPOSED ACTION

Receive the Monthly Investment Report for February 2023.

DOCUMENTS ATTACHED

A. Monthly Investment Report

CONTACT PERSON

Jeff Tucker, Finance Director/Treasurer, (707) 652-7802



Vallejo Flood & Wastewater District Consolidated - Account #10761

MONTHLY ACCOUNT STATEMENT

FEBRUARY 1, 2023 THROUGH FEBRUARY 28, 2023

Chandler Team:

For questions about your account, please call (800) 317-4747,
or contact operations@chandlerasset.com

CHANDLER ASSET MANAGEMENT
chandlerasset.com

Information contained herein is confidential. We urge you to compare this statement to the one you receive from your qualified custodian. Please see Important Disclosures.



PORTFOLIO CHARACTERISTICS

Average Modified Duration	0.50
Average Coupon	2.23%
Average Purchase YTM	2.34%
Average Market YTM	3.29%
Average S&P/Moody Rating	AA+/Aa1
Average Final Maturity	0.57 yrs
Average Life	0.53 yrs

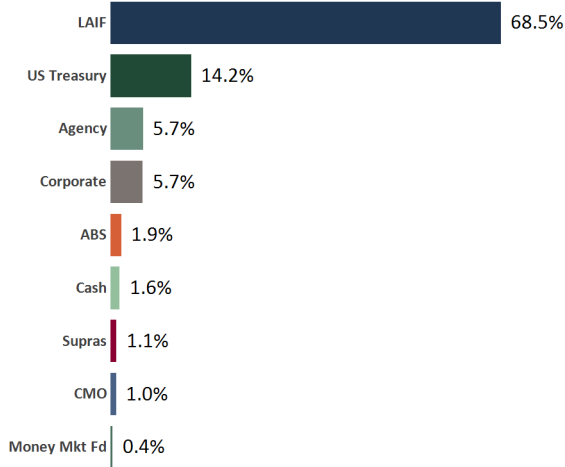
ACCOUNT SUMMARY

	Beg. Values as of 1/31/23	End Values as of 2/28/23
Market Value	46,823,386	43,835,517
Accrued Interest	115,633	167,969
Total Market Value	46,939,019	44,003,486
Income Earned	93,148	79,963
Cont/WD		
Par	47,351,003	44,476,283
Book Value	47,202,027	44,311,509
Cost Value	47,233,104	44,324,247

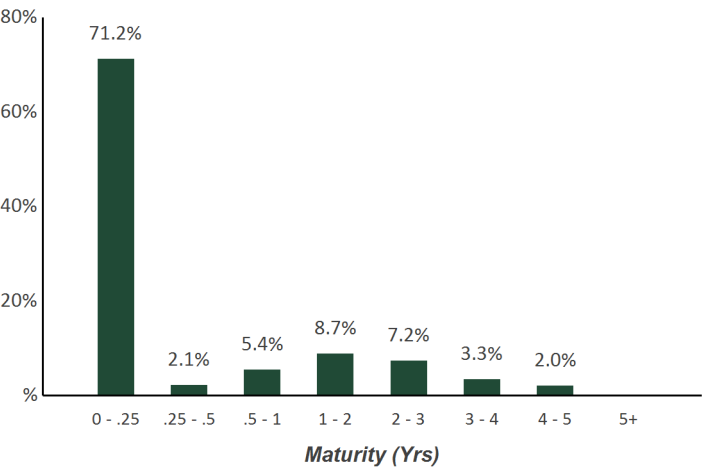
TOP ISSUERS

Local Agency Investment Fund	68.5%
Government of United States	14.2%
Federal Home Loan Mortgage Corp	2.8%
Federal Farm Credit Bank	2.5%
Custodial Checking Account	1.6%
Federal National Mortgage Assoc	1.4%
Intl Bank Recon and Development	0.5%
US Bancorp	0.4%
Total	92.0%

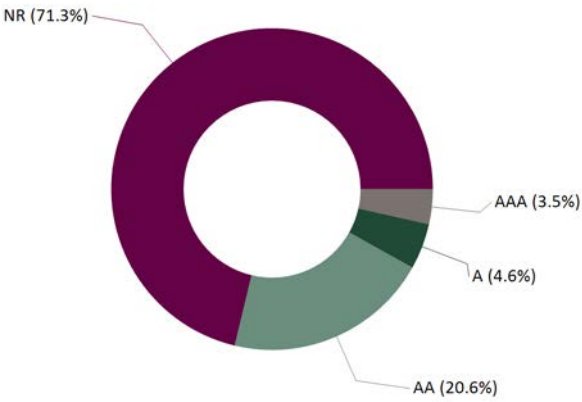
SECTOR ALLOCATION



MATURITY DISTRIBUTION



CREDIT QUALITY (S&P)



Statement of Compliance

As of February 28, 2023



Vallejo Flood & Wastewater District Consolidated

This portfolio is a consolidation of assets managed by Chandler Asset Management and assets managed internally by Client. Chandler relies on Client to provide accurate information for reporting assets and producing this compliance statement.

Category	Standard	Comment
U.S. Treasuries	No limitations; Full faith and credit of the U.S. are pledged for the payment of principal and interest	<i>Complies</i>
Federal Agencies/ U.S. Government Sponsored Enterprises	25% max per Agency/GSE issuer; 20% max federal agency callable securities; Federal agencies or U.S. government-sponsored enterprise obligations, participations, or other instruments, including those issued or fully guaranteed as to principal and interest by federal agencies or U.S. government sponsored enterprises.	<i>Complies</i>
Municipal Securities	"A" rating category or better by a Nationally Recognized Statistical Rating Organization ("NRSRO"); 30% maximum; 5% max per issuer; Include obligations of the District, State of California, and any local agency within the State of California; Bonds of any of the other 49 states in addition to California; Including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by a state, or by a department, board, agency, or authority of any of the other 49 states, in addition to California.	<i>Complies</i>
Supranational Obligations	"AA" rating category or higher by a NRSRO; 30% maximum; 10% max per issuer; USD denominated senior unsecured unsubordinated obligations; Issued or unconditionally guaranteed by International Bank for Reconstruction (IBRD), International Finance Corporation (IFC), or Inter-American Development Bank (IADB)	<i>Complies</i>
Corporate Medium Term Notes	"A" rating category or better by a NRSRO; 30% maximum; 5% max per issuer; Issuing corporations must be organized and operating within the U.S. or be depository institutions licensed by the U.S. or any state and operating within the U.S.	<i>Complies</i>
Negotiable Certificates of Deposit (NCD)	No rating required if amount of the NCD is covered by FDIC insured limit; If amount is above FDIC insured limit, requires "A-1" short-term rated or better by a NRSRO; or "A" long-term issuer rating category or better by a NRSRO; 30% maximum; 5% max per issuer; Issued by a nationally or state-chartered bank, or a federal or state association, a state or federal credit union, or by a federally-licensed or state-licensed branch of a foreign bank.	<i>Complies</i>
Time Certificates of Deposit	FDIC insured/Collateralized; or Non-negotiable, fixed-term Certificates of Deposit collateralized in accordance with California Government Code; In order to secure such deposits, an institution shall maintain in the collateral pool securities having a market value of at least 10% in excess of the total amount deposited (50% in excess of the total amount of deposits secured by promissory notes secured by first mortgages and first trust deeds). The District is permitted to waive the first \$250,000 of collateral security for such deposits of the institution is insured pursuant to federal law.	<i>Complies</i>
Commercial Paper	"A-1" rated or higher by a NRSRO; "A" issuer rated or higher by a NRSRO, if any debt; 25% maximum; 5% max per issuer; 10% max of the outstanding commercial paper of any one issuer; 270 days max maturity; Issuing corporation shall be 1) organized and operating within the U.S. as a general corporation, with assets > \$500 million, and has debt, if any, that is rated "A" or higher by a NRSRO; or 2) organized within the U.S. as a special purpose corporation, trust, or LLC; has program-wide credit enhancements, including, but not limited to, over-collateralization, LOC, and rated "A-1" or higher by a NRSRO.	<i>Complies</i>
Banker's Acceptances	"A-1" short-term debt rated or better by a NRSRO; or "A" long-term debt rating category or better by a NRSRO; 40% maximum; 5% max in bankers acceptance of any one commercial bank; 180 days max maturity	<i>Complies</i>
Asset-Backed, Mortgage-Backed, Mortgage Pass-Through Securities, Collateralized Mortgage Obligations	"AA" rating category or better by a NRSRO; 20% maximum; 5% max per Asset-Backed or Commercial Mortgage issuer; From Issuers not issued by the U.S. Government and its Federal Agencies.	<i>Complies</i>
Mutual Funds and Money Market Mutual Funds	Highest rating or "AAA" rated by two NRSROs; or SEC registered investment adviser with AUM >\$500 million and experience > 5 years; 20% maximum in Money Market Mutual Funds; 10% maximum in Mutual Funds; 20% maximum combined Mutual Funds and Money Market Mutual Funds	<i>Complies</i>
Local Agency Investment Fund (LAIF)	As authorized by government code section 16429.1; Pooled investment money market fund established by the State of California and managed by the California State Treasurer's Office; Not used by investment adviser	<i>Complies</i>

Repurchase Agreements	1 year max maturity; Maintain at a level of at least 102% of the market value of the Repurchase Agreement; Securities used as collateral will be delivered to an acceptable third party custodian; Subject to Master Repurchase Agreement between the District and the provider of repurchase agreement; Not used by investment adviser	<i>Complies</i>
Prohibited	Inverse floaters; Ranges notes, Mortgage-derived or Interest-only strips from pool of mortgages; Zero interest accrual securities if held to maturity; Trading securities for the sole purpose of speculating on the future direction of interest rates; Purchasing or selling securities on margin; Reverse repurchase agreements; Securities lending or any other form of borrowing or leverage; Foreign currency denominated securities	<i>Complies</i>
Social Responsibility	Invest in companies that have a positive impact on the environment and fair workplace practices; Investments are encouraged in entities that support equality of rights, regardless of sex, race, religion, age, disability or sexual orientation; No investment is to be made in a company that receives more than 51% of its gross revenues from the production or manufacture of fossil fuels, weapons manufacturing, cigarettes, alcohol, or gaming products.	<i>Complies</i>
Max Per Issuer	5% max per issuer, with the exception of U.S. Treasuries, Federal Agencies, LAIF, Mutual Funds, Money Market Funds, or Supranational securities, or unless otherwise specified in the policy.	<i>Complies</i>
Maximum Maturity	5 years maximum maturity	<i>Complies</i>



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
ABS									
36262XAC8	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	69,273.58	08/10/2021 0.39%	69,272.64 69,273.23	97.72 5.36%	67,696.27 8.26	0.15% (1,576.96)	NR / AAA AAA	1.65 0.46
47787NAC3	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	8,094.95	07/14/2020 0.52%	8,093.71 8,094.64	98.65 3.51%	7,985.93 1.83	0.02% (108.71)	Aaa / NR AAA	1.72 0.45
58769KAD6	Mercedes-Benz Auto Lease Trust 2021- B A3 0.4% Due 11/15/2024	48,936.00	06/22/2021 0.40%	48,932.31 48,934.73	97.67 5.65%	47,796.09 8.70	0.11% (1,138.64)	NR / AAA AAA	1.72 0.44
09690AAC7	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	23,963.76	09/08/2021 0.34%	23,961.29 23,962.87	98.02 4.91%	23,489.15 1.32	0.05% (473.72)	Aaa / NR AAA	1.83 0.43
89236XAC0	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	17,036.70	10/06/2020 0.36%	17,033.52 17,035.30	98.32 2.17%	16,749.74 2.65	0.04% (285.56)	NR / AAA AAA	1.88 0.93
05601XAC3	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	35,000.00	01/11/2022 1.11%	34,994.77 34,997.44	97.26 5.43%	34,042.05 6.42	0.08% (955.39)	NR / AAA AAA	2.07 0.63
43813GAC5	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	29,884.73	02/17/2021 0.27%	29,884.20 29,884.55	97.13 5.59%	29,027.15 2.24	0.07% (857.40)	Aaa / NR AAA	2.15 0.54
89240BAC2	Toyota Auto Receivables Owners 2021- A A3 0.26% Due 5/15/2025	55,926.27	02/02/2021 0.27%	55,915.90 55,922.79	97.26 5.48%	54,396.38 6.46	0.12% (1,526.41)	Aaa / NR AAA	2.21 0.52
47788UAC6	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	26,248.84	03/02/2021 0.37%	26,243.79 26,246.56	96.51 4.71%	25,332.98 4.20	0.06% (913.58)	Aaa / NR AAA	2.55 0.80
44933LAC7	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	36,798.55	04/20/2021 0.38%	36,794.68 36,797.02	97.07 5.23%	35,722.11 6.21	0.08% (1,074.91)	NR / AAA AAA	2.55 0.60
43815EAC8	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	65,000.00	08/17/2021 0.41%	64,999.05 64,999.49	95.76 5.43%	62,244.55 9.62	0.14% (2,754.94)	NR / AAA AAA	2.72 0.85
05593AAC3	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	20,000.00	02/07/2023 5.22%	19,999.52 19,999.53	99.88 5.31%	19,975.15 45.87	0.05% (24.38)	Aaa / AAA NR	2.74 1.58
44934KAC8	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	90,000.00	07/20/2021 0.39%	89,980.14 89,990.22	96.23 5.34%	86,607.82 15.20	0.20% (3,382.40)	NR / AAA AAA	2.88 0.76



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
ABS									
43815GAC3	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	35,000.00	11/16/2021 0.89%	34,992.62 34,995.50	94.96 5.72%	33,236.59 8.56	0.08% (1,758.91)	Aaa / NR AAA	2.90 1.05
47789QAC4	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	45,000.00	07/13/2021 0.52%	44,995.99 44,997.76	95.40 4.80%	42,929.55 10.40	0.10% (2,068.21)	Aaa / NR AAA	3.05 1.08
89238JAC9	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	30,000.00	11/09/2021 0.71%	29,999.36 29,999.61	94.64 5.93%	28,393.13 9.47	0.06% (1,606.48)	NR / AAA AAA	3.13 1.04
05602RAD3	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	35,000.00	05/10/2022 3.23%	34,998.18 34,998.64	97.17 5.94%	34,009.63 18.73	0.08% (989.01)	Aaa / AAA NR	3.49 1.06
362554AC1	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	25,000.00	10/13/2021 0.68%	24,999.36 24,999.62	94.62 5.36%	23,653.90 7.08	0.05% (1,345.72)	Aaa / AAA NR	3.55 1.16
47787JAC2	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	45,000.00	03/10/2022 2.34%	44,990.05 44,992.77	95.63 5.28%	43,031.49 46.40	0.10% (1,961.28)	Aaa / NR AAA	3.55 1.51
362585AC5	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	35,000.00	04/05/2022 3.13%	34,992.69 34,994.57	96.65 5.27%	33,827.67 45.21	0.08% (1,166.90)	Aaa / AAA NR	3.97 1.58
43815JAC7	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	35,000.00	02/16/2023 5.10%	34,993.50 34,993.53	99.81 5.19%	34,933.65 34.30	0.08% (59.88)	Aaa / NR AAA	4.15 2.20
58770AAC7	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	45,000.00	01/18/2023 4.56%	44,994.60 44,994.75	98.80 5.09%	44,459.19 90.20	0.10% (535.56)	NR / AAA AAA	4.72 2.27
Total ABS		856,163.38	1.31%	856,061.87 856,105.12	5.28%	829,540.17 389.33	1.89% (26,564.95)	Aaa / AAA AAA	2.80 0.98
AGENCY									
3135G04Q3	FNMA Note 0.25% Due 5/22/2023	240,000.00	05/20/2020 0.35%	239,277.60 239,945.90	98.95 4.79%	237,486.24 165.00	0.54% (2,459.66)	Aaa / AA+ AAA	0.23 0.23
3135G05G4	FNMA Note 0.25% Due 7/10/2023	205,000.00	07/08/2020 0.32%	204,559.25 204,947.27	98.32 4.93%	201,546.16 72.60	0.46% (3,401.11)	Aaa / AA+ AAA	0.36 0.36
3133EL3V4	FFCB Note 0.2% Due 8/14/2023	250,000.00	08/12/2020 0.27%	249,477.50 249,920.79	97.68 5.36%	244,189.50 23.61	0.55% (5,731.29)	Aaa / AA+ AAA	0.46 0.45



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
AGENCY									
3137EAEV7	FHLMC Note 0.25% Due 8/24/2023	190,000.00	08/19/2020 0.28%	189,806.20 189,968.94	97.66 5.15%	185,555.90 9.24	0.42% (4,413.04)	Aaa / AA+ AAA	0.48 0.48
3137EAEW5	FHLMC Note 0.25% Due 9/8/2023	130,000.00	09/02/2020 0.26%	129,957.10 129,992.54	97.44 5.23%	126,672.13 156.18	0.29% (3,320.41)	Aaa / AA+ AAA	0.53 0.51
3133EMBS0	FFCB Note 0.2% Due 10/2/2023	250,000.00	10/05/2020 0.26%	249,565.00 249,914.28	97.11 5.20%	242,772.75 206.94	0.55% (7,141.53)	Aaa / AA+ AAA	0.59 0.58
3137EAEY1	FHLMC Note 0.125% Due 10/16/2023	165,000.00	10/14/2020 0.25%	164,384.55 164,871.29	96.91 5.15%	159,899.19 77.34	0.36% (4,972.10)	Aaa / AA+ AAA	0.63 0.62
3137EAEZ8	FHLMC Note 0.25% Due 11/6/2023	210,000.00	11/03/2020 0.28%	209,811.00 209,956.89	96.74 5.13%	203,144.97 167.71	0.46% (6,811.92)	Aaa / AA+ AAA	0.69 0.67
3135G06H1	FNMA Note 0.25% Due 11/27/2023	185,000.00	11/23/2020 0.29%	184,789.10 184,947.90	96.41 5.21%	178,364.05 120.76	0.41% (6,583.85)	Aaa / AA+ AAA	0.75 0.73
3137EAF A2	FHLMC Note 0.25% Due 12/4/2023	150,000.00	12/02/2020 0.28%	149,851.50 149,962.30	96.21 5.35%	144,321.90 90.63	0.33% (5,640.40)	Aaa / AA+ AAA	0.76 0.75
3133EMRZ7	FFCB Note 0.25% Due 2/26/2024	170,000.00	02/22/2021 0.26%	169,938.80 169,979.77	95.23 5.23%	161,897.29 5.90	0.37% (8,082.48)	Aaa / AA+ AAA	0.99 0.97
3133ENPY0	FFCB Note 1.75% Due 2/25/2025	200,000.00	03/16/2022 2.12%	197,936.00 198,600.25	94.11 4.89%	188,210.60 58.33	0.43% (10,389.65)	Aaa / AA+ AAA	1.99 1.92
3133EN5E6	FFCB Note 4% Due 12/29/2025	250,000.00	12/29/2022 4.27%	248,120.00 248,224.73	98.40 4.61%	245,998.75 1,722.22	0.56% (2,225.98)	Aaa / AA+ AAA	2.84 2.63
Total Agency		2,595,000.00	0.81%	2,587,473.60 2,591,232.85	5.07%	2,520,059.43 2,876.46	5.73% (71,173.42)	Aaa / AA+ AAA	0.90 0.86
CASH									
90CHECK\$1	Checking Deposit Bank Account	717,530.11	Various 0.00%	717,530.11 717,530.11	1.00 0.00%	717,530.11 0.00	1.63% 0.00	NR / NR NR	0.00 0.00
Total Cash		717,530.11	N/A	717,530.11 717,530.11	0.00%	717,530.11 0.00	1.63% 0.00	NR / NR NR	0.00 0.00
CMO									
3137BKRJ1	FHLMC K047 A2 3.329% Due 5/25/2025	100,000.00	05/19/2022 3.05%	100,578.13 100,426.73	96.42 5.06%	96,424.66 277.42	0.22% (4,002.07)	NR / NR AAA	2.24 1.99

Vallejo Flood & Wastewater District Consolidated

Account #10761

Holdings Report

As of February 28, 2023



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
CMO									
3137BNGT5	FHLMC K054 A2 2.745% Due 1/25/2026	250,000.00	02/15/2023 4.92%	237,392.58 237,489.10	94.40 4.90%	236,007.38 571.88	0.54% (1,481.72)	NR / AAA NR	2.91 2.60
3137BVZ82	FHLMC K063 3.43% Due 1/25/2027	100,000.00	12/05/2022 4.29%	96,816.41 96,989.52	95.49 4.73%	95,491.33 285.83	0.22% (1,498.19)	NR / NR AAA	3.91 3.44
Total CMO		450,000.00	4.35%	434,787.12 434,905.35	4.89%	427,923.37 1,135.13	0.98% (6,981.98)	NR / AAA AAA	2.98 2.65
CORPORATE									
89236TJD8	Toyota Motor Credit Corp Note 0.4% Due 4/6/2023	60,000.00	04/06/2021 0.44%	59,951.40 59,997.59	99.52 4.97%	59,711.64 96.67	0.14% (285.95)	A1 / A+ A+	0.10 0.11
69371RQ82	Paccar Financial Corp Note 0.8% Due 6/8/2023	150,000.00	06/01/2020 0.85%	149,791.50 149,981.15	98.85 4.98%	148,278.15 276.67	0.34% (1,703.00)	A1 / A+ NR	0.27 0.27
06406FAD5	Bank of NY Mellon Corp Callable Note Cont 6/16/2023 2.2% Due 8/16/2023	150,000.00	06/26/2020 0.62%	156,934.50 150,686.39	98.61 5.25%	147,913.95 137.50	0.34% (2,772.44)	A1 / A AA-	0.46 0.46
24422EVN6	John Deere Capital Corp Note 0.45% Due 1/17/2024	145,000.00	03/01/2021 0.47%	144,897.05 144,968.40	95.90 5.24%	139,055.87 79.75	0.32% (5,912.53)	A2 / A A+	0.88 0.86
808513BN4	Charles Schwab Corp Callable Note Cont 2/18/2024 0.75% Due 3/18/2024	150,000.00	Various 0.69%	150,272.40 150,090.32	95.36 5.33%	143,038.80 509.38	0.33% (7,051.52)	A2 / A A	1.05 1.02
023135BW5	Amazon.com Inc Note 0.45% Due 5/12/2024	85,000.00	05/10/2021 0.50%	84,875.90 84,950.41	94.61 5.12%	80,414.85 115.81	0.18% (4,535.56)	A1 / AA AA-	1.20 1.17
91324PEB4	United Health Group Inc Callable Note Cont 5/15/2022 0.55% Due 5/15/2024	50,000.00	11/08/2021 0.78%	49,713.00 49,861.98	94.44 5.34%	47,220.50 80.97	0.11% (2,641.48)	A3 / A+ A	1.21 1.18
14913R2L0	Caterpillar Financial Service Note 0.45% Due 5/17/2024	130,000.00	05/10/2021 0.50%	129,825.80 129,929.59	94.45 5.20%	122,789.55 169.00	0.28% (7,140.04)	A2 / A A	1.22 1.19
89114QCA4	Toronto Dominion Bank Note 2.65% Due 6/12/2024	125,000.00	08/25/2021 0.61%	132,032.50 128,233.57	96.69 5.34%	120,860.75 726.91	0.28% (7,372.82)	A1 / A AA-	1.29 1.24
06051GJY6	Bank of America Corp Callable Note Cont 6/14/2023 0.523% Due 6/14/2024	100,000.00	06/07/2021 0.52%	100,006.40 100,000.92	98.41 5.32%	98,409.00 111.87	0.22% (1,591.92)	A2 / A- AA-	1.29 1.23
89236TJH9	Toyota Motor Credit Corp Note 0.5% Due 6/18/2024	80,000.00	06/15/2021 0.54%	79,904.80 79,958.74	94.13 5.20%	75,307.84 81.11	0.17% (4,650.90)	A1 / A+ A+	1.30 1.27



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
CORPORATE									
79466LAG9	Salesforce.com Inc Callable Note Cont 7/15/2022 0.625% Due 7/15/2024	20,000.00	06/29/2021 0.64%	19,989.80 19,995.34	93.98 5.20%	18,796.40 15.97	0.04% (1,198.94)	A2 / A+ NR	1.38 1.34
91159HHX1	US Bancorp Callable Note Cont 6/28/2024 2.4% Due 7/30/2024	200,000.00	02/05/2021 0.47%	212,966.00 205,091.91	96.05 5.32%	192,104.20 413.33	0.44% (12,987.71)	A2 / A+ A+	1.42 1.37
78015K7C2	Royal Bank of Canada Note 2.25% Due 11/1/2024	150,000.00	02/05/2021 0.53%	159,499.50 154,264.65	95.18 5.29%	142,772.70 1,125.00	0.33% (11,491.95)	A1 / A AA-	1.68 1.60
87612EBL9	Target Corp Callable Note Cont 4/15/25 2.25% Due 4/15/2025	125,000.00	03/15/2022 2.51%	124,027.50 124,326.80	94.47 5.02%	118,093.63 1,062.50	0.27% (6,233.17)	A2 / A A	2.13 2.02
713448CT3	Pepsico Inc. Callable Note Cont 1/30/2025 2.75% Due 4/30/2025	150,000.00	12/28/2022 4.66%	143,733.00 144,181.69	95.47 4.98%	143,201.10 1,386.46	0.33% (980.59)	A1 / A+ NR	2.17 2.05
06367WB85	Bank of Montreal Note 1.85% Due 5/1/2025	125,000.00	08/29/2022 4.02%	118,191.25 119,463.52	92.79 5.41%	115,983.75 770.83	0.27% (3,479.77)	A2 / A- AA-	2.17 2.07
594918BJ2	Microsoft Callable Note Cont 8/3/2025 3.125% Due 11/3/2025	150,000.00	01/20/2023 4.28%	145,509.00 145,668.44	95.83 4.80%	143,743.95 1,536.46	0.33% (1,924.49)	Aaa / AAA NR	2.68 2.50
023135CN4	Amazon.com Inc Note 4.6% Due 12/1/2025	100,000.00	12/28/2022 4.61%	99,956.00 99,958.52	99.27 4.89%	99,265.00 1,150.00	0.23% (693.52)	A1 / AA AA-	2.76 2.53
857477BR3	State Street Bank Callable Note Cont 2/6/2025 1.746% Due 2/6/2026	35,000.00	02/02/2022 1.75%	35,000.00 35,000.00	93.17 5.53%	32,608.10 42.44	0.07% (2,391.90)	A1 / A AA-	2.94 1.86
037833BY5	Apple Inc Callable Note Cont 11/23/2025 3.25% Due 2/23/2026	150,000.00	02/21/2023 4.78%	143,640.00 143,674.82	95.65 4.83%	143,473.80 108.33	0.33% (201.02)	Aaa / AA+ NR	2.99 2.80
665859AW4	Northern Trust Company Callable Note Cont 4/10/2027 4% Due 5/10/2027	150,000.00	01/10/2023 4.25%	148,507.50 148,552.87	96.86 4.83%	145,295.55 1,850.00	0.33% (3,257.32)	A2 / A+ A+	4.20 3.76
Total Corporate		2,580,000.00	1.89%	2,589,224.80 2,568,837.62	5.13%	2,478,339.08 11,846.96	5.66% (90,498.54)	A1 / A+ A+	1.71 1.60



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
LAIF									
90LAIF\$00	Local Agency Investment Fund State Pool	30,022,943.45	Various 2.65%	30,022,943.45 30,022,943.45	1.00 2.65%	30,022,943.45 129,136.23	68.52% 0.00	NR / NR NR	0.00 0.00
Total LAIF		30,022,943.45	2.65%	30,022,943.45 30,022,943.45	2.65%	30,022,943.45 129,136.23	68.52% 0.00	NR / NR NR	0.00 0.00

MONEY MARKET FUND									
31846V203	First American Govt Obligation Fund Class Y	159,645.56	Various 4.06%	159,645.56 159,645.56	1.00 4.06%	159,645.56 0.00	0.36% 0.00	Aaa / AAA AAA	0.00 0.00
Total Money Market Fund		159,645.56	4.06%	159,645.56 159,645.56	4.06%	159,645.56 0.00	0.36% 0.00	Aaa / AAA AAA	0.00 0.00

SUPRANATIONAL									
459058JM6	Intl. Bank Recon & Development Note 0.25% Due 11/24/2023	105,000.00	11/17/2020 0.32%	104,774.25 104,944.75	96.49 5.16%	101,310.30 70.73	0.23% (3,634.45)	Aaa / AAA AAA	0.74 0.72
459058GQ0	Intl. Bank Recon & Development Note 2.5% Due 3/19/2024	125,000.00	01/26/2021 0.26%	133,742.50 127,929.42	97.13 5.32%	121,417.50 1,406.25	0.28% (6,511.92)	Aaa / AAA AAA	1.05 1.01
4581X0DZ8	Inter-American Dev Bank Note 0.5% Due 9/23/2024	165,000.00	09/15/2021 0.52%	164,877.90 164,936.28	93.15 5.10%	153,690.90 362.08	0.35% (11,245.38)	Aaa / AAA NR	1.57 1.52
45950KCR9	International Finance Corp Note 1.375% Due 10/16/2024	100,000.00	07/12/2021 0.54%	102,690.00 101,345.00	94.25 5.09%	94,246.10 515.63	0.22% (7,098.90)	Aaa / AAA NR	1.63 1.57
Total Supranational		495,000.00	0.42%	506,084.65 499,155.45	5.17%	470,664.80 2,354.69	1.07% (28,490.65)	Aaa / AAA AAA	1.27 1.23

US TREASURY									
91282CAP6	US Treasury Note 0.125% Due 10/15/2023	250,000.00	11/12/2020 0.23%	249,238.28 249,837.08	96.99 5.06%	242,480.50 117.62	0.55% (7,356.58)	Aaa / AA+ AAA	0.63 0.61
91282CBA8	US Treasury Note 0.125% Due 12/15/2023	250,000.00	01/06/2021 0.20%	249,472.66 249,857.83	96.15 5.13%	240,380.75 65.25	0.55% (9,477.08)	Aaa / AA+ AAA	0.79 0.77



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
US TREASURY									
91282CBE0	US Treasury Note 0.125% Due 1/15/2024	250,000.00	01/12/2021 0.24%	249,111.33 249,740.30	95.75 5.13%	239,384.75 38.85	0.54% (10,355.55)	Aaa / AA+ AAA	0.88 0.86
91282CBM2	US Treasury Note 0.125% Due 2/15/2024	200,000.00	02/23/2021 0.22%	199,429.69 199,815.67	95.30 5.18%	190,609.40 9.67	0.43% (9,206.27)	Aaa / AA+ AAA	0.96 0.94
91282CBR1	US Treasury Note 0.25% Due 3/15/2024	200,000.00	03/30/2021 0.33%	199,554.69 199,843.32	95.08 5.16%	190,156.20 230.66	0.43% (9,687.12)	Aaa / AA+ AAA	1.04 1.01
91282CBV2	US Treasury Note 0.375% Due 4/15/2024	250,000.00	04/29/2021 0.34%	250,224.61 250,085.40	94.84 5.15%	237,099.50 352.85	0.54% (12,985.90)	Aaa / AA+ AAA	1.13 1.10
91282CCG4	US Treasury Note 0.25% Due 6/15/2024	250,000.00	06/09/2021 0.31%	249,550.78 249,806.54	93.98 5.12%	234,941.50 130.49	0.53% (14,865.04)	Aaa / AA+ AAA	1.30 1.26
91282CCL3	US Treasury Note 0.375% Due 7/15/2024	250,000.00	07/13/2021 0.42%	249,667.97 249,847.92	93.79 5.09%	234,482.50 116.54	0.53% (15,365.42)	Aaa / AA+ AAA	1.38 1.34
912828YE4	US Treasury Note 1.25% Due 8/31/2024	250,000.00	01/08/2021 0.30%	258,554.69 253,536.54	94.53 5.09%	236,318.25 8.49	0.54% (17,218.29)	Aaa / AA+ AAA	1.51 1.45
91282CCX7	US Treasury Note 0.375% Due 9/15/2024	200,000.00	09/10/2021 0.44%	199,585.94 199,786.93	93.20 5.02%	186,390.60 345.99	0.42% (13,396.33)	Aaa / AA+ AAA	1.55 1.50
91282CDB4	US Treasury Note 0.625% Due 10/15/2024	200,000.00	10/14/2021 0.63%	199,984.38 199,991.53	93.28 4.98%	186,554.60 470.47	0.43% (13,436.93)	Aaa / AA+ AAA	1.63 1.58
91282CDH1	US Treasury Note 0.75% Due 11/15/2024	200,000.00	11/10/2021 0.80%	199,710.94 199,835.16	93.18 4.96%	186,351.60 439.23	0.42% (13,483.56)	Aaa / AA+ AAA	1.72 1.66
91282CDN8	US Treasury Note 1% Due 12/15/2024	200,000.00	02/01/2022 1.38%	197,882.81 198,675.49	93.34 4.92%	186,679.60 417.58	0.43% (11,995.89)	Aaa / AA+ AAA	1.80 1.74
912828Z52	US Treasury Note 1.375% Due 1/31/2025	200,000.00	06/07/2021 0.48%	206,500.00 203,420.54	93.74 4.82%	187,476.60 220.30	0.43% (15,943.94)	Aaa / AA+ AAA	1.93 1.86
912828ZC7	US Treasury Note 1.125% Due 2/28/2025	200,000.00	02/09/2022 1.59%	197,226.56 198,182.58	93.05 4.81%	186,093.80 6.11	0.42% (12,088.78)	Aaa / AA+ AAA	2.00 1.94
912828ZF0	US Treasury Note 0.5% Due 3/31/2025	200,000.00	03/15/2022 2.06%	190,875.00 193,721.41	91.64 4.76%	183,281.20 417.58	0.42% (10,440.21)	Aaa / AA+ AAA	2.09 2.02
912828ZL7	US Treasury Note 0.375% Due 4/30/2025	200,000.00	03/22/2022 2.41%	187,906.25 191,564.24	91.10 4.74%	182,203.20 250.69	0.41% (9,361.04)	Aaa / AA+ AAA	2.17 2.11
912828K74	US Treasury Note 2% Due 8/15/2025	200,000.00	06/01/2022 2.83%	194,921.88 196,102.43	93.97 4.62%	187,937.60 154.70	0.43% (8,164.83)	Aaa / AA+ AAA	2.46 2.36

Holdings Report

As of February 28, 2023



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
US TREASURY									
9128285C0	US Treasury Note 3% Due 9/30/2025	250,000.00	12/28/2022 4.24%	242,041.02 242,531.53	96.13 4.61%	240,312.50 3,131.87	0.55% (2,219.03)	Aaa / AA+ AAA	2.59 2.42
9128285J5	US Treasury Note 3% Due 10/31/2025	250,000.00	12/28/2022 4.24%	241,806.64 242,296.50	96.05 4.59%	240,136.75 2,506.91	0.55% (2,159.75)	Aaa / AA+ AAA	2.67 2.50
912828M56	US Treasury Note 2.25% Due 11/15/2025	200,000.00	08/29/2022 3.44%	192,835.94 193,948.45	94.16 4.57%	188,312.40 1,317.68	0.43% (5,636.05)	Aaa / AA+ AAA	2.72 2.57
9128286L9	US Treasury Note 2.25% Due 3/31/2026	250,000.00	12/28/2022 4.12%	235,869.14 236,606.61	93.72 4.45%	234,306.75 2,348.90	0.54% (2,299.86)	Aaa / AA+ AAA	3.09 2.90
9128286S4	US Treasury Note 2.375% Due 4/30/2026	250,000.00	12/29/2022 4.13%	236,445.31 237,124.72	93.96 4.44%	234,912.00 1,984.63	0.54% (2,212.72)	Aaa / AA+ AAA	3.17 2.98
912828YD6	US Treasury Note 1.375% Due 8/31/2026	250,000.00	01/05/2023 4.10%	227,158.20 228,083.52	90.31 4.39%	225,781.25 9.34	0.51% (2,302.27)	Aaa / AA+ AAA	3.51 3.35
912828U24	US Treasury Note 2% Due 11/15/2026	250,000.00	01/05/2023 4.06%	231,796.88 232,494.52	91.98 4.37%	229,941.50 1,464.09	0.53% (2,553.02)	Aaa / AA+ AAA	3.72 3.49
912828V98	US Treasury Note 2.25% Due 2/15/2027	250,000.00	01/20/2023 3.65%	236,894.53 237,221.28	92.54 4.32%	231,357.50 217.54	0.53% (5,863.78)	Aaa / AA+ AAA	3.97 3.72
91282CEF4	US Treasury Note 2.5% Due 3/31/2027	200,000.00	12/12/2022 3.90%	189,023.44 189,569.12	93.27 4.32%	186,531.20 2,087.91	0.43% (3,037.92)	Aaa / AA+ AAA	4.09 3.78
91282CEW7	US Treasury Note 3.25% Due 6/30/2027	250,000.00	12/29/2022 4.02%	242,158.20 242,449.34	95.95 4.28%	239,873.00 1,346.69	0.55% (2,576.34)	Aaa / AA+ AAA	4.34 3.97
91282CFH9	US Treasury Note 3.125% Due 8/31/2027	250,000.00	01/20/2023 3.59%	245,068.36 245,176.91	95.43 4.25%	238,584.00 21.23	0.54% (6,592.91)	Aaa / AA+ AAA	4.51 4.14
Total US Treasury		6,600,000.00	2.03%	6,450,496.12 6,461,153.41	4.76%	6,208,871.00 20,229.86	14.16% (252,282.41)	Aaa / AA+ AAA	2.27 2.15
TOTAL PORTFOLIO		44,476,282.50	2.34%	44,324,247.28 44,311,508.92	3.29%	43,835,516.97 167,968.66	100.00% (475,991.95)	Aa1 / AA+ AAA	0.57 0.50
TOTAL MARKET VALUE PLUS ACCRUED						44,003,485.63			



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
ACQUISITIONS										
Purchase	02/01/2023	31846V203	2,409.00	First American Govt Obligation Fund Class Y	1.000	3.83%	2,409.00	0.00	2,409.00	0.00
Purchase	02/06/2023	31846V203	305.55	First American Govt Obligation Fund Class Y	1.000	3.83%	305.55	0.00	305.55	0.00
Purchase	02/14/2023	31846V203	250.00	First American Govt Obligation Fund Class Y	1.000	3.83%	250.00	0.00	250.00	0.00
Purchase	02/15/2023	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	99.998	5.22%	19,999.52	0.00	19,999.52	0.00
Purchase	02/15/2023	31846V203	4,937.50	First American Govt Obligation Fund Class Y	1.000	3.83%	4,937.50	0.00	4,937.50	0.00
Purchase	02/15/2023	31846V203	19.50	First American Govt Obligation Fund Class Y	1.000	3.83%	19.50	0.00	19.50	0.00
Purchase	02/15/2023	31846V203	112.75	First American Govt Obligation Fund Class Y	1.000	3.83%	112.75	0.00	112.75	0.00
Purchase	02/15/2023	31846V203	87.00	First American Govt Obligation Fund Class Y	1.000	3.83%	87.00	0.00	87.00	0.00
Purchase	02/15/2023	31846V203	28.50	First American Govt Obligation Fund Class Y	1.000	3.83%	28.50	0.00	28.50	0.00
Purchase	02/15/2023	31846V203	17.75	First American Govt Obligation Fund Class Y	1.000	3.83%	17.75	0.00	17.75	0.00
Purchase	02/15/2023	31846V203	2,169.11	First American Govt Obligation Fund Class Y	1.000	3.83%	2,169.11	0.00	2,169.11	0.00
Purchase	02/15/2023	31846V203	4,740.15	First American Govt Obligation Fund Class Y	1.000	3.83%	4,740.15	0.00	4,740.15	0.00
Purchase	02/15/2023	31846V203	2,652.14	First American Govt Obligation Fund Class Y	1.000	3.83%	2,652.14	0.00	2,652.14	0.00
Purchase	02/15/2023	31846V203	1,996.57	First American Govt Obligation Fund Class Y	1.000	3.83%	1,996.57	0.00	1,996.57	0.00
Purchase	02/15/2023	31846V203	2,156.43	First American Govt Obligation Fund Class Y	1.000	3.83%	2,156.43	0.00	2,156.43	0.00
Purchase	02/15/2023	31846V203	1,080.67	First American Govt Obligation Fund Class Y	1.000	3.83%	1,080.67	0.00	1,080.67	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
ACQUISITIONS										
Purchase	02/16/2023	31846V203	1,650.00	First American Govt Obligation Fund Class Y	1.000	3.83%	1,650.00	0.00	1,650.00	0.00
Purchase	02/16/2023	31846V203	14.17	First American Govt Obligation Fund Class Y	1.000	3.83%	14.17	0.00	14.17	0.00
Purchase	02/16/2023	31846V203	90.42	First American Govt Obligation Fund Class Y	1.000	3.83%	90.42	0.00	90.42	0.00
Purchase	02/21/2023	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	94.957	4.92%	237,392.58	381.25	237,773.83	0.00
Purchase	02/21/2023	31846V203	25.67	First American Govt Obligation Fund Class Y	1.000	3.83%	25.67	0.00	25.67	0.00
Purchase	02/21/2023	31846V203	22.21	First American Govt Obligation Fund Class Y	1.000	3.83%	22.21	0.00	22.21	0.00
Purchase	02/21/2023	31846V203	749.17	First American Govt Obligation Fund Class Y	1.000	3.83%	749.17	0.00	749.17	0.00
Purchase	02/21/2023	31846V203	2,571.10	First American Govt Obligation Fund Class Y	1.000	3.83%	2,571.10	0.00	2,571.10	0.00
Purchase	02/23/2023	037833BY5	150,000.00	Apple Inc Callable Note Cont 11/23/2025 3.25% Due 2/23/2026	95.760	4.78%	143,640.00	0.00	143,640.00	0.00
Purchase	02/23/2023	31846V203	250,000.00	First American Govt Obligation Fund Class Y	1.000	3.83%	250,000.00	0.00	250,000.00	0.00
Purchase	02/23/2023	31846V203	3,562.50	First American Govt Obligation Fund Class Y	1.000	3.83%	3,562.50	0.00	3,562.50	0.00
Purchase	02/24/2023	31846V203	237.50	First American Govt Obligation Fund Class Y	1.000	3.83%	237.50	0.00	237.50	0.00
Purchase	02/24/2023	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	99.981	5.10%	34,993.50	0.00	34,993.50	0.00
Purchase	02/25/2023	31846V203	1,750.00	First American Govt Obligation Fund Class Y	1.000	3.83%	1,750.00	0.00	1,750.00	0.00
Purchase	02/26/2023	31846V203	212.50	First American Govt Obligation Fund Class Y	1.000	3.83%	212.50	0.00	212.50	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
ACQUISITIONS										
Purchase	02/27/2023	31846V203	32.08	First American Govt Obligation Fund Class Y	1.000	4.06%	32.08	0.00	32.08	0.00
Purchase	02/27/2023	31846V203	93.63	First American Govt Obligation Fund Class Y	1.000	4.06%	93.63	0.00	93.63	0.00
Purchase	02/27/2023	31846V203	285.83	First American Govt Obligation Fund Class Y	1.000	4.06%	285.83	0.00	285.83	0.00
Purchase	02/27/2023	31846V203	277.42	First American Govt Obligation Fund Class Y	1.000	4.06%	277.42	0.00	277.42	0.00
Purchase	02/27/2023	31846V203	2,597.75	First American Govt Obligation Fund Class Y	1.000	4.06%	2,597.75	0.00	2,597.75	0.00
Purchase	02/28/2023	31846V203	8,312.50	First American Govt Obligation Fund Class Y	1.000	4.06%	8,312.50	0.00	8,312.50	0.00
Subtotal			750,447.07				731,472.67	381.25	731,853.92	0.00
Short Sale	02/23/2023	31846V203	-143,640.00	First American Govt Obligation Fund Class Y	1.000		-143,640.00	0.00	-143,640.00	0.00
Subtotal			-143,640.00				-143,640.00	0.00	-143,640.00	0.00
TOTAL ACQUISITIONS			606,807.07				587,832.67	381.25	588,213.92	0.00
DISPOSITIONS										
Closing Purchase	02/23/2023	31846V203	-143,640.00	First American Govt Obligation Fund Class Y	1.000		-143,640.00	0.00	-143,640.00	0.00
Subtotal			-143,640.00				-143,640.00	0.00	-143,640.00	0.00
Sale	02/15/2023	31846V203	19,999.52	First American Govt Obligation Fund Class Y	1.000	3.83%	19,999.52	0.00	19,999.52	0.00
Sale	02/21/2023	31846V203	237,773.83	First American Govt Obligation Fund Class Y	1.000	3.83%	237,773.83	0.00	237,773.83	0.00
Sale	02/23/2023	31846V203	143,640.00	First American Govt Obligation Fund Class Y	1.000	3.83%	143,640.00	0.00	143,640.00	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
DISPOSITIONS										
Sale	02/24/2023	31846V203	34,993.50	First American Govt Obligation Fund Class Y	1.000	3.83%	34,993.50	0.00	34,993.50	0.00
Subtotal			436,406.85				436,406.85	0.00	436,406.85	0.00
Paydown	02/15/2023	44933LAC7	2,639.65	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	100.000		2,639.65	12.49	2,652.14	0.00
Paydown	02/15/2023	44934KAC8	0.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	100.000		0.00	28.50	28.50	0.00
Paydown	02/15/2023	47787JAC2	0.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	100.000		0.00	87.00	87.00	0.00
Paydown	02/15/2023	47787NAC3	1,992.28	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	100.000		1,992.28	4.29	1,996.57	0.00
Paydown	02/15/2023	47788UAC6	2,147.91	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	100.000		2,147.91	8.52	2,156.43	0.00
Paydown	02/15/2023	47789QAC4	0.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	100.000		0.00	19.50	19.50	0.00
Paydown	02/15/2023	58769KAD6	1,064.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	100.000		1,064.00	16.67	1,080.67	0.00
Paydown	02/15/2023	58770AAC7	0.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	100.000		0.00	112.75	112.75	0.00
Paydown	02/15/2023	89236XAC0	2,163.51	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	100.000		2,163.51	5.60	2,169.11	0.00
Paydown	02/15/2023	89238JAC9	0.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	100.000		0.00	17.75	17.75	0.00
Paydown	02/15/2023	89240BAC2	4,727.01	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	100.000		4,727.01	13.14	4,740.15	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
DISPOSITIONS										
Paydown	02/16/2023	362554AC1	0.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	100.000		0.00	14.17	14.17	0.00
Paydown	02/16/2023	362585AC5	0.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	100.000		0.00	90.42	90.42	0.00
Paydown	02/21/2023	36262XAC8	726.42	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	100.000		726.42	22.75	749.17	0.00
Paydown	02/21/2023	43813GAC5	2,563.80	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	100.000		2,563.80	7.30	2,571.10	0.00
Paydown	02/21/2023	43815EAC8	0.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	100.000		0.00	22.21	22.21	0.00
Paydown	02/21/2023	43815GAC3	0.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	100.000		0.00	25.67	25.67	0.00
Paydown	02/27/2023	05601XAC3	0.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	100.000		0.00	32.08	32.08	0.00
Paydown	02/27/2023	05602RAD3	0.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	100.000		0.00	93.63	93.63	0.00
Paydown	02/27/2023	09690AAC7	2,590.45	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	100.000		2,590.45	7.30	2,597.75	0.00
Paydown	02/27/2023	3137BKRJ1	0.00	FHLMC K047 A2 3.329% Due 5/25/2025	100.000		0.00	277.42	277.42	0.00
Paydown	02/27/2023	3137BVZ82	0.00	FHLMC K063 3.43% Due 1/25/2027	100.000		0.00	285.83	285.83	0.00
Subtotal			20,615.03				20,615.03	1,204.99	21,820.02	0.00
Maturity	02/23/2023	037833BU3	250,000.00	Apple Inc Callable Note Cont 12/23/2022 2.85% Due 2/23/2023	100.000		250,000.00	0.00	250,000.00	0.00
Subtotal			250,000.00				250,000.00	0.00	250,000.00	0.00
Security Withdrawal	02/03/2023	90LAIF\$00	560,000.00	Local Agency Investment Fund State Pool	1.000		560,000.00	0.00	560,000.00	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
DISPOSITIONS										
Security Withdrawal	02/09/2023	90LAIF\$00	970,000.00	Local Agency Investment Fund State Pool	1.000		970,000.00	0.00	970,000.00	0.00
Security Withdrawal	02/16/2023	90LAIF\$00	500,000.00	Local Agency Investment Fund State Pool	1.000		500,000.00	0.00	500,000.00	0.00
Security Withdrawal	02/23/2023	90LAIF\$00	330,000.00	Local Agency Investment Fund State Pool	1.000		330,000.00	0.00	330,000.00	0.00
Security Withdrawal	02/28/2023	31846V203	1,000.00	First American Govt Obligation Fund Class Y	1.000		1,000.00	0.00	1,000.00	0.00
Security Withdrawal	02/28/2023	90CHECK\$1	557,145.30	Checking Deposit Bank Account	1.000		557,145.30	0.00	557,145.30	0.00
Subtotal			2,918,145.30				2,918,145.30	0.00	2,918,145.30	0.00
TOTAL DISPOSITIONS			3,481,527.18				3,481,527.18	1,204.99	3,482,732.17	0.00

OTHER TRANSACTIONS										
Interest	02/06/2023	857477BR3	35,000.00	State Street Bank Callable Note Cont 2/6/2025 1.746% Due 2/6/2026	0.000		305.55	0.00	305.55	0.00
Interest	02/14/2023	3133EL3V4	250,000.00	FFCB Note 0.2% Due 8/14/2023	0.000		250.00	0.00	250.00	0.00
Interest	02/15/2023	912828K74	200,000.00	US Treasury Note 2% Due 8/15/2025	0.000		2,000.00	0.00	2,000.00	0.00
Interest	02/15/2023	912828V98	250,000.00	US Treasury Note 2.25% Due 2/15/2027	0.000		2,812.50	0.00	2,812.50	0.00
Interest	02/15/2023	91282CBM2	200,000.00	US Treasury Note 0.125% Due 2/15/2024	0.000		125.00	0.00	125.00	0.00
Interest	02/16/2023	06406FAD5	150,000.00	Bank of NY Mellon Corp Callable Note Cont 6/16/2023 2.2% Due 8/16/2023	0.000		1,650.00	0.00	1,650.00	0.00
Interest	02/23/2023	037833BU3	250,000.00	Apple Inc Callable Note Cont 12/23/2022 2.85% Due 2/23/2023	0.000		3,562.50	0.00	3,562.50	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
OTHER TRANSACTIONS										
Interest	02/24/2023	3137EAEV7	190,000.00	FHLMC Note 0.25% Due 8/24/2023	0.000		237.50	0.00	237.50	0.00
Interest	02/25/2023	3133ENPY0	200,000.00	FFCB Note 1.75% Due 2/25/2025	0.000		1,750.00	0.00	1,750.00	0.00
Interest	02/26/2023	3133EMRZ7	170,000.00	FFCB Note 0.25% Due 2/26/2024	0.000		212.50	0.00	212.50	0.00
Interest	02/28/2023	912828YD6	250,000.00	US Treasury Note 1.375% Due 8/31/2026	0.000		1,718.75	0.00	1,718.75	0.00
Interest	02/28/2023	912828YE4	250,000.00	US Treasury Note 1.25% Due 8/31/2024	0.000		1,562.50	0.00	1,562.50	0.00
Interest	02/28/2023	912828ZC7	200,000.00	US Treasury Note 1.125% Due 2/28/2025	0.000		1,125.00	0.00	1,125.00	0.00
Interest	02/28/2023	91282CFH9	250,000.00	US Treasury Note 3.125% Due 8/31/2027	0.000		3,906.25	0.00	3,906.25	0.00
Subtotal			2,845,000.00				21,218.05	0.00	21,218.05	0.00
Dividend	02/01/2023	31846V203	301,605.34	First American Govt Obligation Fund Class Y	0.000		2,409.00	0.00	2,409.00	0.00
Subtotal			301,605.34				2,409.00	0.00	2,409.00	0.00
TOTAL OTHER TRANSACTIONS			3,146,605.34				23,627.05	0.00	23,627.05	0.00

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FIXED INCOME						
023135BW5	Amazon.com Inc Note 0.45% Due 05/12/2024	05/10/2021 05/12/2021 85,000.00	84,947.23 0.00 0.00 84,950.41	83.94 0.00 115.81 31.87	3.18 0.00 3.18 35.05	35.05
023135CN4	Amazon.com Inc Note 4.6% Due 12/01/2025	12/28/2022 12/30/2022 100,000.00	99,957.36 0.00 0.00 99,958.52	766.67 0.00 1,150.00 383.33	1.16 0.00 1.16 384.49	384.49
037833BU3	Apple Inc Callable Note Cont 12/23/2022 Due 02/23/2023	06/02/2020 06/04/2020 0.00	250,000.00 0.00 250,000.00 0.00	3,127.08 3,562.50 0.00 435.42	0.00 0.00 0.00 435.42	435.42
037833BY5	Apple Inc Callable Note Cont 11/23/2025 3.25% Due 02/23/2026	02/21/2023 02/23/2023 150,000.00	0.00 143,640.00 0.00 143,674.82	0.00 0.00 108.33 108.33	34.82 0.00 34.82 143.15	143.15
05593AAC3	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	02/07/2023 02/15/2023 20,000.00	0.00 19,999.52 0.00 19,999.53	0.00 0.00 45.87 45.87	0.01 0.00 0.01 45.88	45.88
05601XAC3	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 03/25/2025	01/11/2022 01/19/2022 35,000.00	34,997.25 0.00 0.00 34,997.44	6.42 32.08 6.42 32.08	0.19 0.00 0.19 32.27	32.27
05602RAD3	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 08/25/2026	05/10/2022 05/18/2022 35,000.00	34,998.60 0.00 0.00 34,998.64	18.73 93.63 18.73 93.63	0.04 0.00 0.04 93.67	93.67
06051GJY6	Bank of America Corp Callable Note Cont 6/14/2023 0.523% Due 06/14/2024	06/07/2021 06/14/2021 100,000.00	100,001.17 0.00 0.00 100,000.92	68.28 0.00 111.87 43.59	0.00 0.25 (0.25) 43.34	43.34
06367WB85	Bank of Montreal Note 1.85% Due 05/01/2025	08/29/2022 08/31/2022 125,000.00	119,267.79 0.00 0.00 119,463.52	578.13 0.00 770.83 192.70	195.73 0.00 195.73 388.43	388.43

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06406FAD5	Bank of NY Mellon Corp Callable Note Cont 6/16/2023 2.2% Due 08/16/2023	06/26/2020 06/30/2020 150,000.00	150,866.01 0.00 0.00 150,686.39	1,512.50 1,650.00 137.50 275.00	0.00 179.62 (179.62) 95.38	95.38
09690AAC7	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	09/08/2021 09/15/2021 23,963.76	26,553.13 0.00 2,590.45 23,962.87	1.46 7.30 1.32 7.16	0.19 0.00 0.19 7.35	7.35
14913R2L0	Caterpillar Financial Service Note 0.45% Due 05/17/2024	05/10/2021 05/17/2021 130,000.00	129,925.14 0.00 0.00 129,929.59	120.25 0.00 169.00 48.75	4.45 0.00 4.45 53.20	53.20
24422EVN6	John Deere Capital Corp Note 0.45% Due 01/17/2024	03/01/2021 03/04/2021 145,000.00	144,965.65 0.00 0.00 144,968.40	25.38 0.00 79.75 54.37	2.75 0.00 2.75 57.12	57.12
3133EL3V4	FFCB Note 0.2% Due 08/14/2023	08/12/2020 08/14/2020 250,000.00	249,907.43 0.00 0.00 249,920.79	231.94 250.00 23.61 41.67	13.36 0.00 13.36 55.03	55.03
3133EMBS0	FFCB Note 0.2% Due 10/02/2023	10/05/2020 10/06/2020 250,000.00	249,903.11 0.00 0.00 249,914.28	165.28 0.00 206.94 41.66	11.17 0.00 11.17 52.83	52.83
3133EMRZ7	FFCB Note 0.25% Due 02/26/2024	02/22/2021 02/26/2021 170,000.00	169,978.20 0.00 0.00 169,979.77	182.99 212.50 5.90 35.41	1.57 0.00 1.57 36.98	36.98
3133EN5E6	FFCB Note 4% Due 12/29/2025	12/29/2022 12/30/2022 250,000.00	248,176.66 0.00 0.00 248,224.73	888.89 0.00 1,722.22 833.33	48.07 0.00 48.07 881.40	881.40
3133ENPY0	FFCB Note 1.75% Due 02/25/2025	03/16/2022 03/21/2022 200,000.00	198,546.34 0.00 0.00 198,600.25	1,516.67 1,750.00 58.33 291.66	53.91 0.00 53.91 345.57	345.57

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3135G04Q3	FNMA Note 0.25% Due 05/22/2023	05/20/2020 05/22/2020 240,000.00	239,927.43 0.00 0.00 239,945.90	115.00 0.00 165.00 50.00	18.47 0.00 18.47 68.47	68.47
3135G05G4	FNMA Note 0.25% Due 07/10/2023	07/08/2020 07/10/2020 205,000.00	204,936.00 0.00 0.00 204,947.27	29.90 0.00 72.60 42.70	11.27 0.00 11.27 53.97	53.97
3135G06H1	FNMA Note 0.25% Due 11/27/2023	11/23/2020 11/25/2020 185,000.00	184,942.52 0.00 0.00 184,947.90	82.22 0.00 120.76 38.54	5.38 0.00 5.38 43.92	43.92
3137BKRJ1	FHLMC K047 A2 3.329% Due 05/25/2025	05/19/2022 05/24/2022 100,000.00	100,441.81 0.00 0.00 100,426.73	277.42 277.42 277.42 277.42	0.00 15.08 (15.08) 262.34	262.34
3137BNGT5	FHLMC K054 A2 2.745% Due 01/25/2026	02/15/2023 02/21/2023 250,000.00	0.00 237,392.58 0.00 237,489.10	0.00 (381.25) 571.88 190.63	96.52 0.00 96.52 287.15	287.15
3137BVZ82	FHLMC K063 3.43% Due 01/25/2027	12/05/2022 12/09/2022 100,000.00	96,930.41 0.00 0.00 96,989.52	285.83 285.83 285.83 285.83	59.11 0.00 59.11 344.94	344.94
3137EAEV7	FHLMC Note 0.25% Due 08/24/2023	08/19/2020 08/21/2020 190,000.00	189,963.99 0.00 0.00 189,968.94	207.15 237.50 9.24 39.59	4.95 0.00 4.95 44.54	44.54
3137EAEW5	FHLMC Note 0.25% Due 09/08/2023	09/02/2020 09/04/2020 130,000.00	129,991.45 0.00 0.00 129,992.54	129.10 0.00 156.18 27.08	1.09 0.00 1.09 28.17	28.17
3137EAEY1	FHLMC Note 0.125% Due 10/16/2023	10/14/2020 10/16/2020 165,000.00	164,855.55 0.00 0.00 164,871.29	60.16 0.00 77.34 17.18	15.74 0.00 15.74 32.92	32.92

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3137EAEZ8	FHLMC Note 0.25% Due 11/06/2023	11/03/2020 11/05/2020 210,000.00	209,952.06 0.00 0.00 209,956.89	123.96 0.00 167.71 43.75	4.83 0.00 4.83 48.58	48.58
3137EAF2	FHLMC Note 0.25% Due 12/04/2023	12/02/2020 12/04/2020 150,000.00	149,958.50 0.00 0.00 149,962.30	59.38 0.00 90.63 31.25	3.80 0.00 3.80 35.05	35.05
362554AC1	GM Financial Securitized Term 2021-4 A3 0.68% Due 09/16/2026	10/13/2021 10/21/2021 25,000.00	24,999.60 0.00 0.00 24,999.62	7.08 14.17 7.08 14.17	0.02 0.00 0.02 14.19	14.19
362585AC5	GM Financial Securitized ART 2022-2 A3 3.1% Due 02/16/2027	04/05/2022 04/13/2022 35,000.00	34,994.41 0.00 0.00 34,994.57	45.21 90.42 45.21 90.42	0.16 0.00 0.16 90.58	90.58
36262XAC8	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	08/10/2021 08/18/2021 69,273.58	69,999.62 0.00 726.42 69,273.23	8.34 22.75 8.26 22.67	0.03 0.00 0.03 22.70	22.70
43813GAC5	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 04/21/2025	02/17/2021 02/24/2021 29,884.73	32,448.32 0.00 2,563.80 29,884.55	2.43 7.30 2.24 7.11	0.03 0.00 0.03 7.14	7.14
43815EAC8	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	08/17/2021 08/25/2021 65,000.00	64,999.47 0.00 0.00 64,999.49	9.62 22.21 9.62 22.21	0.02 0.00 0.02 22.23	22.23
43815GAC3	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 01/21/2026	11/16/2021 11/24/2021 35,000.00	34,995.32 0.00 0.00 34,995.50	8.56 25.67 8.56 25.67	0.18 0.00 0.18 25.85	25.85
43815JAC7	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 04/21/2027	02/16/2023 02/24/2023 35,000.00	0.00 34,993.50 0.00 34,993.53	0.00 0.00 34.30 34.30	0.03 0.00 0.03 34.33	34.33

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44933LAC7	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 09/15/2025	04/20/2021 04/28/2021 36,798.55	39,436.45 0.00 2,639.65 36,797.02	6.66 12.49 6.21 12.04	0.22 0.00 0.22 12.26	12.26
44934KAC8	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 01/15/2026	07/20/2021 07/28/2021 90,000.00	89,989.73 0.00 0.00 89,990.22	15.20 28.50 15.20 28.50	0.49 0.00 0.49 28.99	28.99
4581X0DZ8	Inter-American Dev Bank Note 0.5% Due 09/23/2024	09/15/2021 09/23/2021 165,000.00	164,933.16 0.00 0.00 164,936.28	293.33 0.00 362.08 68.75	3.12 0.00 3.12 71.87	71.87
459058GQ0	Intl. Bank Recon & Development Note 2.5% Due 03/19/2024	01/26/2021 01/28/2021 125,000.00	128,143.03 0.00 0.00 127,929.42	1,145.83 0.00 1,406.25 260.42	0.00 213.61 (213.61) 46.81	46.81
459058JM6	Intl. Bank Recon & Development Note 0.25% Due 11/24/2023	11/17/2020 11/24/2020 105,000.00	104,938.98 0.00 0.00 104,944.75	48.85 0.00 70.73 21.88	5.77 0.00 5.77 27.65	27.65
45950KCR9	International Finance Corp Note 1.375% Due 10/16/2024	07/12/2021 07/14/2021 100,000.00	101,408.29 0.00 0.00 101,345.00	401.04 0.00 515.63 114.59	0.00 63.29 (63.29) 51.30	51.30
47787JAC2	John Deere Owner Trust 2022-A A3 2.32% Due 09/16/2026	03/10/2022 03/16/2022 45,000.00	44,992.56 0.00 0.00 44,992.77	46.40 87.00 46.40 87.00	0.21 0.00 0.21 87.21	87.21
47787NAC3	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	07/14/2020 07/22/2020 8,094.95	10,086.81 0.00 1,992.28 8,094.64	2.29 4.29 1.83 3.83	0.11 0.00 0.11 3.94	3.94
47788UAC6	John Deere Owner Trust 2021-A A3 0.36% Due 09/15/2025	03/02/2021 03/10/2021 26,248.84	28,394.17 0.00 2,147.91 26,246.56	4.54 8.52 4.20 8.18	0.30 0.00 0.30 8.48	8.48

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47789QAC4	John Deere Owner Trust 2021-B A3 0.52% Due 03/16/2026	07/13/2021 07/21/2021 45,000.00	44,997.67 0.00 0.00 44,997.76	10.40 19.50 10.40 19.50	0.09 0.00 0.09 19.59	19.59
58769KAD6	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	06/22/2021 06/29/2021 48,936.00	49,998.59 0.00 1,064.00 48,934.73	8.89 16.67 8.70 16.48	0.14 0.00 0.14 16.62	16.62
58770AAC7	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	01/18/2023 01/25/2023 45,000.00	44,994.63 0.00 0.00 44,994.75	33.83 112.75 90.20 169.12	0.12 0.00 0.12 169.24	169.24
594918BJ2	Microsoft Callable Note Cont 8/3/2025 3.125% Due 11/03/2025	01/20/2023 01/24/2023 150,000.00	145,544.43 0.00 0.00 145,668.44	1,145.83 0.00 1,536.46 390.63	124.01 0.00 124.01 514.64	514.64
665859AW4	Northern Trust Company Callable Note Cont 4/10/2027 4% Due 05/10/2027	01/10/2023 01/12/2023 150,000.00	148,526.40 0.00 0.00 148,552.87	1,350.00 0.00 1,850.00 500.00	26.47 0.00 26.47 526.47	526.47
69371RQ82	Paccar Financial Corp Note 0.8% Due 06/08/2023	06/01/2020 06/08/2020 150,000.00	149,975.82 0.00 0.00 149,981.15	176.67 0.00 276.67 100.00	5.33 0.00 5.33 105.33	105.33
713448CT3	Pepsico Inc. Callable Note Cont 1/30/2025 2.75% Due 04/30/2025	12/28/2022 12/30/2022 150,000.00	143,975.74 0.00 0.00 144,181.69	1,042.71 0.00 1,386.46 343.75	205.95 0.00 205.95 549.70	549.70
78015K7C2	Royal Bank of Canada Note 2.25% Due 11/01/2024	02/05/2021 02/09/2021 150,000.00	154,460.09 0.00 0.00 154,264.65	843.75 0.00 1,125.00 281.25	0.00 195.44 (195.44) 85.81	85.81
79466LAG9	Salesforce.com Inc Callable Note Cont 7/15/2022 0.625% Due 07/15/2024	06/29/2021 07/12/2021 20,000.00	19,995.08 0.00 0.00 19,995.34	5.56 0.00 15.97 10.41	0.26 0.00 0.26 10.67	10.67

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808513BN4	Charles Schwab Corp Callable Note Cont 2/18/2024 0.75% Due 03/18/2024	Various Various 150,000.00	150,097.52 0.00 0.00 150,090.32	415.63 0.00 509.38 93.75	0.77 7.97 (7.20) 86.55	86.55
857477BR3	State Street Bank Callable Note Cont 2/6/2025 1.746% Due 02/06/2026	02/02/2022 02/07/2022 35,000.00	35,000.00 0.00 0.00 35,000.00	297.06 305.55 42.44 50.93	0.00 0.00 0.00 50.93	50.93
87612EBL9	Target Corp Callable Note Cont 4/15/25 2.25% Due 04/15/2025	03/15/2022 03/21/2022 125,000.00	124,302.51 0.00 0.00 124,326.80	828.13 0.00 1,062.50 234.37	24.29 0.00 24.29 258.66	258.66
89114QCA4	Toronto Dominion Bank Note 2.65% Due 06/12/2024	08/25/2021 08/27/2021 125,000.00	128,426.62 0.00 0.00 128,233.57	450.87 0.00 726.91 276.04	0.00 193.05 (193.05) 82.99	82.99
89236TJD8	Toyota Motor Credit Corp Note 0.4% Due 04/06/2023	04/06/2021 04/09/2021 60,000.00	59,995.72 0.00 0.00 59,997.59	76.67 0.00 96.67 20.00	1.87 0.00 1.87 21.87	21.87
89236TJH9	Toyota Motor Credit Corp Note 0.5% Due 06/18/2024	06/15/2021 06/18/2021 80,000.00	79,956.31 0.00 0.00 79,958.74	47.78 0.00 81.11 33.33	2.43 0.00 2.43 35.76	35.76
89236XAC0	Toyota Auto Receivables 2020-D A3 0.35% Due 01/15/2025	10/06/2020 10/13/2020 17,036.70	19,198.57 0.00 2,163.51 17,035.30	2.99 5.60 2.65 5.26	0.24 0.00 0.24 5.50	5.50
89238JAC9	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 04/15/2026	11/09/2021 11/15/2021 30,000.00	29,999.60 0.00 0.00 29,999.61	9.47 17.75 9.47 17.75	0.01 0.00 0.01 17.76	17.76
89240BAC2	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 05/15/2025	02/02/2021 02/08/2021 55,926.27	60,649.22 0.00 4,727.01 55,922.79	7.01 13.14 6.46 12.59	0.58 0.00 0.58 13.17	13.17

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91159HHX1	US Bancorp Callable Note Cont 6/28/2024 2.4% Due 07/30/2024	02/05/2021 02/09/2021 200,000.00	205,385.88 0.00 0.00 205,091.91	13.33 0.00 413.33 400.00	0.00 293.97 (293.97) 106.03	106.03
9128285C0	US Treasury Note 3% Due 09/30/2025	12/28/2022 12/29/2022 250,000.00	242,310.01 0.00 0.00 242,531.53	2,554.95 0.00 3,131.87 576.92	221.52 0.00 221.52 798.44	798.44
9128285J5	US Treasury Note 3% Due 10/31/2025	12/28/2022 12/29/2022 250,000.00	242,075.27 0.00 0.00 242,296.50	1,926.80 0.00 2,506.91 580.11	221.23 0.00 221.23 801.34	801.34
9128286L9	US Treasury Note 2.25% Due 03/31/2026	12/28/2022 12/29/2022 250,000.00	236,273.56 0.00 0.00 236,606.61	1,916.21 0.00 2,348.90 432.69	333.05 0.00 333.05 765.74	765.74
9128286S4	US Treasury Note 2.375% Due 04/30/2026	12/29/2022 12/30/2022 250,000.00	236,812.86 0.00 0.00 237,124.72	1,525.38 0.00 1,984.63 459.25	311.86 0.00 311.86 771.11	771.11
912828K74	US Treasury Note 2% Due 08/15/2025	06/01/2022 06/02/2022 200,000.00	195,980.91 0.00 0.00 196,102.43	1,847.83 2,000.00 154.70 306.87	121.52 0.00 121.52 428.39	428.39
912828M56	US Treasury Note 2.25% Due 11/15/2025	08/29/2022 08/31/2022 200,000.00	193,777.29 0.00 0.00 193,948.45	969.61 0.00 1,317.68 348.07	171.16 0.00 171.16 519.23	519.23
912828U24	US Treasury Note 2% Due 11/15/2026	01/05/2023 01/06/2023 250,000.00	232,132.78 0.00 0.00 232,494.52	1,077.35 0.00 1,464.09 386.74	361.74 0.00 361.74 748.48	748.48
912828V98	US Treasury Note 2.25% Due 02/15/2027	01/20/2023 01/23/2023 250,000.00	236,974.01 0.00 0.00 237,221.28	2,598.51 2,812.50 217.54 431.53	247.27 0.00 247.27 678.80	678.80

Income Earned

As of February 28, 2023



CUSIP	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
912828YD6	US Treasury Note 1.375% Due 08/31/2026	01/05/2023 01/06/2023 250,000.00	227,603.73 0.00 0.00 228,083.52	1,462.36 1,718.75 9.34 265.73	479.79 0.00 479.79 745.52	745.52
912828YE4	US Treasury Note 1.25% Due 08/31/2024	01/08/2021 01/11/2021 250,000.00	253,716.91 0.00 0.00 253,536.54	1,329.42 1,562.50 8.49 241.57	0.00 180.37 (180.37) 61.20	61.20
912828Z52	US Treasury Note 1.375% Due 01/31/2025	06/07/2021 06/07/2021 200,000.00	203,556.97 0.00 0.00 203,420.54	7.60 0.00 220.30 212.70	0.00 136.43 (136.43) 76.27	76.27
912828ZC7	US Treasury Note 1.125% Due 02/28/2025	02/09/2022 02/10/2022 200,000.00	198,112.87 0.00 0.00 198,182.58	957.18 1,125.00 6.11 173.93	69.71 0.00 69.71 243.64	243.64
912828ZF0	US Treasury Note 0.5% Due 03/31/2025	03/15/2022 03/21/2022 200,000.00	193,490.39 0.00 0.00 193,721.41	340.66 0.00 417.58 76.92	231.02 0.00 231.02 307.94	307.94
912828ZL7	US Treasury Note 0.375% Due 04/30/2025	03/22/2022 03/23/2022 200,000.00	191,265.63 0.00 0.00 191,564.24	192.68 0.00 250.69 58.01	298.61 0.00 298.61 356.62	356.62
91282CAP6	US Treasury Note 0.125% Due 10/15/2023	11/12/2020 11/13/2020 250,000.00	249,817.07 0.00 0.00 249,837.08	93.58 0.00 117.62 24.04	20.01 0.00 20.01 44.05	44.05
91282CBA8	US Treasury Note 0.125% Due 12/15/2023	01/06/2021 01/07/2021 250,000.00	249,844.06 0.00 0.00 249,857.83	41.21 0.00 65.25 24.04	13.77 0.00 13.77 37.81	37.81
91282CBE0	US Treasury Note 0.125% Due 01/15/2024	01/12/2021 01/15/2021 250,000.00	249,717.57 0.00 0.00 249,740.30	14.68 0.00 38.85 24.17	22.73 0.00 22.73 46.90	46.90

Income Earned

As of February 28, 2023



CUSIP	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
91282CBM2	US Treasury Note 0.125% Due 02/15/2024	02/23/2021 02/24/2021 200,000.00	199,800.97 0.00 0.00 199,815.67	115.49 125.00 9.67 19.18	14.70 0.00 14.70 33.88	33.88
91282CBR1	US Treasury Note 0.25% Due 03/15/2024	03/30/2021 03/31/2021 200,000.00	199,831.77 0.00 0.00 199,843.32	191.99 0.00 230.66 38.67	11.55 0.00 11.55 50.22	50.22
91282CBV2	US Treasury Note 0.375% Due 04/15/2024	04/29/2021 04/30/2021 250,000.00	250,091.22 0.00 0.00 250,085.40	280.73 0.00 352.85 72.12	0.00 5.82 (5.82) 66.30	66.30
91282CCG4	US Treasury Note 0.25% Due 06/15/2024	06/09/2021 06/15/2021 250,000.00	249,795.06 0.00 0.00 249,806.54	82.42 0.00 130.49 48.07	11.48 0.00 11.48 59.55	59.55
91282CCL3	US Treasury Note 0.375% Due 07/15/2024	07/13/2021 07/15/2021 250,000.00	249,839.44 0.00 0.00 249,847.92	44.03 0.00 116.54 72.51	8.48 0.00 8.48 80.99	80.99
91282CCX7	US Treasury Note 0.375% Due 09/15/2024	09/10/2021 09/15/2021 200,000.00	199,776.35 0.00 0.00 199,786.93	287.98 0.00 345.99 58.01	10.58 0.00 10.58 68.59	68.59
91282CDB4	US Treasury Note 0.625% Due 10/15/2024	10/14/2021 10/15/2021 200,000.00	199,991.14 0.00 0.00 199,991.53	374.31 0.00 470.47 96.16	0.39 0.00 0.39 96.55	96.55
91282CDH1	US Treasury Note 0.75% Due 11/15/2024	11/10/2021 11/15/2021 200,000.00	199,827.78 0.00 0.00 199,835.16	323.20 0.00 439.23 116.03	7.38 0.00 7.38 123.41	123.41
91282CDN8	US Treasury Note 1% Due 12/15/2024	02/01/2022 02/02/2022 200,000.00	198,618.87 0.00 0.00 198,675.49	263.74 0.00 417.58 153.84	56.62 0.00 56.62 210.46	210.46

Vallejo Flood & Wastewater District Consolidated

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Income Earned

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CUSIP	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
91282CEF4	US Treasury Note 2.5% Due 03/31/2027	12/12/2022 12/13/2022 200,000.00	189,373.23 0.00 0.00 189,569.12	1,703.30 0.00 2,087.91 384.61	195.89 0.00 195.89 580.50	580.50
91282CEW7	US Treasury Note 3.25% Due 06/30/2027	12/29/2022 12/30/2022 250,000.00	242,315.70 0.00 0.00 242,449.34	718.23 0.00 1,346.69 628.46	133.64 0.00 133.64 762.10	762.10
91282CFH9	US Treasury Note 3.125% Due 08/31/2027	01/20/2023 01/23/2023 250,000.00	245,094.76 0.00 0.00 245,176.91	3,323.55 3,906.25 21.23 603.93	82.15 0.00 82.15 686.08	686.08
91324PEB4	United Health Group Inc Callable Note Cont 5/15/2022 0.55% Due 05/15/2024	11/08/2021 11/10/2021 50,000.00	49,853.21 0.00 0.00 49,861.98	58.06 0.00 80.97 22.91	8.77 0.00 8.77 31.68	31.68
			13,242,802.50	46,099.73	4,661.63	
			436,025.60	22,041.79	1,484.90	
			270,615.03	38,832.43	3,176.73	
Total Fixed Income		13,576,163.38	13,411,389.80	14,774.49	17,951.22	17,951.22
CASH & EQUIVALENT						
31846V203	First American Govt Obligation Fund Class Y	Various Various 159,645.56	301,605.34 151,807.07 293,766.85 159,645.56	0.00 2,409.00 0.00 2,409.00	0.00 0.00 0.00 2,409.00	2,409.00
90CHECK\$1	Checking Deposit Bank Account	Various Various 717,530.11	1,274,675.41 0.00 557,145.30 717,530.11	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00
			1,576,280.75	0.00	0.00	
			151,807.07	2,409.00	0.00	
			850,912.15	0.00	0.00	
Total Cash & Equivalent		877,175.67	877,175.67	2,409.00	2,409.00	2,409.00



CUSIP	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
LOCAL AGENCY INVESTMENT FUND						
90LAIF\$00	Local Agency Investment Fund State Pool	Various	32,382,943.45	69,533.19	0.00	59,603.04
		Various	0.00	0.00	0.00	
		30,022,943.45	2,360,000.00	129,136.23	0.00	
			30,022,943.45	59,603.04	59,603.04	
			32,382,943.45	69,533.19	0.00	
			0.00	0.00	0.00	
			2,360,000.00	129,136.23	0.00	
			30,022,943.45	59,603.04	59,603.04	
Total Local Agency Investment Fund		30,022,943.45	30,022,943.45	59,603.04	59,603.04	59,603.04
			47,202,026.70	115,632.92	4,661.63	79,963.26
			587,832.67	24,450.79	1,484.90	
			3,481,527.18	167,968.66	3,176.73	
TOTAL PORTFOLIO			44,476,282.50	76,786.53	79,963.26	

Cash Flow Report

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
03/08/2023	Interest	3137EAEW5	130,000.00	FHLMC Note 0.25% Due 9/8/2023	0.00	162.50	162.50
03/15/2023	Interest	91282CCX7	200,000.00	US Treasury Note 0.375% Due 9/15/2024	0.00	375.00	375.00
03/15/2023	Interest	91282CBR1	200,000.00	US Treasury Note 0.25% Due 3/15/2024	0.00	250.00	250.00
03/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,447.66	11.65	2,459.31
03/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	734.46	3.44	737.90
03/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,308.40	7.87	1,316.27
03/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	0.00	19.50	19.50
03/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
03/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,293.64	12.12	4,305.76
03/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,446.69	16.31	4,463.00
03/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,732.94	28.50	4,761.44
03/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	771.11	4.97	776.08
03/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	0.00	87.00	87.00
03/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	0.00	17.75	17.75
03/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
03/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	0.00	14.17	14.17
03/18/2023	Interest	808513BN4	150,000.00	Charles Schwab Corp Callable Note Cont 2/18/2024 0.75% Due 3/18/2024	0.00	562.50	562.50

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
03/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,089.05	22.21	3,111.26
03/19/2023	Interest	459058GQ0	125,000.00	Intl. Bank Recon & Development Note 2.5% Due 3/19/2024	0.00	1,562.50	1,562.50
03/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,291.31	22.51	6,313.82
03/21/2023	Paydown	3137BVZ82	0.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
03/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	0.00	25.67	25.67
03/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,295.50	6.72	2,302.22
03/21/2023	Paydown	3137BKRJ1	0.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
03/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	132.30	132.30
03/23/2023	Interest	4581X0DZ8	165,000.00	Inter-American Dev Bank Note 0.5% Due 9/23/2024	0.00	412.50	412.50
03/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	0.00	32.08	32.08
03/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	0.00	93.63	93.63
03/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,393.77	6.59	2,400.36
03/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
03/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
03/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	114.67	114.67
03/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
03/31/2023	Interest	912828ZF0	200,000.00	US Treasury Note 0.5% Due 3/31/2025	0.00	500.00	500.00

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
03/31/2023	Interest	91282CEF4	200,000.00	US Treasury Note 2.5% Due 3/31/2027	0.00	2,500.00	2,500.00
03/31/2023	Interest	9128285C0	250,000.00	US Treasury Note 3% Due 9/30/2025	0.00	3,750.00	3,750.00
03/31/2023	Interest	9128286L9	250,000.00	US Treasury Note 2.25% Due 3/31/2026	0.00	2,812.50	2,812.50
MAR 2023					32,804.53	15,525.09	48,329.62
04/02/2023	Interest	3133EMBS0	250,000.00	FFCB Note 0.2% Due 10/2/2023	0.00	250.00	250.00
04/06/2023	Maturity	89236TJD8	60,000.00	Toyota Motor Credit Corp Note 0.4% Due 4/6/2023	60,000.00	120.00	60,120.00
04/15/2023	Interest	87612EBL9	125,000.00	Target Corp Callable Note Cont 4/15/25 2.25% Due 4/15/2025	0.00	1,406.25	1,406.25
04/15/2023	Interest	91282CAP6	250,000.00	US Treasury Note 0.125% Due 10/15/2023	0.00	156.25	156.25
04/15/2023	Interest	91282CDB4	200,000.00	US Treasury Note 0.625% Due 10/15/2024	0.00	625.00	625.00
04/15/2023	Interest	91282CBV2	250,000.00	US Treasury Note 0.375% Due 4/15/2024	0.00	468.75	468.75
04/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,447.10	14.83	4,461.93
04/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	0.00	17.75	17.75
04/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,448.45	10.88	2,459.33
04/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	0.00	87.00	87.00
04/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	734.75	3.13	737.88
04/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	0.00	19.50	19.50
04/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
04/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,295.03	11.19	4,306.22
04/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	768.55	4.74	773.29
04/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,733.37	27.00	4,760.37
04/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,308.82	7.48	1,316.30
04/16/2023	Interest	3137EAEY1	165,000.00	FHLMC Note 0.125% Due 10/16/2023	0.00	103.13	103.13
04/16/2023	Interest	45950KCR9	100,000.00	International Finance Corp Note 1.375% Due 10/16/2024	0.00	687.50	687.50
04/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
04/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	0.00	14.17	14.17
04/17/2023	Dividend	90LAIF\$00	1,891,198,688.80	Local Agency Investment Fund State Pool	0.00	129,502.53	129,502.53
04/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,089.67	21.15	3,110.82
04/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,292.56	20.47	6,313.03
04/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,296.05	6.21	2,302.26
04/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
04/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	0.00	25.67	25.67
04/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
04/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	0.00	32.08	32.08
04/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,394.35	5.93	2,400.28

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
04/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
04/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	0.00	93.63	93.63
04/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00
04/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
04/30/2023	Interest	912828ZL7	200,000.00	US Treasury Note 0.375% Due 4/30/2025	0.00	375.00	375.00
04/30/2023	Interest	912828J5	250,000.00	US Treasury Note 3% Due 10/31/2025	0.00	3,750.00	3,750.00
04/30/2023	Interest	713448CT3	150,000.00	Pepsico Inc. Callable Note Cont 1/30/2025 2.75% Due 4/30/2025	0.00	2,062.50	2,062.50
04/30/2023	Interest	9128286S4	250,000.00	US Treasury Note 2.375% Due 4/30/2026	0.00	2,968.75	2,968.75
APR 2023					92,808.70	144,526.15	237,334.85
05/01/2023	Interest	78015K7C2	150,000.00	Royal Bank of Canada Note 2.25% Due 11/1/2024	0.00	1,687.50	1,687.50
05/01/2023	Interest	06367WB85	125,000.00	Bank of Montreal Note 1.85% Due 5/1/2025	0.00	1,156.25	1,156.25
05/03/2023	Interest	594918BJ2	150,000.00	Microsoft Callable Note Cont 8/3/2025 3.125% Due 11/3/2025	0.00	2,343.75	2,343.75
05/06/2023	Interest	3137EAEZ8	210,000.00	FHLMC Note 0.25% Due 11/6/2023	0.00	262.50	262.50
05/10/2023	Interest	665859AW4	150,000.00	Northern Trust Company Callable Note Cont 4/10/2027 4% Due 5/10/2027	0.00	3,000.00	3,000.00
05/12/2023	Interest	023135BW5	85,000.00	Amazon.com Inc Note 0.45% Due 5/12/2024	0.00	191.25	191.25
05/15/2023	Interest	912828M56	200,000.00	US Treasury Note 2.25% Due 11/15/2025	0.00	2,250.00	2,250.00

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
05/15/2023	Interest	91324PEB4	50,000.00	United Health Group Inc Callable Note Cont 5/15/2022 0.55% Due 5/15/2024	0.00	137.50	137.50
05/15/2023	Interest	912828U24	250,000.00	US Treasury Note 2% Due 11/15/2026	0.00	2,500.00	2,500.00
05/15/2023	Interest	91282CDH1	200,000.00	US Treasury Note 0.75% Due 11/15/2024	0.00	750.00	750.00
05/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	735.04	2.82	737.86
05/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,309.24	7.09	1,316.33
05/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,954.55	19.50	1,974.05
05/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,447.50	13.35	4,460.85
05/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
05/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,296.43	10.26	4,306.69
05/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,449.25	10.10	2,459.35
05/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	0.00	87.00	87.00
05/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	765.95	4.52	770.47
05/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,733.81	25.50	4,759.31
05/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,355.18	17.75	1,372.93
05/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
05/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	0.00	14.17	14.17

Vallejo Flood & Wastewater District Consolidated

Account #10761

Cash Flow Report

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
05/17/2023	Interest	14913R2L0	130,000.00	Caterpillar Financial Service Note 0.45% Due 5/17/2024	0.00	292.50	292.50
05/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,090.29	20.10	3,110.39
05/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,293.82	18.42	6,312.24
05/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,296.60	5.69	2,302.29
05/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,587.01	25.67	1,612.68
05/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
05/22/2023	Maturity	3135G04Q3	240,000.00	FNMA Note 0.25% Due 5/22/2023	240,000.00	300.00	240,300.00
05/24/2023	Interest	459058JM6	105,000.00	Intl. Bank Recon & Development Note 0.25% Due 11/24/2023	0.00	131.25	131.25
05/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00
05/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
05/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,112.70	32.08	3,144.78
05/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,394.93	5.27	2,400.20
05/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
05/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
05/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	0.00	93.63	93.63
05/27/2023	Interest	3135G06H1	185,000.00	FNMA Note 0.25% Due 11/27/2023	0.00	231.25	231.25
MAY 2023					280,822.30	17,274.35	298,096.65

Cash Flow Report

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
06/01/2023	Interest	023135CN4	100,000.00	Amazon.com Inc Note 4.6% Due 12/1/2025	0.00	2,300.00	2,300.00
06/04/2023	Interest	3137EAFA2	150,000.00	FHLMC Note 0.25% Due 12/4/2023	0.00	187.50	187.50
06/08/2023	Maturity	69371RQ82	150,000.00	Paccar Financial Corp Note 0.8% Due 6/8/2023	150,000.00	600.00	150,600.00
06/12/2023	Interest	89114QCA4	125,000.00	Toronto Dominion Bank Note 2.65% Due 6/12/2024	0.00	1,656.25	1,656.25
06/14/2023	Call	06051GJY6	100,000.00	Bank of America Corp Callable Note Cont 6/14/2023 0.523% Due 6/14/2024	100,000.00	261.50	100,261.50
06/15/2023	Interest	91282CDN8	200,000.00	US Treasury Note 1% Due 12/15/2024	0.00	1,000.00	1,000.00
06/15/2023	Interest	91282CBA8	250,000.00	US Treasury Note 0.125% Due 12/15/2023	0.00	156.25	156.25
06/15/2023	Interest	91282CCG4	250,000.00	US Treasury Note 0.25% Due 6/15/2024	0.00	312.50	312.50
06/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,450.04	9.33	2,459.37
06/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	0.00	87.00	87.00
06/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,355.98	16.95	1,372.93
06/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	735.33	2.50	737.83
06/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,954.73	18.65	1,973.38
06/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,447.92	11.86	4,459.78
06/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
06/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,297.82	9.33	4,307.15
06/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	763.32	4.30	767.62

Cash Flow Report

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
06/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,734.24	24.00	4,758.24
06/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,309.67	6.70	1,316.37
06/16/2023	Call	06406FAD5	150,000.00	Bank of NY Mellon Corp Callable Note Cont 6/16/2023 2.2% Due 8/16/2023	150,000.00	1,100.00	151,100.00
06/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	0.00	14.17	14.17
06/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
06/18/2023	Interest	89236TJH9	80,000.00	Toyota Motor Credit Corp Note 0.5% Due 6/18/2024	0.00	200.00	200.00
06/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,090.91	19.04	3,109.95
06/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,295.08	16.38	6,311.46
06/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,587.39	24.50	1,611.89
06/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
06/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,297.16	5.17	2,302.33
06/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
06/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
06/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,126.34	29.23	3,155.57
06/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,395.51	4.61	2,400.12
06/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
06/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00
06/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	0.00	93.63	93.63
06/29/2023	Interest	3133EN5E6	250,000.00	FFCB Note 4% Due 12/29/2025	0.00	5,000.00	5,000.00
06/30/2023	Interest	91282CEW7	250,000.00	US Treasury Note 3.25% Due 6/30/2027	0.00	4,062.50	4,062.50
JUN 2023					440,841.44	18,861.53	459,702.97
07/10/2023	Maturity	3135G05G4	205,000.00	FNMA Note 0.25% Due 7/10/2023	205,000.00	256.25	205,256.25
07/15/2023	Interest	91282CCL3	250,000.00	US Treasury Note 0.375% Due 7/15/2024	0.00	468.75	468.75
07/15/2023	Interest	79466LAG9	20,000.00	Salesforce.com Inc Callable Note Cont 7/15/2022 0.625% Due 7/15/2024	0.00	62.50	62.50
07/15/2023	Interest	91282CBE0	250,000.00	US Treasury Note 0.125% Due 1/15/2024	0.00	156.25	156.25
07/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	760.68	4.07	764.75
07/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,734.68	22.50	4,757.18
07/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	0.00	87.00	87.00
07/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,356.78	16.15	1,372.93
07/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,450.84	8.55	2,459.39
07/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	735.62	2.19	737.81
07/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,310.10	6.30	1,316.40
07/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,954.90	17.81	1,972.71

Cash Flow Report

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
07/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
07/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,299.23	8.39	4,307.62
07/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,448.32	10.38	4,458.70
07/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	1,187.70	14.17	1,201.87
07/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
07/17/2023	Interest	24422EVN6	145,000.00	John Deere Capital Corp Note 0.45% Due 1/17/2024	0.00	326.25	326.25
07/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,091.52	17.99	3,109.51
07/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,296.34	14.33	6,310.67
07/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,587.75	23.34	1,611.09
07/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,297.71	4.66	2,302.37
07/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
07/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,140.05	26.36	3,166.41
07/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	0.00	93.63	93.63
07/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,396.08	3.96	2,400.04
07/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
07/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
07/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
07/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
07/30/2023	Interest	91159HHX1	200,000.00	US Bancorp Callable Note Cont 6/28/2024 2.4% Due 7/30/2024	0.00	2,400.00	2,400.00
07/31/2023	Interest	912828Z52	200,000.00	US Treasury Note 1.375% Due 1/31/2025	0.00	1,375.00	1,375.00
JUL 2023					247,048.30	7,054.46	254,102.76
08/06/2023	Interest	857477BR3	35,000.00	State Street Bank Callable Note Cont 2/6/2025 1.746% Due 2/6/2026	0.00	305.55	305.55
08/14/2023	Maturity	3133EL3V4	250,000.00	FFCB Note 0.2% Due 8/14/2023	250,000.00	250.00	250,250.00
08/15/2023	Interest	912828K74	200,000.00	US Treasury Note 2% Due 8/15/2025	0.00	2,000.00	2,000.00
08/15/2023	Interest	912828V98	250,000.00	US Treasury Note 2.25% Due 2/15/2027	0.00	2,812.50	2,812.50
08/15/2023	Interest	91282CBM2	200,000.00	US Treasury Note 0.125% Due 2/15/2024	0.00	125.00	125.00
08/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,735.11	21.00	4,756.11
08/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	758.00	3.85	761.85
08/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,310.52	5.91	1,316.43
08/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,448.73	8.90	4,457.63
08/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,357.59	15.34	1,372.93
08/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,451.65	7.77	2,459.42
08/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	0.00	87.00	87.00
08/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	735.90	1.88	737.78

Vallejo Flood & Wastewater District Consolidated

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Cash Flow Report

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Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
08/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,955.09	16.96	1,972.05
08/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
08/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,300.62	7.46	4,308.08
08/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
08/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	1,187.98	13.49	1,201.47
08/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,092.14	16.93	3,109.07
08/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,297.59	12.29	6,309.88
08/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,298.27	4.14	2,302.41
08/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
08/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,588.13	22.17	1,610.30
08/23/2023	Interest	037833BY5	150,000.00	Apple Inc Callable Note Cont 11/23/2025 3.25% Due 2/23/2026	0.00	2,437.50	2,437.50
08/24/2023	Maturity	3137EAEV7	190,000.00	FHLMC Note 0.25% Due 8/24/2023	190,000.00	237.50	190,237.50
08/25/2023	Interest	3133ENPY0	200,000.00	FFCB Note 1.75% Due 2/25/2025	0.00	1,750.00	1,750.00
08/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
08/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,153.80	23.49	3,177.29
08/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
08/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00

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Vallejo Flood & Wastewater District Consolidated

Account #10761

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
08/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
08/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	0.00	93.63	93.63
08/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,396.66	3.30	2,399.96
08/26/2023	Interest	3133EMRZ7	170,000.00	FFCB Note 0.25% Due 2/26/2024	0.00	212.50	212.50
08/31/2023	Interest	912828YE4	250,000.00	US Treasury Note 1.25% Due 8/31/2024	0.00	1,562.50	1,562.50
08/31/2023	Interest	91282CFH9	250,000.00	US Treasury Note 3.125% Due 8/31/2027	0.00	3,906.25	3,906.25
08/31/2023	Interest	912828YD6	250,000.00	US Treasury Note 1.375% Due 8/31/2026	0.00	1,718.75	1,718.75
08/31/2023	Interest	912828ZC7	200,000.00	US Treasury Note 1.125% Due 2/28/2025	0.00	1,125.00	1,125.00
AUG 2023					482,067.78	20,436.24	502,504.02
09/08/2023	Maturity	3137EAEW5	130,000.00	FHLMC Note 0.25% Due 9/8/2023	130,000.00	162.50	130,162.50
09/15/2023	Interest	91282CBR1	200,000.00	US Treasury Note 0.25% Due 3/15/2024	0.00	250.00	250.00
09/15/2023	Interest	91282CCX7	200,000.00	US Treasury Note 0.375% Due 9/15/2024	0.00	375.00	375.00
09/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	0.00	87.00	87.00
09/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	755.30	3.63	758.93
09/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,735.53	19.51	4,755.04
09/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,358.39	14.54	1,372.93
09/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	736.19	1.57	737.76

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
09/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,310.95	5.52	1,316.47
09/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,955.27	16.11	1,971.38
09/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,449.13	7.42	4,456.55
09/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
09/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,302.02	6.53	4,308.55
09/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,452.44	7.00	2,459.44
09/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	1,188.26	12.82	1,201.08
09/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
09/18/2023	Interest	808513BN4	150,000.00	Charles Schwab Corp Callable Note Cont 2/18/2024 0.75% Due 3/18/2024	0.00	562.50	562.50
09/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,092.76	15.87	3,108.63
09/19/2023	Interest	459058GQ0	125,000.00	Intl. Bank Recon & Development Note 2.5% Due 3/19/2024	0.00	1,562.50	1,562.50
09/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,298.86	10.24	6,309.10
09/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,588.50	21.01	1,609.51
09/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,298.83	3.62	2,302.45
09/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
09/23/2023	Interest	4581X0DZ8	165,000.00	Inter-American Dev Bank Note 0.5% Due 9/23/2024	0.00	412.50	412.50
09/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,167.63	20.59	3,188.22

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
09/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,397.24	2.64	2,399.88
09/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
09/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
09/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	0.00	93.63	93.63
09/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00
09/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
09/30/2023	Interest	912828ZF0	200,000.00	US Treasury Note 0.5% Due 3/31/2025	0.00	500.00	500.00
09/30/2023	Interest	91282CEF4	200,000.00	US Treasury Note 2.5% Due 3/31/2027	0.00	2,500.00	2,500.00
09/30/2023	Interest	9128285C0	250,000.00	US Treasury Note 3% Due 9/30/2025	0.00	3,750.00	3,750.00
09/30/2023	Interest	9128286L9	250,000.00	US Treasury Note 2.25% Due 3/31/2026	0.00	2,812.50	2,812.50
SEP 2023					172,087.30	14,864.43	186,951.73
10/02/2023	Maturity	3133EMBS0	250,000.00	FFCB Note 0.2% Due 10/2/2023	250,000.00	250.00	250,250.00
10/15/2023	Interest	91282CDB4	200,000.00	US Treasury Note 0.625% Due 10/15/2024	0.00	625.00	625.00
10/15/2023	Interest	91282CBV2	250,000.00	US Treasury Note 0.375% Due 4/15/2024	0.00	468.75	468.75
10/15/2023	Interest	87612EBL9	125,000.00	Target Corp Callable Note Cont 4/15/25 2.25% Due 4/15/2025	0.00	1,406.25	1,406.25
10/15/2023	Maturity	91282CAP6	250,000.00	US Treasury Note 0.125% Due 10/15/2023	250,000.00	156.25	250,156.25
10/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,453.24	6.22	2,459.46

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
10/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,359.19	13.74	1,372.93
10/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	736.48	1.25	737.73
10/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,955.45	15.26	1,970.71
10/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,449.55	5.93	4,455.48
10/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
10/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,303.41	5.60	4,309.01
10/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	752.57	3.41	755.98
10/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	1,847.48	87.00	1,934.48
10/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,735.97	18.01	4,753.98
10/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,311.38	5.12	1,316.50
10/16/2023	Interest	45950KCR9	100,000.00	International Finance Corp Note 1.375% Due 10/16/2024	0.00	687.50	687.50
10/16/2023	Maturity	3137EAEY1	165,000.00	FHLMC Note 0.125% Due 10/16/2023	165,000.00	103.13	165,103.13
10/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
10/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	1,188.53	12.15	1,200.68
10/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,093.38	14.82	3,108.20
10/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,300.12	8.19	6,308.31
10/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,299.38	3.11	2,302.49

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
10/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,588.87	19.84	1,608.71
10/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
10/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,181.52	17.69	3,199.21
10/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
10/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
10/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,397.82	1.98	2,399.80
10/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
10/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00
10/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	3,710.34	93.63	3,803.97
10/30/2023	Interest	713448CT3	150,000.00	Pepsico Inc. Callable Note Cont 1/30/2025 2.75% Due 4/30/2025	0.00	2,062.50	2,062.50
10/31/2023	Interest	912828ZL7	200,000.00	US Treasury Note 0.375% Due 4/30/2025	0.00	375.00	375.00
10/31/2023	Interest	9128285J5	250,000.00	US Treasury Note 3% Due 10/31/2025	0.00	3,750.00	3,750.00
10/31/2023	Interest	9128286S4	250,000.00	US Treasury Note 2.375% Due 4/30/2026	0.00	2,968.75	2,968.75
OCT 2023					712,664.68	14,813.76	727,478.44
11/01/2023	Interest	78015K7C2	150,000.00	Royal Bank of Canada Note 2.25% Due 11/1/2024	0.00	1,687.50	1,687.50
11/01/2023	Interest	06367WB85	125,000.00	Bank of Montreal Note 1.85% Due 5/1/2025	0.00	1,156.25	1,156.25
11/03/2023	Interest	594918BJ2	150,000.00	Microsoft Callable Note Cont 8/3/2025 3.125% Due 11/3/2025	0.00	2,343.75	2,343.75

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
11/06/2023	Maturity	3137EAEZ8	210,000.00	FHLMC Note 0.25% Due 11/6/2023	210,000.00	262.50	210,262.50
11/10/2023	Interest	665859AW4	150,000.00	Northern Trust Company Callable Note Cont 4/10/2027 4% Due 5/10/2027	0.00	3,000.00	3,000.00
11/12/2023	Interest	023135BW5	85,000.00	Amazon.com Inc Note 0.45% Due 5/12/2024	0.00	191.25	191.25
11/15/2023	Interest	912828M56	200,000.00	US Treasury Note 2.25% Due 11/15/2025	0.00	2,250.00	2,250.00
11/15/2023	Interest	91324PEB4	50,000.00	United Health Group Inc Callable Note Cont 5/15/2022 0.55% Due 5/15/2024	0.00	137.50	137.50
11/15/2023	Interest	912828U24	250,000.00	US Treasury Note 2% Due 11/15/2026	0.00	2,500.00	2,500.00
11/15/2023	Interest	91282CDH1	200,000.00	US Treasury Note 0.75% Due 11/15/2024	0.00	750.00	750.00
11/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,454.03	5.45	2,459.48
11/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	736.77	0.94	737.71
11/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,311.80	4.73	1,316.53
11/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,955.62	14.42	1,970.04
11/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
11/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,304.81	4.67	4,309.48
11/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	1,849.85	83.43	1,933.28
11/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,449.95	4.45	4,454.40
11/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,360.00	12.93	1,372.93

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
11/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,736.40	16.51	4,752.91
11/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	749.81	3.19	753.00
11/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	0.00	90.42	90.42
11/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	1,188.81	11.47	1,200.28
11/17/2023	Interest	14913R2L0	130,000.00	Caterpillar Financial Service Note 0.45% Due 5/17/2024	0.00	292.50	292.50
11/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,094.00	13.76	3,107.76
11/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,301.37	6.15	6,307.52
11/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,589.24	18.68	1,607.92
11/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,299.93	2.59	2,302.52
11/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
11/24/2023	Maturity	459058JM6	105,000.00	Intl. Bank Recon & Development Note 0.25% Due 11/24/2023	105,000.00	131.25	105,131.25
11/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00
11/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
11/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,195.46	14.77	3,210.23
11/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	3,508.46	83.70	3,592.16
11/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,398.40	1.32	2,399.72
11/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88

Vallejo Flood & Wastewater District Consolidated

Account #10761

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
11/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
11/27/2023	Maturity	3135G06H1	185,000.00	FNMA Note 0.25% Due 11/27/2023	185,000.00	231.25	185,231.25
NOV 2023					547,484.71	16,864.59	564,349.30
12/01/2023	Interest	023135CN4	100,000.00	Amazon.com Inc Note 4.6% Due 12/1/2025	0.00	2,300.00	2,300.00
12/04/2023	Maturity	3137EAFA2	150,000.00	FHLMC Note 0.25% Due 12/4/2023	150,000.00	187.50	150,187.50
12/12/2023	Interest	89114QCA4	125,000.00	Toronto Dominion Bank Note 2.65% Due 6/12/2024	0.00	1,656.25	1,656.25
12/15/2023	Interest	91282CDN8	200,000.00	US Treasury Note 1% Due 12/15/2024	0.00	1,000.00	1,000.00
12/15/2023	Interest	91282CCG4	250,000.00	US Treasury Note 0.25% Due 6/15/2024	0.00	312.50	312.50
12/15/2023	Maturity	91282CBA8	250,000.00	US Treasury Note 0.125% Due 12/15/2023	250,000.00	156.25	250,156.25
12/15/2023	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,454.83	4.67	2,459.50
12/15/2023	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	737.05	0.63	737.68
12/15/2023	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,955.80	13.57	1,969.37
12/15/2023	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
12/15/2023	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,306.22	3.73	4,309.95
12/15/2023	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,360.80	12.13	1,372.93
12/15/2023	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	1,852.22	79.85	1,932.07
12/15/2023	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,312.22	4.34	1,316.56

Vallejo Flood & Wastewater District Consolidated

Account #10761

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
12/15/2023	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,450.36	2.97	4,453.33
12/15/2023	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,736.84	15.01	4,751.85
12/15/2023	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	747.02	2.97	749.99
12/16/2023	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	1,189.09	10.80	1,199.89
12/16/2023	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	1,586.87	90.42	1,677.29
12/18/2023	Interest	89236TJH9	80,000.00	Toyota Motor Credit Corp Note 0.5% Due 6/18/2024	0.00	200.00	200.00
12/18/2023	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,094.62	12.70	3,107.32
12/20/2023	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,302.63	4.10	6,306.73
12/21/2023	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,300.49	2.07	2,302.56
12/21/2023	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
12/21/2023	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,589.61	17.51	1,607.12
12/25/2023	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
12/25/2023	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,209.46	11.85	3,221.31
12/25/2023	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
12/25/2023	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	3,306.20	74.31	3,380.51
12/25/2023	Paydown	09690AAC7	23,963.76	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	2,398.98	0.66	2,399.64
12/25/2023	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00

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Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
12/25/2023	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
12/29/2023	Interest	3133EN5E6	250,000.00	FFCB Note 4% Due 12/29/2025	0.00	5,000.00	5,000.00
12/31/2023	Interest	91282CEW7	250,000.00	US Treasury Note 3.25% Due 6/30/2027	0.00	4,062.50	4,062.50
DEC 2023					448,891.31	16,776.55	465,667.86
01/15/2024	Interest	79466LAG9	20,000.00	Salesforce.com Inc Callable Note Cont 7/15/2022 0.625% Due 7/15/2024	0.00	62.50	62.50
01/15/2024	Interest	91282CCL3	250,000.00	US Treasury Note 0.375% Due 7/15/2024	0.00	468.75	468.75
01/15/2024	Maturity	91282CBE0	250,000.00	US Treasury Note 0.125% Due 1/15/2024	250,000.00	156.25	250,156.25
01/15/2024	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	744.21	2.75	746.96
01/15/2024	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,307.61	2.80	4,310.41
01/15/2024	Paydown	47787NAC3	8,094.95	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	737.35	0.31	737.66
01/15/2024	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,312.66	3.94	1,316.60
01/15/2024	Paydown	58769KAD6	48,936.00	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	4,450.77	1.48	4,452.25
01/15/2024	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,361.61	11.32	1,372.93
01/15/2024	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,455.63	3.89	2,459.52
01/15/2024	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,737.27	13.51	4,750.78
01/15/2024	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	1,854.60	76.27	1,930.87
01/15/2024	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,955.99	12.72	1,968.71

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
01/15/2024	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
01/16/2024	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	1,189.36	10.13	1,199.49
01/16/2024	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	1,587.26	86.32	1,673.58
01/17/2024	Maturity	24422EVN6	145,000.00	John Deere Capital Corp Note 0.45% Due 1/17/2024	145,000.00	326.25	145,326.25
01/18/2024	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,095.24	11.64	3,106.88
01/20/2024	Paydown	36262XAC8	69,273.58	GM Financial Auto Lease Trust 2021-3 A2 0.39% Due 10/21/2024	6,303.90	2.05	6,305.95
01/21/2024	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,589.98	16.35	1,606.33
01/21/2024	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
01/21/2024	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,301.05	1.55	2,302.60
01/25/2024	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
01/25/2024	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
01/25/2024	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,223.54	8.90	3,232.44
01/25/2024	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00
01/25/2024	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	3,103.54	65.47	3,169.01
01/25/2024	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
01/30/2024	Interest	91159HHX1	200,000.00	US Bancorp Callable Note Cont 6/28/2024 2.4% Due 7/30/2024	0.00	2,400.00	2,400.00
01/31/2024	Interest	912828Z52	200,000.00	US Treasury Note 1.375% Due 1/31/2025	0.00	1,375.00	1,375.00

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
JAN 2024					441,311.57	6,657.41	447,968.98
02/06/2024	Interest	857477BR3	35,000.00	State Street Bank Callable Note Cont 2/6/2025 1.746% Due 2/6/2026	0.00	305.55	305.55
02/15/2024	Interest	912828V98	250,000.00	US Treasury Note 2.25% Due 2/15/2027	0.00	2,812.50	2,812.50
02/15/2024	Interest	912828K74	200,000.00	US Treasury Note 2% Due 8/15/2025	0.00	2,000.00	2,000.00
02/15/2024	Maturity	91282CBM2	200,000.00	US Treasury Note 0.125% Due 2/15/2024	200,000.00	125.00	200,125.00
02/15/2024	Paydown	47788UAC6	26,248.84	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	1,313.08	3.55	1,316.63
02/15/2024	Paydown	89238JAC9	30,000.00	Toyota Auto Receivables Trust 2021-D A3 0.71% Due 4/15/2026	1,362.41	10.52	1,372.93
02/15/2024	Paydown	44933LAC7	36,798.55	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	2,456.43	3.11	2,459.54
02/15/2024	Paydown	47787JAC2	45,000.00	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	1,856.97	72.69	1,929.66
02/15/2024	Paydown	47789QAC4	45,000.00	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	1,956.17	11.87	1,968.04
02/15/2024	Paydown	58770AAC7	45,000.00	Mercedes-Benz Auto Receivable 2023-1 A3 4.51% Due 11/15/2027	0.00	169.13	169.13
02/15/2024	Paydown	89240BAC2	55,926.27	Toyota Auto Receivables Owners 2021-A A3 0.26% Due 5/15/2025	4,309.01	1.87	4,310.88
02/15/2024	Paydown	44934KAC8	90,000.00	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	4,737.71	12.01	4,749.72
02/15/2024	Paydown	89236XAC0	17,036.70	Toyota Auto Receivables 2020-D A3 0.35% Due 1/15/2025	741.36	2.54	743.90
02/16/2024	Paydown	362585AC5	35,000.00	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	1,587.64	82.22	1,669.86
02/16/2024	Paydown	362554AC1	25,000.00	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	1,189.64	9.45	1,199.09
02/18/2024	Call	808513BN4	90,000.00	Charles Schwab Corp Callable Note Cont 2/18/2024 0.75% Due 3/18/2024	90,000.00	281.25	90,281.25

Cash Flow Report

As of February 28, 2023



Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
02/18/2024	Paydown	43815EAC8	65,000.00	Honda Auto Receivables 2021-3 A3 0.41% Due 11/18/2025	3,095.85	10.59	3,106.44
02/21/2024	Paydown	43813GAC5	29,884.73	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	2,301.60	1.04	2,302.64
02/21/2024	Paydown	43815GAC3	35,000.00	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	1,590.35	15.18	1,605.53
02/21/2024	Paydown	43815JAC7	35,000.00	Honda Auto Receivables Owner 2023-1 A3 5.04% Due 4/21/2027	0.00	147.00	147.00
02/23/2024	Interest	037833BY5	150,000.00	Apple Inc Callable Note Cont 11/23/2025 3.25% Due 2/23/2026	0.00	2,437.50	2,437.50
02/25/2024	Interest	3133ENPY0	200,000.00	FFCB Note 1.75% Due 2/25/2025	0.00	1,750.00	1,750.00
02/25/2024	Paydown	05601XAC3	35,000.00	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	3,237.66	5.95	3,243.61
02/25/2024	Paydown	05602RAD3	35,000.00	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	2,900.48	57.17	2,957.65
02/25/2024	Paydown	3137BVZ82	100,000.00	FHLMC K063 3.43% Due 1/25/2027	0.00	285.83	285.83
02/25/2024	Paydown	3137BKRJ1	100,000.00	FHLMC K047 A2 3.329% Due 5/25/2025	0.00	277.42	277.42
02/25/2024	Paydown	05593AAC3	20,000.00	BMW Vehicle Lease Trust 2023-1 A3 5.16% Due 11/25/2025	0.00	86.00	86.00
02/25/2024	Paydown	3137BNGT5	250,000.00	FHLMC K054 A2 2.745% Due 1/25/2026	0.00	571.88	571.88
02/26/2024	Maturity	3133EMRZ7	170,000.00	FFCB Note 0.25% Due 2/26/2024	170,000.00	212.50	170,212.50
FEB 2024					494,636.36	11,761.32	506,397.68
TOTAL					4,393,468.98	305,415.88	4,698,884.86



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Performance: Performance results are presented gross-of-advisory fees and represent the client's Total Return. The deduction of advisory fees lowers performance results. These results include the reinvestment of dividends and other earnings. Past performance may not be indicative of future results. Therefore, clients should not assume that future performance of any specific investment or investment strategy will be profitable or equal to past performance levels. All investment strategies have the potential for profit or loss. Economic factors, market conditions or changes in investment strategies, contributions or withdrawals may materially alter the performance and results of your portfolio.

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Ratings: Ratings information have been provided by Moody's, S&P and Fitch through data feeds we believe to be reliable as of the date of this statement, however we cannot guarantee its accuracy.

Security level ratings for U.S. Agency issued mortgage-backed securities ("MBS") reflect the issuer rating because the securities themselves are not rated. The issuing U.S. Agency guarantees the full and timely payment of both principal and interest and carries a AA+/Aaa/AAA by S&P, Moody's and Fitch respectively.



District
Manager
Melissa Morton

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April 11, 2023

BOARD COMMUNICATION

Consent Item 5D

TO: THE HONORABLE PRESIDENT AND BOARD OF TRUSTEES

FROM: MELISSA MORTON, DISTRICT MANAGER 
TRACY RIDEOUT, ENGINEERING MANAGER

SUBJECT: AWARD CONSTRUCTION CONTRACT FOR NEW BEDFORD SANITARY SEWER LIFT STATION PROJECT (CWM004) TO GSW CONSTRUCTION, INC. IN THE AMOUNT OF \$3,422,800.

BACKGROUND AND DISCUSSION

The New Bedford Sanitary Sewer Lift Station, also known as the Glen Cove Lift Station is located on Old Glen Cove Road, south of Pueblo Road, east of I-80 and south of Hwy 780. The station was constructed in 1985 and serves the Glen Cove, Shadow Ridge, and Clearpoint residential subdivisions. It lifts sewage and distributes it via a long force main into a gravity sewer maintenance hole located in the intersection of New Bedford Drive and Sandy Neck Way before flowing by gravity to the Cypress Lift Station and eventually to the Ryder Street Treatment Plant. The nearly 40-year-old lift station requires significant rehabilitation including major mechanical and electrical equipment replacement.

The District, in 2021, engaged Woodard and Curran to conduct an assessment and preliminary design report (PDR) for four (4) lift stations of similar age and construction, all require major mechanical and electrical improvements. The New Bedford Lift Station was prioritized for initial construction activities because, in addition to mechanical, electrical replacement needs, confined space entry challenges, lack of bypass capability, and corrosion issues shared by all four stations, it also experiences water hammer which threatens to cause force main joint decoupling. Since the station is located directly adjacent to a creek, potential sewer overflows would likely have significantly damaging environmental consequences. Further, the access road to this station, an old county road, exhibits substantial structural degradation; access for maintenance vehicles is challenging, and the large PG&E gas transmission main located in the road section is showing signs of distress due to heavy maintenance vehicle loading and requires protection.

West Yost provided engineering design services in conjunction with District staff to deliver a project that addresses these deficiencies (Project). The Project was advertised for bids on February 12, 2023 in accordance with Public Contract Code requirements, and included a base bid and bid alternative #1 for construction of a precast polymer concrete wet well.

On March 14, 2023, the District received three (3) bids for the Project. Bid results were as follows:

Order	Contractor	Location of Business	Base Amount	Total Bid
			Bid Alternative #1	
1	GSW Construction, Inc.	San Francisco, CA	\$3,353,000	\$3,422,800
			\$69,800	
2	GSE Construction Company, Inc.	Livermore, CA	\$3,670,700	\$3,705,700
			\$35,000	
3	Pacific Infrastructure	Pleasanton, CA	\$3,832,000	\$3,852,000
			\$20,000	
Engineer's Estimate of Probable Cost			\$3,202,000	\$3,352,000
			\$150,000	

The engineer's estimate of probable construction cost for the Project was \$3,352,00. The bidding documents specify the low bid shall be determined as the lowest calculated sum of the Base Bid and Bid Alternative #1. The lowest bid received was submitted by GSW Construction, Inc. in the amount of \$3,422,800, which is 2% above the engineer's estimate. Staff has determined GSW Construction, Inc. is the lowest responsive, responsible bidder.

RECOMMENDATION

Staff recommends that the Board of Trustees:

1. Award the Project's construction contract, including Bid Alternative #1 to GSW Construction, Inc. for its bid amount of \$3,422,800;
2. Authorize a 15% contingency in the amount of \$513,420 to address change orders that may occur; and
3. Authorize the District Manager to execute the construction contract and any necessary change orders up to a total amount of \$3,936,220.

ALTERNATIVES CONSIDERED

This Project was initially scoped to correct all deficiencies observed in the assessment and PDR by rehabilitating the lift station; however, early in the design process, staff made the decision to completely demolish the existing lift station and electrical building in favor of new construction. This decision was based on the following factors: new construction will provide for more efficient construction; it allows for improved facility accessibility; provides a new seismic, energy, and building code compliant facility; and is appropriately sized for the backup generator, electrical equipment room and a restroom that does not currently exist in this service area.

The precast polymer concrete wetwells was provided as an additive alternate in the bid documents. The bid alternative is recommended due to its chemical corrosion resistance properties and long life expectancy. The existing facility exhibited significant corrosion and the inclusion of the polymer concrete wet well will reduce the need for future corrosion mitigation, decrease long term maintenance costs and minimize future confined space entry assessments.

Road reconstruction of the entire access road was evaluated, but deferred in favor of reconstruction of only the most degraded structural road section and construction of a new access turn around. District staff solicited interest from the City of Vallejo in partnering on costs

for overall road reconstruction, as the access road is public right of way; however, no agreement on a financing partnership could be reached. The Project will repair the portion of the access road which presents accessibility difficulties and poses the greatest threat to the existing gas transmission line.

ENVIRONMENTAL REVIEW

The project is Categorically Exempt per Section 15302 (c), reconstruction of existing utility facilities with no capacity expansion. A Notice of Exemption was filed with the Solano County Clerk on February 14, 2023.

FISCAL IMPACT

The Capital Improvement Project budget is programmed for complete funding over the next two fiscal years and is sufficient to provide all construction contract and related administrative costs.

PROPOSED ACTION

Award and authorize the District Manager to execute the construction contract for the New Bedford Sewer Lift Station Project including Project Bid Alternate #1 (CWP004) to GSW Construction, Inc., of San Francisco, CA for their bid amount of \$3,422,800 and authorize up to \$513,420 in change orders approved by the District Manager, for a total contract amount not to exceed \$3,936,220.

DOCUMENTS ATTACHED

None

CONTACT PERSON

Tracy Rideout, Engineering Manager, (707) 651-7139

District Manager
Melissa Morton

April 11, 2023

BOARD COMMUNICATION

Consent Item 5E

TO: THE HONORABLE PRESIDENT AND BOARD OF TRUSTEES

FROM: MELISSA MORTON, DISTRICT MANAGER 
JEFF TUCKER, FINANCE DIRECTOR/TREASURER

SUBJECT: AUTHORIZE STAFF TO ISSUE PROPOSITION 218 NOTICE OF PUBLIC HEARING AND PROPOSED RATE INCREASE

BACKGROUND AND DISCUSSION

Every five years, the District evaluates its residential and commercial wastewater rates to ensure that the rates are adequate to meet the revenue needs of the District's wastewater program and to ensure that there is a direct correlation between the calculated rates and the services provided to each customer connection. A Cost of Service Study, also sometimes known as a rate study, is how this analysis is conducted.

The District retained Carollo Engineers to develop a long-range forecast of wastewater program revenue requirements, and to determine whether a fee increase is recommended. After a thorough review and analysis, Carollo Engineers is recommending an increase to fees. Carollo Engineers has also created a Cost of Service model for the District and recommends rates that would be sufficient to meet revenue requirements and that would allocate the proportional cost of service to each parcel.

The attached draft Cost of Service Study (Study) identifies the revenue requirements for the Wastewater Fund and the Upper Lateral Fund, both of which are dependent on sewer service charges. The Study evaluated the appropriateness of the revenue requirements in relation to the District's projected operating and capital expenses, cash flow, debt service, reserve requirements, debt service coverage ratios, and other criteria.

The Study allocates the revenue requirements using a Cost of Service methodology that is consistent within the wastewater industry and with the Water Environment Federation Manual of Practice #27. The methodology assigns the District's costs to factors such as flow, the treatment of wastewater constituents, and customer service, and then in turn allocates those costs to customer classes. The costs allocated to customer classes are then converted to a rate structure to ensure that the fees paid by each class of customer are proportional to the services provided.

The Study recommends a new rate table for the District, which is shown on page 48 of the Study. The Board of Trustees provided direction to staff on March 14, 2023, to include rates in the Proposition 218 Notice of Public Hearing that were lower than the recommendations from Carollo Engineers.

The recommended rates for inclusion in the Notice of Public Hearing are as follows:

Billing Unit	Current Charge per Month	Proposed Charge Effective 7/1/23	Proposed Charge Effective 7/1/24	Proposed Charge Effective 7/1/25	Proposed Charge Effective 7/1/26	Proposed Charge Effective 7/1/27
Residential Customers (single family and multi-family)						
Flat Rate	64.12	73.74	84.80	97.52	103.38	109.18
Commercial and Industrial Customers						
Monthly Charge	50.80	54.26	57.96	61.9	66.12	70.62
Group 1 (per hcf)	3.26	3.68	4.15	4.69	5.30	5.98
Group 2 (per hcf)	3.61	4.1	4.66	5.3	6.03	6.86
Group 3 (per hcf)	5.83	6.75	7.82	9.06	10.49	12.14
Group 4						
Per hcf	2.60	2.89	3.22	3.58	3.98	4.43
BOD (lbs)	0.37	0.45	0.54	0.65	0.78	0.94
S.S. (lbs.)	0.40	0.45	0.51	0.58	0.65	0.73
Group 5 (per mgal)	3,460.71	4,080.38	4,811.00	5,672.44	6,688.12	7,885.68
Schools						
Monthly Charge	50.80	54.26	57.96	61.9	66.12	70.62
Per ADA	6.04	6.8	7.66	8.62	9.7	10.94
Upper Lateral						
Per Parcel/Connection	1.38	1.58	1.82	2.10	2.22	2.34

RECOMMENDATION

Authorize staff to issue a Notice of Public Hearing in compliance with Proposition 218 for sewer fees, to include the recommended rates.

ALTERNATIVES CONSIDERED

None

ENVIRONMENTAL REVIEW

This is not a project under CEQA and no environmental review is required.

FISCAL IMPACT

None.

PROPOSED ACTION

Authorize staff to issue a Notice of Public Hearing in compliance with Proposition 218 for sewer fees.

DOCUMENTS ATTACHED

A. Draft Cost of Service Study

CONTACT PERSON

Jeff Tucker, Finance Director/Treasurer, (707) 652-7802



Vallejo Flood and Wastewater District
Wastewater Rate Study

RATE STUDY RESULTS AND RECOMMENDATIONS

DRAFT | March 2023

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Abbreviations

BOD	biological oxygen demand
CIP	capital improvement plan
Carollo	Carollo Engineers, Inc.
FY	Fiscal Year
hcf/yr	hundred cubic feet per year
lbs	pounds
mgd	million gallons per day
mg/L	milligrams per liter
O&M	Operations and Maintenance
PAYGO	rate funded capital
RCNLD	replacement cost new, less depreciation
District or VFWD	Vallejo Flood and Wastewater District
Study	Wastewater Rate Study and Financial Plan
TSS	total suspended solids

Section 1

INTRODUCTION

1.1 Project Scope and Background

Vallejo Flood and Wastewater District (District or VFWD) retained Carollo Engineers, Inc. (Carollo) in 2022 to perform a Wastewater Rate Study and Financial Plan (Study). This Study conducted the following tasks to establish the rate recommendations provided in this report:

- Develop a five-year financial forecast and determine revenue requirements for the District's wastewater system services.
- Allocate the operating, capital, and debt expenses to each customer class.
- Calculate updated rates for residential and commercial customers for each of the next five years.
- Update Upper Lateral Program rates for a five-year period.

This report documents the analysis and recommendations of this Study, summarizing each methodology and findings.

1.1.1 About Vallejo Flood and Wastewater District

Vallejo Flood and Wastewater District is an independent special district that manages wastewater treatment and conveyance for the City of Vallejo, California, and certain unincorporated portions of Solano County. The District's wastewater system collects, treats, and disposes of approximately 4 billion gallons of wastewater per year generated by the over 120,000 residents located throughout the greater Vallejo area.

The District recently completed several master plans to address facility challenges, such as the urgent need to upgrade aging infrastructure and meet capacity needs for increased flow and strength. These anticipated and necessary costs, in addition to annual inflation, are principal drivers for the updated rates recommended in this Study.

1.2 Project Approach

Carollo used an industry standard rate-setting approach, following the methodology outlined in the Water Environment Federation's *Manual of Practice 27: Financing and Charges for Wastewater Systems* (MOP27). MOP27 outlines a industry best practices for wastewater utilities to use to forecast revenue requirements, allocate costs to the functional category and customer, and then calculate rates.

1.2.1 Proposition 218

Wastewater utilities in California must satisfy the requirements of California's Proposition 218. Proposition 218 requires that rates not exceed the proportional cost of service. While this Study should not be considered a legal document and does not provide any guarantees, assurances, or other legal obligations to meet Proposition 218, the analysis was performed with the proportionality requirements of Proposition 218 as a goal and the recommendations are presented using the best available data to show a nexus between costs and rates.

1.2.2 Report Organization

This Study is organized into the following sections to summarize the methodology and results of each step:

- Baseline Inputs and Assumptions.
- Revenue Requirements.
- Cost of Service Analysis.
- Rate Structure Design.
- Rate Recommendations.
- Appendix.

1.2.2.1 Revenue Requirements

The Revenue Requirements analysis determines the total amount of funding necessary to provide the District's wastewater conveyance and treatment services and facilities and meet its policy goals and contractual commitments. Several financial tests confirm sufficient revenue or identify and quantify necessary increases:

- **Cash Flow:** Do revenues meet expenditures?
- **Reserves:** Do end-of-year reserve fund balances meet policies set by the Board of Trustees and industry best practices? If not, does the District have a funding plan in place to cover shortfalls and meet both operating and capital needs?
- **Debt Coverage:** Do reserves meet all obligations outlined in debt service covenants and other agreements?

The existing revenues are tested against these three tests. If any fail, additional revenues are added to the total revenue requirement.

1.2.2.2 Cost of Service

The Cost of Service process allocates the revenue requirements among customers by determining the proportional rates and charges paid by each customer. Each customer class places different demands upon the District's wastewater infrastructure, with some customer classes generating different wastewater flow volumes and pollutants than others. Therefore, the revenue requirements must be allocated to each component of the system and then further allocated by customer class in accordance with how the system costs are incurred. For instance, customer classes that typically generate a larger volume of wastewater will be allocated a larger share of costs related to treatment and infrastructure repair because it costs the District proportionately more to provide services (such as increased chemicals for treatment, electricity for pumping, or upsizing pipes to accommodate higher flows) compared to classes that generate lower volumes of wastewater.

The costs associated with these functional categories are divided by their respective units for system flow, biochemical oxygen demand (BOD), total suspended solids (TSS), and number of accounts to calculate unit rates for each component. Multiplying this unit rate by each customer class's units establishes the total allocated cost of service – and therefore what needs to be recovered through rates – by customer class.

1.2.2.3 Rate Design

The Rate Design process takes the costs allocated in the Cost of Service step and calculates unit rates for each rate class by dividing the allocated costs by their units of service. A more detailed explanation of this process and the calculations applicable to each customer class is provided in subsequent sections.

In addition to calculating fixed monthly charges and variable rates, the Rate Design process takes the test year of Cost of Service basis and applies it to the four other years within the rate planning horizon, fiscal years (FY) ending 2024 through 2028.

Section 2

BASELINE INPUTS AND ASSUMPTIONS

2.1 Existing Rate Structure

The District's last rate study was completed in 2018 (2018 Study). The 2018 Study maintained the same rate structure but reclassified commercial customers to better reflect cost of service principles and monitor Commercial Group IV significant users individually. The following table reflects the current rates established in that 2018 Study.

Table 1 Existing Sanitary Sewer Charges and Fees

Customer Class	Charge/Rate
Fixed Monthly Charge	
Residential (\$/dwelling unit)	\$64.12
Commercial Group I, II, III	50.80
Commercial/Industrial (Special) Group IV	50.80
Variable Rate	
Commercial Group I (\$/hcf)	\$3.26
Commercial Group II (\$/hcf)	3.61
Commercial Group III (\$/hcf)	5.83
Commercial/Industrial (Special) Group IV	
Flow (\$/hcf)	2.60
BOD (\$/lbs)	0.37
TSS (\$/lbs)	0.40
Commercial/Industrial Other (\$/MG)	3,460.71
Schools (annual rate per avg. daily attendance)	6.04

2.2 Growth and Inflation Assumptions

The District currently projects that its number of sanitary sewer accounts will increase by approximately 0.5 percent annually throughout the duration of the five-year study period (FY 2024 through FY 2028), a cumulative increase of 2.53 percent. VFWD staff provided baseline revenue and expense data which was escalated by the type of expense. Based on current knowledge of the market, Operations and Maintenance (O&M) expenses reflect a 7.0 percent inflation factor for FY 2024 and 5.0 percent for FY 2025 and beyond. Escalation factors for salary and benefits costs range from 1.0 percent to 12.0 percent during the rate setting period, depending on type of expense. Cost escalation factors specifically for salary and benefits are not only based on market factors, but also on retirement projections and obligations and a cost of living allowance.

Section 3

REVENUE REQUIREMENTS

The Revenue Requirements outlines the total amount of revenue that is recommended to be generated through rates for the time horizon of the Study. This process compiles baseline operating and non-operating expenses, deducts offsetting non-rate revenues, and calculates the total revenues required through rates to cover these expenses. This process is repeated for each of the five years based on several assumptions outlined in this section.

This section first outlines the three financial targets used to test total revenues. It then projects expenses and offsetting revenues for the next five years. Then, the Revenue Requirement for each scenario is calculated based on the three financial targets.

3.1 Financial Targets

3.1.1 Reserve Policies

The District currently maintains three reserve funds:

- (1) **Operating Reserve:** The District maintains an Operating Reserve equal to 15 percent of operating expenses to assist VFWD during emergencies.
- (2) **Liquidity Reserve:** The District maintains a liquidity reserve of 180 days of O&M expenses.
- (3) **Debt Service Reserve:** The District maintains a debt service reserve equal to one year of debt service.

For this Study, the District considered creating two additional reserve funds, a Capital Improvement Reserve and a Mare Island Reserve. The results of this Study do not include funding the Mare Island Reserve within this rate setting period but does include building a \$1.5 million reserve for Capital Improvement by FY 2025.

The forecast of reserve balances under the proposed revenue adjustments is outlined in the table below. VFWD falls slightly below target reserve in FY 2027 but rebounds in FY 2028.

Table 2 Reserve Balance Forecast Following Increases (\$ thousands)

Component	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Target Fund Balance	\$15,659	\$17,294	\$18,015	\$19,153	\$20,070
Operating Reserve	4,665	5,006	5,296	5,526	5,762
Capital Improvement Reserve	500	1,500	1,500	1,500	1,500
Mare Island Reserve	—	—	—	—	—
Total Target	\$20,824	\$23,800	\$24,811	\$26,178	\$27,331
Beginning Balance	\$26,067	\$20,855	\$25,777	\$33,313	\$25,774
Cash Flow	(5,212)	4,923	7,536	(7,540)	1,693
Ending Balance	\$20,855	\$25,777	\$33,313	\$25,774	\$27,466
Surplus/Deficit	31	1,977	8,502	(404)	135

3.1.2 Cash Flow

The cash flow test provides the most immediate and straightforward test of financial performance, answering the question “Do revenues exceed expenses?” This offers a quick glance at the long-term viability of the funding plan.

In the District’s case, the cash flow test serves as a diagnostic but is not used for rate modeling purposes. Carollo and the District determined that maintaining positive reserves is the top priority and will be the primary driver of revenue increases. As a result, negative cash flows do not dictate rate increases in the financial modeling for the District.

However, the results of the cash flow test will still be shown in the Revenue Requirements analysis as an additional piece of information. Negative cash flow can be supported by excess reserves for a single year or even several years, but long-term, positive cash flow should be pursued. It provides credit rating agencies a strong signal of the District’s financial health and could result in a higher credit rating for potential future debt issuances. Furthermore, it provides cushion to deal with emergency repairs and unanticipated capital expenses. Therefore, this Study looked closely at cash flow and placed significant weight on its forecast but did not use it as a primary driver of rate increases.

The following table presents the cash flow prior to proposed rate revenue adjustments.

Table 3 Cash Flow Forecast Prior to Proposed Revenue Increases (\$ thousands)

Component	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
REVENUES					
Operating Revenues					
Sewer Service Charge	\$39,271	\$39,468	\$39,665	\$39,863	\$40,063
Non-Operating Revenues					
Septic Hauling Fees	\$492	\$590	\$697	\$697	\$697
Lease Revenue	247	255	262	270	278
Property Taxes	122	126	130	133	137
Financing Sources	—	—	—	—	—
Permits-Septic Haulers	8	8	9	9	9
Permits-Connections	2	2	2	2	3
Plan Check Fees	4	4	4	4	5
Inspection Fees	11	12	12	12	13
Other Revenues	3	3	3	3	3
Capacity Revenues	\$458	\$487	\$442	\$300	\$300
Revenue Increase of Prior Year	—	9,032	18,787	29,419	29,566
Total Revenues	\$40,619	\$49,987	\$60,012	\$70,713	\$71,072
EXPENDITURES					
Operating Expenditures					
Salary & Benefits	\$20,652	\$22,191	\$23,341	\$24,035	\$24,714
Materials, Supplies & Services	10,451	11,182	11,965	12,802	13,699
Major Maintenance	650	1,696	1,225	2,000	2,284
Non-Operating Expenditures					
Rate Funded Capital (PAYGO)	\$20,157	\$16,794	\$22,305	\$35,291	\$24,563
Bond Proceeds	(23,950)	(14,075)	(1,000)	(5,000)	(4,000)
Debt Funded Capital	23,950	14,075	1,000	5,000	4,000
Debt Service	2,954	2,955	4,272	4,272	4,268
Total Expenses	\$54,864	\$54,819	\$63,108	\$78,400	\$69,528
Surplus / (Deficit)	(14,245)	(4,832)	(3,096)	(7,687)	1,545

* Totals may be off due to rounding.

Following proposed revenue adjustments, VFWD only sustains a cash flow deficit in FY 2024 and FY 2027.

Table 4 Cash Flow Forecast Following Proposed Revenue Increases (\$ thousands)

Component	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Increases	23.0%	20.0%	18.0%	0.0%	0.0%
Rate Revenues Before Rate Increase	\$39,271	\$39,468	\$39,665	\$39,863	\$40,063
Rate Revenues from Rate Increase	9,032	18,787	29,419	29,566	29,714
Non-Operating Revenues	1,348	1,487	1,560	1,431	1,444
Less: Expenditures	(54,864)	(54,819)	(63,108)	(78,400)	(69,528)
Resulting Cash Flows	\$(5,212)	\$4,923	\$7,536	\$(7,540)	\$1,693

* Totals may be off due to rounding.

3.1.3 Debt Coverage

The debt coverage test is stipulated in the official statement for each bond series that VFWD issues. VFWD's stipulated debt coverage is 1.25x, meaning that revenues minus operating expenditures must be 25 percent greater than the debt service due in that fiscal year. While 1.25x is the mandated debt coverage ratio, this analysis assumes a more conservative 1.50x coverage. This allows VFWD to plan without coming close to the 1.25x threshold.

Not all revenues are allowed in the debt coverage test. For VFWD, all sewer service charge and capacity charge revenues are included in the calculation. Some non-operating revenues, such as loan proceeds, are not permitted.

The overview of revenues and expenditures included in this test are outlined in the table below. The revenues outlined in the analysis are following the revenue increases show in Table 4, under the assumption that needed increases are cash balance driven and not debt driven. Based on this assumption, VFWD is projected to exceed its debt coverage ratio requirements.

Table 5 Debt Coverage Test Following Proposed Revenue Increases (\$ thousands)

Component	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Allowable Revenues					
Operating Revenues	\$39,271	\$48,500	\$58,452	\$69,282	\$69,628
Non-Operating Revenues	1,348	1,487	1,560	1,431	1,444
Total Allowable Revenues	\$40,619	\$49,987	\$60,012	\$70,713	\$71,072
Allowable Expenditures					
Wastewater Expenses	\$31,752	\$35,069	\$36,531	\$38,837	\$40,697
Debt Service	2,954	2,955	4,272	4,272	4,268
1.5x Debt Coverage	1,477	1,478	2,136	2,136	2,134
Total Allowable Expenses plus Coverage	\$36,183	\$39,502	\$42,939	\$45,245	\$47,099
Debt Coverage Surplus / (Deficit)	\$4,435	\$10,485	\$17,073	\$25,468	\$23,973
DSCR Before Increase	3.00 x	5.05 x	5.50 x	7.46 x	7.12 x

* Totals may be off due to rounding.

Based on this analysis, VFWD is projected to achieve its financial objectives with the proposed revenue increases. The proposed increases are projected to pass the cash flow, debt coverage, and reserve funding tests in each of the next five fiscal years (through FY 2028), with the exception of FY 2024 and FY 2027 when the cash flow test is not met. However, this is not projected to be an issue as sufficient starting fund balances will be available to maintain a positive total cash balance for FY 2024 through FY 2027. The projected revenues and expenses are shown in Figure 1, which demonstrates how revenues before and after that year's increase meets or falls below expenses. Beyond FY 2028, VFWD is projected to achieve the same benchmarks in all years.

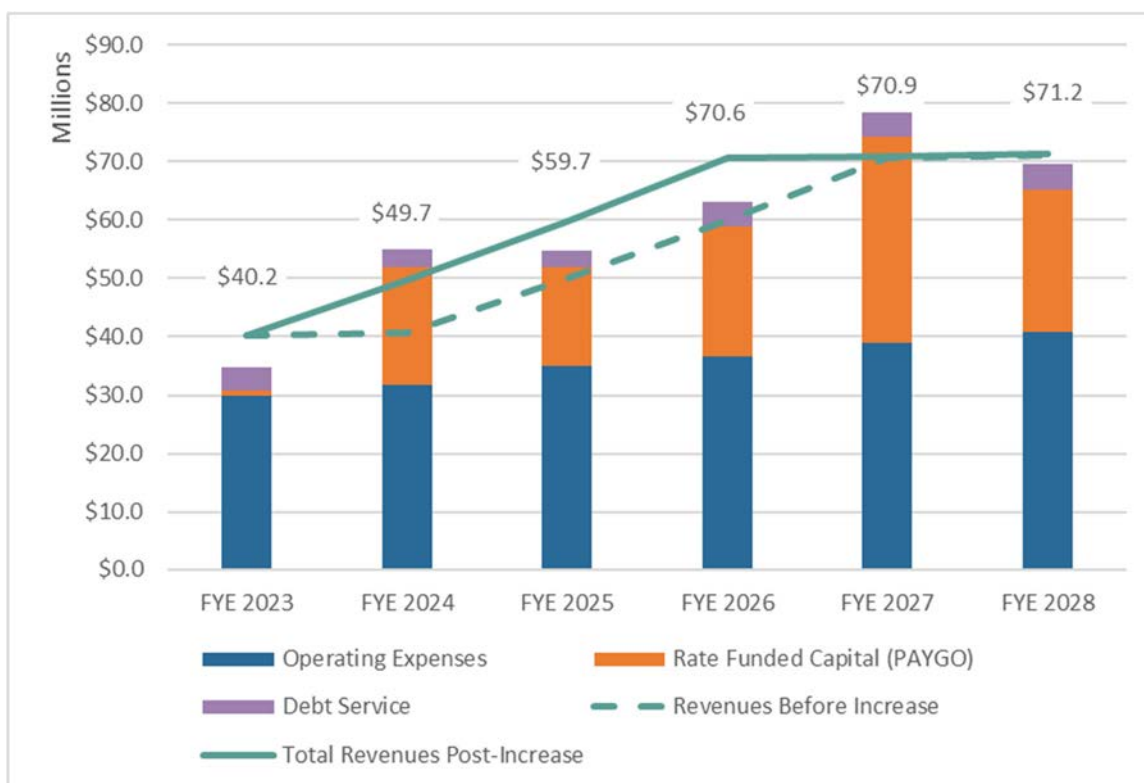


Figure 1 Projected Cash Flows (FY 2024-FY 2028)

Section 4

COST OF SERVICE ANALYSIS

The Cost of Service analysis takes the revenue requirements outlined in the prior section and allocates them first to district functions and then to customer classes based on usage of the District's system. This approach is based on the proportionality requirements of California's Proposition 218. The goal is to provide a method of allocating costs that is fair and equitable and establishes a clear nexus between the wastewater discharge generated by different customers and the fees they are charged by the District to convey and treat that wastewater.

The District's budget is divided into operating or capital expenses, and those expenses have specific functions as their goal. Those functions are driven by the demands and needs of the District's service area and its customers. For instance, expenses related to the treatment system are allocated among BOD, TSS, and Flow, whereas costs of operating the collection system are allocated only to flow.

Using the industry standard methodology outlined in MOP27, this analysis took the following steps to perform the cost of service allocation:

1. Allocate costs to functional categories (e.g., primary treatment, lift stations, solids removal).
2. Allocate functionalized costs to rate components: (flow, loadings, customer).
3. Allocate costs to customer classes using rate component unit costs.

This adjusted cost of service by customer class and their respective units become the basis for designing rates in the final step.

Due to the timing of incurred capital costs and debt service, this Study chose FY 2028 as the test year basis for determining allocations.

4.1 Allocation to Rate Components

The first step of the Cost of Service analysis allocates O&M and CIP costs to the rate components of the utility's primary functions. These rate components are:

- **Flow:** Costs related to flow are primarily incurred by the District to collect, distribute, pump, pretreat, and disinfect wastewater, in addition to some operations for solids removal, primary, and secondary treatment.
- **BOD:** Costs related to BOD are primarily incurred by the system to provide secondary treatment, as well as some solids removal, pretreatment, primary treatment, and disinfection services.
- **TSS:** Costs related to TSS are primarily incurred by the system to provide solids removal and primary treatment, plus some pretreatment, secondary, and disinfection services.
- **Customer:** Costs related to Customer include billing, customer support, and some administrative services.
- **General:** Costs that do not have a direct nexus between the expenses incurred and a specific component to the wastewater system are allocated to General, which is redistributed to the other four rate components after allocating test year revenue requirements.

The total allocation percentages determined in this step are then applied to the test year revenue requirements to determine an adjusted total cost of service by rate components.

4.1.1 Allocated Operations and Maintenance Costs

District staff provided input on how each O&M cost center contributes to addressing the rate components outlined above. To establish an O&M budget for test year FY 2028, the percentage of cost center expenses within the total FY 2023 budget was applied to the projected revenue requirement for FY 2028. The following table presents the percentages and resulting allocation of O&M costs for test year FY 2028. A more detailed breakout of this allocation is provided in the Appendix.

Table 6 Operations and Maintenance Allocation Factors and Summary (FY 2028) (\$ thousands)

Cost Centers	FY 2028 Budget	Flow	BOD	TSS	Customer	General
Admin	\$2,121				10.0%	90.0%
Safety & Risk Management	2,306				50.0%	50.0%
Finance	2,972				50.0%	50.0%
Engineering	1,992	50.0%	20.0%	20.0%	10.0%	0.0%
Field Operations	7,085	100.0%				
Operations	1,317	50.0%	25.0%	25.0%		
Environmental Services	8,004		45.0%	45.0%	10.0%	
Facilities Maintenance	3,944	45.0%	22.5%	22.5%		10.0%
Electrical/IT	7,087	40.0%	17.5%	17.5%		25.0%
Human Resources	3,868					100.0%
Total Allocation	\$40,697	\$13,349	\$6,457	\$6,457	\$3,851	\$10,583
Allocation (%)		32.80%	15.87%	15.87%	9.46%	26.00%

* Totals may be off due to rounding.

4.1.2 Allocated Rate Funded Capital (PAYGO)

The previous 2018 Study allocated rate funded capital ("pay as you go" or more simply, PAYGO) costs using an allocation determined by the replacement cost new, less depreciation (RCNLD) valuation of the fixed asset registry. Since District staff was able to provide the specific functionality of the capital projects anticipated within the five-year rate setting period, this Study established a tailored PAYGO allocation by assigning CIP to an allocation basis according to their functional purpose.

Due to the timing of capital projects, costs incurred vary each year. If CIP allocations were determined using only test year, it would inadequately assign costs of service to the primary project of the test year rather than the full scope of this Study's rate design. Therefore, a five-year sum of CIP costs became the basis of determining allocation percentages. Each project was assigned an allocation factor and distributed to their respective rate component. Once summed, a total CIP allocation percentage was calculated.

The table below outlines the allocation factors and their associated rate component and summarizes the resulting allocation of the five-year rate funded capital. Line-by-line detail of this calculation is provided in the Appendix.

Table 7 Capital Improvement Project Allocation Factors and Summary (FY 2024-2028) (\$ thousands)

Allocation Factors	FY 24-FY28	Flow	BOD	TSS	Customer	General
Total System Flow		100%				
Pipelines		100%				
Lift Stations		100%				
Solids Removal		10%	10%	60%		20%
Pretreatment		85%	5%	10%		
Primary		10%	5%	85%		
Secondary		10%	85%	5%		
Disinfection		90%	5%	5%		
Buildings & Improvements					50%	50%
Vehicles & Equipment					10%	90%
General						100%
5-Year PAYGO	\$119,110	\$62,752	\$13,118	\$18,586	\$2,138	\$22,515
Allocation (%)		52.68%	11.01%	15.60%	1.80%	18.90%

Note:

(1) CIP projects are allocated individually by these factors, detailed in the Appendix.

4.1.3 Allocated Debt Service

Debt service costs are allocated to rate categories based on the types of projects funded with the debt instruments and how the infrastructure benefits VFWD's customers.

- **Existing Debt:** The District's existing debt was issued to fund the Sewer System Overflow Elimination Program. Since this is a collection system improvement, it was fully allocated to flow.
- **Future Debt:** The District anticipates issuing future debt for plant improvements and renewal and replacement (R&R), specifically the MIPS Effluent Bypass Project. VFWD staff provided input on the appropriate allocation to rate components for this specific project.

4.1.4 Allocated Connection Fee Revenue

This Study allocated connection fee revenue based on the PAYGO and debt funded five-year CIP. The connection fee revenue allocation is summarized in Table 8.

Table 8 Connection Fee Revenue Allocation (FY 2028) (\$ thousands)

	Total	Flow	BOD	TSS	Customer	General
Allocation (%)	100%	58%	13%	13%	1%	15%
Allocation (\$)	\$300	173,566	39,287	39,440	4,138	43,568

4.2 Allocation of Revenue Requirements

The allocations determined in the previous step are then applied to the test year's revenue requirement to establish a total cost of service by rate component. Allocated offsetting revenues and cash from reserves are deducted from allocated O&M costs and capital expenses. Then, any costs allocated to General are proportionately redistributed to the four rate components. The table below summarizes this calculation.

Table 9 Revenue Requirements Allocation (FY 2028) (\$ thousands)

Revenue Requirement Line Item	Allocation Basis	Total	Flow	BOD	TSS	Customer	General
OPERATING EXPENSES	O&M	\$40,697	\$13,349	\$6,457	\$6,457	\$3,851	\$10,583
(+) CAPITAL EXPENSES							
Existing Debt Service	Total System Flow	2,312	2,312	-	-	-	-
Future Debt Service (5-yr Avg.)	New Debt Service	1,957	1,467	391	98	-	-
Rate Funded Capital (PAYGO)	5-Year CIP	24,563	12,941	2,705	3,833	441	4,643
Total Revenue Requirements		\$69,528	\$30,069	\$9,554	\$10,388	\$4,292	\$15,226
(-) OFFSETTING REVENUES							
Septic Hauling Fees	Solids Removal	\$697	\$70	\$70	\$418	\$-	\$139
Connection Fees	Connection Fees	300	174	39	39	4	44
Lease Revenue	General	278	-	-	-	-	278
Property Taxes	General	137	-	-	-	-	137
Permits-Septic Haulers	General	9	1	1	6	-	2
Permits-Connections	General	3	-	-	-	-	3
Plan Check Fees	General	5	-	-	-	-	5
Inspection Fees	Solids Removal	13	-	-	-	-	13
Other Revenues	General	3	-	-	-	-	3
Total Revenue Offsets		\$1,444	\$244	\$110	\$463	\$4	\$623
(+) Cash from Reserves	General	\$1,693	\$-	\$-	\$-	\$-	\$1,693
Total Cost of Service		\$69,776	\$29,825	\$9,444	\$9,925	\$4,288	\$16,296
Total Cost of Service – Reallocated General		\$69,776	\$38,912	\$12,321	\$12,949	\$5,594	\$-

Notes:

(1) Totals may be off due to rounding

The Flow, BOD, and TSS rate components are all based on variable unit costs. The majority (93.01 percent) of the test year's revenue requirements in the initial cost of service are variable. This is in contrast with the District's expense profile, which is largely fixed in nature. Salary and benefits, a fixed cost, accounts for 63.95 percent of the District's budget.

To adjust for this and balance the fixed cost recovery with the cost of service, the Study reallocated the cost of service so that 60 percent of the total cost of service was allocated to fixed categories.

The Customer category was 8 percent of the initial cost of service. The remaining 52 percent was then reallocated from Flow, BOD, and TSS, based on the initial cost of service. The resulting allocation is 24.25 percent of costs allocated to Flow, 7.68 percent to BOD, 8.07 percent to TSS, and 60.00 percent to Customer. This calculation summary is provided in the table below.

Table 10 Test Year Revenue Requirements Allocation with Fixed Cost Adjustment (FY 2028) (\$ thousands)

Component	Total	Flow	BOD	TSS	Customer
Preliminary Cost of Service (\$)	\$69,776	\$38,912	\$12,321	\$12,949	\$5,594
Preliminary Cost of Service (%)		55.8%	17.7%	18.6%	8.0%
Share Reallocation to Fixed		60.63%	19.20%	20.17%	
Reallocation to Fixed (\$)		\$(21,991)	\$(6,963)	\$(7,318)	\$36,272
Adjusted Cost of Service	\$69,776	\$16,922	\$5,358	\$5,631	\$41,866
<i>Adjusted Cost of Service (%)</i>		<i>24.25%</i>	<i>7.68%</i>	<i>8.07%</i>	<i>60.00%</i>

4.2.1 Unit Costs

The unit costs for each billing process the District quantifies the nexus between total cost of service and customer class costs of service. Dividing the total cost of service by the system's total units for Flow in hundred cubic feet per year (hcf/yr), BOD in pounds (lbs), and TSS (lbs) generates a unit cost that can be applied to each customer's units and determine their respective costs of service.

The District bills Commercial Group I, II, and III based on flow (hcf/yr), Commercial Group IV based on flow (hcf) using a Winter Quarter Average, BOD (lbs), and TSS (lbs), schools based on student attendance, and Residential by a fixed charge. However, to calculate system unit costs and allocate costs of service to each customer group, all customer groups need units established for flow and loadings. Commercial customers have historical concentration assumptions measured in milligrams per liter (mg/L) which can be converted to loading pounds using the following equation.

BOD and TSS Pounds Formula:

$$\text{Pounds} = \text{Flow (gpd)} \times \text{Concentration (mg/L)} \times 8.345 \times 10^{-6}$$

The total system loadings are calculated in the same way as commercial loadings.

Using FY 2022 billing data and commercial loading assumptions, Flow, BOD, and TSS were calculated for each rate class and subcategories. The table below summarizes these units for the FY 2028 test year and further detail can be found in the Appendix.

Table 11 Units of Service by Customer Class (FY 2028)

Customer Class	Flow (hcf/yr)	BOD (lbs)	TSS (lbs)	Units	Accounts
COMMERCIAL					
Commercial I	407,287	423,872	326,368	1,423	1,423
Commercial II	90,379	153,628	104,158	242	242
Commercial III	151,016	783,583	595,600	251	251
Commercial IV	128,699	157,386	74,179	7	7
Commercial/Industrial Other	9,251	8,444	7,900	3	3
Schools	23,629	19,175	16,225	12,274 ⁽¹⁾	6
Total Commercial Units	810,261	1,546,089	1,124,429	14,200	1,932
RESIDENTIAL					
Single Family Residential				35,199	35,199
Multi-Family Residential				11,350	2,107
Total Residential Units ⁽²⁾	2,904,844	5,199,691	5,267,257	46,548	37,306
Total System Units	3,715,106	6,745,779	6,391,686	60,749	39,238

Notes:

(1) Students in attendance

(2) Residential Flow, BOD, and TSS are not metered individually; calculated by subtracting total system units from total commercial units.

To calculate unit costs, the system's cost of service for each billing process is divided by the system's total units, as shown in the table below.

Table 12 Units Cost Calculation (FY 2028)

Component	Flow	BOD	TSS	Customers
Cost of Service (\$ thousands)	\$16,922	\$5,358	\$5,631	\$41,866
Unit of Service	3,715,106 hcf	6,745,779 lbs	6,391,686 lbs	48,481 ¹ bills/yr
Unit Cost	\$4.55 \$/hcf	\$0.79 \$/lb	\$0.88 \$/lb	\$71.96 \$/month

Notes:

(1) Reflects total commercial accounts (1,932) plus total residential units (46,458) because bills are issued individually to multi-family units and each (6) schools.

4.3 Allocation to Customer Class

Allocating test year revenue requirements to the rate components establishes an adjusted cost of service for the District's total wastewater system. The last step in the Cost of Service analysis is to distribute those costs to each customer class proportionate to the level of service provided. This step utilizes the results of the unit cost and billing data to calculate their total costs of service, which will be recovered through rates and fixed charges.

To allocate system cost of service, unit costs are multiplied by each customer group's corresponding units, as shown in the table below.

Table 13 Cost of Service Allocated by Customer Class Calculation (FY 2028) (\$ thousands)

Component	Total	Flow (hcf)	BOD (lbs)	TSS (lbs)	Customers
<i>Unit Cost</i>		<i>\$4.55</i>	<i>\$0.79</i>	<i>\$0.88</i>	<i>\$71.96</i>
		<i>\$/hcf</i>	<i>\$/lb</i>	<i>\$/lb</i>	<i>\$/month</i>
Residential					
Units		2,904,844	5,199,691	5,267,257	46,548
Cost of Service	\$62,198	\$13,231	\$4,130	\$4,640	\$40,197
Commercial I					
Units		407,287	423,872	326,368	1,423
Cost of Service	\$3,708	\$1,855	\$337	\$288	\$1,229
Commercial II					
Units		90,379	153,628	104,158	242
Cost of Service	\$834	\$412	\$122	\$92	\$209
Commercial III					
Units		151,016	783,583	595,600	251
Cost of Service	\$2,052	\$688	\$622	\$525	\$217
Commercial IV					
Units		128,699	157,386	74,179	7
Cost of Service	\$783	\$586	\$125	\$65	\$6
Commercial/Industrial Other					
Units		9,251	8,444	7,900	3
Cost of Service	\$58	\$42	\$7	\$7	\$3
Schools					
Units		23,629	19,175	16,225	6
Cost of Service	\$142	\$108	\$15	\$14	\$5
Allocated Cost of Service	\$69,776	\$16,922	\$5,358	\$5,631	\$41,866

Notes:

(1) Totals may be off due to rounding

Table 14 Cost of Service Allocated by Customer Class Summary (FY 2028) (\$ thousands)

Component	Total	Flow	BOD	TSS	Customers
<i>Unit Cost</i>		<i>\$4.55</i> <i>\$/hcf</i>	<i>\$0.79</i> <i>\$/lb</i>	<i>\$0.88</i> <i>\$/lb</i>	<i>\$71.96</i> <i>\$/month</i>
Residential	\$62,198	\$13,231	\$4,130	\$4,640	\$40,197
Commercial I	3,708	1,855	337	288	1,229
Commercial II	834	412	122	92	\$209
Commercial III	2,052	688	622	\$525	217
Commercial IV	783	586	125	\$65	6
Commercial/Industrial Other	\$58	42	7	\$7	\$3
Schools	142	108	15	14	5
Allocated Cost of Service	\$69,776	\$16,922	\$5,358	\$5,631	\$41,866

Notes:

(1) Totals may be off due to rounding

Section 5

RATE STRUCTURE DESIGN

Following the allocation of costs in the Cost of Service analysis, the Rate Design effectively becomes a division problem, where the rate is equal to the allocated costs divided by the units of service divided by the billing period. The focus of this process is to achieve full cost recovery and substantiate that each rate code pays their fair and proportionate share of system costs.

5.1 Rate Structure

Based on discussion with VFWD staff and careful review of the cost of analysis, Carollo recommends that the District maintains its current rate structure and billing processes:

- Residential customers pay a fixed monthly charge.
- Commercial Group I, II, and III pay a fixed monthly charge and variable flow rate (\$/hcf).
- Commercial Group IV pays a fixed monthly and variable flow (\$/hcf) and loading rates for BOD (\$/lb) and TSS (\$/lb).
- Commercial/Industrial Other customers pay a fixed monthly charge and variable flow rate (\$/MG).
- Schools pay a fixed monthly charge and variable flow rate (\$ per student attendance).

5.2 Fixed Charge

The fixed charge is intended to provide a stable revenue source related to how customers use the system expressed as the system capacity required to serve them. The proposed fixed charge is a combination of the Customer and reallocated General costs. The Customer component recovers costs that apply to all accounts in the system, regardless of usage or the size of the connection to the system. The proposed fixed charge is designed to collect costs associated with capital expenditures (rate funded capital and a portion of engineering) as well as maintenance costs based on each customer's use of the system.

The District recovers costs associated with providing service to Residential customers only through a fixed monthly charge, billed as an assessment on the property tax roll. This is due to the District's assessment that their BOD and TSS loadings and growth rate remain proportionality consistent, and therefore is unnecessary to delineate variable loading-related rates. While there is variation between and among customers within the residential customer class in terms of both flow and loading, in general the usage patterns and flow characteristics of residential waste is consistent enough to justify a flat rate for this class.

The FY 2028 monthly unit charge was calculated in the previous section at \$71.96 by dividing total system accounts by Customer-related costs. Since Commercial customers are also charged variable rates, their monthly fixed charge remains \$71.96. Residential customers pay a fixed charge to recover costs associated with Flow, BOD, TSS, and Customer. Therefore, their monthly fixed charge of \$111.37 reflects the number of Residential accounts divided by total Residential revenue to recover, as shown in the table below.

Table 15 Monthly Fixed Charge Calculation (FY 2028)

	FY 2028
Commercial	
Total System Bills	48,481
Total Customer Revenue to Recover (\$ thousands)	\$41,866
Monthly Fixed Charge	\$71.96
Residential	
Number of Accounts	46,548 ¹
Total Revenue to Recover (\$ thousands)	\$62,198
Monthly Fixed Charge	\$111.36

Note:

(1) Includes single family residential accounts and multi-family residential units.

5.3 Variable Rates

The variable rates are developed for each customer class and designed to recover the costs proportionate to wastewater flow and loadings contributed to the system. Cost of service-based rates were developed for each customer class based on the principle of maintaining equity customer classes. Customer classes, such as Commercial Group I or II, only pay for their proportional share of costs of service. Additionally, within each customer class, each account will pay a fair share of the costs assigned to that group based on their individual use.

Similar to the fixed rate calculation, variable rates for Commercial Group I, II, III, and Commercial/Industrial-Other are the quotient of total Flow (hcf) divided by the sum of variable costs (Flow, BOD, and TSS). Schools follow the same formula but use students in attendance rather than Flow in the numerator. Commercial Group IV customers are charged the unit cost for Flow, BOD, and TSS calculated in the previous section. The following table presents this calculation and resulting variable charges.

Table 16 Variable Rate Calculation (FY 2028)

	FY 2028
Commercial Group I	
Total Flow (hcf)	407,287
Total Variable Cost (\$ thousands)	\$2,479
Variable Rate (\$/hcf)	\$6.09
Commercial Group II	
Total Flow (hcf)	90,379
Total Variable Cost (\$ thousands)	\$625
Variable Rate (\$/hcf)	\$6.93
Commercial Group III	
Total Flow (hcf)	151,016
Total Variable Cost (\$ thousands)	\$1,835
Variable Rate (\$/hcf)	\$12.16
Commercial Group IV	
Flow (\$/hcf)	\$4.56
BOD (\$/lb)	0.80
TSS (\$/lb)	0.89
Commercial/Industrial-Other Group	
Total Flow (MG)	6.92
Total Variable Cost (\$ thousands)	\$56
Variable Rate (\$/MG)	\$8,064.40
Schools	
Number of Students	12,274
Total Variable Cost (\$ thousands)	\$137
Variable Rate (\$/hcf)	\$11.18

5.4 Five-Year Rate Schedule

Since this Study used FY 2028 as its test year, the previous four years of rates were phased-in from current rates to adequately meet the revenue requirements of FY 2024 through FY 2027. Residential rates closely follow the overall revenue increases. Commercial, Industrial, and Other rates are phased in by an equal percentage so that each customer class reaches its cost of service rates by FY 2026, as there are no scheduled rate increases in FY 2027 and FY 2028.

Table 17 Residential Monthly Service Charge Rates (FY 2024 – FY 2028)

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<i>Revenue Increase (%)</i>		23.00%	20.00%	18.00%	0.00%	0.00%
Single Family Residential	\$64.12	\$78.88	\$94.64	\$111.36	\$111.36	\$111.36
Multi-Family Residential	64.12	78.88	94.64	111.36	111.36	111.36

Table 18 Commercial Monthly Service Charge and Volumetric Rate Impacts (FY 2024 – FY 2028)

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
MONTHLY FIXED CHARGE¹						
Monthly Fixed Charge	\$50.80	\$57.06	\$64.08	\$71.96	\$71.96	\$71.96
VOLUMETRIC RATE						
Commercial Group I – Low Strength (\$/hcf)	\$3.26	\$4.01	\$4.94	\$6.08	\$6.08	\$6.09
Commercial Group II – Medium Strength (\$/hcf)	3.61	4.49	5.58	6.93	6.93	6.93
Commercial Group III – High Strength (\$/hcf)	5.83	7.45	9.52	12.16	12.16	12.16
Commercial – Others (\$/MG)	3,460.71	4,588.12	6,082.80	8,064.40	8,064.40	8,064.40
Commercial Group IV – Significant Dischargers						
Flow (\$/hcf)	\$2.60	\$3.14	\$3.79	\$4.56	\$4.56	\$4.56
BOD (\$/lb)	0.37	0.48	0.62	0.80	0.80	0.80
TSS (\$/lb)	0.40	0.52	0.68	0.89	0.89	0.89
Schools (\$ per ADA)	6.04	7.42	9.12	11.18	11.18	11.18

Notes:

(1) Applies to all Commercial and School Groups below

Section 6

UPPER LATERAL PROGRAM

The District currently offers an Upper Lateral Program (UL Program) to property owners in the District service area. The upper lateral is the pipe that runs from the building to the property line. Below is a figure from the District's website that illustrates the portion of pipe that is the property owner's responsibility.

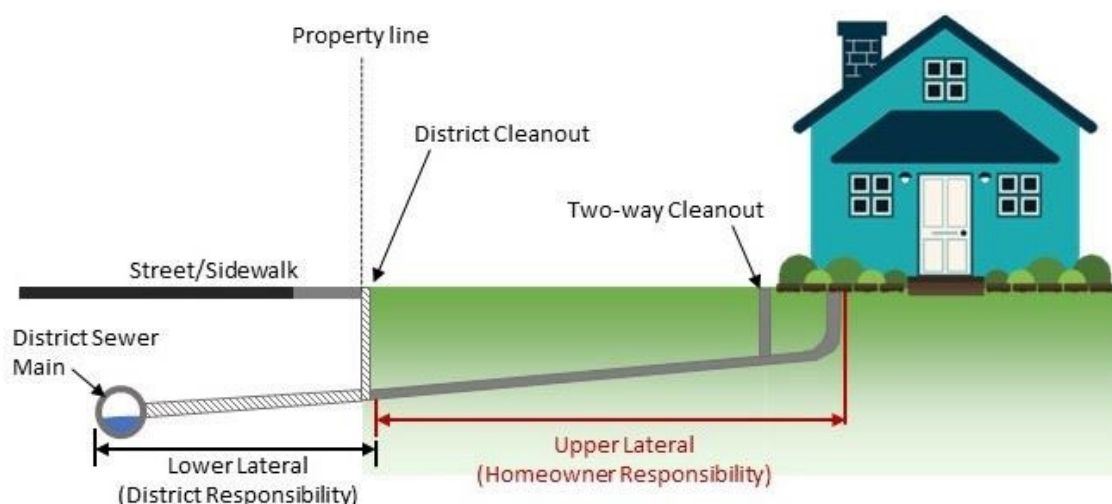


Figure 2 Upper Lateral Location

When these lines are damaged or clogged, it is the property owner's responsibility to have the lined repaired or replaced. The UL Program partially reimburses these costs to the owners. On average, contractor costs to repair or replace an upper lateral was more than \$6,000 in FY 2022. The District's average reimbursement rate to property owners during that same time period was 48 percent. The District's goal reimbursement rate is 80 percent.

6.1 Upper Lateral Rates

In order to provide the UL Program, the District charges \$1.38 per month per connection. In order for the District to progress towards increasing its reimbursement percentage from 48 percent to 80 percent, it is recommended that the upper lateral rates increase by 23.0 percent in FY 2024, 20.0 percent in FY 2025, and 18.0 percent in FY 2026. As shown in Table 19, the monthly upper lateral rate would increase by \$1.02 over the next three years, from \$1.38 to \$2.40 in FY 2026.

Table 19 Proposed Upper Lateral Rates (FY 2024 – FY 2028)

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<i>Revenue Increase (%)</i>		23.00%	20.00%	18.00%	0.00%	0.00%
Monthly	\$1.38	\$1.70	\$2.04	\$2.40	\$2.40	\$2.40
Annual	\$16.56	\$20.38	\$24.44	\$28.84	\$28.84	\$28.84

Section 7

RATE RECOMMENDATIONS

Based on the data, assumptions, and approaches detailed in the previous sections, Carollo recommends the following:

7.1 Reserve Policies

- Carollo recommends that the District maintain a capital reserve of at least \$1.5 million in addition to its already established operating and debt reserve requirements.

7.2 Revenue Requirements

- Revenue under existing rates is insufficient to cover operating and capital costs, debt payments, and debt service coverage throughout the Study period (FY 2024 – FY 2028). As such, Carollo recommends the District increase sewer rates by 23.0 percent in FY 2024, 20.0 percent in FY 2025, and 18.0 percent in FY 2026.

7.3 Cost of Service and Rates

- Carollo recommends that the District implement the rate schedule presented in Table 17 and Table 18 to provide sufficient revenue to fund the necessary projects for repairing, replacing, and updating VFWD's wastewater system. The recommended rates are supported by the Cost of Service analysis.

7.4 Upper Lateral Program

- Carollo Recommends that the District increase the upper lateral program rate by 23.0 percent in FY 2024, 20.0 percent in FY 2025, and 18.0 percent in FY 2026. These increases will result in revenue that will allow the District to increase its average reimbursement percentage from 48 percent to the District's goal of 80 percent.

Appendix A

FINANCIAL RATE MODEL

Vallejo Flood and Wastewater District

Financial Rate Model

Revenue Requirements (Carollo Proj. No. 201501)

Forecasted

Rate Setting Period

FYE 2022

FYE 2023

FYE 2024

FYE 2025

FYE 2026

FYE 2027

FYE 2028

Cash Flow Test

Starting Fund Balance Before Increase	\$	17,404,877	\$	21,525,000	\$	25,157,583	\$	20,854,725	\$	25,777,402	\$	33,313,493	\$	25,773,941
Debt Service Reserve		(1,555,580)		(1,555,580)		909,580								
Available Beginning Fund Balance	\$	15,849,297	\$	19,969,420	\$	26,067,163	\$	20,854,725	\$	25,777,402	\$	33,313,493	\$	25,773,941

REVENUES

Operating Revenues - (excl. Septec Haulers)	\$	38,646,307	\$	39,075,890	\$	39,271,269	\$	39,467,626	\$	39,664,964	\$	39,863,289	\$	40,062,605
Revenue Increase Prior Year		-		-		-		9,032,392		18,786,590		29,418,710		29,565,804
Non-Operating Revenues		837,271		797,700		889,600		999,820		1,118,332		1,130,902		1,143,902
Capacity Revenues		836,956		352,730		457,900		487,340		441,710		300,000		300,000
Total Revenues	\$	40,320,534	\$	40,226,320	\$	40,618,769	\$	49,987,178	\$	60,011,596	\$	70,712,901	\$	71,072,311

EXPENSES

Operating Expenses														
Salary & Benefits	\$	18,335,506	\$	19,635,400	\$	20,651,700	\$	22,190,544	\$	23,341,000	\$	24,034,711	\$	24,713,586
Materials, Supplies & Services		9,537,560		9,766,930		10,450,610		11,182,150		11,964,910		12,802,440		13,698,590
Major Maintenance		800,000		600,000		650,000		1,696,300		1,225,000		2,000,000		2,284,400
Total Operating Expenses	\$	28,673,066	\$	30,002,330	\$	31,752,310	\$	35,068,994	\$	36,530,910	\$	38,837,151	\$	40,696,576
		TRUE		TRUE		TRUE		TRUE		TRUE		TRUE		TRUE
Non-Operating Expenses / (Offsetting Revenues)														
Rate Funded Capital (PAYGO)	\$	662,536	\$	800,000	\$	20,157,165	\$	16,794,330	\$	22,304,753	\$	35,290,684	\$	24,562,822
Bond Proceeds		-		(11,975,000)		(23,950,000)		(14,075,000)		(1,000,000)		(5,000,000)		(4,000,000)
Debt Funded Capital		-		11,975,000		23,950,000		14,075,000		1,000,000		5,000,000		4,000,000
Debt Service		3,863,196		3,856,197		2,954,125		2,955,375		4,271,961		4,271,711		4,268,211
Transfer To Stormwater Fund (Pension Loan)		379,630		379,630		-		-		-		-		-
Total Non-Operating Expenses	\$	4,905,362	\$	5,035,827	\$	23,111,290	\$	19,749,705	\$	26,576,714	\$	39,562,395	\$	28,831,033

Total Expenses	\$	33,578,428	\$	35,038,157	\$	54,863,600	\$	54,818,699	\$	63,107,625	\$	78,399,547	\$	69,527,609
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Cash Flow Surplus / (Deficit)	\$	6,742,106	\$	5,188,163	\$	(14,244,830)	\$	(4,831,521)	\$	(3,096,029)	\$	(7,686,646)	\$	1,544,702
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Ending Fund Balance Before Increase		22,591,403		25,157,583		11,822,333		16,023,204		22,681,373		25,626,847		27,318,643
Operating Fund Above/(Below) Target Balance		4,270,300		5,951,564		(9,001,687)		(7,776,999)		(2,129,757)		(551,293)		(12,728)

Reserves Target Test

Ending Fund Balance Before Increase		\$	22,591,403	\$	25,157,583	\$	11,822,333	\$	16,023,204	\$	22,681,373	\$	25,626,847	\$	27,318,643
Target Fund Balance (180 days of O&M)	180 days	\$	14,140,142	\$	14,795,670	\$	15,658,673	\$	17,294,298	\$	18,015,244	\$	19,152,568	\$	20,069,544
Cash Flow/Liquidity (days of O&M)		287.58 days		306.06 days		135.90 days		166.77 days		226.62 days		240.85 days		245.02 days	
Operating Reserve (15% of O&M)	15%	\$	4,180,960	\$	4,410,350	\$	4,665,347	\$	5,005,904	\$	5,295,887	\$	5,525,573	\$	5,761,826
Capital Improvement Reserve		\$	-	\$	-	\$	500,000	\$	1,500,000	\$	1,500,000	\$	1,500,000	\$	1,500,000

Vallejo Flood and Wastewater District

Financial Rate Model

Revenue Requirements (Carollo Proj. No. 201501)

Forecasted

Rate Setting Period

FYE 2022

FYE 2023

FYE 2024

FYE 2025

FYE 2026

FYE 2027

FYE 2028

Debt Coverage Test

REVENUES

Operating Revenues	\$	38,646,307	\$	39,075,890	\$	39,271,269	\$	48,500,018	\$	58,451,554	\$	69,281,999	\$	69,628,409
Total Non-Operating Revenues		1,674,227		1,150,430		1,347,500		1,487,160		1,560,042		1,430,902		1,443,902
Total Revenues	\$	40,320,534	\$	40,226,320	\$	40,618,769	\$	49,987,178	\$	60,011,596	\$	70,712,901	\$	71,072,311

EXPENSES

Wastewater Expenses	\$	28,673,066	\$	30,002,330	\$	31,752,310	\$	35,068,994	\$	36,530,910	\$	38,837,151	\$	40,696,576
Debt Service		3,863,196		3,856,197		2,954,125		2,955,375		4,271,961		4,271,711		4,268,211
Debt Coverage	1.5 x	1,931,598		1,928,098		1,477,062		1,477,687		2,135,981		2,135,856		2,134,106
Total Expenses	\$	34,467,861	\$	35,786,625	\$	36,183,497	\$	39,502,056	\$	42,938,853	\$	45,244,719	\$	47,098,893

DSCR Before Increase	●	3.01 x	●	2.65 x	●	3.00 x	●	5.05 x	●	5.50 x	●	7.46 x	●	7.12 x
Debt Coverage Surplus / (Deficit)	\$	5,852,673	\$	4,439,695	\$	4,435,272	\$	10,485,121	\$	17,072,743	\$	25,468,182	\$	23,973,418

Revenue Requirement

Revenue Surplus / (Shortfalls)	\$	4,270,300	\$	4,439,695	\$	(9,001,687)	\$	(7,776,999)	\$	(2,129,757)	\$	(551,293)	\$	(12,728)
		Surplus		Surplus		Cash Flow Driven		Cash Flow Driven		Cash Flow Driven		Cash Flow Driven		Cash Flow Driven
Revenue Increase Month		July		July		July		July		July		July		July
Calculated Rate Increase		0.0%		0.0%		23.0%		19.8%		5.4%		1.4%		0.1%
Rate Increase Override						23.0%		20.0%		18.0%				
Utilized Rate Increase		0.0%		0.0%		23.0%		20.0%		18.0%		0.0%		0.0%
Cumulative Rate Increase		0.0%		0.0%		23.0%		47.6%		74.2%		74.2%		74.2%

Resulting Cash Flows

Rate Revenues Before Rate Increase	\$	38,646,307	\$	39,075,890	\$	39,271,269	\$	39,467,626	\$	39,664,964	\$	39,863,289	\$	40,062,605
Rate Revenues From Rate Increase		-		-		9,032,392		18,786,590		29,418,710		29,565,804		29,713,633
Non-Operating Revenues		1,674,227		1,150,430		1,347,500		1,487,160		1,560,042		1,430,902		1,443,902
Less: Rate Increase Delay		-		-		-		-		-		-		-
Less: Expenditures		(33,578,428)		(35,038,157)		(54,863,600)		(54,818,699)		(63,107,625)		(78,399,547)		(69,527,609)
Resulting Cash Flows	\$	6,742,106	\$	5,188,163	\$	(5,212,438)	\$	4,922,677	\$	7,536,091	\$	(7,539,552)	\$	1,692,531

Rate Revenue Requirement	\$	38,646,307	\$	39,075,890	\$	48,303,661	\$	58,254,216	\$	69,083,674	\$	69,429,093	\$	69,776,238
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DSCR After Increase			3.01 x		2.65 x		6.06 x		8.35 x		7.99 x		7.50 x		7.15 x
Target Fund Balance (180 days of O&M)	180 days	\$	14,140,142	\$	14,795,670	\$	15,658,673	\$	17,294,298	\$	18,015,244	\$	19,152,568	\$	20,069,544
Cash Flow/Liquidity (days of O&M)			287.58 days		306.06 days		239.73 days		268.29 days		332.85 days		242.23 days		246.34 days
Operating Reserve (15% of O&M)	15%	\$	4,180,960	\$	4,410,350	\$	4,665,347	\$	5,005,904	\$	5,295,887	\$	5,525,573	\$	5,761,826
Capital Improvement Reserve		\$	506,000	\$	506,000	\$	506,000	\$	1,500,000	\$	1,500,000	\$	1,500,000	\$	1,500,000

Vallejo Flood and Wastewater District

Financial Rate Model

Revenue Requirements (Carollo Proj. No. 201501)

		Forecasted		Rate Setting Period											
		FYE 2022		FYE 2023		FYE 2024		FYE 2025		FYE 2026		FYE 2027		FYE 2028	
68	Total Target Reserves	\$	18,321,102	\$	19,206,019	\$	20,824,020	\$	23,800,203	\$	24,811,130	\$	26,178,141	\$	27,331,371
69	Total Cash Balance	\$	22,591,403	\$	25,157,583	\$	20,854,725	\$	25,777,402	\$	33,313,493	\$	25,773,941	\$	27,466,472
			TRUE		TRUE		TRUE		TRUE		TRUE		FALSE		TRUE
70	Surplus/(Deficit)	\$	4,270,300	\$	5,951,564	\$	30,705	\$	1,977,199	\$	8,502,363	\$	(404,200)	\$	135,101

Vallejo Flood and Wastewater District

Financial Rate Model

O&M (Carollo Proj. No. 201501)

Estimate Forecasted -->

FYE 2022

FYE 2023

FYE 2024

FYE 2025

FYE 2026

FYE 2027

FYE 2028

REVENUES

Operating Revenues

SSC-Rate Revenue	\$	38,646,307	\$	39,075,890	\$	39,271,269	\$	39,467,626	\$	39,664,964	\$	39,863,289	\$	40,062,605
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Total Operating Revenues	\$	38,646,307	\$	39,075,890	\$	39,271,269	\$	39,467,626	\$	39,664,964	\$	39,863,289	\$	40,062,605
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Non-Operating Revenues

Septic Hauling Fees	\$	441,932	\$	400,000	\$	492,000	\$	590,400	\$	696,672	\$	696,672	\$	696,672
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Lease Revenue		236,830		240,000		247,200		254,620		262,260		270,130		278,230
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Property Taxes		129,946		130,000		122,000		125,700		129,500		133,300		137,300
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Financing Sources		-		-		-		-		-		-		-
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Permits-Septic Haulers		8,863		8,000		8,200		8,400		8,700		9,000		9,300
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Permits-connections		2,000		2,000		2,100		2,200		2,300		2,400		2,500
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Plan Check Fees		4,000		4,000		4,100		4,200		4,300		4,400		4,500
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Inspection Fees		11,000		11,000		11,300		11,600		11,900		12,300		12,700
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Other Revenues		2,700		2,700		2,700		2,700		2,700		2,700		2,700
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Total Non-Operating Revenues	\$	837,271	\$	797,700	\$	889,600	\$	999,820	\$	1,118,332	\$	1,130,902	\$	1,143,902
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Capacity Revenues

Connection Fees	\$	788,656	\$	300,000	\$	300,000	\$	300,000	\$	300,000	\$	300,000	\$	300,000
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Grants & Intergov. Rev.		-		-		-		-		-		-		-
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Interest		48,300		52,730		157,900		187,340		141,710		-		-
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Total Capacity Revenues	\$	836,956	\$	352,730	\$	457,900	\$	487,340	\$	441,710	\$	300,000	\$	300,000
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Total Revenues without Increases	\$	40,320,534	\$	40,226,320	\$	40,618,769	\$	40,954,786	\$	41,225,006	\$	41,294,191	\$	41,506,507
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Vallejo Flood and Wastewater District

Financial Rate Model

O&M (Carollo Proj. No. 201501)

Estimate Forecasted -->

FYE 2022

FYE 2023

FYE 2024

FYE 2025

FYE 2026

FYE 2027

FYE 2028

22	OPERATING EXPENSES								
23	Salary & Benefits								
24	Wages	\$ 10,547,095	\$ 11,311,800	\$ 11,877,400	\$ 12,352,500	\$ 12,723,100	\$ 13,104,800	\$ 13,498,000	
25	Health Benefits & Med Flex - Current EEs	1,913,322	1,970,000	2,048,800	2,130,800	2,194,800	2,260,700	2,328,600	
26	Retiree Health Benefits-directly paid	1,487,182	1,531,800	1,593,100	1,656,900	1,706,700	1,758,000	1,810,800	
27	Retirement - Normal Cost - Combined	3,064,330	1,587,100	1,500,100	1,531,700	1,547,100	1,555,500	1,561,700	
28	Retirement - UAL - Classic		1,879,300	1,821,700	2,210,000	2,338,400	2,454,800	2,541,500	
29	Retirement - UAL - PEPRA		7,100	-	-	-	-	-	
30	OPEB Trust Payment	500,000	500,000	500,000	500,000	500,000	500,000	500,000	
31	Other Benefits	823,577	848,300	873,800	900,100	927,200	955,100	983,800	
32	CIP Scenario A	-	-	436,800	908,544	1,403,700	1,445,811	1,489,186	
33	Materials, Supplies & Services								
34	06-xx Prof. Services	1,600,180	1,864,370	1,994,880	2,134,520	2,283,940	2,443,820	2,614,890	
35	07-xx Postage, Printing	16,560	51,230	54,820	58,660	62,770	67,160	71,860	
36	08-04 Education Reimbursement	21,830	21,830	23,360	25,000	26,750	28,620	30,620	
37	08-xx Training & Education	221,560	265,210	283,770	303,630	324,880	347,620	371,950	
38	09-xx Dues & Memberships	79,040	81,050	86,720	92,790	99,290	106,240	113,680	
39	10-xx Advertising	113,930	112,450	120,320	128,740	137,750	147,390	157,710	
40	11-xx Admin Expenses	769,200	844,900	904,040	967,320	1,035,030	1,107,480	1,185,000	
41	12-xx Rents & Leases	181,170	166,450	178,100	190,570	203,910	218,180	233,450	
42	13-xx Misc Expenses	14,400	14,860	15,900	17,010	18,200	19,470	20,830	
43	14-xx Mat'ls, Supp & Srvc	1,674,550	1,694,430	1,813,040	1,939,950	2,075,750	2,221,050	2,376,520	
44	15-xx Other Services	2,077,160	2,069,980	2,214,880	2,369,920	2,535,810	2,713,320	2,903,250	
45	16-xx Utilities	1,730,560	1,534,590	1,642,010	1,756,950	1,879,940	2,011,540	2,152,350	
46	24-xx Equipment Rental	26,610	26,610	28,470	30,460	32,590	34,870	37,310	
47	32-xx Expense (permits, lic. & assessments)	702,760	710,080	759,790	812,980	869,890	930,780	995,930	
48	36-xx Expense (small equip, computer)	308,050	308,890	330,510	353,650	378,410	404,900	433,240	
49	OTO Major Maintenance Projects	800,000	600,000	650,000	1,696,300	1,225,000	2,000,000	2,284,400	
50	Total Operating Expenses	\$ 28,673,066	\$ 30,002,330	\$ 31,752,310	\$ 35,068,994	\$ 36,530,910	\$ 38,837,151	\$ 40,696,576	

Vallejo Flood and Wastewater District

Financial Rate Model

Debt Service (Carollo Proj. No. 201501)

Rate Setting Period

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	FYE 2035	FYE 2036
Existing Debt Service															
Interest Payment	\$ 1,371,114	\$ 1,275,600	\$ 1,176,381	\$ 1,095,365	\$ 1,010,425	\$ 945,175	\$ 876,675	\$ 804,925	\$ 722,150	\$ 634,975	\$ 542,575	\$ 445,225	\$ 342,650	\$ 234,575	\$ 120,450
Principal Payment	2,492,083	2,580,596	1,777,744	1,860,010	1,305,000	1,370,000	1,435,000	1,505,000	1,585,000	1,680,000	1,770,000	1,865,000	1,965,000	2,075,000	2,190,000
Total Existing Debt Service	\$ 3,863,196	\$ 3,856,197	\$ 2,954,125	\$ 2,955,375	\$ 2,315,425	\$ 2,315,175	\$ 2,311,675	\$ 2,309,925	\$ 2,307,150	\$ 2,314,975	\$ 2,312,575	\$ 2,310,225	\$ 2,307,650	\$ 2,309,575	\$ 2,310,450
Future Debt Service															
Interest Payment	\$ -	\$ -	\$ -	\$ -	\$ 416,000	\$ 403,676	\$ 391,253	\$ 378,731	\$ 366,108	\$ 7,175,385	\$ 7,076,269	\$ 6,971,872	\$ 6,861,885	\$ 6,745,975	\$ 7,859,795
Principal Payment	-	-	-	-	1,540,536	1,552,861	1,565,284	1,577,806	1,590,428	3,041,333	3,140,449	3,244,845	3,354,833	3,470,742	3,853,491
Total Future Debt Service	\$ -	\$ -	\$ -	\$ -	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 10,216,718	\$ 10,216,718	\$ 10,216,718	\$ 10,216,718	\$ 10,216,718	\$ 11,713,285
Total Debt Service	\$ 3,863,196	\$ 3,856,197	\$ 2,954,125	\$ 2,955,375	\$ 4,271,961	\$ 4,271,711	\$ 4,268,211	\$ 4,266,461	\$ 4,263,686	\$ 12,531,693	\$ 12,529,293	\$ 12,526,943	\$ 12,524,368	\$ 12,526,293	\$ 14,023,735

Existing Debt Issuances

SRF 2004 Loan															
Interest Payment	\$ 43,708	\$ 22,124													
Principal Payment	863,364	884,948													
Total	\$ 907,072	\$ 907,072	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SRF 2008 Loan															
Interest Payment	\$ 28,731	\$ 21,802	\$ 14,706	\$ 7,440											
Principal Payment	288,719	295,648	302,744	310,010											
Total	\$ 317,450	\$ 317,450	\$ 317,450	\$ 317,450	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue Bonds 2011															
Interest Payment	\$ 57,750	\$ 44,250	\$ 30,250	\$ 15,500											
Principal Payment	270,000	280,000	295,000	310,000											
Total	\$ 327,750	\$ 324,250	\$ 325,250	\$ 325,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue Bonds 2014															
Interest Payment	\$ 1,240,925	\$ 1,187,425	\$ 1,131,425	\$ 1,072,425	\$ 1,010,425	\$ 945,175	\$ 876,675	\$ 804,925	\$ 722,150	\$ 634,975	\$ 542,575	\$ 445,225	\$ 342,650	\$ 234,575	\$ 120,450
Principal Payment	1,070,000	1,120,000	1,180,000	1,240,000	1,305,000	1,370,000	1,435,000	1,505,000	1,585,000	1,680,000	1,770,000	1,865,000	1,965,000	2,075,000	2,190,000
Total	\$ 2,310,925	\$ 2,307,425	\$ 2,311,425	\$ 2,312,425	\$ 2,315,425	\$ 2,315,175	\$ 2,311,675	\$ 2,309,925	\$ 2,307,150	\$ 2,314,975	\$ 2,312,575	\$ 2,310,225	\$ 2,307,650	\$ 2,309,575	\$ 2,310,450

Future Debt Issuances

MIPS															
2026 Loan	Par	Loan Length	Interest Rate	Issuance Costs											
State Revolving Fund	\$ 52,000,000	30 years	0.80%	0.00%											
Interest Payment	\$ 6,696,094	\$ -	\$ -	\$ -	\$ -	\$ 416,000	\$ 403,676	\$ 391,253	\$ 378,731	\$ 366,108	\$ 353,385	\$ 340,559	\$ 327,632	\$ 314,600	\$ 288,224
Principal Payment	52,000,000	-	-	-	-	1,540,536	1,552,861	1,565,284	1,577,806	1,590,428	1,603,152	1,615,977	1,628,905	1,641,936	1,655,072
TOTAL	\$ 58,696,094	\$ -	\$ -	\$ -	\$ -	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536	\$ 1,956,536
<i>Principal Remaining:</i>	<i>\$ 52,000,000</i>	<i>\$ 52,000,000</i>	<i>\$ 52,000,000</i>	<i>\$ 52,000,000</i>	<i>\$ 50,459,464</i>	<i>\$ 48,906,603</i>	<i>\$ 47,341,319</i>	<i>\$ 45,763,513</i>	<i>\$ 44,173,085</i>	<i>\$ 42,569,933</i>	<i>\$ 40,953,956</i>	<i>\$ 39,325,051</i>	<i>\$ 37,683,115</i>	<i>\$ 36,028,044</i>	<i>\$ 34,359,731</i>
<i>Reserve</i>	<i>\$1,956,536</i>														
<i>Proceeds</i>	<i>50,043,464</i>														
<i>Variance</i>	<i>(43,464)</i>														
TREATMENT PLANT - PH 1															
2031 Loan	Par	Loan Length	Interest Rate	Issuance Costs											
Treatment Plant Ph 1 Bond	\$ 113,700,000	30 years	6.00%	3.00%											
Interest Payment	\$ 134,105,437	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,822,000	\$ 6,735,709	\$ 6,644,241	\$ 6,547,284	\$ 6,444,511	\$ 6,335,570
Principal Payment	113,700,000	-	-	-	-	-	-	-	-	1,438,181	1,524,472	1,615,940	1,712,897	1,815,671	1,924,611
TOTAL	\$ 247,805,437	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,260,181	\$ 8,260,181	\$ 8,260,181	\$ 8,260,181	\$ 8,260,181	\$ 8,260,181
<i>Principal Remaining:</i>	<i>\$ 113,700,000</i>	<i>\$ 113,700,000</i>	<i>\$ 113,700,000</i>	<i>\$ 113,700,000</i>	<i>\$ 113,700,000</i>	<i>\$ 113,700,000</i>	<i>\$ 113,700,000</i>	<i>\$ 113,700,000</i>	<i>\$ 113,700,000</i>	<i>\$ 112,261,819</i>	<i>\$ 110,737,347</i>	<i>\$ 109,121,406</i>	<i>\$ 107,408,509</i>	<i>\$ 105,592,839</i>	<i>\$ 103,668,228</i>
<i>Reserve</i>	<i>\$8,260,181</i>														
<i>Proceeds</i>	<i>102,028,819</i>														
<i>Variance</i>	<i>(48,019)</i>														
TREATMENT PLANT - PH 2															
2036 Loan	Par	Loan Length	Interest Rate	Issuance Costs											
Treatment Plant Ph 2 Bond	\$ 20,600,000	30 years	6.00%	3.00%											
Interest Payment	\$ 24,297,027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,236,000
Principal Payment	20,600,000	-	-	-	-	-	-	-	-	-	-	-	-	-	260,568
TOTAL	\$ 44,897,027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,496,568
<i>Principal Remaining:</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,600,000</i>	<i>\$ 20,339,432</i>
<i>Reserve</i>	<i>\$1,496,568</i>														
<i>Proceeds</i>	<i>18,485,432</i>														
<i>Variance</i>	<i>(17,432)</i>														

Vallejo Flood and Wastewater District

Financial Rate Model

CIP (Carollo Proj. No. 201501)

		Estimate	Forecasted -->					
Funding Source		FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
10	DEBT FUNDED							
11	MIPS							
12	MIPS & BioTower Media	State Revolving Fund	-	11,975,000	23,950,000	11,975,000	-	-
13	Expected to be Refunded	State Revolving Fund			2,100,000			
48	RATE FUNDED (SCENARIO A)	escalated 3% annually						
49	Collection System							
50	Capacity	PAYGO		6,058,500	3,570,000	4,231,240	11,438,150	4,454,750
51	Lower Lateral Program	PAYGO		367,500	367,500	360,500	360,500	360,500
52	SS Mains	PAYGO		1,680,000	2,100,000	2,060,000	2,060,000	2,060,000
53	SS Lift Stations	PAYGO		5,110,350	871,815	1,854,000	1,545,000	1,545,000
54	WWTP			-	-	-	-	-
55	Pretreatment and HW	PAYGO		918,960	1,575,000	-	103,000	507,790
56	Primary	PAYGO		-	378,000	370,800	370,800	-
57	Secondary	PAYGO		882,945	3,307,500	2,217,590	4,878,080	2,317,500
58	Disinfection	PAYGO		-	-	-	-	824,000
59	Solids Handling	PAYGO		361,200	-	-	-	257,500
60	Effluents Mgmt/Flow Conveyance	PAYGO		577,500	525,000	154,500	25,750	2,060,000
61	Process Control	PAYGO		-	105,000	309,000	-	515,000
62	Buildings and Grounds	PAYGO		777,000	105,000	309,000	2,394,750	-
63	Utilities	PAYGO		97,860	-	2,097,080	782,800	782,800
64	Regulatory Driven	PAYGO		-	630,000	3,502,000	7,725,000	4,120,000
65	Vehicles & Equipment			-	-	-	-	-
66	Annual Allocation	PAYGO		437,850	372,015	1,491,543	259,354	895,482
67	Tubbs			-	-	-	-	-
68	Priority 1 - Flood Protection (levees)	PAYGO		-	787,500	772,500	772,500	772,500
69	Tubbs Levee Imps (PSH001)	PAYGO	164,489	350,000	787,500	-	-	-
70	Tubbs Farm Bldgs (PSH004)	PAYGO	498,047	450,000	-	-	-	-
71	Tubbs Farm Bldgs P2	PAYGO		525,000	-	-	-	-
72	Maintenance Programming			-	-	-	-	-
73	Plant and Collections Unprogrammed	PAYGO		1,575,000	2,100,000	2,575,000	2,575,000	3,090,000
74	Additional Projects	PAYGO						
75	Annual CIP (Scenario A)		\$ 662,536	\$ 800,000	\$ 20,157,165	\$ 16,794,330	\$ 22,304,753	\$ 35,290,684
				\$ 24,562,822				

Vallejo Flood and Wastewater District

Financial Rate Model

Units of Service (Carollo Proj. No. 201501)

#		FYE 2022						Units	Accounts
		Flow (HCF/yr)	BOD (lbs/yr)	TSS (lbs/yr)	Flow (MGD)	BOD (mg/L)	TSS (mg/L)		
1	Total Plant Influent	4,704,011	7,557,556	7,314,965	9.64	257	249		
2	Less: I&I	1,107,687	1,002,614	1,106,333	2.27	145	160		
3	Net Plant Influent	3,596,324	6,554,941	6,208,632	7.37	292	276		
4	COMMERCIAL								
5	Commercial I								
6	Car Wash/Soft Water Service	15,984	1,996	14,967	0.03	20	150		
7	Office Buildings	47,949	38,911	23,945	0.10	130	80		
8	Laundromats	9,942	9,309	6,827	0.02	150	110		
9	Hospital	96,786	151,043	60,417	0.20	250	100		
10	All Other Commercial	226,596	212,174	212,174	0.46	150	150		
11	Total Commercial I	397,256	413,432	318,329	0.81	167	128	1,388	1,388
12	Commercial II								
13	Bars	2,112	2,637	2,637	0.00	200	200		
14	Hotel/Motel w/o Dining	42,900	83,017	32,136	0.09	310	120		
15	Repair Shop/Service Station	22,567	25,357	39,444	0.05	180	280		
16	Commercial Laundry	2,166	6,084	3,245	0.00	450	240		
17	Unknown Com II	18,408	32,749	24,131	0.04	285	210		
18	Total Commercial II	88,153	149,844	101,592	0.18	272	185	236	236
19	Commercial III								
20	Shopping Center/Regional Mall	25,494	95,486	63,657	0.05	600	400		
21	Hotel/Motel w/ Dining	2,277	7,107	8,528	0.00	500	600		
22	Industrial/Manufacturing	2,580	12,884	6,442	0.01	800	400		
23	Grocery Store w/Meat Dept.	50,328	251,332	251,332	0.10	800	800		
24	Restaurant	51,988	324,527	194,716	0.11	1,000	600		
25	Bakery	813	5,075	3,045	0.00	1,000	600		
26	Mortuary	1,169	5,838	5,838	0.00	800	800		
27	Unknown Com III	12,648	62,035	47,372	0.03	786	600		
28	Total Commercial III	147,297	764,284	580,931	0.30	831	632	245	245

Vallejo Flood and Wastewater District

Financial Rate Model

Units of Service (Carollo Proj. No. 201501)

#		FYE 2022						Units	Accounts
		Flow (HCF/yr)	BOD (lbs/yr)	TSS (lbs/yr)	Flow (MGD)	BOD (mg/L)	TSS (mg/L)		
29	Commercial IV								
30	Six Flags	123,607	110,210	45,139	0.25	143	59		
31	MI Brewery	371	4,581	1,423	0.00	1,980	615		
32	Napa Smith	702	11,027	3,274	0.00	2,518	748		
33	Weston	370	545	72	0.00	236	31		
34	Savage and Cooke	805	25,605	22,539	0.00	5,095	4,485		
35	American Canyon Landfill	2,474	836	309	0.01	54	20		
36	[Future Expected Account]								
37	Total Commercial IV	128,328	152,805	72,756	0.26	191	91	6	6
38	Commercial -- Other								
42	MI Dry Dock	746	699	699	0.00	150	150		
43	Lind Marine	6,761	6,330	6,330	0.01	150	150		
43	COV	1,744	1,415	871	0.00	130	80		
44	Total Commercial Other - Flat Fee	9,251	8,444	7,900	0.02	430	380	3	3
45	Schools	23,047	18,703	15,826	0.05	130	110	11,972	6
47	Total Schools	23,047	18,703	15,826	0.05	130	110	11,972	6
48	Total Commercial	793,332	1,507,512	1,097,334	1.63	304	222	13,850	1,884
50	RESIDENTIAL								
3	Single Family Residential							34,332	34,332
50	Multi-Family Residential							11,070	2,055
50	Total Residential	2,802,991	5,047,429	5,111,298	5.74	288	292	45,402	36,387
50	TOTAL UNITS OF SERVICE	3,596,324	6,554,941	6,208,632	7.37	292	276	59,252	38,271

Vallejo Flood and Wastewater District

Financial Rate Model

Units of Service (Carollo Proj. No. 201501)

#		FYE 2028				
		Flow (HCF/yr)	Flow (MGD)	BOD (lbs/yr)	TSS (lbs/yr)	Accounts
1	Total Plant Influent	4,822,793	9.88	7,748,393	7,498,019	
2	Less: I&I	1,107,687	2.27	1,002,614	1,106,333	
3	Net Plant Influent	3,715,106	7.61	6,745,779	6,391,686	
4	COMMERCIAL					
5	Commercial I					
6	Car Wash/Soft Water Service	16,388	0.03	2,046	15,345	
7	Office Buildings	49,159	0.10	39,893	24,550	
8	Laundromats	10,193	0.02	9,544	6,999	
9	Hopsital	99,230	0.20	154,857	61,943	
10	All Other Commercial	232,317	0.48	217,531	217,531	
11	Total Commercial I	407,287	0.83	423,872	326,368	1,423 1,423
12	Commercial II					
13	Bars	2,165	0.00	2,703	2,703	
14	Hotel/Motel w/o Dining	43,983	0.09	85,113	32,947	
15	Repair Shop/Service Station	23,137	0.05	25,997	40,440	
16	Commercial Laundry	2,221	0.00	6,238	3,327	
17	Unknown Com II	18,873	0.04	33,576	24,740	
18	Total Commercial II	90,379	0.19	153,628	104,158	242 242
19	Commercial III					
20	Shopping Center/Regional Mall	26,138	0.05	97,897	65,265	
21	Hotel/Motel w/ Dining	2,334	0.00	7,286	8,744	
22	Industrial/Manufacturing	2,645	0.01	13,210	6,605	
23	Grocery Store w/Meat Dept.	51,599	0.11	257,679	257,679	
24	Restaurant	53,301	0.11	332,721	199,633	
25	Bakery	834	0.00	5,203	3,122	
26	Mortuary	1,199	0.00	5,985	5,985	
27	Unknown Com III	12,967	0.03	63,601	48,568	
28	Total Commercial III	151,016	0.31	783,583	595,600	251 251

Vallejo Flood and Wastewater District

Financial Rate Model

Units of Service (Carollo Proj. No. 201501)

#		FYE 2028				
		Flow (HCF/yr)	Flow (MGD)	BOD (lbs/yr)	TSS (lbs/yr)	Units
29	Commercial IV					
30	Six Flags	123,607	0.25	110,210	45,139	
31	MI Brewery	371	0.00	4,581	1,423	
32	Napa Smith	702	0.00	11,027	3,274	
33	Weston	370	0.00	545	72	
34	Savage and Cooke	805	0.00	25,605	22,539	
35	American Canyon Landfill	2,474	0.01	836	309	
36	[Future Expected Account]	371	760	4,581	1,423	
37	Total Commercial IV	128,699	0.26	157,386	74,179	7
38	Commercial -- Other					
42	MI Dry Dock	746	0.00	699	699	
43	Lind Marine	6,761	0.01	6,330	6,330	
43	COV	1,744	0.00	1,415	871	
44	Total Commercial Other - Flat Fee	9,251	0.02	8,444	7,900	3
45	Schools	23,629	0.05	19,175	16,225	12,274
47	Total Schools	23,629	0.05	19,175	16,225	12,274
48	Total Commercial	810,261	1.66	1,546,089	1,124,429	14,200
50	RESIDENTIAL					
3	Single Family Residential					35,199
50	Multi-Family Residential					11,350
50	Total Residential	2,904,844	5.95	5,199,691	5,267,257	46,548
50	TOTAL UNITS OF SERVICE	3,715,106	7.61	6,745,779	6,391,686	60,749

Vallejo Flood and Wastewater District

Financial Rate Model

COS Allocations (Carollo Proj. No. 201501)

Allocation Index

Allocation	Notes	Flow	BOD	TSS	Customer	General	Total
5-Year CIP	FY 2024 - 2028	53%	11%	16%	2%	19%	100%
Connection Fees	Debt & PAYGO CIP	58%	13%	13%	1%	15%	100%
O&M		33%	16%	16%	9%	26%	100%
New Debt Service		75%	20%	5%	0%	0%	100%
Total System Flow		100%					100%
Pipelines		100%					100%
Lift Stations		100%					100%
Solids Removal	Includes climate change for Tubbs	10%	10%	60%		20%	100%
Pretreatment		85%	5%	10%			100%
Primary		10%	5%	85%			100%
Secondary		10%	85%	5%			100%
Disinfection		90%	5%	5%			100%
Buildings & Improvements					50%	50%	100%
Vehicles & Equipment					10%	90%	100%
General						100%	100%

CIP Allocation

CIP Scenario A

CIP Project	5-Yr Total Cost A	Allocation	Flow	BOD	TSS	Customer	General	Total
COLLECTION SYSTEM								
Capacity	\$ 29,752,640	Pipelines	\$ 29,752,640	\$ -	\$ -	\$ -	\$ -	\$ 29,752,640
Lower Lateral Program	1,816,500	Pipelines	1,816,500	-	-	-	-	1,816,500
SS Mains	9,960,000	Pipelines	9,960,000	-	-	-	-	9,960,000
SS Lift Stations	10,926,165	Lift Stations	10,926,165	-	-	-	-	10,926,165
WWTP								
Pretreatment and HW	3,104,750	Pretreatment	2,639,038	155,238	310,475	-	-	3,104,750
Primary	1,119,600	Primary	111,960	55,980	951,660	-	-	1,119,600
Secondary	13,603,615	Secondary	1,360,362	11,563,073	680,181	-	-	13,603,615
Disinfection	824,000	Disinfection	741,600	41,200	41,200	-	-	824,000
Solids Handling	618,700	Solids Removal	61,870	61,870	371,220	-	123,740	618,700
Effluents Mgmt/Flow Conveyance	3,342,750	Pipelines	3,342,750	-	-	-	-	3,342,750
Process Control	929,000	General	-	-	-	-	929,000	929,000
Buildings and Grounds	3,585,750	Buildings & Improvements	-	-	-	1,792,875	1,792,875	3,585,750
Utilities	3,760,540	General	-	-	-	-	3,760,540	3,760,540
Regulatory Driven	15,977,000	Primary	1,597,700	798,850	13,580,450	-	-	15,977,000
VEHICLES & EQUIPMENT								
Annual Allocation	3,456,244	Vehicles & Equipment	-	-	-	345,624	3,110,620	3,456,244
TUBBS								
Priority 1 - Flood Protection (levees)	3,105,000	Solids Removal	310,500	310,500	1,863,000	-	621,000	3,105,000
Tubbs Levee Imps (PSH001)	787,500	Solids Removal	78,750	78,750	472,500	-	157,500	787,500
Tubbs Farm Bldgs (PSH004)	-	Solids Removal	-	-	-	-	-	-
Tubbs Farm Bldgs P2	525,000	Solids Removal	52,500	52,500	315,000	-	105,000	525,000
MAINTENANCE PROGRAMMING								
Plant and Collections Unprogrammed	11,915,000	General	-	-	-	-	11,915,000	11,915,000
Additional Projects	-	General	-	-	-	-	-	-
TOTAL	\$ 119,110		\$ 62,752	\$ 13,118	\$ 18,586	\$ 2,138	\$ 22,515	\$ 119,109,754

Allocation %

TRUE

1.80%

1.80%

15.60%

1.80%

18.90%

100.00%

TRUE

Vallejo Flood and Wastewater District

Financial Rate Model

COS Allocations (Carollo Proj. No. 201501)

O&M Allocation

Cost Centers	FYE 2028	Flow	BOD	TSS	Customer	General	Total	Allocation
3101: Admin	\$ 2,121,400				10.0%	90.0%	100%	5.21%
3102: Safety & Risk Management	2,306,142				50.0%	50.0%	100%	5.67%
3103: Finance	2,971,941				50.0%	50.0%	100%	7.30%
3104: Engineering	1,991,600	50.0%	20.0%	20.0%	10.0%	0.0%	100%	4.89%
3105: Field Operations	7,085,165	100.0%					100%	17.41%
3107: Operations	1,316,881	50.0%	25.0%	25.0%			100%	3.24%
3108: Environmental Services	8,004,102		45.0%	45.0%	10.0%		100%	19.67%
3109: Facilities Maintenance	3,943,957	45.0%	22.5%	22.5%		10.0%	100%	9.69%
3110: Electrical/IT	7,087,239	40.0%	17.5%	17.5%	0.0%	25.0%	100%	17.41%
3111: Human Resources	3,868,148	0.0%	0.0%	0.0%	0.0%	100.0%	100%	9.50%
TOTAL	\$ 40,696,576	\$ 13,349	\$ 6,457	\$ 6,457	\$ 3,851	\$ 10,583	\$ 40,696,576	100.00%
Admin	\$ 2,121	\$ -	\$ -	\$ -	\$ 212,140.01	\$ 1,909,260.09	\$ 2,121,400.10	5.21%
Safety & Risk Management	2,306	-	-	-	1,153,071.03	1,153,071.03	2,306,142.06	5.67%
Finance	2,972	-	-	-	1,485,970.52	1,485,970.52	2,971,941.04	7.30%
Engineering	1,992	995,800.24	398,320.10	398,320.10	199,160.05	-	1,991,600.48	4.89%
Field Operations	7,085	7,085,164.94	-	-	-	-	7,085,164.94	17.41%
Operations	1,317	658,440.31	329,220.15	329,220.15	-	-	1,316,880.61	3.24%
Environmental Services	8,004	-	3,601,845.97	3,601,845.97	800,410.21	-	8,004,102.15	19.67%
Facilities Maintenance	3,944	1,774,780.70	887,390.35	887,390.35	-	394,395.71	3,943,957.10	9.69%
Electrical/IT	7,087	2,834,895.76	1,240,266.90	1,240,266.90	-	1,771,809.85	7,087,239.41	17.41%
Human Resources	3,868	-	-	-	-	3,868,147.95	3,868,147.95	9.50%
TOTAL	\$ 40,697	\$ 13,349	\$ 6,457	\$ 6,457	\$ 3,851	\$ 10,583	\$ 40,697	100.00%
Allocation %		TRUE 32.80%	TRUE 15.87%	TRUE 15.87%	TRUE 9.46%	TRUE 26.00%		

Vallejo Flood and Wastewater District

Financial Rate Model

Cost of Service (Carollo Proj. No. 201501)

1	Allocated Cost of Service	FYE 2028						
2		Allocation	Flow	BOD	TSS	Customer	General	TOTAL
3	OPERATING EXPENSES	O&M	\$ 13,349,082	\$ 6,457,043	\$ 6,457,043	\$ 3,850,752	\$ 10,582,655	\$ 40,696,576
4	(+) CAPITAL EXPENSES							
5	Debt Service (Existing)	Total System Flow	2,311,675	-	-	-	-	2,311,675
6	Debt Service (Future) - 5-yr Avg	New Debt Service	1,467,402	391,307	97,827	-	-	1,956,536
7	Rate Funded Capital (PAYGO)	5-Year CIP	12,940,791	2,705,187	3,832,741	441,001	4,643,102	24,562,822
8	Total Revenue Requirements		\$ 30,068,950	\$ 9,553,537	\$ 10,387,612	\$ 4,291,753	\$ 15,225,757	\$ 69,527,609
9	(-) OFFSETTING REVENUE							
10	Septic Hauling Fees	Solids Removal	69,667	69,667	418,003	-	139,334	696,672
11	Connection Fees	Connection Fees	173,566	39,287	39,440	4,138	43,568	300,000
12	Grants & Intergov. Rev.	General	-	-	-	-	-	-
13	Interest	General	-	-	-	-	-	-
14	Lease Revenue	General	-	-	-	-	278,230	278,230
15	Property Taxes	General	-	-	-	-	137,300	137,300
16	Financing Sources	General	-	-	-	-	-	-
17	Permits-Septic Haulers	Solids Removal	930	930	5,580	-	1,860	9,300
18	Permits-connections	General	-	-	-	-	2,500	2,500
19	Plan Check Fees	General	-	-	-	-	4,500	4,500
20	Inspection Fees	General	-	-	-	-	12,700	12,700
21	Other Revenues	General	-	-	-	-	2,700	2,700
22	Total Revenue Offsets		\$ 244,164	\$ 109,884	\$ 463,023	\$ 4,138	\$ 622,693	\$ 1,443,902
23	(+) ADJUSTMENTS							
24	Cash from Reserves	General	\$ -	\$ -	\$ -	\$ -	\$ 1,692,531	\$ 1,692,531
25	Total Adjustments		\$ -	\$ -	\$ -	\$ -	\$ 1,692,531	\$ 1,692,531
26	Total Cost of Service		\$ 29,824,787	\$ 9,443,653	\$ 9,924,588	\$ 4,287,615	\$ 16,295,595	\$ 69,776,238

Vallejo Flood and Wastewater District

Financial Rate Model

Cost of Service (Carollo Proj. No. 201501)

27	Allocation of General Cost		\$ 9,087,636	\$ 2,877,489	\$ 3,024,030	\$ 1,306,440	\$ (16,295,595)	\$ -
28	Allocated Cost of Service		\$ 38,912,423	\$ 12,321,142	\$ 12,948,619	\$ 5,594,055	\$ -	\$ 69,776,238
			55.77%	17.66%	18.56%	8.02%	0.00%	100.00%
29	Allocation % (Fixed Costs)		60.63%	19.20%	20.17%			
30	Adjustment to Fixed Charges	60%	\$ (21,990,827)	\$ (6,963,126)	\$ (7,317,736)	\$ 36,271,688		
31	Adjusted Cost of Service		\$ 16,921,596	\$ 5,358,016	\$ 5,630,883	\$ 41,865,743	\$ -	\$ 69,776,238
			24.25%	7.68%	8.07%	60.00%	0.00%	100.00%
32	Unit of Service		3,715,106	6,745,779	6,391,686	48,481		
33		Units	hcf	lbs/yr	lbs/yr	bills/yr		
34	Unit Cost		\$ 4.55	\$ 0.79	\$ 0.88	\$ 71.96		
35		Units	\$/hcf	\$/lb	\$/lb	\$/month		

Allocated Cost of Service to Customer Classes

		Flow	BOD	TSS	Customer	General	TOTAL COS
37							
38	Residential	\$ 13,231,011	\$ 4,129,994	\$ 4,640,295	\$ 40,197,185	\$ -	\$ 62,198,485
39	Commercial I	1,855,116	336,672	287,520	1,228,882	-	3,708,190
40	Commercial II	411,659	122,023	91,760	208,945	-	834,387
41	Commercial III	687,850	622,382	524,706	216,914	-	2,051,852
42	Commercial IV	586,198	125,008	65,349	6,045	-	782,600
43	Commercial/Industrial Other	42,135	6,707	6,960	2,591	-	58,393
44	Schools	107,626	15,230	14,294	5,181	-	142,332
45	Allocated Cost of Service	\$ 16,921,596	\$ 5,358,016	\$ 5,630,883	\$ 41,865,743	\$ -	\$ 69,776,238

Vallejo Flood and Wastewater District

Financial Rate Model

Rate Design (Carollo Proj. No. 201501)

1	Fixed Charge Rate Design	Current	2028	Difference	
2	RESIDENTIAL				
3	Number of Accounts (incl. MFR)		46,548		
4	Customer Revenue to Recover		\$ 62,198,485		
5	Fixed Charge (\$/month)	\$ 64.12	\$ 111.36	↑ \$47.24	↑ 73.67%
6	Variable Charge Rate Design				
7	COMMERCIAL I				
8	Total Flow (HCF)		407,287		
9	Variable Cost		\$ 2,479,308		
10	Variable Rate (\$/hcf)	\$ 3.26	\$ 6.10	↑ \$2.83	↑ 86.81%
11	Fixed Charge (\$/month)	\$ 50.80	\$ 71.96	↑ \$21.16	↑ 41.65%
12	COMMERCIAL II				
13	Total Flow (HCF)		90,379		
14	Variable Cost		\$ 625,442		
15	Variable Rate (\$/hcf)	\$ 3.61	\$ 6.94	↑ \$3.32	↑ 91.97%
16	Fixed Charge (\$/month)	\$ 50.80	\$ 71.96	↑ \$21.16	↑ 41.65%
17	COMMERCIAL III				
18	Total Flow (HCF)		151,016		
19	Variable Cost		\$ 1,834,938		
20	Variable Rate (\$/hcf)	\$ 5.83	\$ 12.16	↑ \$6.33	↑ 108.58%
21	Fixed Charge (\$/month)	\$ 50.80	\$ 71.96	↑ \$21.16	↑ 41.65%
22	COMMERCIAL IV				
23	Flow Rate (\$/hcf)	\$ 2.60	\$ 4.56		
24	BOD Rate (\$/lb)	0.37	0.80		
25	TSS Rate (\$/lb)	0.40	0.89		
26	Fixed Charge (\$/month)	50.80	\$ 71.96	↑ \$21.16	↑ 41.65%
27	COMMERCIAL -- Other				
28	Total Flow (mgal)		6.92		
29	Variable Cost		\$ 55,802		
30	Variable Rate (\$/hcf)	\$ 3,460.71	\$ 8,064.40	↑ \$4,603.68	↑ 133.03%
31	Fixed Charge (\$/month)	\$ 50.80	\$ 71.96	↑ \$21.16	↑ 41.65%
32	SCHOOLS				
33	Total ADA		12,274		
34	Variable Cost		\$ 137,151		
35	Variable Rate (\$/student)	\$ 6.04	\$ 11.18	↑ \$5.14	↑ 85.10%
36	Fixed Charge (\$/month)	\$ 50.80	\$ 71.96	↑ \$21.16	↑ 41.65%

Vallejo Flood and Wastewater District

Financial Rate Model

Rate Schedule (Carollo Proj. No. 201501)

1	Rate Schedule FY 24 - FY 28	Current	2024	2025	2026	2027	2028
5	RESIDENTIAL						
6	Monthly Service Charge						
7	Single Family Residential	\$ 64.12	\$ 78.88	\$ 94.64	\$ 111.36	\$ 111.36	\$ 111.36
8	Multi-Family Residential	64.12	78.88	94.64	111.36	111.36	111.36
9	COMMERCIAL/INDUSTRIAL						
10	Monthly Service Charge	\$ 50.80	\$ 57.06	\$ 64.08	\$ 71.96	\$ 71.96	\$ 71.96
11	Volumetric Rate						
12	Commercial I - Low Strength (\$/hcf)	\$ 3.26	\$ 4.01	\$ 4.94	\$ 6.08	\$ 6.08	\$ 6.09
13	Commercial II - Medium Strength (\$/hcf)	3.61	4.49	5.58	6.93	6.93	6.93
14	Commercial III - High Strength (\$/hcf)	5.83	7.45	9.52	12.16	12.16	12.16
15	Commercial - Others (\$/mgal)	3,460.71	4,588.12	6,082.80	8,064.40	8,064.40	8,064.40
16	Commercial IV - Significant Dischargers						
17	Flow (\$/hcf)	2.60	3.14	3.79	4.56	4.56	4.56
18	BOD (\$/lb)	0.37	0.48	0.62	0.80	0.80	0.80
19	TSS (\$/lb)	0.40	0.52	0.68	0.89	0.89	0.89
20	Schools (\$ per ADA)	6.04	7.42	9.12	11.18	11.18	11.18



District Manager
Melissa Morton

April 11, 2023
Consent Item 5F

BOARD COMMUNICATION

TO: THE HONORABLE PRESIDENT AND BOARD OF TRUSTEES

FROM: MELISSA MORTON, DISTRICT MANAGER *Melissa Morton*
JUSTIN KEATING, DIRECTOR OF FIELD OPERATIONS

SUBJECT: APPROVE THE SEWER SYSTEM MANAGEMENT PLAN (SSMP) UPDATE

BACKGROUND AND DISCUSSION

The Sewer System Management Plan (SSMP) is a requirement of the State Water Resources Control Board, to be in compliance with the Statewide General Waste Discharge Requirements for sanitary sewer systems. The State Water Resources Control Board requires an agency's SSMP to be internally audited every two years, and updated every five years. The five-year SSMP update must also be approved by the agency's governing body. These updates insure the SSMP reflects an agency's most current practices for managing the sanitary sewer system.

In December 2022, the State Water Resources Control Board adopted the newly issued Statewide General Waste Discharge Requirements. This newly adopted order goes into effect June 5, 2023 and changes the audit and updates timelines, and requires changes to an agency's SSMP Emergency Response Plans. This update meets the five-year update schedule and will be compliant with the June 5, 2023 requirements.

RECOMMENDATION

Approve the District's Sewer System Management Plan update.

ALTERNATIVES CONSIDERED

None. This is a regulatory requirement as part of the Statewide General Waste Discharge Requirements.

ENVIRONMENTAL REVIEW

This is not a project under CEQA and no environmental review is required.

FISCAL IMPACT

This item was budgeted in the FY 2022-2023 budget.

PROPOSED ACTION

Approve the District's Sewer System Management Plan update, as required by State Water Resources Control Board, to comply with requirements that will go into effect on June 5, 2023.

DOCUMENTS ATTACHED

A. Updated Sewer System Management Plan

CONTACT PERSON

Justin Keating, Director of Field Operations, (707) 652-7823

Sewer System Management Plan Update December 2022

PREPARED FOR

Vallejo Flood and Wastewater District



PREPARED BY



Sewer System Management Plan Update December 2022

Prepared for

Vallejo Flood & Wastewater District

Project No. 078-40-22-29

Waste Discharge ID 2SSO10212

2022 SSMP Adoption Date: _____, 2023

Original SSMP Adoption Date: December 11, 2012

Council Resolution Number: 2012-5474



Project Manager: Anne Girtz, PE

March 28, 2023

Date

A handwritten signature in blue ink that reads "Michael Zacharia".

QA/QC Review: Michael Zacharia, PE

March 28, 2023

Date

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SSMP INTRODUCTION

INTRODUCTION

I.1 Introduction

This Sewer System Management Plan (SSMP) is a compendium of the policies, procedures, and activities that are included in the planning, management, operation, and maintenance of the Vallejo Flood & Wastewater District (District) wastewater collection system.

The State Water Resources Control Board (SWRCB) has issued statewide waste discharge requirements for sanitary sewer systems, which include requirements for development of an SSMP. The SWRCB requirements are outlined in Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, dated May 2, 2006 (GWDR), and Order No. WQ-2008-0002-EXEC, dated February 20, 2008, which was amended by Order No. 2013-0058-EXEC, effective September 9, 2013, which changed the Monitoring and Reporting Program (MRP). The SWRCB has recently re-issued the GWDR with Order No. WQ 2022-0103-DWQ (2022 Order) which will become effective June 5, 2023. The only update included in this SSMP that satisfies the 2022 Order is the renaming of the OERP to SERP which is required by June 5, 2023. No other changes were required under the 2022 Order.

The District currently operates under a San Francisco Bay Regional Water Quality Control Board National Pollution Discharge Elimination System Permit (NPDES) No. CA0037699 issued by Order R2-2017-0035, which was issued on November 1, 2017, and recently reissued (will go into effect on April 1, 2023). The National Pollution Discharge Elimination System Permit NPDES Permit covers both the District wastewater treatment plant (WWTP) and the collection system operations. The District's waste discharger identification number in the California Integrated Water Quality System (CIWQS) is 2SSO10212.

The District adopted their original SSMP on December 11, 2012. The SSMP document has since been updated according to the GWDR requirements, including this most recent 2022 update, which was adopted by the Board on XX XX, 2023. This 2022 version of the SSMP builds on the 2017 SSMP update, adding supplementary information to document the District's recent efforts and achievements in reducing sanitary sewer overflows within their collection system.

The structure (section numbering and nomenclature) of this SSMP follows the above referenced GWDR and MRP. This SSMP is organized by the SWRCB outline of elements; and contains language taken from the GWDR at the beginning of each element. The GWDR uses the term "Enrollee" to mean each individual municipal wastewater agency that has completed and submitted the required application for coverage under the WDR (in this case, the Enrollee is the District).

I.2 Definitions, Acronyms, and Abbreviations

ABS	<u>Acrylonitrile Butadiene Styrene</u>
Board	<u>Board of Trustees</u>
BMP	<u>Best Management Practices</u> Refers to the procedures employed in commercial kitchens to minimize the quantity of grease that is discharged to the sanitary sewer system. Examples include scraping food scraps into a garbage can and dry wiping dishes and utensils prior to washing.
CCTV	<u>Closed Circuit Television</u> Refers to the process and equipment that is used to internally inspect the condition of gravity sewers.

Introduction



CIP	<u>Capital Improvement Program</u> Refers to the document that identifies future capital improvements to the District's sanitary sewer system.
CIPP	<u>Cured-in-Place Pipe</u>
CIU	<u>Categorical Industrial User</u>
CIWQS	<u>California Integrated Water Quality System</u> Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system.
CMMS	<u>Computerized Maintenance Management System</u> Refers to the computerized maintenance management system that is used by the District to plan, dispatch, and record the work on its sanitary sewer system. Infor is the propriety software the District uses for CMMS.
CMP	<u>Corrugated Metal Pipe</u>
CWEA	<u>California Water Environment Association</u>
DIP	<u>Ductile Iron Pipe</u>
District	<u>Refers to the Vallejo Flood & Wastewater District</u>
DS	<u>Data Submitters</u>
FOG	<u>Fats, Oils, and Grease</u> Refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.
FOP	<u>Field Operations</u>
FRP	<u>Fiberglass Reinforced Plastic</u>
GWDR or WDR	<u>General Waste Discharge Requirements</u> Refers to the State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, dated May 2, 2006. The Order was updated in December 2022 and will go into effect June 5, 20233.
GIS	<u>Geographical Information System</u> Refers to the District's system that is used to capture, store, analyze, and manage geospatial data associated with the District's sanitary sewer system assets.
GRD	<u>Grease Removal Device</u> Refers to grease traps and grease interceptors that are installed to remove FOG from the wastewater flow at food service establishments.
I&I, I/I	<u>Infiltration and Inflow</u> - Refers to water that enters the sanitary sewer system from storm water and groundwater. - Infiltration enters through defects in the sanitary sewer system after flowing through the soil. Inflow enters the sanitary sewer without flowing through the soil. Typical points of inflow are holes in manhole lids and direct connections to the sanitary sewer (e.g. storm drains, area drains, and roof leaders).
Infor / Hansen	Refers to the software used by the District for computerized maintenance management (CMMS).
JHA	<u>Job Hazard Analysis</u>
Lateral	<u>See Private Sewer Lateral</u>

LRO	<u>Legally Responsible Official</u> Refers to person(s) formally designated by an agency to be responsible for formal reporting and certifying of all reports submitted to the CIWQS.
Mainline Sewer	Refers to District wastewater collection system piping that is not a private lateral connection to a user.
MRP	<u>Monitoring and Reporting Program</u> State Water Resources Control Board Executive Order WQ 2013-0058-EXEC effective September 9, 2013.
NASCO PACP	National Association of Sewer Service Companies (NASSCO) – Pipeline Assessment Certification Program (PACP)
NPDES	<u>National Pollution Discharge Elimination System Permit</u>
Notification of an SSO	Refers to the time at which the District becomes aware of an SSO event through observation or notification by the public or other source.
OES	<u>Office of Emergency Services</u> Refers to the California State Office of Emergency Services.
O&M	<u>Operations and Maintenance</u>
OERP	<u>Overflow Emergency Response Plan</u>
PEP/PLP	<u>Polyethylene</u>
PM	<u>Preventive Maintenance</u> Refers to maintenance activities intended to prevent failures of the sanitary sewer system facilities (e.g. cleaning, CCTV, repair, etc.).
POLYC	<u>Polycarbonate</u>
Private Sewer Lateral	Refers to the portion of a private property's building sewer as defined by the plumbing code, and is further defined as the piping of a sewer system that extends from the end of the building drain to the property line cleanout.
PS	<u>Pump Station</u> A facility that transmits and lifts sewage into the District gravity sanitary sewer collection system
RCP	<u>Reinforced Concrete Pipe</u>
RWQCB	<u>Regional Water Quality Control Board</u> Refers to the San Francisco Bay Regional Water Quality Control Board.
SERP	<u>Spill Emergency Response Plan</u>
SIU	<u>Significant Industrial User</u>
SSO	<u>Sanitary Sewer Overflow</u> Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include: • Overflows or releases of untreated or partially treated wastewater that reach waters of the United States; • Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and • Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

	SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS. Note: Wastewater backups into buildings caused by a blockage or other malfunction of a lateral that is privately owned are not SSOs. SSO Categories: <u>Category 1:</u> Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either: • Reaches surface water and/or drainage channel tributary to a surface water; or • Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly. <u>Category 2:</u> Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either: • Does not reach surface water, a drainage channel, or an MS4, or • The entire SSO discharged to the storm drain system was fully recovered and disposed of properly. <u>Category 3:</u> All discharges of untreated or partially treated wastewater, that are equal to or greater than 50 gallons and less than 1,000 gallons that does not discharge to surface water. <u>Category 4:</u> All discharges of untreated or partially treated wastewater, less than 50 gallons that does not discharge to surface water.
SSOEP	<u>Sanitary Overflow Elimination Program</u>
Sanitary Sewer System or Sewer System	Refers to the sanitary sewer facilities that are owned and operated by the Vallejo Flood & Wastewater District.
SSMP	<u>Sewer System Management Plan</u>
SOP	<u>Standard Operating Procedures</u> Refers to written procedures that pertain to specific activities employed in the operation and maintenance of the Sanitary Sewer System.
SWRCB	<u>State Water Resources Control Board</u> Refers to the California Environmental Protection Agency, State Water Resources Control Board. Note: The State Board is a separate entity from the San Francisco Bay Regional Water Quality Control Board, although the two agencies are closely connected.
SECAP	<u>System Evaluation and Capacity Assurance Plan</u>
Water of the State	Refers to “any surface water or groundwater, including saline waters, within the boundaries of the state.” (California Water Code § 13050(e)).
WWTP	<u>Wastewater Treatment Plant</u>

I.3 Sanitary Sewer System Facilities

Located in southern-most Solano County along the northeast interior of the San Pablo Bay, the Vallejo Flood & Wastewater District (District) is a special district created by an Act of California State Legislature May 19, 1952. The District is not coterminous with the City of Vallejo and serves an area slightly larger encompassing unincorporated County areas and Mare Island. The District's net overall service area covers approximately thirty-six square miles.

The District provides uninterrupted wastewater collection, treatment and disposal, and storm water transmission and pollution control services, generally on a 24-hour basis, to all customer connections within its boundary. The District owns, maintains, and operates 395 miles of wastewater gravity mains, 78 miles of lower laterals, 30 wastewater pump stations and 11 miles of associated force mains, a secondary treatment wastewater treatment plant, and biosolids disposal facilities. These major facilities are generally depicted on Figure 1. The District also protects lands and inhabitants from flooding damage through its storm drainage systems.

The District services approximately 38,000 accounts that equate to approximately 48,000 dwelling units. Dwelling units exceed accounts due to multi-residential apartments and mobile home parks. The District's service area is predominantly residential with low strength commercial establishments and professional offices. The District does not contain any large industrial users, however, there are six (6) Significant Industrial Users (SIU) such as Six Flags Discovery Kingdom, one Categorical Industrial User (CIU) and a number of high-density residential developments.

Table 1 and Table 2 summarizes the collection system by pipeline size and material, and Table 3 provides the installation age distribution of the District's collection system.

Table 1. Collection System Size Distribution			
Diameter (inch)	Number of Line Segments	Pipe Length (LF)	Portion of Sewer System (percent by length)
≤ 6	3,126	653,150	31.32
8	5,060	960,856	46.07
10-12	782	172,196	8.26
14-16	185	41,218	1.98
18-24	323	78,020	3.74
27-39	211	58,466	2.80
≥ 42	93	25,432	1.22
Unknown	45	96,262	4.62
Total	9,825	2,085,600	100%

Source: District GIS, December 2022

Table 2. Collection System Materials of Construction

Material	Number of Line Segments	Pipe Length, miles	Portion of Sewer System, percent by length
Vitrified Clay Pipe (VCP)	5,263	1,099,668	52.73
Polyvinyl Chloride (PVC)	2,363	414,006	19.85
High-density Polyethylene (HDPE)	672	144,197	6.91
Asbestos Cement Pipe (ACP)	409	86,856	4.16
Reinforced Plastic Mortar (RPM)	354	67,690	3.25
Other ^(a)	385	87,490	4.19
Unknown	379	185,693 ^a	8.90
Total	9,825	2,085,600	100%

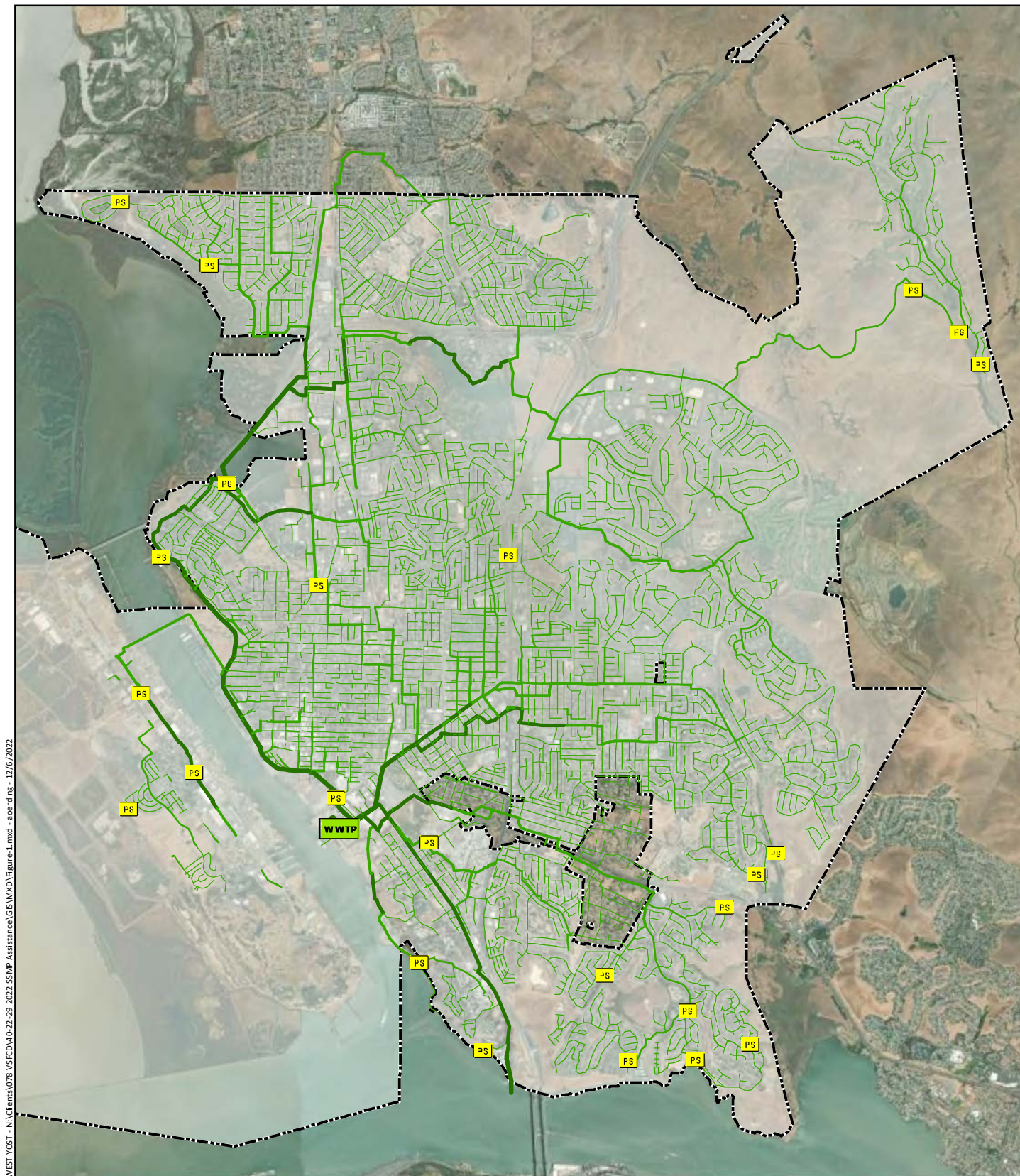
Source: District GIS, December 2022

(a) "Other" pipe types include Acrylonitrile Butadiene Styrene (ABS), Cast Iron (CIP), Cured-in-Place (CIPP), Corrugated Metal (CMP), Ductile Iron (DIP), Fiberglass (FRP), Polyethylene (PEP/PLP), Polycarbonate (POLYC), Reinforced Concrete Pipe (RCP), Vylon, and other miscellaneous materials.

Table 3. Inventory of Collection System Pipes by Age

Construction Decade	Approximate Age in Years	Pipe Length, LF	Portion of Sewer System, percent by length
1930-1939	84-93	30,228	1.4
1940-1949	74-83	81,493	3.9
1950-1959	64-73	437,863	21.0
1960-1969	54-63	238,878	11.5
1970-1979	44-53	380,148	18.2
1980-1989	34-43	305,668	14.7
1990-1999	24-33	68,105	3.3
2000-2009	14-23	170,142	8.2
2010-2023	0-13	33,151	1.6
Unknown	-	339,924	16.3
Total		2,085,600	100%

Source: District GIS, December 2022



WEST YOST - N:\Clients\078 VSFC\40-22-29 2022 SSMP Assistance\GIS\WKD Figure-1.mxd - aecording - 12/6/2022

Sewer Pipe Diameter

- ≤ 8-inches
- 10 to 12-inches
- 14 to 24-inches
- 27 to 39-inches
- 42 to 60-inches



City of Vallejo Boundary



Wastewater Treatment Plant



Pump Station



0 2,500 5,000

Scale in Feet



Figure 1

Wastewater Collection System

Vallejo Flood and Wastewater District
Sewer System Management Plan

CHAPTER 1

Element I: Goals

State Water Resources Control Board (SWRCB) Waste Discharge Requirement:

The goal of the Sewer System Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent Sanitary Sewer Overflows (SSOs), as well as mitigate any SSOs that do occur.

1.1 SSMP GOALS

The goals of the District SSMP are to focus on SSO reduction and mitigation by way of:

- Implementation of annual team production and Best Management Practices focusing on system cleaning, maintenance and repair;
- Performance of comprehensive and continuous condition assessment of the system;
- Repair, Rehabilitation, or Replacement of lines that cannot be effectively maintained through a robust and appropriately funded Capital Improvement Program (CIP);
- Targeting exceptional levels of customer service that are responsive and result in high levels of customer satisfaction; and
- Providing the best equipment, training and communication with staff so that we can reach and maintain these goals.

CHAPTER 2

Element II: Organization

SWRCB Waste Discharge Requirement:

The SSMP must identify:

- a) The name of the principal executive officer or ranking elected official responsible for the overall management of the sewer system, or an authorized representative of that person.
- b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and
- c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

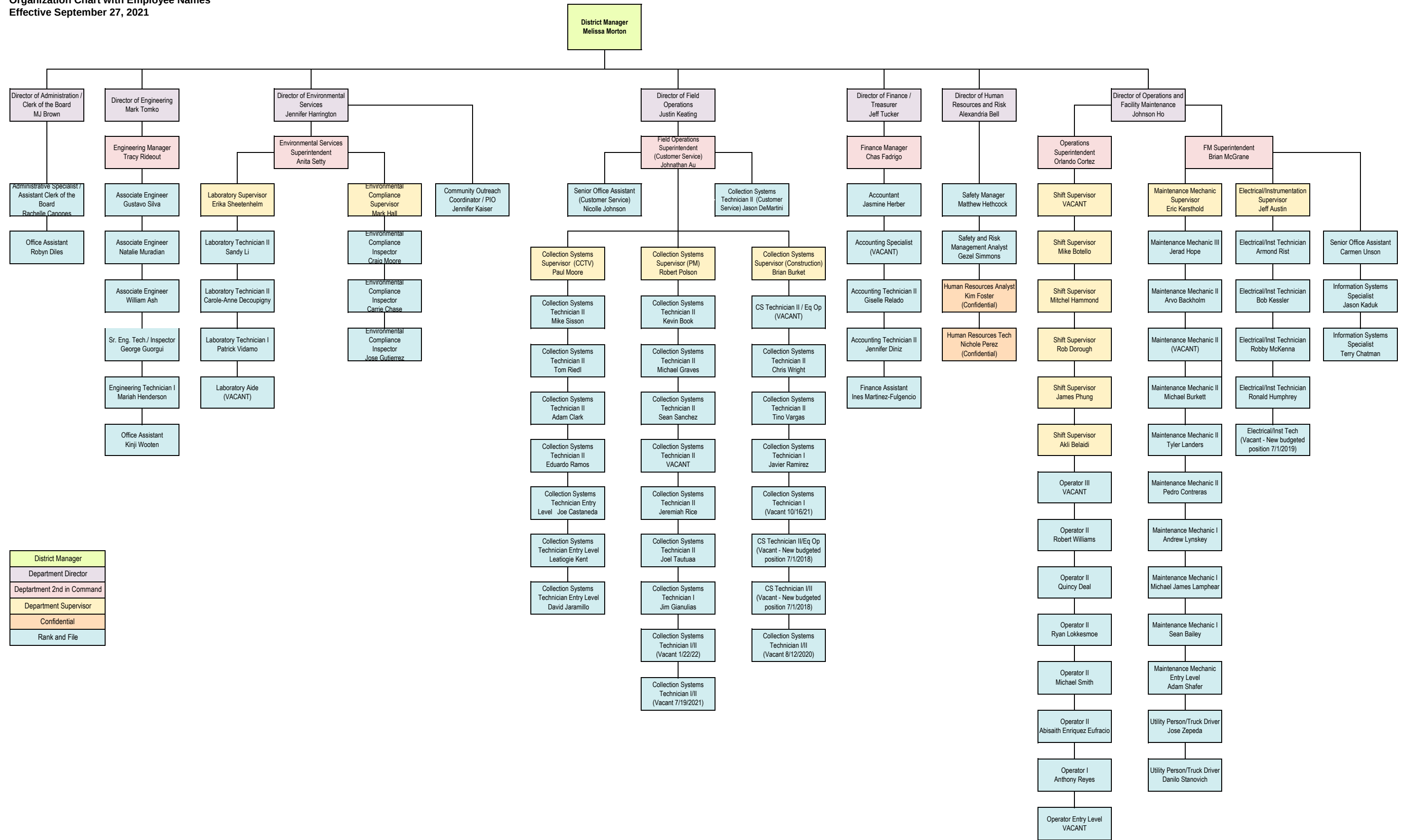
2.1 ORGANIZATIONAL STRUCTURE

The District is governed by an eight-member Board of Trustees, composed of seven (7) members of the Vallejo City Council and one (1) member representing the unincorporated areas of Vallejo typically from the Solano County Board of Supervisors.

The Board sets policy for the District and appoints the District Manager and Treasurer who serve at the pleasure of the Board. The District Manager is the chief administrative official responsible for the District's day-to-day operations in accordance with Board policies, approved budget, and legal and regulatory compliance. The Treasurer is charged with cash and investment management in accordance with CA law, policy, and general direction.

The organization chart for the management, operation, and maintenance of the District's wastewater collection system is shown on the following page

**Vallejo Flood Wastewater District
Organization Chart with Employee Names
Effective September 27, 2021**



2.2 AUTHORIZED REPRESENTATIVES

The District's staff with a role in the implementation of the SSMP are identified in Table 4 along with their roles and responsibilities as they relate to collection system operations. Additionally, District staff responsible for the reporting and certification of spill reports through the California Integrated Water Quality System (CIWQS) are identified as either a Legally Responsible Official (LRO) or Data Submitter (DS), as appropriate. Staff designated as either an LRO or Data Submitters are responsible for the reporting of SSOs to the SWRCB. The LRO is responsible for certifying these reports.

Table 4. District Staff Roles and Responsibilities Defined	
Position	Roles and Responsibilities
Board of Trustees	Establishes policy for the management of the District facilities.
District Manager	Plans, coordinates, and directs, through subordinate department heads, the operations, engineering and construction programs, and the financial affairs of the District; carries out the policies of the Board and observes and enforces all laws, rules, and regulations governing the affairs of the District.
Director of Finance/Treasurer	Designs, develops, implements, and manages District financing plans set forth by policy, ordinance, and Board approval.
Director of Human Resources and Risk	Develops, updates, and implements an employee safety program, an emergency preparedness program, an Employee Safety Training Program, and overall risk management activities.
Director of Environmental Services	Manages and supervises the activities of the Laboratory, Pollution Control, and Community Outreach departments. Interprets and implements codes and regulations concerning wastewater and storm water discharges.
Director of Engineering	Approves all engineering plans for improvements to be accepted by the District and provides Engineering policy guidance and interpretation to subordinates and, when applicable, to other District departments.
Director of Operations and Facility Maintenance	Oversees and coordinates operations and maintenance (O&M) staff for activities including budgeting, long range planning, emergency coordination, communication with agencies and the engineering personnel on design issues, and maintenance activities in the Plant and pump stations.
Director of Field Operations (LRO)	Plans, coordinates, and directs the operations maintenance and repair of the wastewater and storm water collection systems. Plans, organizes, directs, coordinates, budgets, and reports the activities of a work force actively engaged in the maintenance, operation and repair of District collection systems.
Field Operations Superintendent (LRO)	The Field Operations Superintendent is responsible for the supervision of locating and marking underground facilities and structures, furnishing reports as required, as needed performing Collection System Technician and Supervisor duties, evaluates condition and effectiveness of existing systems, screens emergency calls and coordination of Field Operations customer service program, overflow response and follow up processes.
Preventative Maintenance Supervisor (DS)	Acts as a working foreman, organizes and leads crew(s) in the maintenance, installation and repair of collection systems and screens emergency calls. Responsible for the safety and work performed by the crew(s) under supervision. Responsible for directing staff in the planning and completion of preventative maintenance activities for the collections systems.
Construction and Repair Supervisor (DS)	Acts as a working foreman, organizes and leads crew(s) in the maintenance, installation and repair of collection systems and screens emergency calls. Responsible for the safety and work performed by the crew(s) under supervision. Responsible for directing staff in the repair and replacement of pipelines in the collections systems.

Table 4. District Staff Roles and Responsibilities Defined

Position	Roles and Responsibilities
Closed Caption Television (CCTV) Inspection Supervisor (DS)	Acts as a working foreman, organizes and leads crew(s) in the maintenance, installation and repair of collection systems and screens emergency calls. Responsible for the safety and work performed by the crew(s) under supervision. Responsible for directing staff in the planning and completion of TV inspection activities for the collections systems.
Facilities Maintenance Mechanic	Performs any mechanical and electrical repair, maintenance and installation of sewage treatment plant and pumping station and storm water pumping station equipment.

2.3 RESPONSIBILITY FOR SSMP IMPLEMENTATION AND MAINTENANCE

The Director of Field Operations shall have the overall responsibility for, implementing, periodically auditing, and maintaining the District's SSMP. This individual may delegate these responsibilities to other staff. Justin Keating is the current Director of Field Operations and has responsibility for the update to this document. Other District staff provide support to the Director of Field Operations in developing, implementing, and maintaining specific elements of the District's SSMP, and are identified by job title in Table 5. Names and contact information are included in Appendix A.

Table 5. Responsible Officials in SSMP Content Development

Element	Element Name	Responsible District Official
-	Introduction	Director of Field Operations
1	Goals	Director of Field Operations
2	Organization	Director of Field Operations
3	Legal Authority	Director of Environmental Services & Director of Engineering
4	Operations and Maintenance Program	Director of Field Operations
5	Design and Performance Provisions	Director of Engineering
6	Spill Emergency Response Plan	Director of Field Operations & Director of Human Resources and Risk
7	FOG Control Program	Director of Environmental Services
8	System Evaluation and Capacity Assurance Plan	Director of Engineering
9	Monitoring, Measurement and Program Modifications	Director of Field Operations
10	Program Audits	Director of Field Operations
11	Communications Program	Director of Field Operations
Appendix A	Responsible Officials' Contact Information	Director of Human Resources and Risk
Appendix B	Health and Safety Manual	Director of Human Resources and Risk
Appendix C	Sewer System Major Equipment Inventory	Director of Field Operations
Appendix D	Critical Sewer System Replacement Parts Inventory	Director of Field Operations
Appendix E	Sanitary Sewer Design Standards	Director of Engineering
Appendix F	Spill Emergency Response Plan (SERP)	Director of Field Operations

Table 5. Responsible Officials in SSMP Content Development

Element	Element Name	Responsible District Official
Appendix G	FOG Outreach Documents	Director of Environmental Services
Appendix H	Sewer System Capital Improvement Budget and Schedule	Director of Finance/Treasurer
Appendix I	SSMP Audits	Director of Field Operations
Appendix J	SSMP Audit Guidance Documents	Director of Field Operations
Appendix K	SSMP Change Log	Director of Field Operations
Appendix L	SSMP Board Adoption Documents	Board of Trustees

2.4 SSO REPORTING CHAIN OF COMMUNICATION

The following procedures are used for reporting SSOs, from receipt of a complaint to reporting the SSO to the State and Regional Water Board and other agencies, if applicable:

1. **Notification**

Notifications of SSOs are typically received by the District Administrative Assistant during normal business hours. The Administrative assistant will dispatch a Field Operations Service Technician to the SSO. After hours calls are routed by an answering service to the following staff, in the order listed: primary standby Service Technician, secondary standby Service Technician, Field Operations Superintendent, Director of Field Operations.

2. **Service Call Report Form**

The field personnel responding to the Service Call will document all aspects of the call in the Service Call Report form. This form documents when the call was received, the reporting party, the problem, the location, what was done, and equipment and personnel used to correct the problem. If an SSO occurred, the spill volume, recovered volume, and any amount that reached waters of the United States is recorded. This form is turned in to the Field Operations Superintendent at the end of day or next business day if the service call occurred after hours.

3. **Overflow Report Form**

The field personnel responding to the call will document all overflow information in the Overflow Report form. Four (4) forms have been created, one for each of the SSO categories (Category 1, Category 2, Category 3, or Category 4), that include information specific to the response and reporting of the applicable SSO category. This form is then attached to the Service Call Report form and submitted for processing to the Field Operations Superintendent. The form is then reviewed by the Field Operations Superintendent and compared to the Service Call report for information accuracy.

4. **2-hour Notification**

If the SSO is a Category 1 Overflow and 1,000 gallons or greater, notification is made by phone to the California OES by the field personnel responding to the spill. The information for this notification is contained on the Overflow Report form and is organized in the order that Cal OES requests the information to ease the reporting process.

5. Overflow Report Folder

When the Field Operations Superintendent receives the Overflow Report form, he/she creates an Overflow Report folder. The folder has a cover sheet with the required items to be included in the folder, which are checked off as they are added. This folder contains all original hard copies of the Service Call Report form and Overflow Report form. The information in this folder is used to create required CIWQS reports. The Field Operations Superintendent will also add to the folder any additional field reports, email confirmation of CIWQS report receipt, any internal tracking information that were used in documenting and reporting the spill, and pictures from the incident.

6. CIWQS Online Report

The District's CIWQS reporting staff include: Director of Field Operations (Primary LRO), Field Operations Superintendent (Alternate LRO, if needed), and Field Operations Collection System Supervisors (Data Submitters). Typically, the Director of Field Operations completes the on-line report in CIWQS and is responsible for report certification. A copy of the report is then given back to the Field Operations Superintendent for review and inclusion in the Overflow Report folder. An e-mail from the SWRCB is sent immediately after the on-line report is submitted to acknowledge receipt of SSO report. A copy of the e-mail is given to the Field Operations Superintendent for review and inclusion in the Overflow Report folder.

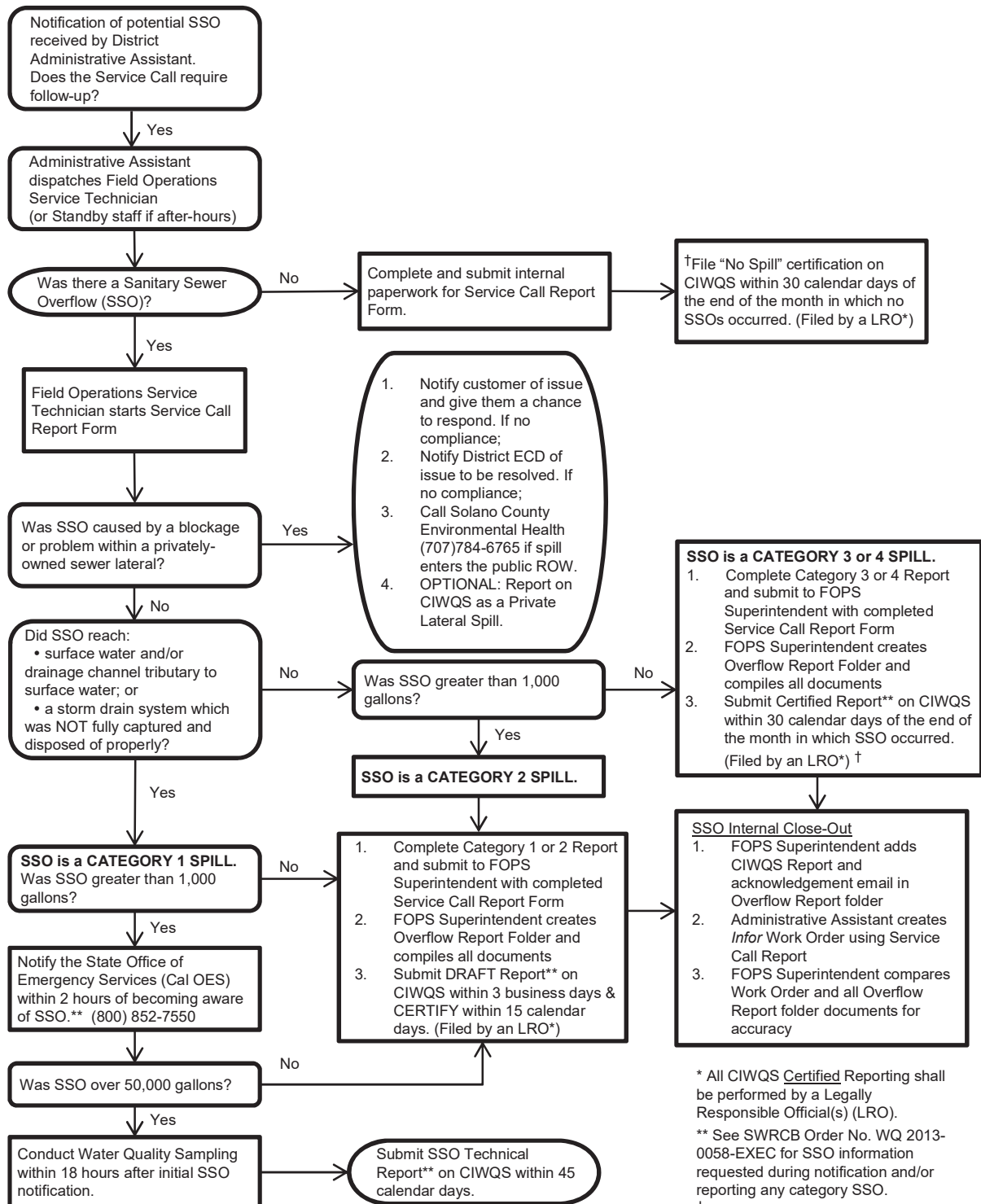
7. Completed Work Order

The Administrative Assistant will use the Service Call Report to create a work order in the Infor Computerized Maintenance Management System (CMMS) database for the SSO event. He/she will record the service call identification number and the work order number on the Service Call Report form for reference. The Field Operations Superintendent will compare the work order, Service Call Report form, Overflow Report form, the 2-hour notification, if needed, and the CIWQS Online Report for accuracy.

The SSO Reporting Chain of Communication follows the flow chart shown on Figure 3. The SSO Reporting process and responsibilities are also described in detail in the Spill Emergency Response Plan in Element VI.

Figure 3.

SSO Reporting Procedure Flowchart



* All CIWQS Certified Reporting shall be performed by a Legally Responsible Official(s) (LRO).

** See SWRCB Order No. WQ 2013-0058-EXEC for SSO information requested during notification and/or reporting any category SSO.

† Field Ops Superintendent has Outlook alerts for: 1) 1st week of each month to check previous month SSOs for No Spill Certification to CIWQS; 2) 20th of each month to check for previous month Category 3 Certified Reports to CIWQS.

CHAPTER 3

Element III: Legal Authority

SWRCB Waste Discharge Requirement:

Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

- a) Prevent illicit discharges into its sanitary sewer system (examples may include infiltration and inflow (I/I), stormwater, chemical dumping, unauthorized debris and cut roots, etc.);
- b) Require that sewers and connections be properly designed and constructed;
- c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
- d) Limit the discharge of Fats, Oil, and Grease (FOG) and other debris that may cause blockages; and
- e) Enforce any violation of its sewer ordinances.

3.1 LEGAL AUTHORITY

The following Legal Authority Review and resulting Action Plan was developed by the District to demonstrate compliance with the General Waste Discharge Requirements (GWDR) and ensure that the District possesses adequate legal authority to implement and enforce the SSMP. As it applies to the SSMP, legal authority refers to powers granted to the District to provide services to the public typically through various mechanisms including, but not limited to: ordinances, legal agreements, discharge permits, connection permits, and/or established policy and procedures. For the purposes of this review, the mechanisms described above must be legally enforceable in order to adequately meet the requirements established in the GWDR.

The review was performed by identifying the prerequisite authorities contained within the GWDR and listing them in table form to create a Legal Authority Checklist (Table 6). Existing mechanisms (as defined above) were then reviewed and included in the appropriate sections of the Legal Authority Checklist. Mechanisms listed in the checklist were then evaluated to determine whether or not they are adequate to satisfy the GWDR. Mechanisms found to be inadequate were examined further and an Action Plan was developed to establish a list of mechanisms that need to be developed or improved in order to fully satisfy the GWDR.

This Section includes excerpts from the District's Code. The code is posted on the District's website at: <https://www.vallejowastewater.org/188/Ordinances-Codes>

Table 6. GWDR Legal Authority Checklist

Requirement	Legal Authority Reference
General Legal Authority	
Act as an enforcement agency to ensure compliance with all laws and/or regulations applicable to the operation of the wastewater collection system	Enabling Act 8934
Public Sewer Discharges	
Prevent illicit discharges into the wastewater collection system	Non-Domestic Sewer Use Ordinance (Ord. No. 2009-68) Sewage Disposal Ordinance 1961-4
Limit the discharge of FOG and other debris that may cause blockages	Non-Domestic Sewer Use Ordinance 2009-68
Public Sewer Design & Construction	
Require that sewers and connections be properly designed and constructed	Sewer Fees & Connection Ordinance 2011-70A Sanitary Sewer System Construction Permit, Review, Inspection and Approval Process
Require proper installation, testing, and inspection of new and rehabilitated sewers	Sewer Fees & Connection Ordinance 2011-70A Sanitary Sewer System Construction Permit, Review, Inspection and Approval Process
Upper Laterals	
Clearly define District responsibility and policies for sewer laterals	Upper Sewer Lateral Ordinance 94-69 Upper Lateral Fee Ordinance 2017-64A
Ensure access for maintenance, inspection, or repairs for portions of the service lateral owned or maintained by the District	Sewer Fees & Connection Ordinance 2011-70A Upper Lateral Fee Ordinance 2017-64A
Control I&I from private service laterals	Upper Sewer Lateral Ordinance 94-69
Require private entities to inspect and/or repair lateral conduits to the District's sewer system, as necessary.	Upper Sewer Lateral Ordinance 94-69
FOG Source Control	
Requirements to install grease removal devices (GRDs) such as traps or interceptors.	Non-Domestic Sewer Use Ordinance 2009-68
Set design standards for GRDs	Non-Domestic Sewer Use Ordinance 2009-68
Set maintenance requirements for GRDs	Non-Domestic Sewer Use Ordinance 2009-68
Require application of best management practices (BMPs)	Non-Domestic Sewer Use Ordinance 2009-68
Authority to inspect grease producing facilities	Non-Domestic Sewer Use Ordinance 2009-68
Enforcement	
Enforce any violation of the District's sewer ordinances	Non-Domestic Sewer Use Ordinance 2009-68 Sewage Disposal Ordinance 1961-4 Sewer Fees & Connection Ordinance 2011-70A Upper Lateral Fee Ordinance 2017-64A Stormwater Discharge Ordinance 99-71
Other Requirements (Recommended but not required by GWDR)	
Prohibit vandalism (tampering).	Sewage Disposal Ordinance 1961-4

3.1.1 General Legal Authority

Operation of the wastewater collection system within the District's service area must be accomplished in compliance with the GWDR and other applicable federal, state, and local laws or regulations. Accordingly, the District must possess sufficient authority to establish and enforce rules, regulations, and policies as necessary to prohibit and/or regulate discharges to the wastewater collection system. Pursuant to an act of the State of California Legislature (Enabling Act 8934, Vallejo Sanitation and Flood Control District Act), the District is duly authorized to act as an enforcement agency to ensure compliance with all laws and/or regulations applicable to the operation of the wastewater collection system within the District boundaries or by any other public or private agency. Pursuant to the authority described above any person or businesses discharging to the District's wastewater collection system are subject to the ordinances, rules, regulations, policies, and/or other requirements established by the District.

3.1.2 Public Sewers

This section provides references to District code that demonstrate that the District has the legal authority to prevent illicit discharges, limit the discharge of FOG, require proper design and construction, and require inspection of new construction to their wastewater collection system.

3.1.2.1 Illicit Discharges

The authority to prevent illicit discharges into the wastewater collection system is found in several sections of the District's Non-Domestic Sewer Use Ordinance Number 2009-68 and Sewage Disposal Ordinance Number 1961-4. Ordinance Number 2009-68, which applies primarily to non-domestic or industrial discharges, defines allowable and restricted discharges; discharges that do not comply with this ordinance are considered to be illicit. The sections that prevent illicit discharges into the wastewater collection system are stated as follows:

Nondomestic Sewer Use Ordinance No. 2009-68

Article III, 4.12.070 Exclusion of Unpolluted Waters. No person shall discharge or provide a connection for discharging or draining into any public sanitary sewer or tributary sewer thereto any unpolluted waters including: stormwater, surface water, groundwater, lake water, swamp or pond water, water from rainspouts, roof drains, foundation drains, sump pumps or any other form of surface drainage.

Article III, Section 4.12.080 General Prohibitions. No Industrial User shall introduce or cause to be introduced into the Public Sanitary Sewer System any pollutant or wastewater which causes Pass Through or Interference, or which would otherwise inhibit or be incompatible with the operation of the Public Sanitary Sewer System, including interference with the disposal of sludge (biosolids).

Article IV, Section 4.12.160, Non-domestic Wastewater Discharges. It shall be unlawful to discharge, or permit to be discharged any wastewater from nondomestic sources directly or indirectly to the District's wastewater treatment system except as authorized by the District Manager in accordance with this Ordinance.

Article IV, Section 4.12.180, Wastewater Discharge Permit.

- a) *Discharges Requiring Permit. Whenever any Nondomestic Waste is produced and discharged into the Public Sanitary Sewer System in such quantities that, in the opinion of the District Manager, may cause Interference with the operation of the wastewater treatment system,*

contaminate the sludge resulting from the treatment process, pose a potential threat to District personnel responsible for the operation and maintenance of that system, adversely affect the treatment of sewage, or may not yield readily to treatment and pass through the treatment plant resulting in contamination of the plant's Receiving Waters, it will not be allowed to be discharged into the Public Sanitary Sewer System without a Wastewater Discharge Permit. The District Manager may exempt certain classes of dischargers of industrial wastewaters from the requirement to obtain a Wastewater Discharge Permit if the quantity and quality of the wastewater is determined to be unlikely to create significant effects on the District's sewerage system or result in violations of State or Federal law.

- b) *Permit Application.* No person intending to discharge nondomestic waste shall make a connection to the Public Sanitary Sewer System without first notifying the District and receiving from the office of the District Manager a Wastewater Discharge Permit or letter of exemption. All dischargers requiring a wastewater discharge permit pursuant to subsection A. shall notify the district of their intent to discharge non-domestic waste and submit to the district manager information necessary to develop a wastewater discharge permit.

Article IV, Section 4.12.210, Accidental Discharge Prevention. All non-domestic dischargers shall provide protection from the accidental discharge of prohibited materials or other substances regulated by this chapter. When required by the district, the discharger shall develop an accidental discharge prevention plan to be approved by the district manager. Facilities required to prevent accidental discharges shall be provided and maintained at the discharger's own expense. In order to control discharges of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, industrial users may be required to develop and implement a slug discharge prevention plan if such a plan is deemed necessary by the district. If the district decides that a slug discharge prevention plan is needed, the plan shall contain, at a minimum, the following elements: a complete description of discharge practices, including non-routine batch discharges; a description of stored chemicals; a written procedure for immediately notifying the district of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five working days; and, if necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response. Such notification will not relieve dischargers of liability for any expense, loss or damage to the sewerage system, treatment plant or treatment process, or for any fines imposed on the district under applicable state and federal regulations. A copy of the plan shall be furnished and permanently posted on the discharger's bulletin board advising employees what actions to take in case of a slug discharge in violation of this chapter. Also, non-domestic dischargers shall make available copies of this chapter to employees having responsibility for compliance with this chapter or any agreement reached under this section.

Section 4.16.020, Applications and Permits. No person may discharge or place into the sanitary sewer system any wastes or materials of whatever nature, except as provided, without first having applied for and received from the manager (District Manager) a permit to do so.

3.1.2.2 Fats, Oils, and Grease (FOG)

The authority to prevent or limit the discharge of FOG and other debris that may cause blockages the wastewater collection system is outline in Non-Domestic Sewer Use Ordinance Number 2009-68. The applicable section is presented below:

Nondomestic Sewer Use Ordinance No. 2009-68

Article III, Section 4.12.145, FOG Discharges. No food service facility shall discharge into the public sanitary sewer system fats, oils, and grease (FOG) that may accumulate and/or cause or contribute to blockages in the public sanitary sewer system or at the lateral which connects the facility to the public sanitary sewer system.

3.1.2.3 Design and Construction

The primary authority to require that sewers and connections be properly designed and constructed has been established in the District's Sanitary Sewer Connection Fees Ordinance Number 2011-70A. This ordinance was adopted to assure the construction and preservation of adequate wastewater collection system facilities, requiring that all dwellings, buildings, or establishments are connected to the public wastewater collection system, and that a permit is obtained to develop or redevelop any parcel, property, and/or structure with the District's service area (Ordinance Number 2011-70A, Section 3). An essential component of the permitting procedure is the plan review and approval process which ensures that all sewers and connections are properly designed and constructed; an outline of this process is presented below.

Initial Contact

Persons or businesses preparing to connect to the public wastewater collection system will typically meet with a representative of the City of Vallejo Building Department or the District to present a preliminary plan, which is a general layout of the proposed project. Based on this discussion, copies of the District's Standard Technical Specifications and Engineering Design Standards and Policies, and other applicable specifications are presented to the person or business; these documents specify the design standards for sewer construction, types and quality of materials to be used, and the construction process to be employed so that sewers and connections are properly designed and constructed.

Preliminary Plan Submittal and Review

Prior to considering an application for a permit to connect to the wastewater collection system, a preliminary plan for construction must be submitted to the City of Vallejo Building Department or the District's Department of Engineering for review. The preliminary plan will then be reviewed by the City of Vallejo Building Department and the District's Department of Engineering to ensure that applicable requirements, standards and polices have been adequately addressed. If the plan found to be inadequate it will be returned to the applicant to address deficiencies.

Project Plan Review

Once the plan described above has been reviewed and amended per the District's comments, it will be submitted to the District (along with other required documents) for acceptance by the District. The project plan is then reviewed and certified by the District (if found to be in full compliance with applicable requirements); at this time the plan review process is completed and grading activities, if any, may proceed.

Permit Fees

Upon completion of the project plan review the District approved plan will be submitted to determine connection fees. Once fees have been paid a connection permit will be issued and construction may proceed.

3.1.2.4 Acceptance of New and Rehabilitated Sewers

Proper installation, testing, and inspection of new and rehabilitated sewers is ensured by onsite inspections performed by District personnel or by an independent, nonaffiliated third party (typically to ensure proper oversight for very large projects). Acceptance of the sewers is allowed once the conditions are met.

Inspection Process

Upon initiating construction activities, the person or business intending to connect to the wastewater collection system must contact the District (in addition to the City of Vallejo Building Department) to schedule inspections. Inspectors verify that specifications for materials (proper size and composition) and design (appropriate slope, proper connections, etc.) are met and that construction practices (SWPPP is fully implemented, safety procedures in place, etc.) are in compliance with the District's requirements.

Inspectors are responsible for certifying that required testing is performed and that constructed sewers have been properly installed prior to allowing fill activities to proceed. The inspector is also responsible for reviewing and certifying the results of CCTV inspections and other applicable testing to ensure proper installation prior to final approval of the project. As an added security measure, persons or businesses responsible for the construction of sewers and associated connections to the public wastewater collection system are responsible for correcting failures resulting from improper construction for a period of one (1) year following final approval of the project.

3.1.3 Upper Laterals

This section provides references to District code that define the District's lateral policy and demonstrate that the District has the legal authority to access upper laterals, control I&I from private laterals, and require inspection of upper laterals.

3.1.3.1 District Responsibility and Policies

Upper Sewer Lateral Ordinance 94-69 was developed to establish rules and procedures for evaluating, repairing, replacing, and maintaining upper lateral conduits to the public wastewater collection system within the District's service area. The upper sewer lateral (and responsibility for repair and maintenance) is defined as follows:

***Section 1.04.010 Definition.** The upper sewer lateral is defined as the privately owned portion of the lateral. It extends from a point two feet outside a structure or facility to a district cleanout. The cleanout shall be either at the property line, easement line, or at some other point on the lateral as designated by the district. In the instance where no cleanout exists, the upper lateral extends to the mainline sewer.*

Presently, repair and maintenance of upper lateral conduits to the public wastewater collection system are addressed thorough the District's Upper Lateral Program, an effort to reduce groundwater inflow and infiltration (that can contribute to or result in SSOs) by replacing leaky upper laterals. The goal of this program is to systematically replace every upper lateral within the District's service area in conjunction with its Infiltration & Inflow Correction Plan (prepared by CH2M Hill, September 1992) to reduce wet weather

SSOs. The Upper Lateral Program is equally funded by all of the District's customers, paid in addition to monthly services fees (Upper Lateral Fee Ordinance 2017-64A). Program eligibility applies to all customers conditioned upon failure of their upper lateral to pass inspection. Repairs are owner initiated at this time, and the customer is responsible for arranging and paying for the repairs. The customer is reimbursed once the repair has been approved by the District and receipts have been submitted.

3.1.3.2 Access for Maintenance, Inspection, or Repairs

The ability to allow employees of the District access for maintenance, inspection, or repairs for the portions of the lateral owned or maintained by the District has been established in several ordinances. A summary of the ordinances and statutes that apply to the upper lateral are presented below.

Sewer Connection Fees Ordinance 2011-70A

Section 4.04.050 Right of Entry. All property owners, as a condition for the issuance of a sanitary sewer permit, shall grant to the District a Right-Of-Entry for purposes of testing, inspection, and repairing of the upper lateral. Said Right-Of-Entry shall be binding on all heirs, successors, or assignees of the permittee.

Upper Lateral Fee Ordinance 2017-64A

Section 4.08.120 Power To Inspect Premises. In order to effect the powers of this Ordinance pursuant to Section 6523.2 of the Health and Safety Code of the State of California, and the District's Enabling Act, the District Manager, or his authorized representative(s) is hereby given power and authority to enter upon private property for the purpose of inspection and maintenance of storm, sanitary and waste facilities, including but not limited to, ascertaining the nature of such premises, reading water meters, the type of activities carried on therein, the number of plumbing fixtures situated therein, the number of units, and any other facts or information reasonably necessary to ascertain the applicability of any sewer service fees or upper lateral fees to such premises, or the amount of such fees.

3.1.3.3 Infiltration and Inflow Control

As the repair and maintenance of upper lateral conduits to the public wastewater collection system is currently on a voluntary basis, the District has limited authority to require the repair or replacement of private laterals contributing I&I to the public wastewater collection system. However, the District has been somewhat successful in employing its Stormwater Discharge Ordinance 99-71 to require the repair or replacement of laterals known to overflow. In this instance, the District has been able to assert that sewage flowing from the upper lateral (frequently to the storm drainage system) is a potential threat to the storm drainage system. The sections of the Stormwater Discharge Ordinance used by the District to require the repair or replacement of private service laterals are as follows:

Article II, Section 6.12.060, Prohibition of Discharge. The discharge of non-stormwater discharges to the District's storm drain system or to any public or private drainage system that discharges to the District's storm drain system is prohibited. All discharges of material other than stormwater must be in compliance with an NPDES permit issued for the discharge.

Article II, Section 6.12.080, Illicit Discharge and Illicit Connections.

- a) *It is prohibited to establish, use, maintain, or continue illicit drainage connections to the District storm drain system, and to commence or continue any illicit discharges to the District storm sewer system. This prohibition is expressly retroactive and applies to connections made in the past, regardless of whether made under a permit or other authorization or whether permissible under the law or practices applicable or prevailing at the time of the connection.*
- b) *Persons found to be in violation of this section shall be responsible for removing the illicit drainage connection in a manner acceptable to and approved by the District.*

Article II, Section 6.12.090, Reduction of Pollutants in Stormwater. *Any person engaged in activities as determined by the District which will or may result in pollutants entering the District storm sewer system shall undertake all measures as is identified and determined necessary by the District, to reduce or eliminate such pollutants.*

In certain cases, the District has been able to assert that sewage flowing from a private upper lateral represents an immediate danger to the health, safety, and welfare of the public. In this instance the owner of the private upper lateral can be required repair the lateral immediately. Declaring the private upper lateral to be an immediate danger establishes the District's right to take actions necessary to eliminate the cause of the violation. The District is also authorized to consider an overflowing private upper lateral to be a public nuisance, in which case the District establishes the right to take actions necessary to eliminate the cause of the violation. The applicable sections of the Stormwater Discharge Ordinance 99-71 are presented below.

Article IV, Section 6.12.280, Discharges Constituting an Immediate Danger. *If, in the sole judgment of the District Manager, the violation constitutes an immediate danger to the health, safety, and welfare of the community, informal written notice will be provided to the discharger. In such a case, if the discharger does not cease violating at once, the District Manager may take actions necessary to eliminate the cause of the violation.*

Article IV, Section 6.12.330, Violations Deemed a Public Nuisance.

- a) *In addition to the penalties previously provided in this chapter, any condition caused or permitted to exist in violation of any of the provisions of this chapter is a threat to the public health, safety and welfare, and is declared and deemed a nuisance, and may be summarily abated and/or restored by the engineer/manager or such engineer/manager's duly authorized representative, and/or civil action to abate, enjoin or otherwise compel the cessation of such nuisance may be taken by the district's legal counsel.*
- b) *The cost of such abatement and restoration shall be borne by the owner of the property and the cost of such abatement and restoration shall be a lien upon and against the property and such lien shall continue in existence until the cost shall be paid.*
- c) *If any violation of this chapter constitutes a seasonal and recurrent nuisance, the district shall so declare. Thereafter such seasonal and recurrent nuisance shall be abated every year without the necessity of any further hearing.*

3.1.3.4 Inspection and/or Repair of Private Laterals

As previously stated, the District has limited authority to require private entities to inspect and/or repair private laterals discharging to the public wastewater collection system. The District has been able to apply

the authority provided by its Stormwater Discharge Ordinance (as detailed above) to require the inspection and/or replacement of laterals known to overflow. This approach is considered to be reactive and is most likely not adequate to meet the SSMP requirements established by the GWDR. However, the District reimburses private entities for lateral repairs through the Upper Lateral Replacement Program. Program eligibility applies to all customers conditioned upon failure of their upper lateral to pass inspection. While this program is not mandatory, it may be an incentive for private entities to replace their sewer lateral.

In addition, the District has been able to deal with a limited amount of private lateral problem with the assistance of the Solano County Department of Environmental Management. In these instances, the overflow is declared to be a health hazard and the owner is required to eliminate the overflow. Although the District has been fairly successful in dealing with private lateral problems via the Stormwater Discharge Ordinance, the process is time consuming, and the results are not always immediate. This approach is considered to be reactive and may not fully satisfy the intent of the GWDR (to reduce the occurrence of SSO by eliminating I&I associated with the upper lateral). On the other hand, the District's Upper Lateral Replacement Program has gone a long way to demonstrate a proactive approach to addressing I&I from the private upper lateral.

3.1.4 Agreements with Satellite Agencies

No satellite agencies discharge to the District's sewer system or wastewater treatment plant. The District owns and maintains all sewer mains within their service area.

3.1.5 FOG Source Control

In conjunction with the development of a FOG control program, the District's Non-Domestic Sewer Use Ordinance 2009-68 was recently revised to include requirements to address FOG discharges to the public wastewater collection system. The appropriate sections that were created in compliance with the GWDR are detailed below as follows.

3.1.5.1 Grease Removal Devices (GRDs) Design and Installation

Article III, Section 4.12.145, FOG Removal Devices. Any food service facility discharging wastes containing FOG shall install, operate and maintain an approved FOG removal device adequately sized for the facility. FOG removal devices are required for a food service facility that meets any of the following criteria:

- a) New construction;*
- b) Remodels, additions, alterations or repairs that require review by the district's engineering department; or*
- c) Has caused or contributed to a FOG related collection system blockage resulting in the need for the district to increase maintenance of the public sanitary sewer system and/or a sewage spill.*

FOG removal devices shall be designed by a civil engineer registered in the State of California. Design, constructed and installation shall be performed in accordance with the most current version of the California Plumbing Code. FOG removal devices shall have a district approved sampling access point located downstream of the point of discharge

3.1.5.2 GRDs Maintenance

Article III, Section 4.12.145, FOG Removal Device Maintenance. To ensure proper operation, maintenance and performance, FOG removal devices shall be serviced as required to ensure that the facility discharge does not cause or contribute to a FOG related collection system blockage and/or sewage overflow. FOG removal devices shall be maintained as follows:

- a) FOG removal devices shall be maintained in accordance with the minimum cleaning frequency established by the district.*
- b) The entire contents of the exterior FOG removal devices shall be removed and hauled away each time the equipment is maintained. Discharging the water fraction from the FOG removal device to the public sanitary sewer system is strictly prohibited.*
- c) Maintenance of exterior FOG removal devices shall be performed by persons who are certified by the California Department of Food and Agriculture (DFA) as a "registered transporter of inedible kitchen grease".*
- d) Maintenance of interior FOG removal devices shall be performed in accordance with procedures approved by the district.*

Article III, Section 4.12.145, Record Keeping Requirements. Food Service Facilities shall retain maintenance records with the following information for each FOG removal device located on the premises and for grease removed by an approved rendering company:

- a) Date of service;*
- b) Volume pumped (gallons);*
- c) Name of business performing service; and*
- d) Waste grease disposal location.*

Records shall be kept at the Food Service Facility for a minimum of three years and provided to the District upon request.

3.1.5.3 Best Management Practices

Article III, Section 4.12.145, Good Housekeeping Requirements and BMP. Food Services Facilities shall implement good housekeeping practices sufficient to prevent FOG discharges to the sanitary Public Sanitary Sewer System. Facilities may be required to implement prescribed BMP if good housekeeping practices are not fully implemented or fail to substantially reduce or prevent the discharge of FOG to the public sanitary sewer system.

3.1.5.4 Authority to Inspect

Article V, Section 4.12.250, Inspection and Sampling. The District may inspect the facilities of any discharger of nondomestic waste to ascertain whether the purpose and objectives of this Ordinance are being met and all permit requirements are being complied with. The District Manager or his duly authorized representative may enter any premises in the District and have ready access to all parts of the premises which include: processes resulting in discharge to the public sanitary sewer, discharge points, discharge holding or pretreatment facilities, chemical storage, or the area in which discharge records are kept. Said entry and access is for the purposes of inspection, sampling, and the examination and copying of records or in the performance of any other duties under this Ordinance. The District Manager or his duly authorized representative shall have the right to set up or install on the

discharger's property such devices as are necessary to conduct sampling inspection, compliance monitoring and/or metering operations.

Where a discharger has security measures in force which would require proper identification and clearance before entry into its premises, the discharger shall make necessary arrangements with security personnel so that upon presentation of suitable identification, the District Manager or a duly authorized representative of the District shall be permitted to enter, without delay, for the purpose of performing specific responsibilities. If the Discharger, or owner or occupant of the premises refuses to allow entry, and the District Manager determines that access is necessary to fulfil the District's duties and obligations in enforcing this Ordinance, the District Manager may apply to a judge of the Superior Court in Solano County for an Inspection Warrant in accordance with California Code of Civil Procedure, Section 1822.50 to 1822.57, inclusive. The denial of such access is itself a violation of this Ordinance.

3.1.6 Enforcement

All of the District's Ordinances identified in Table 6 and cited as an authority provided to the District pursuant to the Vallejo Sanitation and Flood Control District Act, contain provisions that allow for enforcement of the requirements contained within each ordinance. The provisions in each ordinance that apply to the District's authority are listed below:

Non-Domestic Sewer Use Ordinance 2009-68

Article VI, Section 4.12.270, Authority. All users of the District's system and facilities are subject to enforcement actions administratively or judicially by the District, U.S. EPA, State of California Regional Water Quality Control Board, or the Comity of Solano District Attorney. Said actions may be taken pursuant to the authority and provisions of several laws, including but not limited to: (1) Federal Water Pollution Control Act, commonly known as the Clean Water Act (33 U.S.C.A. Section 1251 et seq.); (2) California Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.); (3) California Hazardous Waste Control Law (California Health & Safety Code Sections 25100 to 25249.2); (4) Resource Conservation and Recovery Act of 1976 (42 U.S.C.A. Section 6901 et seq.); and (5) California Government Code, Sections 54739-54740.6.

Article VI, Section 4.12.290, Ordinance. Pursuant to the authority of California Government Code Sections 54739-54740.6, and Clean Water Act, 33 U.S.C. Section 1251 et seq., any Person who violates any provision of this Ordinance; any permit condition, prohibition or effluent limit; or any suspension or revocation order shall be liable civilly for a sum prescribed by law per violation for each day in which such violation occurs. The Legal Counsel of the District, upon order of the District Manager, shall petition the Superior Court to impose, assess, and recover such penalties, or such other penalties as the District may impose, assess, and recover pursuant to Federal and/or State legislative authorization.

Sewage Disposal Ordinance 1961-4

Section 4.16.070, Violations and Penalties. Any person violating any of the provisions of this Ordinance, or of any resolution adopted by the board of trustees pursuant to Section 4.16.050(A) of this Ordinance, shall be guilty of a misdemeanor and guilty of a separate offense for each and every day during which any violation of any of the provisions of this Ordinance is committed, continued or permitted, and upon conviction of each such violation such person shall be punishable by a fine of not more than five hundred dollars (\$500.00), or by imprisonment in the county jail of the county of Solano for not more than six months, or by both such fine and imprisonment. Any person violating any of the provisions of this Ordinance shall become liable to the District for any expense, loss or damage occasioned by the District by reason of such violation.

Sewer Fees & Connection Ordinance 2011-70A

4.04.180 Violations. Whenever the district manager determines that any user has violated or is in violation of this chapter, the district manager shall, by certified mail, notify the user to remedy the violation within thirty (30) days from receipt of the written notice or such lesser period as may be specified by the district. The user shall be responsible for all costs incurred by the district due to the violation. Violations of this chapter shall include, without limitation the following:

- a) Use of the district's facilities (sanitary sewer or storm drain) without a valid connection permit.
- b) Use of the district's facilities in a manner not permitted.
- c) Change in use category of a permitted facility without obtaining a permit for the new use.
- d) Modification (added units, space, etc.) of a permitted facility without obtaining a permit covering the change.
- e) Use of the district's facilities by a facility which has been permitted by the district but not cleared for occupancy.

Upper Sewer Lateral Ordinance 94-69

Section 5.08.120, Restrictions and Penalties. To effect the purposes of this ordinance, the District may enter upon private property for the purpose of inspection, evaluation, and repair of the upper sewer lateral. The District may impose a \$200 per month surcharge, or take other action up to and including termination of service to property in which a violation of any rule or regulation of this ordinance is found to exist. This shall be in addition to any other penalties stipulated or specified in this ordinance.

Upper Lateral Fee Ordinance 2017-64A

Section 4.08.200, Delinquent Charges As Debt To Agency; Court Action. Any charges or fees established or set by this chapter or any subsequent ordinances enacted by the district, and all amendments thereto, which become delinquent pursuant to the terms of the ordinance establishing the same, and all penalties or delinquent charges accrued thereon, shall constitute a debt due to the district, for which the district may sue the party or parties responsible therefor, in any civil court of competent jurisdiction for collection of same. The prevailing party in any such civil action shall be awarded reasonable attorneys' fees to be fixed by the court, in addition to any other relief granted or other costs awarded. Any remedy provided in this section is in addition to any other remedy provided in this chapter.

Section 4.08.210, Delinquent Charges To Constitute Lien. Pursuant to California Health and Safety Code section 5473.11:

- a) The district shall notify the assessed shown on the latest equalized assessment roll whenever delinquent and unpaid charges for services which would become a lien on the property pursuant to subdivision B, below, remain delinquent and unpaid for sixty (60) days.
- b) The amount of the unpaid charges for services and facilities furnished by the district shall, at the discretion of the district, be secured at any time by recording a certificate of lien in any county specifying the amount of the unpaid charges and the name and address of the person liable for those unpaid charges. From the time of recordation of the certificate, the amount required to be paid together with interest and penalty constitutes a lien upon all real property in the county of recordation owned by the person or afterwards, and before the lien expires, acquired by him or her.

- c) *The lien shall have the force, priority, and effect of a judgment lien and shall continue for ten (10) years from the date of the filing of the certificate unless sooner released or otherwise discharged. The lien may, within ten (10) years from the filing of the certificate or within ten (10) years from the date of the last extension of the lien in the manner herein provided, be extended by filing for record a new certificate in the office of the county recorder of any county and from the time of this filing the lien shall be extended to the real property in such county for ten (10) years unless sooner re-leased or otherwise discharged.*

Section 4.08.220, Collection Of Delinquent Charges On Tax Roll. *Pursuant to the provisions of Sections 5470 through 5474.10 of the California Health and Safety Code, this district hereby elects, as an alternative procedure for the collection of delinquent charges and fees established by this chapter or any subsequent ordinance of the district, or any amendments thereto, to have all such delinquent charges and fees collected on the tax roll in the same manner, by the same persons, and at the same time as, and together with and not separately from, the collection of general property taxes. The district shall prepare and file the written report on the parcels of real property for which there are delinquent charges or fees greater than one billing cycle, and give notice and hold the public hearing thereon, all pursuant to the aforesaid provisions of the Health and Safety Code. Any delinquent charge or fee collected on the tax roll, shall have added to it a processing fee per parcel, pursuant to the current schedule, and a release of public lien recording fee(s) based on the county assessor-recorder's fee schedule.*

Section 4.08.230, Court Action To Enforce Lien. *As a separate, distinct and cumulative remedy for collection of delinquent charges and fees, and any interest or penalties thereon, an action may be brought in the district's name in any court of competent jurisdiction to enforce or foreclose the lien provided for in Section 4.08.210 herein above. The prevailing party in any such civil action shall be awarded reasonable attorney's fees to be fixed by the court, in addition to any other relief granted or other costs awarded.*

Section 4.08.250, Disconnection Of Sewer Line.

- a) Upon the failure of any customer or customer-designee to pay any sewer service charge or charges before delinquency, or if the customer, customer-designee, or any occupant of any premises shall violate any other section of Title 4 of the district code, or any resolution adopted by the board pursuant to Title 4 of the district code, and such nonpayment or other violation shall continue for a period of sixty (60) days, then, in addition to all other remedies provided in said Title 4, the district may disconnect the premises from the sanitary sewer system, subject to the notice required in subdivision B of this section.
- b) The district manager shall send written notice to the customer and customer designee, if any, specifying the delinquency or other violation; and, if applicable, the date after which, upon the failure of the customer, customer-designee or other occupant of the premises to cure the delinquency or rectify the violation, the district will exercise its authority to disconnect the premises from the sanitary sewer system. However, such date shall not be less than fifteen (15) days after the deposit of such notice in the United States mail, addressed to the customer and customer-designee, if any.
- c) Whenever the premises have been disconnected from the sanitary sewer system for nonpayment of sewer service charges or for other violations of Title 4 of the district code, such premises shall not be reconnected to the sanitary sewer system until (i) all delinquent charges, penalties and interest have been paid, and (ii) such of the following charges, as

applicable, have been paid: a sewer disconnection fee equal to the actual cost to the district of such disconnection and a sewer reconnection fee equal to the actual cost to the district of such reconnection, and (iii) until the customer and/or customer- designee shall otherwise have complied with Title 4 of the district code.

- d) When the premises are disconnected from the sanitary sewer system, the district manager may take or request any authorized public officer to take such steps as legally may be taken to abate any nuisance on such premises and to prohibit occupancy of such premises until they shall be reconnected to the sanitary sewer system.

Stormwater Discharge Ordinance 99-71

Article IV, Section 6.12.230, Authority. Any person discharging to the district's or to any public storm drain system and facilities are subject to enforcement actions administratively or judicially by the district, U.S. EPA, state of California Regional Water Quality Control Board, or the county of Solano District Attorney. Such enforcement actions may be taken pursuant to the authority and provisions (1) Federal Water Pollution Control Act, commonly known as the Clean Water Act (33 U.S.C.A. Section 1251, et seq.); (2) California Porter Cologne Water Quality Act (California Water Code Section 13000, et seq.); (3) California Hazardous Waste Control Law (California Health & Safety Code Sections 25100 to 25250); (4) Resource Conservation and Recovery Act of 1976 (42U.S.C.A. Section 6901, et seq.); and (5) applicable provisions of the California Government Code.

Article IV Section 6.12.300, Assessment of Civil Penalties.

- a) Violations Constituting Misdemeanors. Unless otherwise specified by ordinance, the violation of any provision of the Chapter, or failure to comply with any of the mandatory requirements of this Chapter shall constitute a misdemeanor, except that notwithstanding any other provision of this Chapter, any such violation constituting a misdemeanor under this Chapter may, in the discretion of the enforcing authority' be charged and prosecuted as an infraction.
- b) Violations Constituting Infractions. Any person violating or failing to comply with any of the provisions of this ordinance shall be guilty of an infraction, which shall be enforced and punishable in the manner prescribed by the Penal Code and Government Code of the State of California or abated as a nuisance as provided herein.
- c) Penalty for Violation. Upon conviction of a misdemeanor, a person shall be subject to payment of a fine, or imprisonment, or both, not to exceed the limits set forth in the California Government Code Section 36901, which section is incorporated in this ordinance by reference. Upon conviction of an infraction, a person shall be subject to payment of a fine, not to exceed the limits set forth in the California Government Code Section 36900, which section is incorporated in the ordinance by this reference. After a third conviction for a violation of the same provision, subsequent violations within a twelve (12) month period may be charged as a misdemeanor.
- d) California Code of Civil Procedure Section 1094.6. The provisions of Section 1094.6 of the California Code of Civil Procedure are applicable to judicial review of the District's decisions pursuant to this Chapter.
- e) Civil Actions. In addition to any other remedies provided in this section, any violation of this section may be enforced by civil action brought by the District. In any such action, the

District may seek, and the Court should grant, as appropriate, any or all of the following remedies:

- 1) A temporary and/or permanent injunction.
- 2) Assessment of the violator for the cost of any investigation, inspection, or monitoring survey which led to the establishment of the violation, and for the reasonable costs of preparing and bringing legal action under this subsection.
- 3) Costs incurred in removing, correcting, or terminating the adverse effects resulting from the violation.
- 4) Compensatory damages for loss or destruction to water quality, wildlife, fish and aquatic life. Assessments under this subsection shall be paid to the District to be used exclusively for costs associated with monitoring and establishing storm water discharge pollution control systems and/or implementing or enforcing the provisions of this ordinance.

3.1.7 Other Requirements (Recommended but not required by GWDR)

This section provides references to District code that demonstrate that the District has the legal authority to prohibit tampering and to their wastewater collection system.

3.1.7.1 Prohibit Vandalism (Tampering)

Sewage Disposal Ordinance 1961-4 was developed to affirm the authority to provide for the administration of the District regarding the collection and treatment of sanitary sewage. In addition, the ordinance defined fundamental conditions for discharge to the public wastewater collection system, provisions for the protection related facilities and appurtenances, including protection from damage, and established a mechanism to enforce violations of District rules and regulations. The language that prohibits vandalism is described below:

Section 4.16.060, Protection from Damage. No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance, or equipment which is part of the sanitary sewer system.

3.2 LEGAL AUTHORITY ACTION PLAN

The preceding legal authority review demonstrates that, for the most part, the District possesses the necessary legal authority to meet the SSMP legal authority requirements established by the GWDR. However, the review indicates that the District's ability to deal effectively with private lateral problems, including requiring the inspection and/or repair of private laterals as well as controlling I&I, is limited and there is room for improvement. The following additional mechanisms will be considered by the District to augment its ability to deal effectively with private lateral problems:

- Consider the development and adoption of a separate Private Upper Lateral Inspection and Repair Ordinance or revision of Upper Sewer Lateral Ordinance 94-69. The benefit of developing a separate ordinance is the consolidation of requirements that are specific to the inspection, repair, and ongoing maintenance of the upper lateral.
- Consider the development and adoption of Non-Residential Testing and/or Repair Ordinance. The District will consider the benefits of establishing requirements for commercial buildings and

determine the level of effort that would effectively address I&I from this group of customers. Once this has been decided inspection and repair criteria will be developed.

- Consider development and adoption of a Residential Testing and/or Repair Ordinance. Establishing requirements for testing and/or repair is essential to ensuring that the District is able to deal effectively with private lateral problems. Considering the resistance (from realtors and title companies) that the District has experienced in the past, testing and/or repair of upper laterals from individual residences may be required only in conjunction with remodeling and as a result of an overflow from a private system caused by failure of the upper lateral.
- Consider development of a plan to effectively enforce requirements, outside of the current application of the Stormwater Discharge Ordinance 99-71. Identify response options available to the District and develop a plan for accelerated enforcement for emergency situations. The guidelines assistance in identifying appropriate enforcement responses, ensure fair and uniform application of District requirements, and eliminate possible economic advantages gained through continuing violations.
- The District is continually developing guidance documents for various programs including handouts on BMPs for restaurants, FAQs for the Upper Lateral Program, and other topics. Continue to develop guidance materials to assist customers

CHAPTER 4

Element IV: Operations and Maintenance Program

SWRCB Waste Discharge Requirement:

The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

- a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;
- b) Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventive Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;
- c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
- d) Provide training on a regular basis for staff in sanitary sewer system O&M, and require contractors to be appropriately trained; and
- e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

The Field Operations Department (FOPS) is responsible for the operation, maintenance, inspection, and repair of the wastewater collection system within the District's service area. FOPS activities are supported by the Plant Operations and Maintenance Department for maintenance of the pump stations; the Environmental Services Department for implementing the FOG Control Program; and the Engineering Department for management of maps and the rehabilitation and replacement program. FOPS and the Plant Operations and Maintenance Department provide on-call personnel available for responding to blockages and other system problems on a 24-hour basis throughout the year.

4.1 COLLECTION SYSTEM MAPPING

Vallejo Flood & Wastewater District is a special district that has the responsibility for both the wastewater and stormwater collection systems. As such, District staff maintain both the wastewater and stormwater maps. Field maps are accessible electronically by stand-alone applications on tablets and laptops. These digital maps are continuously updated and pushed out to the tablets, so the field crews are always able to use the most current map. When offline, the field crews are able to access the last version of the map on their tablet. Paper mapbooks are being phased out and are no longer updated.

Map changes are generated any time a difference is identified between what is represented in the map and what is identified in the field, or when projects come through Engineering and add to or update existing systems. Occasionally, Field Operations staff identify differences between field conditions and the collection systems maps. When this occurs, the Field Operations staff will document the difference on the

Geographical Information System (GIS) Map Update Report Form. The Field Maintenance Supervisor will review the changes and update the Infor CMMS database. These changes may include updates to pipe attributes such as size or material, or it may include creating new manholes and updating the asset identification systems. The Field Maintenance Supervisor will then give the GIS Map Update Report Form to Engineering so that they can update the collection systems maps in GIS. Engineering handles the update and management of the GIS system which is the basis for our electronic or digital maps the crews use in the field. Since the last SSMP was issued, a GIS Map Update Standard Operating Procedure (SOP) was prepared and finalized. The SOP will be kept on the District's servers. More about SOP development is provided in Section 4.2.2, Development of Standard Operating Procedures.

4.2 PREVENTATIVE OPERATION AND MAINTENANCE

The District's sewer system maintenance program includes the following major components: line cleaning and root removal CCTV inspection, line repair and replacement, inflow/infiltration removal and reduction, manhole repair and replacement, and the Upper Lateral Program. This section documents the use of CMMS for maintenance scheduling and tracking, as well as the District maintenance activities for gravity sewers, sewer laterals, and pump stations.

4.2.1 Computerized Maintenance Management System (CMMS)

The District maintains work order records and schedules maintenance activities in the Infor CMMS. Maintenance activities are scheduled based upon prescribed criteria (identified trouble spots are cleaned more frequently, as required).

The Field Operations crews are continuously documenting information about the field conditions in the work order to be used as a reference for future cleaning and review of that line. The crews will document information about the type of issue in the line (grease, roots, etc.) and the severity (light, medium, heavy). Additionally, when adjustments are made to the cleaning schedule the Field crews will document the reason why the change occurred and by whom. This tracking helps Field Operations focus their resources where they are needed and reflects current priorities for SSO prevention.

The Field Operation Division has a goal to complete all work orders within a 2-week window of the due date. The staff have been able to achieve this goal and have found that they have been able to prevent more overflows at this goal completion rate since increasing from a previous goal of a one-month window. To help achieve this goal, the Preventative Maintenance Supervisor runs a weekly report of overdue schedule work orders requiring follow-up and notifies the field crews of these priority work orders for completion. Since 2020, upgrades have been made to the City's GIS incorporating links between CMMS work orders and maintenance status layers (line cleaning activities) including CCTV inspections, lateral maintenance, and construction activities. These layers can be viewed by crews in the field, preventing overlapping of work areas and improving cleaning efficiency.

4.2.2 Development of Standard Operating Procedures

The District has been working to develop standard operating procedures (SOPs) for collection system administrative, operational, and maintenance activities. As part of the District's Competency-Based Training Program started in 2021, robust and detailed SOPs were created to document step-by-step procedures required for all O&M activities. These SOPs are used during training sessions.

The District has also procured an online, app-based SOP program called “Smart SOP”. This platform holds SOP documents and can be accessed by FOP staff in the field.

4.2.3 Gravity Sewers

This section documents the cleaning and condition assessment activities for the gravity sewer system.

4.2.3.1 Cleaning

Cleaning of gravity sewer mains is primarily accomplished through the use of hydraulic high- pressure jetting and hydraulic root cutting equipment with mechanical methods (rods and cutters, etc.) used as necessary. Cleaning frequency is prioritized by the maintenance history, blockage history and overflow history, and CCTV inspection and condition assessment records. The line cleaning program focuses mainly on pipes ranging from 3 inches to 18 inches in diameter. Pipes with larger diameters require less frequent cleaning using bucket machines and may require bypass pumping.

The District has an on-going program to address the removal of roots, which is one of the primary causes of blockages in the wastewater collection system. Root removal is accomplished mainly by hydraulic high-pressure jetting. When jetting is not sufficient, high-pressure hogging, power rodding, electric eeling, and chemical root foaming may be used. The majority of the root foaming program is performed on a contract basis.

Gravity sewers that have had past blockages that have led to an SSO are automatically placed on a six-month cleaning schedule. The field staff are continuously updating this schedule, as needed, to make best use of District resources while still protecting against SSOs. If at 6 months, the pipe is significantly blocked the scheduled cleaning frequency may be accelerated to 3 months. If no issues are found, the cleaning frequency may be pushed to 9 or 12 months. Approximately 20 percent of the collection system mainlines is on an increased preventative maintenance schedule. This includes several hot spots mainlines that are cleaned monthly.

The historical sewer line cleaning results are shown in Table 7 through 9. “Other” cleaning in Table 9 includes root foaming and a minimal amount of rodding.

Table 7. Historical Hydro-Jetting Rates			
Fiscal Year	Line Jetted, feet	Line Jetted, miles	Percent of System
2022	405,846	76.9	19.5
2021	630,389	119.4	30.2
2020	565,761	107.2	27.1
2019	562,080	106.5	27.0
2018	605,879	114.8	29.1
2017	638,293	120.9	29.1
2016	672,215	127.3	30.7
2015	657,892	124.6	30.0
2014	601,680	114.0	27.5
2013	751,871	142.4	34.3

Table 8. Historical Hogging Rates

Fiscal Year	Line Jetted, feet	Line Jetted, miles	Percent of System
2022	585,491	110.9	28
2021	620,112	117.5	30
2020	649,432	123.0	31
2019	640,814	121.4	31
2018	625,269	118.4	30
2017	592,242	112.2	27.0
2016	570,967	108.1	26.1
2015	459,070	86.9	21.0
2014	530,115	100.4	24.2
2013	490,822	93.0	22.4

Table 9. Historical Rates of Other Cleaning Methods

Fiscal Year	Line Cleaned, feet	Line Cleaned, miles	Percent of System
2022	5,352	1.0	0.3
2021	33,931	6.4	1.6
2020	43,857	8.3	2.1
2019	32,303	6.1	1.5
2018	35,134	6.7	1.7
2017	53,571	10.1	2.4
2016	67,348	12.8	3.1
2015	33,430	6.3	1.5
2014	84,807	16.1	3.9
2013	81,479	15.4	3.7

4.2.3.2 Condition Assessment

The District conducts routine condition assessment of their wastewater collection system through CCTV inspection. The District has two (2) CCTV crews, one performs inspections on a routine schedule and a second that is for service call response, engineering research or customer service-initiated inspections. Routine inspections are part of a continual condition assessment of the collection system. CCTV is used to identify developing problems (deteriorating and failing sections, offsets, root intrusions, etc.) within the wastewater collection system. This regular inspection schedule is completed for the entire wastewater collection system on an eight-year cycle. CCTV inspections are also performed in response to a blockage. Each line segment that has a blockage is CCTV inspected to determine the cause of the blockage. CCTV inspections are also utilized to evaluate the performance of different types of maintenance equipment allowing for continuous improvement as new technology and equipment become available. In 2020, the District adopted the industry-standard condition assessment defect coding program, NASSCO PACP, in place of the customized program they had been using previously. This change provided standardization

and consistency to the methods in which pipeline conditions are identified, evaluated, and managed. Historical CCTV results are shown in Table 10.

Table 10. Historical CCTV Rates	
Fiscal Year	CCTV Inspection, miles
2022	34.25
2021	36.04
2020	25.75
2019	20.15
2018	45.25
2017	49.7
2016	48.7
2015	51.6
2014	53.4
2013	47.7

In addition to the CCTV inspection, the District started a Jet Inspection program in 2011. The goal is to move quickly through the pipe and sample the types of materials in the line segment looking for grit, grease or roots that may identify major issues, which will be investigated in detail by the regular CCTV crew. The Jet Inspect Program has a target goal of approximately 5,000 linear feet per day. At this rate, the District has been able to inspect every pipe with a diameter of 15 inches or less in the system with a target of a three (3)-year inspection frequency. Since starting this program in 2011, the District has seen a 60 percent reduction in SSOs per year, from an average of 41 spills per year in 2008 through 2011 to an average of 16 spills per year in 2012 through 2022.

4.2.4 Sewer Laterals

The District maintains one (1) full time lateral maintenance crew. This crew cleans and inspects the publicly owned lower laterals that have had past stoppages or have been identified as needing periodic maintenance. This lateral maintenance crew's primary cleaning equipment uses high pressure/low volume water with various nozzle configurations to remove roots, grease and various materials from the laterals. As part of the lateral cleaning process this crew also has a portable lateral inspection camera. This camera is used to look at the condition of the lateral before it is cleaned and after it is cleaned. This information is used to verify the cleaning frequency timeline is correct and to verify that the intended cleaning was as successful as intended. The District is also using electric eeling and chemical root foaming for lateral root control. The majority of the root foaming program is performed on a contract basis. Laterals with past root issues are placed on the schedule to be foamed annually to prevent large root masses from blocking the lateral. In the past, some laterals may have been on both an electric eeling schedule and a foaming schedule. Moving forward, the District is removing those laterals from the foaming schedule as electric eeling is sufficient. Laterals that are only treated through foaming will remain on the foaming schedule. Maintenance of private upper laterals is the responsibility of the owner.

The historical lower lateral cleaning results are shown in Table 11.

Table 11. Historical Lower Lateral Cleaning Rates

Fiscal Year	Laterals cleaned, each
2022	2,670
2021	2,646
2020	2,636
2019	2,561
2018	3,004
2017	2,756
2016	2,880
2015	2,726
2014	2,780
2013	2,696

4.2.5 Pump Stations

The Mechanical Maintenance staff within the Plant Operations and Maintenance Department maintain the pump stations to ensure their reliable operation. The District collection system has 30 wastewater pump stations as described in Table 12. As needed, the Field Operations staff will assist the Plant Operations and Maintenance staff in maintenance activities, such as cleaning and vacuuming of the wet well.

Table 12. Pump Station Locations and Descriptions

Pump Station No.	Pump Station Name/Location	Construction Year	No. Pumps	Pump GPM	Pump Manufacturer	Pump HP	Standby Generation, kW
S01	Sears Point Sanitary Pump Station	1996	4	5000	Flygt	200	1100
S02	Meadows Sanitary Pump Station	2007	2	800	Flygt	25	100
S03	Shady Lane Sanitary Pump Station	1985	2	220	S & L	30	60
S04	Lemon Street Sanitary Pump Station	1986	2	400	Flygt	4	25
S05	Greenmont Sanitary Pump Station	1969	2	650	Cornell Pump	40	125
S06	Sandy Beach Sanitary Pump Station	1992	2	375	Flygt	4	12.5

Table 12. Pump Station Locations and Descriptions

Pump Station No.	Pump Station Name/Location	Construction Year	No. Pumps	Pump GPM	Pump Manufacturer	Pump HP	Standby Generation, kW
S07	Maritime Sanitary Pump Station	1996	2	315	Flygt	30	100
S08	Regatta Sanitary Pump Station	1985	2	1320	S & L	100	125
S09	Marina Sanitary Pump Station	1985	2	725	S & L	40	60
S10	New Bedford Sanitary Pump Station	1985	2	475	S & L	25	60
S11	Catalina Sanitary Pump Station	1985	2	160	S & L	3	No Gen
S12	Dillon Point Sanitary Pump Station	1985	2	400	S & L	15	40
S13	State Park Sanitary Pump Station	1985	2	600	S & L	30	60
S14	Columbus Parkway Sanitary Pump Station	1986	2	200	S & L	10	35
S15	Admiral Callaghan Sanitary Pump Station	1991	2	300	Flygt	2.7	No Gen
S16	Wilson Avenue Sanitary Pump Station	1996	2	11	Environ.1	1	No Gen
S17	Sky Valley #1 Sanitary Pump Station	1990	2	900	S & L	75	80
S18	Sky Valley #2 Sanitary Pump Station	1990	2	900	S & L	75	80
S20	Orchard Sanitary Pump Station	2005	2	100	Flygt	5	30
S21	Missouri Sanitary Pump Station	2005	2	700	Flygt	10	100
S22	Cypress Sanitary Pump Station	2013	1	30	Meyer	1	No Gen
MID02	DOM2	1940-1950	3	900	Chicago	7	No Gen

Table 12. Pump Station Locations and Descriptions

Pump Station No.	Pump Station Name/Location	Construction Year	No. Pumps	Pump GPM	Pump Manufacturer	Pump HP	Standby Generation, kW
MID03	DOM3	1940-1950	2	200	Cornell	3	30
MID04	DOM4	1940-1950	3	1823	Flygt	45	150
MID05	DOM5	1940-1950	2	650	Cornell	8	60
MID06	DOM6	1940-1950	2	670	Cornell	10	100
MID07	DOM7	1940-1950	3	1650	Cornell	20	100.0
MID08	DOM8	1940-1950	2	350	Chicago	3	30
MID11	DOM11/Farragut Village	1940-1950	2	57	Vaughn	5	30
MID12	Mare Island L Street Manhole	1940-1950	1	30	Zoeller	1	No Gen

4.2.6 Force Mains

The District does not currently have a force main inspection program. The District is currently implementing an asset management program and also planning a pump station Master Plan in which the forcemains will be evaluated and rehabilitated as needed. A budget of \$500,000 has been allocated to pump station and forcemain CIPs each year through 2027. Table 13 lists the force main asset information.

Table 13. Force Main Descriptions

Pump Station Associated with Force Main	Force Main Asset Information		
	Material Type	Size, inches	Length, feet
S01	HDPE	30	2,137
S02	HDPE	6	209
S03	DIP	6	1,949
S04	CIP	8	141
S05	ACP	8	3,663
S06	DIP	6	30
S07	PVC	6	3,063
S08	DIP	12	2,480
S09	DIP	10	2,076
S10	DIP	8	1,771
S11	DIP	6	330
S12	DIP	6	2,183
S13	DIP	8	2,337
S14	PVC	4	443
S15	DIP	6	106
S16	PVC	4	104

Table 13. Force Main Descriptions

Pump Station Associated with Force Main	Force Main Asset Information		
	Material Type	Size, inches	Length, feet
S17	DIP	10	2404
S18	DIP	10	2,216
S20	PVC	4	1658
S21	HDPE	6	414
S22	PVC	2	35
MID2	DIP	14	55
MID3	HDPE	30	370
MID4	HDPE	18	7000+
MID5	CIP	6	95
MID6	CIP	8	421
MID7	CIP	14	92
MID8	CIP	8	453
MID11	CIP	4	1204
MID12	PVC	2	332

4.3 REHABILITATION AND REPLACEMENT PROGRAM

The District has programs for the rehabilitation and replacement of both District-owned mains, District-owned laterals, and privately owned laterals. The rehabilitation and replacement program is a partnership between Field Operations and Engineering. Smaller mainline infrastructure repairs and lower lateral replacement is completed by Field Operations staff, while larger Capital Improvement Projects are managed by Engineering with input from Field Operations Staff.

4.3.1 Line Segment Repair

Line segments found to be defective either through routine inspection, maintenance activities, or an SSO occurrence are evaluated to determine whether periodic maintenance, repair, or rehabilitation is necessary. The following process is used to evaluate the appropriate actions.

First, the line segment is inspected through CCTV. The history of the line segment is reviewed to determine how many times a problem may have occurred. If it is determined that continued periodic maintenance is more cost-effective than repair or rehabilitation and the periodic maintenance will preclude future blockages, a maintenance schedule is initiated, or the maintenance frequency is adjusted. If there is a severe defect in the line that a spot repair can address in lieu of a maintenance schedule, then the repair will be made. If the problem with the line segment is more systemic in nature, it will be evaluated for a rehabilitation and addition to the CIP, depending on the severity of the systemic issues.

Line segments determined to qualify to be added to the CIP are prioritized based on multiple factors including CCTV condition assessment scores, I&I potential, maintenance history, service call history, and prior stoppage history. Based on scores generated from these criteria the priority in the CIP is established.

4.3.2 Inflow/Infiltration Removal and Reduction Program

In 1999, the District initiated a design program to manage its SSOs in a cost-effective manner to protect public health and water quality. The design was eventually identified as the Sanitary Sewer Overflow Elimination Program (SSOEP). This program was based on a 5-year return period design event that identified numerous repair, replacement, and enhancement projects that would significantly reduce wet-weather SSOs. Since that time the District has completed the identified projects and the amount of wet-weather related SSOs has decreased significantly. A number of known trouble spots and problem line segments were replaced in conjunction with SSOEP activities. Although the majority of the SSOEP tasks have been completed the District continues to identify opportunities to address inflow/infiltration in conjunction with system cleaning, flow monitoring, and CCTV inspection activities.

The District currently budgets for approximately \$1.25 million in I&I capital improvements each year to continue rehabilitation and replacement of the collection system reducing blockages and overflows

4.3.3 Upper Lateral Program

The Upper Lateral Program is a District effort to reduce groundwater inflow and infiltration into the sewer system by replacing leaky upper laterals. Upper laterals are private sewer pipes that lead from residential or commercial buildings to the District's sewer lines. The District's goal is to systematically replace those upper laterals within the District boundary that are necessary to promote a significant reduction of inflow and infiltration, thereby reducing wet weather overflows in the wastewater collection system. All connected customers provide Upper Lateral Program funding at \$1.38 per month per lateral. This fee is included in the regular sewer service bill and program eligibility applies to all customers conditioned upon failure of the lateral to pass inspection. Customers are responsible for applying for the District's program, and upon approval make the arrangements and initially pay for the replacement of the upper lateral. The customer then submits receipts and receives partial reimbursement from the District.

4.4 TRAINING

This section outlines the training standards and training activity tracking being completed by the District.

4.4.1 Training Standards

Safety and job-specific training requirements are set out in the District's Safety Policy No. 706 – Training Requirements, included as Appendix B. The policy includes a spreadsheet of training requirements by topic, job classification, frequency, and type of training (formal, online, tailgate).

4.4.2 Training Activity Tracking

Training activities are currently tracked in two (2) locations: Target Solutions online training application, and as work orders in the Infor CMMS. Since the last update, Target Solutions is utilized as the primary database for formal training scheduling and tracking. Target Solutions has the ability to tie training activities to policy and SOP development or review. Infor CMMS is used to track more informal weekly Field Operations staff training on various topics such as equipment, safety, or staff development. These weekly training activities are often held as a "tailgate meeting". Staff also attend additional training offered by professional organizations, as appropriate. All District training is tracked and coordinated through the District's Safety and Risk Management Department. Documentation of training activities and schedule can be extracted from both Target Solutions and Infor if necessary.

4.5 EQUIPMENT AND REPLACEMENT PARTS

The list of the major equipment that District uses in the operation and maintenance of its sewer system is included in Appendix C. The District has developed an inventory of critical replacement parts that is included in Appendix D.

CHAPTER 5

Element V: Design and Performance Provisions

SWRCB Waste Discharge Requirement:

- a) Design and construction standards and specifications for the installation of new sanitary sewer systems, lift stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and
- b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

5.1 DESIGN CRITERIA FOR INSTALLATION, REHABILITATION AND REPAIR

The District's Engineering Design Standards and Standard Drawings for wastewater collection system facilities are administered by the Engineering Division.

5.1.1 General

The District has established standards for both new construction and rehabilitation work associated with the collection system. These standards are periodically reviewed and updated by the Engineering Division. The Engineering Division completed a comprehensive update to these Engineering Standards in July 2020, included as Appendix E. The Engineering Standards are located on the District website at: <https://www.vallejowastewater.org/DocumentCenter/View/359/Engineering-Design-Standards---Combined-PDF>. The Engineering Standard Details were also updated in July 2020 and are located on the District website at: <https://www.vallejowastewater.org/DocumentCenter/View/358/Engineering-Standard-Details---Combined-PDF>

5.1.2 Gravity Sewers

All gravity sewers are required to be designed, installed, inspected, and accepted per the District's design standards. Some of the standards that must be considered in the design include:

Size

The District has established a minimum allowable size for public sewer mains of 8 inches.

Capacity

The District has determined appropriate design flow factors and peaking factors for the design of new facilities. These factors are included in the Sewer Design Standards.

Materials

Sewer pipes must be designed for at least a 50-year life, considering expected corrosion and abrasion.

Minimum Slope

The District has established standard minimum slopes to assure self-cleaning velocities. These acceptable minimum slopes are listed by diameter in Table 14.

Table 14. Acceptable Minimum Slopes for New Gravity Sewers	
Pipe Diameter, inch	Standard Minimum Slope, foot per foot
8	0.0052
10	0.0039
12	0.0030
15	0.0023
18	0.0018
21	0.0014
24	0.0012
27	0.0010
36	0.0007

5.1.3 Private Sewer Systems and Private Laterals

Private sewer laterals are required to be designed, installed, inspected, and accepted per the District's design standards. Laterals must be constructed according to Standard Drawing No. SS-2 in the District's Standard Details. Private sewers serving two (2) or more legal parcels are not permitted within the District. Some of the standards that must be considered in the design include:

Minimum Size

Sewer lateral diameter must be at least 4 inches for single residences and 6 inches or larger when required.

Connection to the Sewer Main

Sewer laterals must be connected to the sewer main. Connection to larger sewer trunks must be approved by the District.

Cleanouts

All lateral sewers must have a cleanout located at the property line for access to the lower lateral for cleaning by the District.

5.1.4 Manholes

All manholes are required to be designed, installed, inspected, and accepted per the District's design standards. Some of the standards that must be considered in the design include:

Location

Manholes must be placed at intersections of all sewer lines, at all changes of alignment, and at the end of lines.

Access

All manholes must be accessible by the District's standard maintenance vehicles.

5.1.5 Pump Stations

Special design problems involving siphons, pumps, force mains or any other unusual structure shall require individual study and approval by the District Engineer.

5.2 INSPECTION AND TESTING CRITERIA

The construction inspection of wastewater collection system facilities within new subdivisions inside the City of Vallejo limits is performed by the City of Vallejo. Any construction work on sanitary sewer facilities not inspected by the City of Vallejo is inspected by District staff during construction and prior to acceptance. All facilities must pass a final inspection prior to final acceptance by the District.

5.2.1 Gravity Sewers and Private Laterals

All new and rehabilitated sewer mains and laterals are required to pass the following acceptance tests: cleaning, infiltration-exfiltration leakage tests, CCTV inspection, and Mandrel test for pipes larger than six (6) inches.

Cleaning

Prior to final acceptance and final inspection of the pipe by the Engineer, the Contractor shall flush and clean all parts of the system by removing all accumulated construction debris, rocks, gravel, sand, silt, and other foreign material from the pipe. A trap shall be placed in the downstream structure of any section of line being cleaned.

Infiltration-Exfiltration Tests

A test for infiltration leakage should include a visual inspection of each pipe joint by CCTV. For mains less than 16 inches, a low-pressure air testing must also be used as the acceptance test for leakage. For mains 16 inches and larger, hydrostatic test must also be used as the acceptance test for leakage. The procedures for air testing and hydrostatic testing are included in Section 02750 of the District's Standard Specifications.

CCTV

After completion of the pipe installation, service lateral reconnections, finish work at the manholes, final cleaning and passing air test, the sewer pipe and installed service laterals shall be inspected by CCTV. The original tape and reports shall be provided to the Engineer.

Mandrel Test

Where any pipeline is required to pass the Mandrel test, the subject line must be tested a minimum of 31 days after placement of final backfill. Sanitary sewers installed by pipe bursting are not required to pass the Mandrel test.

5.2.2 Manholes

All newly installed manholes shall be vacuum tested after construction and prior to coating or lining of the interior. Unless specified in the project specific contract documents, rehabilitated manholes are not required to be tested by vacuum or hydrostatic test. Rehabilitated manholes shall be tested by visual observation for leakage. The procedures for hydrostatic testing and vacuum testing are included in Section 02726 of the District's Standard Specifications.

5.2.3 Pump Stations

Special design problems involving siphons, pumps, force mains or any other unusual structure shall require individual study and approval by the District Engineer.

CHAPTER 6

Element VI: Spill Emergency Response Plan

SWRCB Waste Discharge Requirement:

Each Enrollee shall develop and implement a Spill Emergency Response Plan (SERP) [previously OERP] that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- b) A program to ensure an appropriate response to all overflows;
- c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or National Pollution Discharge Elimination System (NPDES) permit requirements. The SSMP should identify the officials who will receive immediate notification;
- d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The SERP is included in full in Appendix F. This section includes the purpose, policy, and details on SERP-specific training. Note that the title of the SERP document was changed with this 2022 SSMP update to satisfy certain requirements of the 2022 Order; previous versions of the SSMP refer to the OERP. Therefore, sections of the SERP document may still reference “OERP”.

6.1 PURPOSE

The purpose of the District’s SERP is to ensure that the District personnel follow established guidelines in cleaning up and decontaminating sewer spills, which may occur within the District service area. This SERP satisfies the SWRCB Statewide GWDR, which require wastewater collection agencies to have an SERP.

6.2 POLICY

The District’s employees are required to report all wastewater overflows resulting from the District-owned/maintained wastewater collection system and to take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The District’s goal is to respond to sewer system overflows as soon as possible following notification. The District will follow reporting procedures in regard to sewer spills as set forth by the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the SWRCB.

6.3 TRAINING

Operations Staff performs work and responds to emergencies in accordance with the standards and best practices established in the SERP. After significant incidents, the Field Operations Superintendent holds tailgate-style meetings with Operations Staff to review the incident, discuss what went well, and what could be improved. These meetings reinforce procedures established in the SERP and update Staff on changes to regulations or procedures.

CHAPTER 7

Element VII: Fats, Oils, and Grease Control Program

SWRCB Waste Discharge Requirement:

Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:

- a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
- c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
- f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and
- g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.

7.1 NATURE AND EXTENT OF FOG PROBLEM

Table 15 shows the total number and percentage of FOG-related mainline SSOs from 2012 through 2022. As the District has applied targeted FOG control measures, as discussed in detail in this section, the number of SSOs have reduced from a maximum of 12 in one year in 2009 to three (3) or fewer SSOs per year since 2012.

Table 15. Historical FOG-Related SSOs in Mainlines		
Calendar Year	SSOs Caused by FOG	Percentage of SSOs caused by FOG
2012	2	11
2013	3	18
2014	1	5
2015	1	5
2016	1	8
2017	0	0
2018	1	6
2019	2	13
2020	2	18
2021	3	17
2022	1	17

Source: CIWQS, downloaded 12/22/2022

7.2 FOG SOURCE CONTROL PROGRAM – REVIEWS & INSPECTIONS

Source control efforts developed for the FOG Control Program were designed to reduce the number of FOG related stoppages and overflows. The FOG Control Program works by both establishing and defining regulatory requirements for non-domestic dischargers as well as by encouraging voluntary compliance through education and outreach to residential and commercial sources (targeting high-risk trouble spots first). District efforts to date include establishing and defining regulatory requirements for non-domestic dischargers (food service facilities), developing a system to identify and track activities associated with trouble spots, establishing an approach for developing and distributing education and outreach materials, determining the District's legal authority to promote compliance with program requirements, and implementing a comprehensive inspection and permitting program for food service facilities.

7.3 RESPONSE TO GWDR REQUIREMENTS

Requirement (a): An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG.

Response to Requirement (a):

The District's primary public education outreach is focused on businesses in the service area including restaurants, food trucks, and food service facilities. Outreach on BMPs and proper FOG disposal occurs during annual inspections and upon new business opening.

The District sends out a bi-monthly newsletter with information about the sewer and storm systems. The topics are selected based on time of year, and the November/December newsletter typically has an article on proper FOG disposal for the holidays.

The District typically prepares an insert in the newspaper and a press release around the holidays focused on FOG disposal.

Example outreach materials are included in Appendix G.

Requirement (b): A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area.

Response to Requirement (b):

Businesses who generate FOG may dispose of FOG in multiple ways. If the FOG is collected in a grease interceptor, the business will hire a waste hauler to clean the interceptor. The waste haulers typically take their FOG to EBMUD for disposal. If the FOG is collected in a small grease trap, the business can allow the trap to dry out and then place in the garbage for disposal at the landfill.

District field staff may at times use a vacuum truck to clear FOG from the collection system. The field staff will dispose of the FOG in a dumpster at the Wastewater Treatment Plant (WWTP), rather than sending this waste through the treatment process. After the FOG dries out in the dumpster, it will be sent to the landfill for proper disposal.

Requirement (c): The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG.

Response to Requirement (c):

The District's Code provides the legal basis and authority for the District's FOG Control Program. The specific ordinances as they related to the FOG Control Program are identified in Element III of this SSMP.

Requirement (d): Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements.

Response to Requirement (d):

The District requires restaurants and businesses to fill out a pre-treatment questionnaire to determine if and what type of GRDs may be necessary. If it is determined that a GRD is necessary, Engineering will determine the size required and discuss with Environmental Services. Upon installation, Engineering will inspect the GRD prior to acceptance.

Requirement (e): Authority to inspect grease producing facilities, enforcement authorities, and determination of whether the collection system agency has sufficient staff to inspect and enforce the FOG ordinance.

Response to Requirement (e):

The District has the required authority of inspect grease producing facilities and provide enforcement of FOG control requirements. The specific ordinances as they related to the FOG Control Program are identified in Element III of this SSMP. At full staff capacity, the District has sufficient staff to inspect and enforce the FOG ordinance. The staff are able to meet the annual inspection schedule for all facilities within the District.

Requirement (f): Identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f).

Response to Requirement (f):

Field Operations Division staff maintain a list of high frequency lines for a variety of maintenance issues, including FOG. These lines are cleaned on an increased frequency, as necessary to prevent blockages.

Environmental Services Division and Field Operations Division staff have regular meetings and maintain open communication regarding FOG issues. If Field Operations staff identify excessive FOG during a maintenance call or regular cleaning activities, they will make note in the work order. The Field Operations Supervisor will work with Environmental Services enforcement staff to identify any potential sources. Environmental Services staff will follow up with the source to identify if additional FOG control measures are necessary.

CHAPTER 8

Element VIII: System Evaluation and Capacity Assurance Plan

SWRCB Waste Discharge Requirement:

- a) Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the Capacity of key system components, hydraulic deficiencies (including components of the system with limiting Capacity) and the major sources that contribute to the peak flows associated with overflow events;
- b) Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and
- c) Capacity Enhancement Measures: The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping Capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
- d) Schedule: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements.

8.1 SYSTEM CAPACITY EVALUATION

The District is currently undertaking a collection system master plan which includes a capacity evaluation and an update to the hydraulic model which was originally developed between 2001 and 2006. The master plan is expected to be completed in 2023. In the last update the model was calibrated with 4 years of rainfall data and was then used to generate 51 years of hypothetical wet-weather SSOs, based on current collection system conditions and the past 51 years of actual rainfall. Results were used to develop GIS layers for pipe hydraulic information such as velocity and water surface elevation during the 5-year event. This information is available to field staff as a reference when investigating maintenance or potential SSO issues. Maintenance programs are also being cross-referenced with this data to optimize cleaning efforts.

The 2001-2006 system evaluation led to the development and implementation of a \$60 million CIP including \$11 million of sewer rehabilitation, \$13 million of conveyance improvements, \$27 million of storage projects, and \$9 million of treatment plant improvements. Improvements investigated fell into two (2) broad categories: (1) pipe rehabilitation to reduce I&I and (2) conveyance and storage improvements to ensure treatment of wet weather flows. Based on detailed economic evaluations, it was determined that a reduction of I/I of at least 60 percent would make pipe rehabilitation the preferred approach. Extensive pipe rehabilitation and flow monitoring in test areas yielded I&I reductions of not more than 30 percent. Accordingly, the District developed a series of pipe enlargement and wet weather storage projects which in combination reduced the likelihood of wet weather SSOs to a 5-year return frequency. Results from the 2023 model updates will be compared against the existing CIP program to identify any bottlenecks or hydraulic issues that should be added as studies or improvement projects.

The District's service area is approximately 95 percent built out. The modeling of the system has been based on ultimate build-out. As such, the collection system has adequate capacity for wet and dry weather flows. However, the District recognizes that the adequacy of its current collection system is based on the current level of I&I. I&I can be expected to increase over time due to the continuing deterioration of the collection system. The District continues to offset progressive deterioration and I&I increase with pipe

rehabilitation. Wet weather overflow events will be analyzed and, should they have occurred during conditions less severe than the design criteria, measures will be taken to prevent their reoccurrence either by increasing downstream capacity or reducing upstream I&I by pipe rehabilitation. I&I reduction is a key factor in the prioritization program for CIP development. Since 2006, the District has removed all system deficiencies that were the cause of wet-weather overflows. The District is aware of areas where surcharging occurs in wet weather events, and these areas are being targeted in the CIP for flow monitoring studies. The results of these flow monitoring studies will identify projects areas that will be inserted into the CIP and prioritized for future improvement.

8.2 DESIGN CRITERIA

The capacity-related design criteria, including base wastewater flow and peaking factors, are included in Element V: Design and Performance Provisions. These criteria were determined from historical rainfall records and resulted in the definition of the 5-year design storm.

8.3 CAPACITY ENHANCEMENT MEASURES – CAPITAL IMPROVEMENT PROGRAM

The District proactively replaces pipe throughout the collection system. The annual budget for pipe replacements is approximately \$2-4 million including \$1.25 million per year for I&I improvements as required by the District's NPDES permit. Currently, pipe rehabilitation projects are prioritized using the following criteria:

- I&I control;
- Structural integrity;
- Blockages and overflows; and
- Maintenance frequency

The District takes an adaptive management approach and adjust its efforts to achieve its goal. As future conditions warrant, the District may modify these criteria, add additional criteria, and adjust the overall expenditure for pipe rehabilitation. The District will monitor conditions by measuring sewer flow at key locations, documenting and reporting both wet weather and dry weather SSOs, evaluating the success of preventative maintenance and adjust maintenance frequencies when necessary, and identifying trends in system records.

The District prepares a biennial budget and a 10-year CIP. The biennial budget includes projects identified in the CIP that are considered to be the highest priority. Budget information can be found on the District's website. The current budget is attached as Appendix H.

CHAPTER 9

Element IV: Monitoring, Measurement, and Program Modifications

SWRCB Waste Discharge Requirement:

The Enrollee shall:

- a. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- b. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- c. Assess the success of the Preventative Maintenance program;
- d. Update program elements, as appropriate, based on monitoring or performance evaluations; and
- e. Identify and illustrate SSO trends, including: frequency, location, and volume.

9.1 PERFORMANCE MEASURES

The indicators that the District will use to measure the performance of its wastewater collection system and the effectiveness of its SSMP are:

- SSOs: Total number, Number for each cause (roots, grease, debris, structural failure, capacity, pump station failure, and other), SSO Rate (number per 100 miles per year);
- Volume of sewage recovered compared to total volume spilled;
- Volume of sewage discharged to Waters of the State; and
- Percentage of spills during wet-weather events.
- Number of certified No Spill months

The performance indicators listed above will be tracked and maintained in Infor, in the District's CMMS.

9.2 BASELINE PERFORMANCE

The historical, or baseline, performance is shown by spill location, spill cause, and volume. The District has recently added percentage of spills during Wet-Weather events and certified No Spill months as metrics to further define and track performance.

Location of SSO Failure:

Table 16 shows the number of SSOs per year by location. The District tracks the location of the cause of the SSO to better target maintenance activities. If it is determined that a maintenance activity could have prevented the SSO, the problem asset is placed on a routine maintenance schedule. For example, if blockage was due to FOG in a gravity sewer main the main may be placed on a six-month cleaning schedule.

Table 16. SSO Location by Year

Calendar Year	Gravity Main SSOs	Lower Lateral SSOs	Pump Station SSOs	Force Main SSOs
2012	16	3	0	0
2013	8	7	1	1
2014	17	2	1	0
2015	15	4	0	1
2016	7	5	0	1
2017	14	5	0	0
2018	10	6	0	0
2019	10	4	1	0
2020	9	2	0	0
2021	14	4	0	0
2022	6	1	0	1

Source: CIWQS, downloaded 2/16/2023

Cause of SSO:

Table 17 shows the number of SSOs per year by cause of failure. The District uses the SSO cause to develop targeted activities to reduce SSOs. For example, SSOs caused by grease at one time accounted for approximately one third of the SSOs per year; however, this number is down below 10 percent of the total SSOs in recent years. This can be attributed in part to the implementation of the FOG Source Control Program. Historically, root intrusion in VCP laterals and mains has been the largest contributor to SSOs. District inspection, maintenance, and capital improvement efforts have been focused in areas with known root intrusion to reduce root related SSOs. The District has an aggressive root control maintenance program using foaming to control recurring roots, in addition to hydro jetting and hogging. Additionally, the District works with nozzle manufacturers in research and development which has improved root removal efficiency and reduced the need for mechanical rodding. Other SSO failure causes include vandalism, contractor error, surcharged storm drainage system, watermain failure, and unknown causes.

Table 17. SSOs by Cause

Calendar Year	Roots	Debris	Grease	Capacity	Structural Failure	Vandalism	Other	Total
2012	11	1	2	-	1	1	3	19
2013	7	-	3	-	1	1	5 ^(a)	17
2014	6	1	1	1	2	1	8 ^(a)	20
2015	12	2	1	-	1	1	3	20
2016	6	1	1	1	2	-	2	13
2017	13	3	-	1	1	2	-	20
2018	9	3	1	-	2	1	-	16
2019	7	3	2	1	-	1	1 ^(a)	15
2020	3	4	2	-	2	-	-	11
2021	7	4	3	1	1	2	-	18
2022	2	-	1	1	2	1	1	8

Source: CIWQS, downloaded 2/16/2023

(a) One or more SSOs caused due to pump station failure

SSO Volumes:

Table 18 shows the volume of SSOs including total volume, portion recovered, and total volume entering surface Waters of the State (WotS). The District has procedures in the SERP aimed at containing as much of the spill as possible. Procedures are continuously being evaluated for effectiveness.

Table 18. SSO Volumes			
Year	Total Volume, gallons	Portion Recovered and Returned to Sewers. percent	Total Volume Discharged to WotS, gallons
2012	8,084	14	625
2013	1,688	76	0
2014	41,665	9	36,845
2015	12,374	98	100
2016	21,867	17	14,178
2017	1,913,901	0.4	1,911,516
2018	29,938	28	16,050
2019	9,452	30	6,573
2020	3,132	66	916
2021	37,755	27	23,290
2022	27,297	41	3,925
<i>Source: CIWQS, downloaded 2/16/2023</i>			

In 2017, the District experienced a Category 1 SSO at their Ryder Street storage basin which resulted in a spill of 1.91 million gallons (MG). The Ryder Street basin serves as an equalization facility for the collection system when interceptor flows overwhelm the treatment facility influent capacity (typically during wet weather events). Although the Ryder Street basin is one of the District's NPDES permitted discharges, it is considered a collection system facility, and thus discharges from the basin are reported in the CIWQS database. The SSO volumes from the Ryder Street storage basin are included in all SSO figures presented herein. The District acknowledges that the 2017 Ryder Street storage basin SSO was a controlled discharge through an existing NPDES permitted discharge location.

Total SSOs Per Year:

Figure 4 shows the total number of SSOs per year. The District tracks this spill rate in multiple internal documents to judge the effectiveness of their maintenance program and other activities. The spill rate is posted in an area visible to the entire Field Operations team. This helps the entire team be aware and allow them to focus their efforts on maintaining a low spill rate.

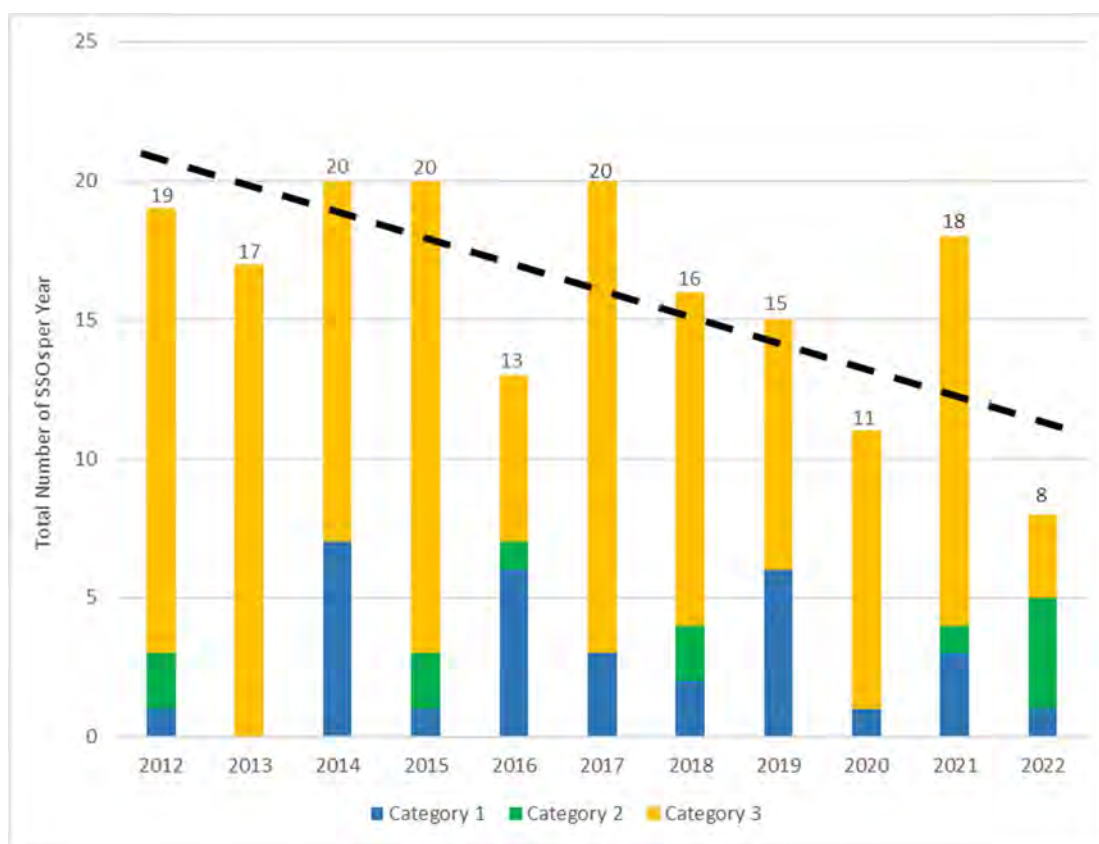


Figure 4. Trend in Rate of SSOs Per Year

Spills During Wet-Weather Events:

SSOs during wet weather events can be the result of individual or a combination of insufficient hydraulic capacity from high flows or a maintenance or blockage issue. Higher intensity and duration of storm events have continued to increase throughout the region and indicate that wet-weather SSOs will continue unless improvements are made to the system to increase capacity and improve condition. A total of six (6) SSOs occurred during wet-weather events from 2012 to 2022. This represents approximately 4% of all SSOs (6 out of 177).

Certified No Spill Months:

For a month in which no SSOs occur, the District can submit a No-Spill certification. No-spill Certifications are required within 30 days after the end of each calendar month without an SSO. The number of No Spill months was added in 2022 as a performance indicator. Table 19 presents the number of No Spill months since 2012.

Table 19. Total No Spill Months	
Calendar Year	Certified No Spill Months
2012	2
2013	2
2014	2
2015	4
2016	2
2017	4
2018	3
2019	5
2020	6
2021	4
2022	5
Source: CIWQS, downloaded 2/16/2023	

9.3 PERFORMANCE MONITORING AND PROGRAM CHANGES

The District will evaluate the performance of its wastewater collection system at least every two (2) years with the SSMP audit using the performance measures identified in the Element. The District may use other performance measures in its evaluation. The District will prioritize its actions and initiate changes to this SSMP, its O&M program, and any related programs based on the results of the evaluation. The District will update the data and analysis at the time of the evaluation and will include the updated analysis in the audit report.

CHAPTER 10

Element X: SSMP Program Audits

SWRCB Waste Discharge Requirement:

As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two (2) years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in the WDR, including identification of any deficiencies in the SSMP and steps to correct them.

10.1 AUDITS

The District will audit its implementation and compliance with the provisions of this SSMP every two (2) years as required by the WDR. The audit will be conducted and completed no later than every two (2) years following original adoption by the Board of Trustees (Board), which originally occurred on December 11, 2012 by Resolution 2012-5474. The audit will be conducted by a team consisting of District Staff selected from the Field Operations Department. The audit team may include members from other departments of the District, outside agencies, or contractors. It is also recommended that the District complete an audit of its SSO files to assure that the files are complete, contain all required records as stated in the MRP, and that the files contain no extraneous or conflicting documents that are not adequately reviewed and explanations provided be conducted. District SSMP Audits are included in Appendix I of this SSMP.

The SSMP Audit SOP and Audit Checklist Template, included in Appendix J, are used to guide the audit process and includes evaluation of the GWDR requirements for each SSMP element. The results of the audit, including the identification of any deficiencies and the steps taken or planned to correct deficiencies will be included in an Audit Report. Future modifications and changes to the SSMP will be identified and tracked in a Change Log, included as Appendix K.

The audit may contain information about successes in implementing the most recent version of the SSMP and identify revisions that are needed for a more effective program. Information collected can be used in preparing the audit. Tables and figures or charts can be used to summarize information about these indicators. An explanation of the SSMP development, and accomplishments in improving the sewer system, should be included in the audit, including:

- How the sewer system agency implemented SSMP elements since the last audit;
- The effectiveness of implementing SSMP elements;
- A description of the additions and improvements made to the wastewater collection system in the past reporting period; and
- A description of the additions and improvements planned for the upcoming reporting year with an estimated schedule for implementation.

10.2 SSMP UPDATES

The District will recertify its SSMP five (5) years from the original date of District Board adoption and approval (December 11, 2012) or when substantial changes are made in the SSMP. The District will determine the need to update its SSMP more frequently based on the results of the audits and the performance of its wastewater collection system using information from the Monitoring and Measuring Program in Element IX. In the event that the District decides that an update is warranted, the process to complete the update will be identified, assigned to certain staff and include a schedule for completion. The District will complete the update and take the revisions to the District Board no later than one (1) year after identifying the need for an update. Board adoption documents are included in Appendix L.

CHAPTER 11

Element XI: Communication Program

SWRCB Waste Discharge Requirement:

The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

11.1 COMMUNICATION DURING SSMP DEVELOPMENT AND IMPLEMENTATION

The District maintains a website (<https://www.vallejowastewater.org>) to inform the public about District activities. The District's website is an effective communication channel for providing alerts and news to the public. The website provides important announcements, public hearing notices, links to agendas and minutes for the Board of Trustees meetings, and other key information for the public. The District will publish the most up-to-date SSMP on the website. Notice will be provided to the public through the Board Meeting Packet on future updates to the SSMP.

Information is provided upon request to interested parties, including brochures and materials regarding collection system maintenance, contact information and/or opportunities for input into the implementation process. The District will also have brochures and information on collection system programs at various department counters at the District offices as well as on the District website.

11.2 COMMUNICATION WITH SATELLITE WASTEWATER COLLECTION SYSTEMS

No satellite agencies discharge to the District's sewer system or wastewater treatment plant. The District owns and maintains all sewer mains within their service area.

11.3 OTHER OUTREACH ACTIVITIES

The District provides several other outreach activities to the community. Some of the larger activities are discussed below.

School Outreach Programs

The District provides water quality-related educational programs to public and private schools in the greater Vallejo area. Programs focus on reducing pollution in wastewater and stormwater, and inspiring responsible stewardship of our watersheds and resources. Hundreds of students, teachers, and parents take part in our programs each year. The district offers field trips to the wastewater treatment plant and classroom presentations to students in Grades 4 and 5; a Watershed Explorers program for students in Grade 3; and creek biomonitoring for select classes in local high schools. The District has created a YouTube channel to provide students with a digital tour when field trips are not safe.

Used Cooking Oil and Grease Recycling Program

The District works with the company Recology Vallejo to promote the Residential Used Cooking Oil and Grease Recycling Program. The District participates in this effort by paying for the cost of a grease disposal bin and distributing information during public outreach events. The District also paid for print ads in the Vallejo Times-Herald that direct readers how to properly dispose of their used cooking oil.

Media Outreach

The District works with the local news media to promote pollution reduction efforts. Articles and ads in the Vallejo Times-Herald cover topics such as Coastal Cleanup Day, Vallejo Watershed Alliance, recycling holiday cooking oil, sandbag information during wet weather, and the mercury thermometer exchange at Earth Day.

Vallejo Watershed Alliance

The District is the lead agency in the Vallejo Watershed Alliance, a community-based group working together to improve the greater Vallejo watershed, which encompasses the City of Vallejo and nearby unincorporated areas of Solano County. Establishing and supporting this group helps the District fulfill its mission and adhere to regulations, and provides a forum for dealing with long-standing urban water problems. The Alliance is made up of public agencies, non-profits and interested individuals. The Alliance hosts monthly workdays, planning meetings, and other activities.

District Speakers Bureau

The District has guest speakers available free of charge for local service clubs, large businesses, community organizations, churches and other groups. Expert speakers address such topics as:

- Disaster preparedness;
- What homeowners can do to protect their homes from sewer backups;
- How businesses can be in compliance with clean water regulations;
- Less toxic home and garden practices;
- How wastewater collection systems and the treatment plant work;
- The Vallejo Watershed Alliance, a community-based group of volunteers who want to help Vallejo's waterways;
- How wastewater collection systems and the treatment plant work.

Appendix A

Responsible Officials

Appendix A. Responsible Officials in SSMP Content Development

Element	Element Name	Position Title	Responsible District Official	Phone	Email
-	Introduction	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
I	Goals	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
II	Organization	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
III	Legal Authority	Director of Environmental Services 3 Director of Engineering	Jennifer Harrington and Mark Tomko	707-644-8949 ext. 1600 707-644-8949 ext. 1301	jharrington@vallejewastewater.org mtomko@vallejewastewater.org
IV	Operations and Maintenance Program	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
V	Design and Performance Provisions	Director of Engineering	Mark Tomko	707-644-8949 ext. 1301	mtomko@vallejewastewater.org
VI	Overflow Emergency Response Plan	Safety Manager	Matthew Hethcock	707-644-8949 ext. 1801	mhethcock@vallejewastewater.org
VII	Fats, Oils and Grease (FOG) Control Program	Director of Environmental Services	Jennifer Harrington	707-644-8949 ext. 1600	jharrington@vallejewastewater.org
VIII	System Evaluation and Capacity Assurance Plan	Director of Engineering	Mark Tomko	707-644-8949 ext. 1301	mtomko@vallejewastewater.org
IX	Monitoring, Measurement and Program Modifications	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
X	Program Audits	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
XI	Communications Program	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
Appendix A	Responsible Officials Contact Info	Safety Manager	Matthew Hethcock	707-644-8949 ext. 1801	mhethcock@vallejewastewater.org
Appendix B	Health and Safety Manual	Safety Manager	Matthew Hethcock	707-644-8949 ext. 1801	mhethcock@vallejewastewater.org
Appendix C	Equipment Inventory	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
Appendix D	Critical Parts Inventory	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejewastewater.org
Appendix E	Design Standards	Director of Engineering	Mark Tomko	707-644-8949 ext. 1301	mtomko@vallejewastewater.org
Appendix F	Overflow Emergency Response Plan	Safety Manager	Matthew Hethcock	707-644-8949 ext. 1801	mhethcock@vallejewastewater.org
Appendix G	FOG Outreach	Director of Environmental Services	Jennifer Harrington	707-644-8949 ext. 1600	jharrington@vallejewastewater.org
Appendix H	Sewer System CIP Budget and Schedule	Director of Finance	Jeffrey Tucker	707-644-8949 ext.1201	jtucker@vallejewastewater.org

Appendix A. Responsible Officials in SSMP Content Development

Element	Element Name	Position Title	Responsible District Official	Phone	Email
Appendix I	SSMP Audits	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejowastewater.org
Appendix J	SSMP Audit Guidance Documents	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejowastewater.org
Appendix K	SSMP Change Log	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejowastewater.org
Appendix L	SSMP Board Adoption Documents	Director of Field Operations	Justin Keating	707-652-7823	jkeating@vallejowastewater.org

Appendix B

Health and Safety Manual

TRAINING REQUIREMENTS

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- 706.5 [TRAINING REQUIREMENTS](#)

[ATTACHMENT A – CSRMA On-Line Training Procedures](#)

HEALTH & SAFETY MANUAL VSFCD

3/14/2014

706.1 PURPOSE

Safety Training Requirements

To provide a list of required Safety and Health Training and Instruction Requirements contained in the Construction Safety Orders (Subchapter 4) and the General Industry Safety Orders (Subchapter 7) of Title 8 of the California Code of Regulations.

Job Specific Training Requirements

To provide guidelines on tracking department/job specific trainings given in conjunction with specific job requirements.

706.2 SCOPE

These requirements apply to all District personnel as outlined on the training requirements sheet.

706.3 POLICY

Safety Training

All employees are to receive both specific safety training in relation to their positions and specific training in the equipment and procedures to conduct their job effectively. Each employee is given a safety manual at the time of their safety orientation. At that time all policies and procedures that they have the potential to be exposed to are reviewed.

Continued training is given as required. There are three different forms of training

- Formal trainings conducted by the Safety/Risk Management Staff or outside experts on the subject;
- On-line training – CSRMA on-line training is required to be completed by each department according to their exposure. See Attachment A for directions on how to assess program.
- Tailgate Training - Periodic training is given in the way of “tailgate” meetings. Tailgate meetings are given once every 10 working days for most departments.

Job Specific Training

It is part of the Safety/Risk Department responsibilities to document all employee trainings. This includes ALL training (whether Safety or job specific) that is conducted either in-house (a sales or manufacturers rep) or off-site. If group computers are needed to be set up, it will need to be coordinated through Desktop support (this type of training is typically conducted in our Boardroom).

If you are attending an off-site conference or training, you are required to complete a conference/seminar expense approval form for approval my your manager. This form is turned in to the Clerk of the Board who in turns makes a copy and forwards to Safety and Risk. Once you have attended the off-site training, please forward your certificate or confirmation of the training so that it can be placed in the training data base and in your training file.

If you are setting up an in-house training, please contact the Safety/Risk Department for any set up requirements by your vendor and/or for a signup sheet to be created. We have a portable computer projector with a screen and of course the three overhead projectors in the three main buildings available. If you are in need of this equipment, please contact Safety/Risk Department.

706.4 SUMMARY OF TRAINING REQUIREMENTS

The following tables breakdown the types of training required by each department. Each department manager is responsible for assuring their employees have received the appropriate training prior to being exposed to that specific hazard.

706.5 VSFCD TRAINING REQUIREMENTS

TYPE OF TRAINING	TRAINING TOPIC	Title 8 Section	District Policy	Frequency of Training	Job Classification	Ops	Main	PCD	Lab	FOPS	Eng	Admin
Formal	Accident Investigation	3202(a)(7)(F)	711	Initial	Supervisors	X	X	X	X	X	X	X
on-line	Acetylene & Fuel Gas Safety	1740(k)(1)		Initial	Users		X			X		
Tailgate	Aerial Lift Devices	3648(l)(7)		Initial	Users	X	X					
Tailgate	Battery Handling/Changing/Charging	5185(a)		Initial	Assigned Ees		X	X		X		
Formal/on-line	Bloodborne Pathogens	5193(g)(92)	720	Initial	All Ees	X	X	X	X	X	X	X
Tailgate	Boatswains Chair	1662(a)		Initial	Users		X			X		
Tailgate	Chain Saw Safety	6283 (m)		Initial	Users					X		
Formal	Chemical Hygiene for Labs	5191(f)(2)	727	Initial	Lab Ees	X			X	X		
Tailgate	Compaction Equipment	4355(a)(2)		Before Use	Users					X		
Formal	Confined Space	5157(g)	722	Initial	Affected Ees	X	X			X	X	
Formal	Confined Space Rescue Plan	5157	722	Initial	Affected Ees	X	X			X	X	
Tailgate	Cranes & Hoisting Equipment	5006		Initial	Affected Ees	X	X			X		
Formal/on-line	DOT - Substance Abuse Reasonable Sus.	49CFR382.6 01	718b	Initial	Supervisors	X	X	X	X	X	X	X
Formal	DOT - Substance Abuse Policy	49CFR382.6 01	718b	Initial	Class A & B	X				X		
Formal/on-line	Electrical Safety	2320.2(a)(2)/2940		Initial	Affected Ees	X	X					
Tailgate	Elevated Work Platforms	3638(d), 3646(c), 3648 (c) & (l)(7)	724	Before Use	Users	X	X					
Tailgate	Emergency Action Plan	3220(e)	721	Initial	All Ees	X	X	X	X	X	X	X

706.5 VSFCD TRAINING REQUIREMENTS (cont'd)

TYPE OF TRAINING	TRAINING TOPIC	Title 8 Section	District Policy	Frequency of Training	Job Classification	Ops	Main	PCD	Lab	FOPS	Eng	Admin
Tailgate	Equipment & Machinery	1510(b)		Before Use	Qualified Ees	X	X	X	X	X	X	X
Tailgate	Ergonomics	5110(b)(3)	716	Initial	All Ees	X	X	X	X	X	X	X
Formal	Excavation/Trenching/Shoring	1541	730	Initial	Competent Person					X		
Tailgate	Fire Detection Systems	6183(c)(4)	721.2	Initial	Assigned Ees		X					
on-line	Fall Protection	3458			Competent Person	X	X			X		
Formal	Fire Extinguisher	6151(g)(1)-(2)	721.2	Initial	All Ees	X	X	X	X	X	X	X
Formal	Fire Prevention Plan	3221(d)(1)-(2)	721.2	Initial	All Ees	X	X	X	X	X	X	X
Formal	First Aid/CPR/AED	3400(b), 3439(b) 5157		Initial	Assigned Ees	X	X			X		
Formal	Flagger (Traffic Control)	1599(f) & (g)		Initial	Assigned Ees					X		
Tailgate	Flammable Liquids	5561	726		Qualified Ees	X	X			X		
Tailgate	Hazard Communication	5194(b)(1)	726	Initial	All Ees	X	X	X	X	X	X	X
		22CCR Section 66001										
Tailgate	Hazardous Waste Management	66001	726	Initial	All Ees	X	X	X	X	X	X	X
Tailgate	Hearing (Noise Protectors)	5098(a)(4)		Initial	Exposed Ees	X	X			X		
Tailgate	Heat Stress	3395	717	Initial	Exposed Ees	X	X	X		X	X	
Formal	Industrial Lift Trucks (Forklifts)	3657(i) & 3664(b)	724	Initial	Operators	X	X			X		
Formal	IIPP	3203(a)(7)	703	Initial	All Ees	X	X	X	X	X	X	X
Tailgate	Job Hazards	3203(a)(7)	703	Initial	All Ees	X	X	X	X	X	X	X
Formal	Lab Safety (see Chemical Hygiene)	5191 (f)	727	Initial	Exposed Ees	X			X			

706.5 VSFCD TRAINING REQUIREMENTS (cont'd)

TYPE OF TRAINING	TRAINING TOPIC	Title 8 Section	District Policy	Frequency of Training	Job Classification	Ops	Main	PCD	Lab	FOPS	Eng	Admin
Tailgate	Ladder Safety	3276-3280		Initial	All Ees	X	X	X	X	X	X	X
Formal	Lockout/Tagout	3314	728	Initial	Exposed Ees	X	X			X		
Tailgate	Medical & Exposure Records Access	3204(g)(1)		Initial	All Ees	X	X	X	X	X	X	X
Tailgate	Office Safety			Initial	All Ees	X	X	X	X	X	X	X
Tailgate	Personal Fall Arrest Systems	1670(b)(19)		Initial	Competent Person	X	X			X		
Tailgate	Personal Protective Equipment (PPE)	3380(c)		Initial	All Ees	X	X	X	X	X	X	X
Formal	Pesticide Safety	5194(h)	733	Initial	Exposed Ees	X	X			X		
Tailgate	Posting Requirements	340		Initial	All Ees	X	X	X	X	X	X	X
Tailgate	Power Press	4203(a) & (b)		Initial	Exposed Ees		X					
Formal	Respiratory Protection	5144(c) & (K)	729	Initial	Users	X	X			X		
Formal	Standardized Emergency Management System (SIMS) and NIMS	19CFR 2428, 2446	721	Initial	All Ees	X	X	X	X	X	X	X
Formal	Supervisory Safety Training	3203(a)(7)(F)		Initial	Supervisors	X	X	X	X	X	X	X
Tailgate	Welding & Cutting Safety/Hot Work	47099 & 4848(a)		Initial	Qualified Ees		X			X		

Appendix C

Sewer System Major Equipment Inventory

Appendix C. Sewer System Major Equipment Inventory

Equipment No.	Description	Equipment Type
204T	2004 GODWYN PUMP SER#0334516103	TRAILR
207T	2006 BIG TEX EQUIPMENT TRAILER	TRAILR
T134	1992 DAKOTA BACKHOE TRAILER	TRAILR
T141	1993 TRAILKING BACKHOE TRAILER	TRAIL
T149	1995 PORTABLE TOILET TRAILER	TRAILR
T167	1997 AIR BLOWER UNIT	TRAILR
T198	2003 SULLAIR DIESEL POWER MOBILE AIR COMPRESSOR (FOPS)	TRAILR
T203	PACIFIC TEK TRILER MOUNTED SELF- CONTAINED VACUUM SYSTEM	TRAILR
T210	2006 ALUMITECH AIRBOAT TRAILER (V209)	TRAILR
T212	2006 ALUMITECH AIRBOAT TRAILER (V211)	TRAILR
T214	2006 WANCO SOLAR TRAILERMOUNTED ARROWBOARD	TRAILR
T215	2006 BIG TEX SHORING TRAILER	TRAILR
T217	2006 WANCO SOLAR TRAILER MOUNTED ARROWBOARD	TRAILR
T233	2010 PREMIER TRAILER-MOUNTED E6 T3/ENGINE DRIVEN SEWAGE PUMP (FAC MAINT)	TPUMP
T257	IRON PANTHER-PIPE BURSTING TRAILER-FOPS	TRAILR
T270	MULTIQUIP 220 K GENERATOR - TRAILER FACILIITES MAINTENANCE	GEN220K
T271	MULTIQUIP 220 K GENERATOR TRAILER FACILITIES MAINTENANCE	GEN220K
T276	2021 BIG TEX EQUIPMENT TRAILER	TRAILR
V150	1996 JOHN DEERE 410D	BACKH
V166	BOBCAT LOADER - MODEL 763	SKID
V174	2001 FORD F350 FLATBED TRUCK	TRUCK
V177	2001 HONDA GENERATOR - EU20001A	GENERA
V179	2001 HONDA GENERATOR - EU20001A	GENERA
V180	2001 HONDA GENERATOR - ES6500K2A	GENERA
V181	2007 HONDA GENERATOR - EU20001A GEN. IS LOST/ NEW GENERATOR PURCHASED 5/17/07	GENERA
V182	2005 CHEVROLET PANEL VAN - CONFINED SPACE RESCUE - CARB LOW USE VEHICLE	CONRES
V183	2005 CHEVROLET PANEL VAN - CONFINED SPACE RESCUE - CARB LOW USE VEHICLE	TRUCK
V184	HONDA GENERATOR (CONSTRUCTION PIPE BURST TRAILER)	GEN650
V185	2002 FORD F150 SUPERCAB PICKUP	TRUCK
V190	2002 FORD WINDSTAR MINI VAN	MINIVN
V191	2002 FORD F-150 SUPERCAB PICKUP TRUCK	TRUCK

Appendix C. Sewer System Major Equipment Inventory

Equipment No.	Description	Equipment Type
V196	2003 FORD 650 SUPER DUTY [RODDER]	PR
V199	2002 HONDA GENERATOR - EB3500	GENERA
V200	2002 HONDA GENERATOR - ES6500K2A	GENERA
V201	2003 HONDA GENERATOR - EU3000IS	GENERA
V205	BOBCAT 322G MINI EXCAVATOR	MINIEX
V209	2006 ALUMITECH AIRBOAT 14' X 7'6"FT 330HP	ABOAT
V211	2006 ALUMITECH AIRBOAT 14' X 7'6"FT 330HP	ABOAT
V213	2006 JOHN DEERE 410G	BACKHO
V215	2006 EASEMENT PROWLER AND TRAILER	JET
V220	2008 FORD F350 SD PICKUP W/SPECIAL UTILITY BODY	1.PU
V221	2008 STERLING TRANSFER TRUCK	
V221-T	1991 RELIANCE TRAILER (V120-T RE-AASIGNED 10/22/07) HAS BEEN EXTENSIVE REFURBISHED AND RE-ASSIGNED TO NEW TRACTOR V221	TRAILR
V222	2008 STERLING TRANSFER TRUCK	
V222-T	1989 RELIANCE TRAILER (V111-T RE-AASIGNED 10/22/07) HAS BEEN EXTENSIVE REFURBISHED AND RE-ASSIGNED TO NEW TRACTOR V222	TRAILR
V234	FORKLIFT	
V235	FORD F-150 EXTRA CAB MECHANICAL MAINTENANCE TRUCK.	TRUCK
V237	2013 FORD F-350 CREWCAB - CONST./REPAIR CREW	1.PU
V238	2013 Ram 1500 4WD Quad Cab Tradesman PM SUPERVISORS PICK UP - Johnathan	TRUCK
V239	2014 FORD F-150 EXTRA CAB MECHANICAL MAINTENANCE TRUCK.	TRUCK
V240	2014 BOBCAT T550 TRACKLOADER	SKID
V241	2014 PIPE HUNTER JET EYE TV/JET MACHINE	TVJET
V242	2014 Ford F-150 4 x2 Extra Cab Pickup Truck	TRUCK
V243	2015 Ford F450 CHASSIS CAB - MECHANICAL MAINTENANCE	TRUCK
V244	2016 Kenworth 10 yard dump truck	D-TRK
V245	2016 Ford Explorer - FWD FOPS	TRUCK
V246	Electrician shop truck	TRUCK
V247	Dodge Grand Caravan	VAN
V248	2016 PETERBILT 5 YARD DUMP TRUCK (PACCAR PX9 330) (ALLISON 300 RDS-T)	DUMP
V249	2016 Construction Crew Flatbed FORD F-550	FLAT

Appendix C. Sewer System Major Equipment Inventory

Equipment No.	Description	Equipment Type
V250	2016 TV Inspection Vehicle-Chevrolet Duramax 6.6L V8 Turbo Diesel G33903 RWD 4500	TV#1
V251	2016 TV Inspection Vehicle-Chevrolet Duramax 6.6L V8 Turbo Diesel G33903 RWD 4500	TV#1
V252	2017 Ford Escape - Admin	SUV
V253-01	2018 Kawasaki Mule - Operations	
V254	2018 Kawasaki Mule - Electricians	
V255	FOPS 2018 Kawasaki Mule SX	UC
V256	MECH Kawasaki Mule 2WD	UC
V258	2018 Ford Escape SE 4WD - Engineering	TRUCK
V259	FOPS Service Call Truck 2018 GMC SIERRA 3500	1.PU
V260	2018 JOHN DEERE 410L BACKHOE-FOPS	BACKH
V261	2018 VAC -CON	VAC
V262	FOPS 2019 PETERBILT DUMP TRUCK - 5 Yard	DUMP
V263	FOPS - 2019 FORD F-350 W/UTILITY BOX	TRUCK
V265	FOPS - 2019 FORD F-350 W/UTILITY BOX	TRUCK
V266	2019 Dynapac CC1200 Asphalt Roller	ROLLER
V267	2020 PETERBUILT 348 VACCON VIN#3NP3HJ8X6MM735452	VAC
V268	2020 FREIGHTLINER "PIPEHUNTER" VIN# 3ALACKFCOLDMH7058	JET
V269	2019 FORD F-550 VIN#1FDUF5GTXKEG06890	TRUCK
V272	2020 NISSAN ROGUE VIN#KNMAT2MV5LP509767 LICENSE#BA30E92 FOPS SUPERINTENDT VEHICLE	TRUCK
V273	2020 NISSAN ROGUE VIN#KNMAT2MVXLP523101 LIC#BA21P98	TRUCK
V277	2020 FORD F-550 DIESEL CONSTRUCTION TRUCK	TRUCK
V279	2021 Chevrolet Silverado 1500 V8 4x4 Standard Body - VIN:1GCRYAEF7MZ142642	TRUCK
V280	2020 Ford F550 Regular Cab VIN:1FDUF5GTXLEE47497 PM Lateral Maintenance Truck	TRUCK
V283	2020 FORD F-350 VIN.#1FDRF3A66LED69782	TRUCK
V285	2021 CHEVROLET 3500 HD 1GB3WREY5MF136663	TRUCK
V290	2021 FORD F350 VIN# 1FDRF3GTXMED45872	TRUCK
VC168	18" FS400 Husquvarna Concrete Saw 11hp	CONSA
VD-PUMP6	2004 GODWIN CD150M 6" SILENCED DIESEL PUMPSET	TPUMP

Appendix C. Sewer System Major Equipment Inventory

Equipment No.	Description	Equipment Type
VG-PUMP1	HONDA 1 1/2 INCH PUMP / GAS OPERATED / ID # 3381 / 53 GPM RATING **OUT OF SERVICE 5/19/2020**	PPUMP
VG-PUMP2	HONDA 1 1/2 INCH PUMP / GAS OPERATED / ID # 3383 / 53 GPM RATING	PPUMP
VG-PUMP4	HONDA 2 INCH TRASH PUMP / GAS OPERATED / ID # NONE ASSIGNED /	PPUMP
VG-PUMP5	HONDA PUMP / GAS OPERATED	PPUMP

Appendix D

Critical Sewer System Replacement Parts Inventory

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
102	225	FEET	4" VCP
103	736	FT	6" VCP
104	48	FT	8" VCP
105	46	FT	10" VCP
106	60	FT	12" VCP
106A	0	FT	12" SDR 26 PIPE
107	375	EA	4" SDR-35 PIPE
107A	360	FT	4" SDR 17 HDPE PIPE
107B	100	FT	4" SDR 26 PIPE
108	201	EA	6" SDR-35 PIPE
108A	360	FT	6" SDR 17 HDPE PIPE
108B	100	FT	6" SDR 26 PIPE
109	32	EA	4" DUCTILE IRON PIPE
110	100	EA	8" SDR-35 PIPE
110A	100	FT	8" SDR-17 HDPE PIPE
110B	100	FT	8" SDR 26 PIPE
111	35	EA	6" DUCTILE IRON PIPE
112	120	FOOT	10" SDR 35 PIPE
112A	180	FT	10" SDR 17 HDPE PIPE
112B	100	FT	10" SDR 26 PIPE
113	200	FT	12" CORRUGATED SMOOTH BORE PIPE
113A	200	FT	12" SDR 26 PIPE
114	360	FT	5.375" HDPE PIPE (NON USE)
115	0	FT	18" SDR26 PIPE
116	0	FT	24" smooth bore corrugated pipe
124	1	EA	FERNCO PIPE PATCH KIT 4" X 24" - SUMMER/WINTER
125	1	EA	FERNCO PIPE PATCH KIT 6" X 24" - SUMMER/WINTER
127	1	EA	FERNCO PIPE PATCH KIT 8" X 24" - SUMMER/WINTER
200	40	EA	4"X4" VCP WYE
200A	12	EA	4" FUSED SDR 17 WYE
200B	3	EA	4"X4" SDR35 WYE
200C	10	EA	4"X4" SDR 26 WYE
200F	10	EA	6"X4" SDR 26 WYE

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
201	0	EA	6"X6" VCP WYE
201A	0	EA	6" X 6" SDR 26 WYE
202	21	EA	6"X4" VCP WYE
202A	0	EA	6"X4" SDR 35 WYE
203	5	EA	8"X8" VCP WYE
203A	0	EA	8" X 8" SDR 26 WYE
204	11	EA	8"X6" VCP WYE
204A	0	EA	8" X 6" SDR 26 WYE
205	24	EA	8"X4" VCP WYE
205A	3	EA	8"X 4" SDR 26 WYE
206	0	EA	10" x 4" SDR 26 WYE
206A	11	EA	10"X4" VCP WYE
207	6	EA	10"x6" VCP WYE
208	6	EA	10"x8" VCP WYE
208A	3	EA	12"x6" VCP WYE
208B	0	EA	12"x4" VCP WYE
208C	0	EA	12"x8" VCP WYE
209	3	EA	6"x6" VCP DBL WYE
210	8	EA	6"x4" VCP DBL WYE
211	4	EA	8"x8" VCP DBL WYE
212	6	EA	8"x6" VCP DBL WYE
213	11	EA	6"x6" VCP TEE
213A	29	EA	4"x4" VCP TEE
214	0	EA	12"X4" SDR 26 WYE
214A	39		6"X4" VCP TEE
214B	0	EA	12"X6" SDR 26 WYE
215	6	EA	8"x8" VCP TEE
216	11	EA	8"x6" VCP TEE
217	11	EA	8"x4" VCP TEE
218	2	EA	6"x6" VCP DBL TEE
219	8	EA	6"x4" VCP DBL TEE
220	1	EA	8"x8" VCP DBL TEE
221	1	EA	8"x6" VCP DBL TEE
222	12	EA	4" INSERT A TEE
223	12	EA	6" INSERT A TEE

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
224	12	EA	8" INSERT A TEE
225	0	EA	18" X 4" SDR26 WYE
300	104	EA	4"X1/4" VCP BEND
300A	0		4' SDR 26 11 1/4 BEND
301	66	EA	4"X1/8" VCP BEND
301A	0	EA	4" 1/8th BEND (BELL & SPIGOT)
301B	3	EA	4" SDR35 36"LONG 1/8 BEND
301C	3	EA	4" SDR35 1/8 BEND
302	10	EA	4"X1/16" VCP BEND
302A	3	EA	4" SDR35 1/16 BEND
302B	10	EA	4" SDR 26 LONG RADIUS 1/8TH BEND
302C	0	EA	4" SDR 26 45 DEGREE SLIP/GASKET (MALE TO FEMALE)
302D	10	EA	4" SDR 26 22 1/2 DEGREE
302E	0	EA	4" SDR 26 COUPLING GASKET/GASKET
302F	0	EA	4" SDR26 22 1/2 DEGREE GASKET/SLIP (MALE/FEMALE)
302G	0	EA	4" SDR26 22 1/2 DEGREE GASKET/GASKET
302H	0	EA	4" SDR 26 45 DEGREE GASKET/GASKET
303	11	EA	6"X1/4" VCP BEND
304	14	EA	6"X1/8" VCP BEND
304A	0	EA	6" SDR 26 45 DEGREE GASKET/GASKET
304B	0	EA	6"SDR26 45 DEGREE GASKET/SLIP (MALE/FEMALE)
305	14	EA	6"X1/16" VCP BEND
305A	0	EA	6" SDR 26 22 1/2 DEGREE GASKET/GASKET
305B	0	EA	6" SDR 26 22 1/2 DEGREE GASKET/SLIP (MALE/FEMALE)
306	6	EA	8"X1/4" VCP BEND
307	9	EA	8"X1/8" VCP BEND
307A	0	EA	8"SDR26 45 DEGREE GASKET/SLIP (MALE/FEMALE)
308	12	EA	8" X 1/16" VCP BEND
308A	0	EA	8"SDR26 22 1/2 DEGREE GASKET/SLIP (MALE/FEMALE)
308B	0	EA	8'SDR 26 COUPLING GASKET/GASKET

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
309A	2	EA	10"X1/16" VCP BEND
310	3	EA	10" X 1/8" VCP BEND
311	0	EA	12" SDR26 22 1/2 DEGREE GASKET/GASKET
312	0	EA	12" SDR26 45 DEGREE GASKET/GASKET
400	366	EA	4" ABS Cap
400A	0	EA	4" RUBBER CAP
401	45	EA	6" ABS Cap
402	60	EA	8" ABS Cap
403	1	EA	4" VCP Starter Hub
404	8	EA	6" VCP Starter Hub
405	726	EA	4" Bushing VCP to AC
405A	0	EA	4" BUSHING VCP TO PLASTIC/CAST IRON
406	749	EA	4" P.E. Bushing CI to VCP
407	31	EA	6" P.E. BUSHING VCP TO PLASTIC/CAST IRON
408	134	EA	6" P.E. Bushing VCP to AC
409A	35	EA	8" P.E. Bushing VCP to AC
409B	26		8" P.E. BUSHING VCP TO PLASTIC/CAST IRON
410	35	EA	10" P.E. BUSHING VCP TO AC
411	18	EA	10" P.E. BUSHING VCP TO PLASTIC/CAST IRON
412	16	EA	12" P.E. BUSHING VCP TO PLASTIC/CAST IRON
413	11	EA	12" P.E. BUSHING VCP TO AC
500	100	EA	4" Rubber Repair Coupling
500A	61	EA	4" Fernco rubber coupling
500B	1	EA	4" CLAY TO CLAY SHEER BAND COUPLING
501	56	EA	6" CLAY TO CLAY SHEER BAND COUPLING
501B	62	EA	6" CLAY TO CLAY COUPLING Type O(GREEN)
502	50	EA	8" CLAY TO CLAY COUPLING W/SHEAR BAND
503	27	EA	10" CLAY TO CLAY SHEER BAND COUPLING
503A	0	EA	10" CLAY TO CI/PL COUPLING
503B	0	EA	10" CI/PL TO CI/PL COUPLING

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
504	12	EA	12" CLAY TO CLAY SHEER BAND COUPLING
504A	0	EA	12" VCP TO CI/PL REDUCER COUPLING
504B	0	EA	12" CI/PL TO CI/PL COUPLING
504C	0		12" CONCRETE/PLASTIC COUPLING
505	56	EA	4"VCP TO 4"CI/PL REDUCER COUPLING
505B	30	EA	4"VCP TO 3"CI/PL REDUCER COUPLING
505C	10	EA	4" CI/PL TO 3" CI/PL REDUCER COUPLING
506	4	EA	6"VCP TO 4" CI/PL REDUCER COUPLING
506B	0		6" PLASTIC TO 4" PLASTIC COUPLING
507	7	EA	6"VCP TO 6" CI/PL REDUCER COUPLING
508	0	EA	8" VCP TO 6" CI/PL REDUCER COUPLING
509	22	EA	6"VCP to 4"VCP REDUCER COUPLING
509A	6		6" TO 4" ECCENTRIC REDUCER COUPLING PVC
510A	6	EA	8" VCP TO 6" VCP REDUCER COUPLING
511	12	EA	8" CLAY TO 8" CI/PL COUPLING
511A	0	EA	8" CI/PL x 8" CI/PL COUPLING
511B	0		8" CONCRETE/PLASTIC COUPLING
512	15		12" SPLIT COUPLER FOR CORRUGATED PIPE PLAIN END
513A	12	EA	4" CI/PL TO 4" CI/PL COUPLING
514	24	EA	6" CI/PL X 6" CI/PL COUPLING
514A	0	EA	6" CONCRETE/PLASTIC COUPLING
514B	0	EA	6" AC/DI to 6" CI/PL COUPLING
515	0	EA	18" CLAY TO CI/PLASTIC COUPLING
600	0	EA	STANDARD CONCRETE CO BOX F-8 8-1/2 ID X 11-3/4
601	0	EA	STANDARD CONCRETE CO LID F-8 8-7/8 MODEL D210
602	69	EA	STANDARD CONCRETE CO BOX AND LID F-8 8-1/4 X 11-3/4
603	0	EA	LARGE CONCRETE CO BOX AND CAST IRON LID G-8 13 X 12
604	6	EA	Co Box & Lid G-5 (METAL)
604A	20		G-5 BOX LID - METAL LID ONLY
604B	0		G 5 Box only

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
605	5	EA	PRE-CAST CONCRETE CB COVER 26 3/4"
605A	1		STANDARD 2 X 3 CB GRATE
605B	0		26 3/4" metal casting catch basin lid
606	5	EA	B-16 BOX & LID 16"X9" RECTANGLE
606A	1	EA	B-16 BOX 16"X9" RECTANGLE 12" EXT.
606B	6	EA	B-16 LID 16"X9" RECTANGLE
607	10		B9 CHRISTY RECTANGULAR BOX & LID (SEWER)
607A	11		B9 CHRISTY RECTANGULAR LID (SEWER)
607B	10		B9 CHRISTY RECTANGULAR
608	0	EA	B21 RECTANGLE CHRISTY BOX 21" X 11"
608A	0	EA	B21 RECTANGLE CHRISTY LID 21" X 11"
700	22	EA	3"x24" CONCRETE RISER RING
701	22	EA	6"x24" CONCRETE RISER RING
702	1	EA	6"X36" CONCRETE RISER RING
703	2	EA	1'x48" CONCRETE RISER RING
704	8	EA	2'x48" CONCRETE RISER RING
704A	2	EA	3'x48" CONCRETE RISER RING
705	0	EA	3' BARREL SECTION FOR MANHOLE
705A	0	EA	2' BARREL SECTION FOR MANHOLE
706	1	EA	2' MANHOLE CONE CONCENTRIC
706A	1	EA	1 1/2' CONCENTRIC MANHOLE CONE
706B	2	EA	2 1/2' CONCENTRIC MANHOLE CONE
706D	3		1 1/2 FOOT MANHOLE CONE
707	1	EA	3' MANHOLE CONE CONCENTRIC
707A	3	EA	3' MANHOLE CONE ECCENTRIC
710	11	EA	MANHOLE FRAME & COVER 24"
710A	8	EA	24" BOLT DOWN MH FRAME & COVER
710B	2	EA	LOCKDOWN FRAME & COVER (A-1024-R3 FRAME) (A-1024-246 COVER)
710C	41		MANHOLE FRAME AND COVER P1090
710D	3	EA	REVOLUTION 24"MANHOLE FRAME & COVER (NON TRAFFIC RATED)
711A	1		24" MANHOLE FRAME TYPE P1090
712	0	EA	24" MANHOLE COVER TYPE P1090

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
712C	0	EA	GMI 26" Black Composite Water Resistant Manhole Cover and Frame with Gasket "Plain- Confined Entry" Heavy Duty Traffic Rated U.S. Load Specification Exceeds AASHTO M306-10 H-20 & H-25 traffic requirements
713	0	EA	2" METAL INSERT RISERS FOR FRAME&COVER
713A	0		1 1/2" METAL INSERT RISER FOR FRAME/COVER
714	1	EA	36" MANHOLE FRAME & 2 PIECE COVER
714A	3		1 PIECE 36 FRAME AND COVER
714C	0	EA	GMI 38" Black Composite Water Resistant Manhole Cover and Frame with Gasket "Plain Confined Entry" Heavy Duty Traffic Rated U.S. Load Specification Exceeds AASHTO M306-10 H-20 & H-25 traffic requirements.
715A	11		RODDING INLET COVER
716A	0		BACKUP OVERFLOW DEVICE
717	0	EA	Tyler Two Way Wye (Y)
718	7	EA	Manhole marker sign and post
718A	10	EA	FIBERGLASS MARKER POST
719	4	EA	4" BACKFLOW CHECK VALVE
720	1	EA	4" BELLOWS STYLE BACKFLOW PREVENTER VALVE
720A	1	EA	POLY PIT W/POLY LID
720B	1	EA	POLY PIT W/STEEL LID
721	1	EA	6" BELLOWS STYLE BACKFLOW PREVENTER VALVE
800	20	EA	COLD PATCH-CUT BACK (TON)
800A	0		UPM ASPHALT PATCHING COMPOUND
801	1	EA	Backfill 3/4 Class II AB (ton)
804	0	EA	Drain Rock (yard) 1 1/2"
804A	0	EA	Drain Rock (yard) 3/4"
805	0	EA	Concrete Dry Mix (yard)
806	0	EA	Engineers Rip Rap (ton)
807	25	EA	Cement (sack)

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
808	10	EA	Sand (ton)
808A	0	EA	Topsoil (Sandy loam)
810	2	EA	Water Plug Cement (5 gal)
810A	0	EA	RAPID SET CONCRETE(50 LB BLUE BAG)
810B	2	EA	RAPID SET CONCRETE WITH ROCK(50 LB GREEN BAG)
811	0	EA	TEGRA PROOF (5 gal)
811A	0	EA	TEGRA PLUG (1 GALLON CAN)
811B	0	EA	KD2 BLITZ (30 lb. PAIL)
811C	0	EA	THANE EPOXY COMPOUND (1 PAIL)_
812	2	EA	RAM NECK (20 PC PER BOX)
813	2	EA	Pre-mix sack (Concrete)
813A	0	EA	Mortar pre mix sack (80 lb.)
813B	0	EA	ACYRL 60 (BONDING AGENT) gal.
814	307	EA	4" ABS PIPE
815	181	EA	4" ABS 2-WAY C.O. D.W.V. #3724
816	120	EA	3" ABS PIPE
817	9	EA	4" x 1/8" ABS BEND
818	3	EA	4" ABS SLIP x SLIP COUPLING
820	18	EA	4" x 1/16" ABS Bend
821	0	EA	4" x 1/4" ABS Bend
822	41.25	EA	ROOT FOAM (VAPOR ROOTER)5 gal.
822A	2	EA	Foaming Agent (Additive) Gal.
822B	0.4	EA	ROOT FOAM (VAPOROOTER) PER QT
822C	0	EA	SEWER ROOT FOAM (GAL.)
822D	34	LB	ROOT X (STORM DRAIN ROOT TREATMENT AGENT)
823	0	EA	Grout Chemical (gal)
823A	0	EA	Grout Chemical Solvent (gal)
824	14	EA	RAT BAIT (block)
826	6	EA	MANHOLE ODOR SCRUBBER REFILL
826A	2		MANHOLE ODOR SCRUBBER
827	1	EA	NDS BACKWATER VALVE
828	1	EA	NDS BACKWATER VALVE W/RISER
829	1	EA	CHRISTY FL30 (FIBER LITE) BOX 12"
829A	1	EA	CHRISTY FL30 (FIBER LITE) LID

Appendix D. Critical Sewer Replacement Parts Inventory

Part No.	Quantity Available	Unit of Stock	Description
829B	1	EA	CHRISTY FL30 (FIBER LITE) 6" EXT.
829C	1	EA	CHRISTY FL30 (FIBER LITE) 8" EXT.
830	400	EA	RAIN PAN SIZES "D" & "D-2"
830A	50	EA	RAIN PAN SIZES "K"
830B	50	EA	RAIN PAN SIZES "V"
835	1		CURB INLET TOP W/LID AND GUARD ROD.
836	1		6" ABS PIPE
837	10		BACKFLOW PREVENTER SCREW CAP 6"
838	10		BACKFLOW PREVENTER 6" ADAPTER FOR SCREW CAP
839	5	EA	CLEAN CHECK BACKFLOW PREVENTION VALVE
840	0		Trash Nets B.W. Williams North&South
842	0		Trash Nets Solano
843	0		Trash Nets Sonoma
844	0		4" MAXADAPTER COUPLING OVERSIZE
845	0		6" MAXADAPTER OVERSIZED
846	0		8" MAXADAPTER STANDARD
847	0		4" SHOVEL NOSE ADAPTER
848	0		6" SHOVEL NOSE ADAPTER
LOSS	0		DAMAGED/LOST MATERIALS OR SUPPLIES

Appendix E

Sanitary Sewer Design Standards



ENGINEERING STANDARDS

JULY 2020

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Phone: (707) 644-8949
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Engineering Standards

Approved by:

A handwritten signature in blue ink, appearing to read "Mark Tomko".

Mark Tomko, RCE 59700
Director of Engineering

Revision Date: July 2020

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ENGINEERING STANDARDS



SECTION 1 - GENERAL

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Section 1. General

1.1 Purpose

These Standards and Specifications (Standards) provide minimum standards for the Vallejo Flood and Wastewater District (VFWD or District) public sewer and storm drain collection system. These Standards apply to planning, design, construction, and rehabilitation of the public sewer and storm drain collection system that VFWD operates and maintains, require VFWD's approval, or are installed within existing or new public rights of way (ROWS) or easements. The Standards ensure VFWD's assets are consistently designed and constructed to meet a set criteria.

1.2 Background

These Standards provide for the safety and general welfare of the public that use VFWD's facilities. These Standards are periodically updated to reflect changes in materials and technology. Users of the Standards should verify with VFWD that the version they are using is the latest. All references within these Standards refer to this document unless otherwise noted.

It is not possible to anticipate all situations that may arise in the planning, design, construction, and rehabilitation of sewer facilities, or to prescribe standards applicable to every situation. Any situations not included in these Standards, should be planned, designed, and constructed in accordance with accepted engineering practices, subject to approval of the District Engineer. All designs must be signed and stamped as appropriate by a Professional Engineer licensed to practice in the State of California.

1.3 Sanitary Sewer System Overview

Figure 1-1 provides an overview of the District boundary. The public sewer collection system includes:

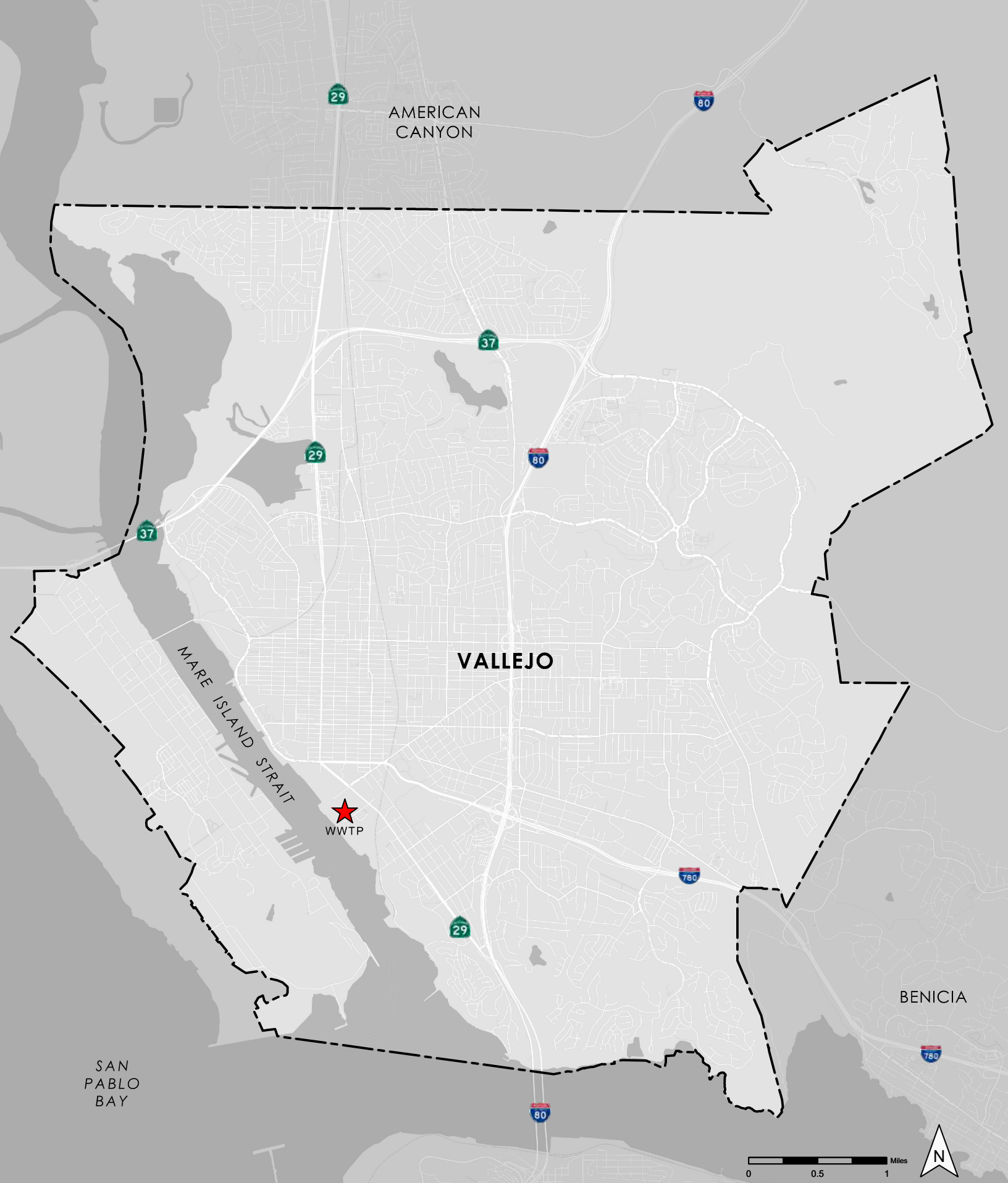
- 21 pump stations on the mainland
- 8 pump stations on Mare Island (not including 1 abandoned pump station and six private "ship-to-shore" pump stations no longer maintained by VFWD)
- Approximately 380 miles of gravity sewers
- Approximately 10 miles of force mains
- Related appurtenances
- Lower laterals with District Cleanouts

These facilities convey sewage to VFWD's wastewater treatment plant located at 450 Ryder Street.

1.4 Storm Drain System Overview

The public storm drain collection system includes:

- 5 pump stations on the mainland (a total capacity of 950 cfs)
- 1 pump station on Mare Island
- 3 pump stations on Tubbs Island,



Vallejo Flood & Wastewater District Agenda Packet Page 230 of 915 Figure 1-1 District Boundary

September 2020

Data Sources: VFWD, CALCAD, ESRI, USGS



- 220 miles of storm drain pipes and open channels
- 1 large detention pond (Lake Dalwigk)
- 6 locations of trash capture devices
- Related appurtenances

1.5 Definitions and Terms

Whenever the following terms or titles are used in these Standards or when used in contracts, agreements, documents, or instruments where these Standards apply, the intent and meaning are as follows:

1. **AIR RELEASE VALVE:** An air valve that enables air to be released from a pressurized pipe or force main.
2. **AS-BUILTS:** Final drawings of the project signed by the engineer and submitted to VFWD before project acceptance. As-builts are permanent records and archived by VFWD.
3. **BOARD OF TRUSTEES:** The governing body of VFWD, as set by the California State Code. Also referred to as the "Board."
4. **BUTT FUSION:** Welding process used to join two different pieces of plastic pipe. This process involves heating both pieces simultaneously and pressing them together.
5. **CATHODIC PROTECTION SYSTEM:** The system that protects metallic materials from corrosion damage due to stray electrical currents and to control corrosion from aggressive soils.
6. **COMBINATION AIR RELEASE VALVE:** A combination air and vacuum valve that enables air to be released from a pressurized pipe or force main, and that prevents a vacuum from developing during draining or water column separation of the system.
7. **CONTRACTOR:** Any person that is responsible for the construction, maintenance or repair of sewer facilities within VFWD's service area. All contractors under contract to do work must be licensed according to the laws of the State of California.
8. **CUSTOMER:** Owner of the parcel being served by VFWD's sewer collection system.
9. **DESIGN ENGINEER:** That person legally authorized to practice civil engineering in the State of California who prepares or submits improvement plans or specifications to VFWD for approval. When VFWD's Standards and Specifications require that approval be obtained from VFWD, such approval must be requested by the design engineer.
10. **DEVELOPER:** Any person or persons, firm, partnership, corporation, or combination that is financially responsible for the construction of approved sewer facilities within VFWD.
11. **DISTRICT CLEANOUT:** The District Cleanout (DCO) is the cleanout located at the public right of way and is owned and maintained by VFWD. The DCO indicates the separation of the upper lateral from the lower lateral.
12. **DIRECTOR OF ENGINEERING:** A California-licensed civil engineer that oversees the planning, design, and construction of all District capital improvement and development improvement projects, ensures compliance with District standards, and manages the Engineering Department. The Director of Engineering approves engineering drawings that impact District facilities on behalf of the District.
13. **EASEMENT:** An acquired legal right to use land in the manner specified in the legal document. The easement is itself a real property interest, but legal title to the underlying land is retained by the landowner for all other purposes than those specified. The landowner who grants the easement cannot build structures within the easement area or use fencing that would hinder access.

14. **ENERGY GRADE LINE:** A line that represents the elevation of energy head (in feet) of water flowing in a pipe.
15. **ENGINEERED FILL:** Fill, which is selected, placed, and compacted to an appropriate specification so that it will exhibit the required engineering behavior.
16. **EQUIVALENT SINGLE-FAMILY DWELLING:** A parameter used to identify the sewage discharge on the basis of a single-family detached residential dwelling.
17. **FLUSHER BRANCH:** The upstream end of a main line pipe that ends as a cleanout at ground level. A flusher branch may consist of either an elbow with an angled riser to the ground surface or a wye or tee fitting with a vertical riser to the ground surface and a plug or stub line at the end of the pipe.
18. **FORCE MAIN:** The pressurized sewer facilities that convey sewage from a pump station into a gravity pipeline.
19. **GRAVITY PIPELINE:** The non-pressurized conveyance facilities of the sewer collection system.
20. **GREASE INTERCEPTOR:** A device designed and installed to separate grease, oil, solids, and other related undesirable matter from normal wastes and retain them, permitting normal liquid wastes to discharge into VFWD's sewer collection system. The device must be consistent with the requirements of the California Plumbing Code.
21. **GROSS ACRE:** An area of 43,560 square feet, which includes the total area within the property lines of a lot or parcel of land before public ROWs are deducted from such lot or parcel.
22. **GROUNDWATER:** Water held underground in soil or permeable rock.
23. **H-20 LOADING:** American Association of State Highway Transportation Officials (AASHTO) published its bridge design criteria, commonly known as H-20 or HS-20. It consists of truck axle loading of 32,000 lbs., or wheel loading of 16,000 lbs.
24. **INFILTRATION:** Any water entering VFWD's sewer collection system from the ground, through means including, but not limited to, defective pipes, pipe joints, connections, or maintenance hole walls.
25. **INFLOW:** Any water entering or discharging into VFWD's sewer collection system from sources including, but not limited to the following: roof leaders, cellars, yard and area drains, fountain drains, crushed laterals, cooling water discharges, drains from springs and swampy areas, manhole covers, cross-connections from storm sewers and combined sewers, catch basins, storm waters, surface runoff, street wash waters, or street wash drainage.
26. **INTERCEPTOR:** A sanitary sewer that is designed to pick up flows from trunk lines and convey flow to the wastewater treatment plant.
27. **LOWER LATERAL:** Portion of the sewer lateral from the main line to VFWD's sewer cleanout (District Cleanout). If no District Cleanout exists, then there is no Lower Lateral.
28. **MAIN LINE:** Sewer pipe constructed to accommodate a number of lateral sewers.
29. **MANHOLE or MAINTENANCE HOLE:** A type of node that provides a point of entry into the sewer collection system. A maintenance hole with an incoming pipe elevated several feet above the maintenance hole invert is termed a "drop maintenance hole." If the drop piping is inside the maintenance hole, it is termed an "inside drop." If the drop piping is located outside the maintenance hole barrel and then terminates inside near the maintenance hole bottom, it is termed an "outside drop."
30. **MAINTENANCE HOLE TAPS:** Taps connecting directly into a maintenance hole.
31. **NODE:** A point of access or inspection such as a maintenance hole, flusher branch, blind tee, or other sanitary sewer main line structure.

32. **NOTICE TO PROCEED:** The written authorization to the contractor specifying the date the work may begin and any conditions regarding the beginning of the work.
33. **OWNER:** The record owner of real property, residence, or business. VFWD Standards and Specifications
34. **PERCHED WATER:** Groundwater occurring in a saturated zone separated from the main body of groundwater by unsaturated rock.
35. **PLANS:** The plans, drawings, profiles, cross sections, working drawings, and supplemental drawings, or reproductions approved by VFWD that show the locations, character, dimensions, and details of the work.
36. **PLUMBING SEWER CODE:** The California State Plumbing Code, most current revision.
37. **POINT REPAIR:** Rehabilitation of a short section (less than 50 feet long) in an existing pipeline.
38. **PRIVATE SEWER:** Any sewer facility not owned by VFWD.
39. **PUBLIC RIGHT-OF-WAY:** Any real property (for example, streets, sidewalks, curbs, gutters, highways, alleys, landscaped corridors or medians) that has been set aside for public use and dedicated as a public ROW in the fee title.
40. **PUBLIC SEWER:** Any sewer that carries domestic or nondomestic wastewater located within an easement or public ROW maintained by VFWD.
41. **PUBLIC UTILITY EASEMENT:** An easement dedicated to any utility, which provides services to the general public, including gases, electric, telephone, sewer, water, and television cable system. PUE's are generally strips of land that are created at the time a plat for a new development is designed. PUE's almost always exist along streets and rear lot lines, and sometimes exist between lots.
42. **PUMP STATION:** A pumping facility that pumps sewage through a force main (longer than 400 feet) into the nearest maintenance hole, such that sewage can again flow by gravity.
43. **POLYVINYL CHLORIDE:** A synthetic thermoplastic material made from the polymerization of vinyl chloride.
44. **RECORD DRAWINGS:** Drawings prepared by the contractor that document changes to, additions to, or deductions from the contract documents and represents the work as constructed.
45. **RIGHT-OF-WAY:** A type of easement that permits the public to travel over a parcel of land. Typically, a ROW is granted on a subdivision or parcel map and is dedicated to the jurisdiction for operation and maintenance of a travel way.
46. **SANITARY SEWER:** A sewer facility that carries wastewater.
47. **SERVICE AREA:** The geographical area served by VFWD's sewer collection system.
48. **SEWAGE:** Domestic or nondomestic waste, or both, together with such ground, surface, and stormwaters that enter the sewer collection system.
49. **SEWER:** A pipe or conduit that receives and carries wastewater.
50. **SEWER COLLECTION SYSTEM:** All facilities for collecting, pumping, conveying, controlling, treating, storing, and disposing of wastewater.
51. **SEWER EASEMENT:** An acquired legal right to the exclusive or joint use of a defined portion of land for access, construction, or maintenance of sewers or as defined within the legal description of said easement.
52. **SEWER FACILITIES:** Refers to sewer maintenance holes, wet wells, pump stations, access roads, gravity pipes, force mains, sewer easements, laterals, and any facility over which VFWD has full jurisdiction.

- 53. **SEWER LATERAL:** A pipe comprised of the upper and lower lateral that collects sewage (typically residential or commercial) and transports it to VFWD's main line pipe or maintenance hole. Also called lateral sewer and service sewer.
- 54. **SPRING LINE:** The horizontal centerline of the pipe or in box section, the mid-height of the vertical wall.
- 55. **STATE STANDARD SPECIFICATIONS OR STATE SPECIFICATIONS:** The Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation, latest edition.
- 56. **STUB LINES:** A main line that terminates without direct access. A stub line or flusher branch wye or tee may sometimes have a lower lateral connection at the end.
- 57. **SUBCONTRACTOR:** A properly licensed party under contract and responsible to the contractor for performing a specified part of the work or to a subcontractor of the contractor.
- 58. **TAPS:** The location where lower laterals join main lines. Cored and hammer taps are types of connections commonly made to a main line after its original construction.
- 59. **TRANSITION MAINTENANCE HOLE:** The maintenance hole where a force main connects and pressurized flow ends and gravity flow begins.
- 60. **TRUNK (ALSO CALLED TRUNK SEWER OR TRUNK SEWER FACILITY):** Any sewer pipe that conveys flow from a major sewer basin. These pipes are generally 10" diameter and larger, and remain a trunk sewer until they enter an interceptor.
- 61. **TWO-WAY CLEANOUT:** The cleanout located where the sewer lateral enters the building, allows for cleaning of the lateral upstream and downstream of the cleanout.
- 62. **UPPER LATERAL:** Portion of the sewer lateral from the upper end of the lower lateral to the limits of the building plumbing.
- 63. **USER:** Any person who discharges waste directly or indirectly to the sewer collection system, causes, or allows such discharge.
- 64. **VALLEJO FLOOD AND WASTEWATER DISTRICT:** A flood control and sanitation district, created in 1952 by a special act of the California State Legislature, and can be found in the California Water Code, Section 8934, Uncodified Acts. Before 2018, VFWD was legally known as Vallejo Sanitation and Flood Control District.
- 65. **VITRIFIED CLAY PIPE:** Pipe made from a blend of clay and shale that has been subjected to high temperature to achieve vitrification, which results in a hard, inert ceramic.
- 66. **WASTEWATER:** The liquid and water-carried non-domestic and domestic wastes, whether treated or untreated.
- 67. **WATER TABLE:** The upper limit of the portion of the ground wholly saturated with water.
- 68. **WORK:** All actions that the contractor is required to do as specified, indicated, shown, contemplated, or implied in the contract to construct the work, including all alterations, amendments, or extensions made by contract change order, other written orders, or VFWD's directives. Unless specified otherwise in the contract, the work includes furnishing all materials, supplies, equipment, tools, labor, transportation, supervision, and all incidentals necessary to complete the work.

1.6 Updates to Standards

The Director of Engineering may issue clarifications to this document as required.

The Standards shall be updated at the minimum every ten years following 2020.

1.7 Disclaimer and Applicability

These Standards are intended for use in work administered and inspected by VFWD, any connection into VFWD's system, and for development within public ROWs or easements, or for dedication or incorporation into VFWD's facilities. Any use of these Standards by any other person, persons, or entity does not create or imply the assumption of any liability or responsibility by VFWD.

While information contained in these Standards is believed to be correct at the time of publication, VFWD, and their working parties and agents involved in preparation and publication, do not accept any liability for its contents or for any consequences arising from its use.

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ENGINEERING STANDARDS

02/11/2020

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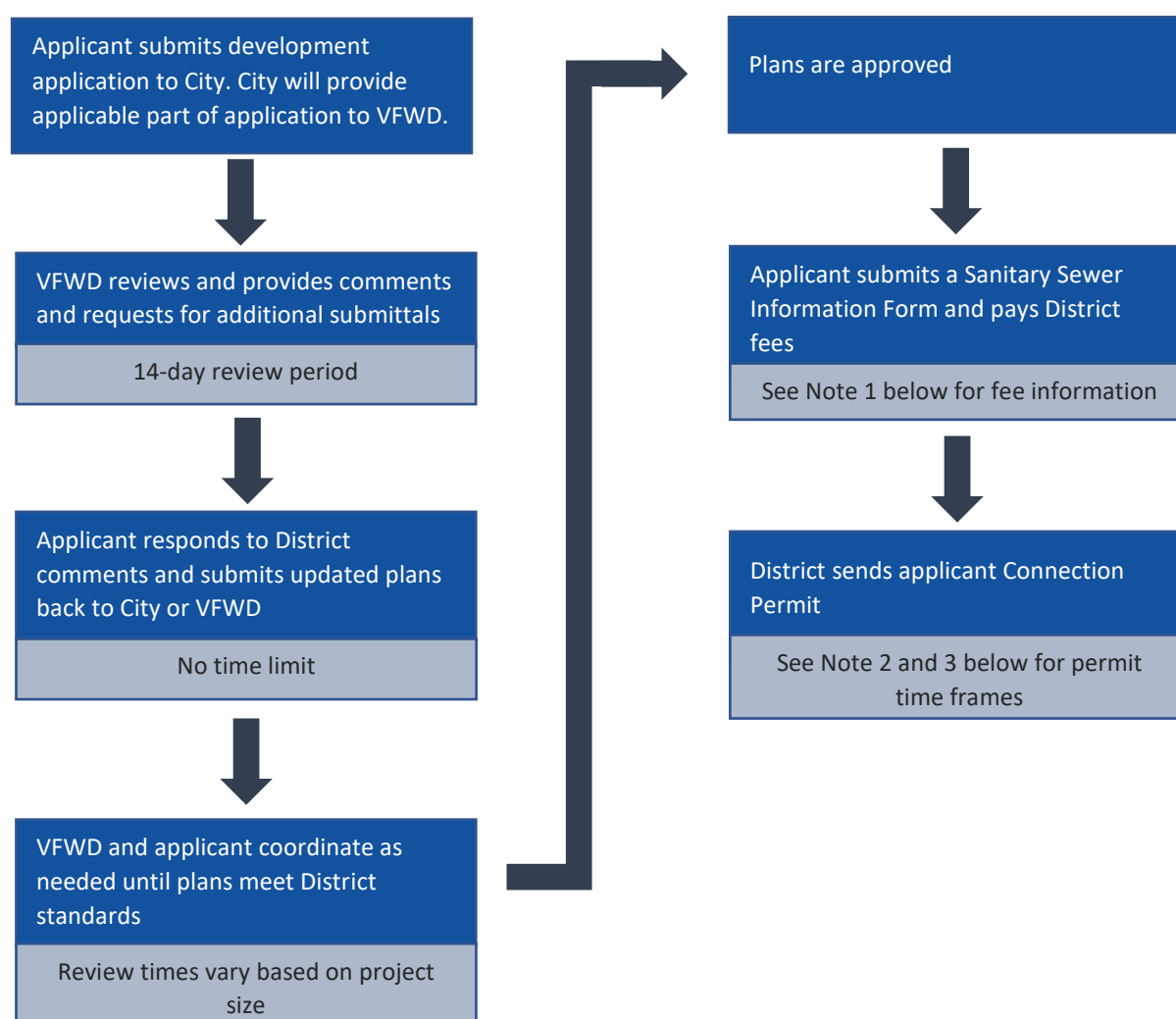
Section 2. Development and Plan Preparation

2.1 Development Applications

Development applications are filed with the City or County, depending on jurisdiction. VFWD receives the development application from the applicable jurisdiction and reviews and provides requirements or conditions for the sewer and storm drain portion of land use applications.

2.2 Development Review Process

Once the District receives the development application, the following process is followed. In this section, days means calendar days.



Notes:

1. Fees are updated annually and can be found on the District's [website](#). Fees can include:

- a. Plan review fee
 - b. Processing fee
 - c. Inspection fee
 - d. Sewer connection fee
 - e. Storm drain connection fee
2. The Connection Permit issued with the Sanitary Sewer Information Form is valid for one year, with the option for a one-year extension.
3. If a set of plans is approved but no connection permit is obtained, the approval expires in one year.

2.3 Submittal Types

Development applications can either be major or minor developments, as categorized in Table 2-1.

Table 2-1. Development Categories	
Major Development	Minor Development
• New construction of anything more than one single detached residence • Major tenant improvements resulting in an increase in living space or change of use • Subdivision of a parcel into 4 or more parcels.	• Accessory dwelling units (ADUs) • Remodel of or addition to a single-family home • Construction of one, detached, single family home that's not part of a larger, on-going, development • Subdivision of a parcel into less than 4 parcels. • Minor tenant improvements not resulting in an increase in living space or change in use

Both types of development will be reviewed for the following items:

- Consistency with District Master Plans
- Compliance with District policies, procedures, and standards
- Available District facilities and effects on those facilities
- District project scheduling
- Permissibility of requested deviations
- Reasonable system development
- District modeling

Required submittals for both development categories are shown in Table 2-2. Requirements for project plans are specified in Section 2.4 below.

Table 2-2. Submittal Requirements	
Major Development	Minor Development
• Tentative Maps • Project Plans, including a utility site plan • Easements • Sewer and Storm Drain Studies • Pre-Treatment Questionnaires, as needed • Amount of impervious area (square footage)	• Utility site plan • Pre-Treatment Questionnaires, as needed

2.4 Project Plan Requirements

Submittal requirements for major developments and public infrastructure improvements shall follow format for project plans.

2.4.1 Size of Plans

All Plans shall be submitted electronically for review and/or approval and shall be 22" x 34". Other sizes will not be accepted.

2.4.2 Lettering

All printing and/or lettering shall be a minimum of one-tenth (1/10) inch height and of such font and line weight as to be readily legible on half-scale (11" x 17") reproductions made from the original drawings. The sanitary sewer and storm drain features and labels should be easily differentiated from other features on Plans.

2.4.3 Title Block

Every sheet of a set of plans submitted for review/approval must have a title block showing project or subdivision name, sheet title, sheet number, date, scale, design percent complete, horizontal and vertical datum, design engineer's business address and phone number, and other pertinent information. The preferred location for the title block is along the right-hand end or bottom of the sheet so that the title block information is visible when the plans are rolled up.

2.4.4 Cover Sheet

Cover sheets shall include the following:

- Project name and District project number, if applicable
- Vicinity/Location map: not necessarily to scale. Shows location of job to determine location of proposed project in relation to major cross streets and local highways.
- System Map should show the following:
 - All properties included in project
 - Existing, proposed, abandoned/removed sewers
 - Key map showing which plan sheet corresponds with which location
 - North arrow
- Index of sheets
- Abbreviations and legend of symbols and lines
- Standard and/or special notes (if these cannot fit on the cover sheet, they can be included on a second general sheet). In addition to the standard notes, include the following:
 - "Material and construction of sanitary and storm drain lines shall conform to VFWD Standard Specifications and Drawings."
 - "All existing utilities for which an accurate location is in question shall be exposed and verified by the Owner/Developer or an agent prior to construction."
 - A note identifying the lots that require backflow prevention devices
- Stamp of VFWD approval, example in Figure 2-1.

VALLEJO FLOOD AND WASTEWATER DISTRICT	
THIS PLAN HAS BEEN REVIEWED FOR COMPLIANCE WITH VFWD STANDARDS AND IS ACCEPTED FOR CONSTRUCTION.	
BY: _____ MARK TOMKO, P.E. DIRECTOR OF ENGINEERING	_____ DATE

Figure 2-1. Stamp of approval. Update the Director of Engineering name as appropriate.

2.4.5 Plans and Profiles

Show sewer and storm drain collection systems in both plan and profile views.

2.4.5.A Plans

Sewer and storm drain plans shall be drawn at a scale no smaller than 1" = 40' and shall follow in the same direction as the profile. Plans shall contain the following information, at a minimum:

- The horizontal relationship between proposed sewer and/or storm drain improvements and existing and/or proposed field conditions, including existing or proposed utilities and other facilities
- Line size and type
- All structures and their respective identification numbers
- All property lines and corners adjacent to the sewer and/or storm drain alignment
- Label the addresses of buildings in already improved areas
- Street names
- Sewer lateral locations, lengths, and stationing, or dimensions from a permanent structure or property corners
- Proposed pumped service lots
- Differentiate between public and private sewer or storm drain systems using different linetypes
- District and two-way cleanouts, with labeled rim and invert elevations
- All necessary sewer and/or storm drain line, lateral, and structure stationing
- Horizontal curve data and stationing, if allowed
- Any proposed modifications or alternatives to the VFWD Standard Specifications, including, but not limited to, special details, special construction methods, trench configurations, and/or other requested Special Approvals, when such are anticipated or planned.
- Angle of deflection at each maintenance hole
- Public right of way
- Permanent and temporary construction easements to scale. Dimension each easement and tie it to both the property line and the main line. Identify the recorded book and page number for each permanent easement shown on the plans. For easements submitted, but not yet recorded before the approved plans, leave blank lines for the design engineer to fill in the recordation information on the Record or As-built Drawings prior to submittal to VFWD.
- General existing topographic features:
 - Curbs
 - Drainage ditches

- o Driveways
- o Existing structures
- o Fire hydrants
- o Flood plains
- o Horizontal location and size of storm drain and sewer pipelines
- o Masonry structures
- o Medians
- o Retaining walls
- o Sidewalks
- o Shoulders
- o Street lines
- o Traffic signals street lights and pull boxes
- o Trees (6 inches and larger) and other foliage
- o Underground electrical conduits
- o Water lines gas lines telephone conduits and other underground utilities
- o Utility poles
- o Any other features of the area that may affect the design requirements.

2.4.5.B Profiles

Sewer profiles shall be drawn at a scale of 1" = 40' horizontal and 1" = 4' vertical and shall read from downstream-to-upstream, left-to-right whenever possible. Profiles shall contain the following information, at a minimum:

- The existing ground surface at the time of sewer construction and the finished ground and/or paving surface
- All structures with their appropriate designations and stationing
- Design rim, in, and out invert elevations for each structure
- Vertical curve data and stationing, if allowed
- Sewer line size, pipe type, pipe class, slope and length of pipe between each pair of consecutive structures.
- Existing and/or proposed utilities and other facilities that cross the alignment of the sewer, and their invert elevations
- The vertical clearance between the sewer and other utilities when the vertical clearance is less than twelve (12) inches.
- Road structural section thickness (base plus pavement) for sewers installed in new roadways.

Draw main lines, maintenance holes, and other nodes on the profile with scaled, parallel lines that show pipe invert and top of pipe. Label slopes 1/8 inch above the pipe segment or between the parallel lines, preferably parallel to the pipe segment. Label the length, size, and material of each pipe segment parallel to the horizontal grid lines and approximately halfway between the ground surfaces and main line.

Label all pipe invert elevations at each node on the profile. Label these inverts parallel to the horizontal grid lines, underscored by a line that runs 45 degrees from the corresponding pipe invert. Label the

elevations of maintenance holes, maintenance holes with drop connections, flusher branches, or other appurtenances on the profile.

Draw existing facilities on the profile using dashed lines, with the abbreviation "EX" or "(E)" printed 1/8 inch above and preferably parallel to the line.

2.4.5.C Stationing

The stationing on plan and profile sheets reads from left to right. Stationing increases from south to north or from west to east. Arrange plans so that the North arrow points toward the top or right of the sheet, as practical.

The horizontal location and invert elevation for the beginning of the new sewer main shall be determined by taking survey measurements from existing VFWD maintenance holes and/or rodding inlets. For rodding inlets note the stationing of the ell and the rodding inlet.

2.4.6 Grading Sheets

Label maintenance holes with flow arrows and provide rim elevations on the grading sheets.

Show existing and proposed drainage patterns.

Regular contour intervals for existing and proposed drainage, as appropriate.

2.4.7 Trees

Trees and other objects within 10 feet of the construction trench zone must have their correct location and clearance from construction centerline shown on the plans. Note the diameter of tree trunks and interfering heavy tree branches on the plans. Note the removal of trees and objects and other special handling on the plans. The design engineer assumes full responsibility for such notes as VFWD assumes that all necessary arrangements with the owner of the tree or object to be handled have been made.

If there is no easement document, VFWD requires written documentation of all special arrangements regarding property preservation made between the property owners and the design engineer. If an easement is negotiated, include all special arrangements in the easement document. Tree removals within an existing easement or within a public utility easement where there are VFWD pipelines, require VFWD's notification. A tree removal and restoration plan may be required by VFWD before tree removal within these easements.

2.4.8 Registered Engineer

In accordance with the Business and Professions Code, Professional Engineers Act, Section 6735, all civil Engineering Plans, specifications, and reports submitted to VFWD shall be prepared by a registered civil engineer or by a subordinate under his or her direction, and shall be signed by him or her to indicate his or her responsibility for them. In addition to the signature, all final civil engineering Plans, specifications, and reports shall bear the stamp of the registrant, and the expiration date of the certificate or authority.

2.5 Completion and Final Acceptance

Prior to the final acceptance for maintenance and operation of any sanitary sewer or storm drain by VFWD the following shall be completed:

- All fees required by District have been paid
- The facility in question shall pass a final inspection
- A maintenance bond of 10% of the contract price shall be provided to the District if the contract price exceeds \$25,000
- An as-built set of plans showing any field changes from the original approved set of plans shall be provided to District. As-built plans shall be signed by engineer responsible for the design of the facilities and the inspector responsible for the final acceptance test and inspection.

2.6 Final Occupancy

Specific District consent of the first occupancy in a development prior to acceptance of the entire development by the District and other agencies shall be obtained prior to such occupancies. Each phase of a project as phased at the time of improvement plan acceptance for construction shall be considered a separate development for purpose of this section.

Subsequent occupancies of a development do not require specific consent so long as they comply with valid District connection permits for the unit(s).

ENGINEERING STANDARDS



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Section 3. Sewer Design Standards

3.1 General

The primary goals of these Sewer Design Standards are to:

- Protect the health and safety of the community
- Minimize sanitary sewer overflows

If unusual conditions exist, the Director of Engineering may waive or modify these standards upon written request. The written request must explain why these standards cannot be achieved.

3.2 Sewer Study Guidelines

A sewer study is a plan to provide sewer service for a proposed project and must follow the minimum sewer study requirements as described below. A sewer study describes the area to be served by the local collection and trunk facilities, and defines the sewer facilities necessary to provide service to that area. Approved sewer studies become part of VFWD's organizational knowledge and historical documentation used for future planning.

There are two levels of studies that are typically completed for development projects.

- **Capacity Impact Assessment (High-Level):** The intent of this study is to demonstrate it is possible to provide sewer service to the project and prove that the system has capacity to handle the increase in flows. The study focus is on high level views of topography, phasing & timing, interceptor sewers (and their capacity), major trunks (and their capacity), and sewer sheds. Schematic lines will cover the remainder of the site and upstream areas. The study does NOT need to include minor trunks, collectors, maintenance holes, easements, and subdivision layouts. The objective is District approval of the study for capacity and service type only. This study is typically used in the following projects:
 - Environmental reports
 - Financial feasibility studies
 - Community master plan
 - Specific plan
- **Sewer Infrastructure Sizing Study (More-Detailed):** The intent of this study is the design analysis of the sewer system for a specific project site, forms the basis for the improvement plans, and proves that the system has capacity to handle the increase in flows. The study will establish the backbone trunk system and sheds, locate and size pump/lift stations, and establish depth of pipes and verify cover, plus establish locations and sizes of collector pipes, residential street layout, maintenance hole details, and any exceptions to policy. Any request for non-standard facilities must include supporting documentation (i.e. "Two maintenance holes will not meet the minimum required depth of 3 ft and will therefore require flat-slab tops." This study is triggered for the following scenarios at the request of the District:
 - New subdivisions

- Developments where upstream or adjacent areas might require current or future service through the subject property
- Developments in which downstream capacity is limited
- Developments for which a higher density is proposed. For instance, a golf course converted to a subdivision or a new casino

If a development does not appear to trigger a sewer study as described above, the Director of Engineering may require a sewer study. All sewer connections are subject to remaining wet weather capacity in the District's collection system, and to the Director of Engineering's approval.

Regardless of the type of sewer study being completed, the study should, at a minimum, include the following information.

- **Project Description:** Include project location, project characteristics, proposed land uses/zoning and existing land uses/zoning, topography, and how the project will tie into the District's sewer system.
- **Performance and Design Criteria:** Discuss the criteria used to evaluate the existing and proposed sewer system, i.e. the peak water surface elevation shall not exceed the allowable d/D. State assumptions made and basis for assumptions.
- **Design:** Discuss alternatives for alignments and gravity versus pump stations.
- **Methods and Evaluation Approach:**
 - State the loads used to evaluate the sewer capacity impacts of the proposed project, including average dry weather flows, peak sanitary sewer flows, infiltration and inflows, and peak wet weather flows. See Section 3.3 below.
 - Briefly discuss model construction and any modeling assumptions used.
- **Hydraulic Performance Results:**
 - Discuss the change in water surface elevations in the project area and in key, low-lying areas upstream and downstream of the project.
 - Present tables with sewer invert elevations, maintenance hole rim elevations, and pre-project and post project water surface elevations, with a discussion of any anomalies or areas that do not meet the District's standards.
- **Conclusions:** Summarize key findings of the study.

3.3 Capacity Calculations

Collection system design within a developing area must include provisions for size and capacity to convey adequately all domestic, commercial, institutional, and industrial sewage that can be reasonably anticipated under conditions of full ultimate development.

3.3.1 Flow Estimation

Sewer design will be based on the ultimate total volume of flow expected from the tributary area per the City's General Plan for proposed development. Public mains will be sized to serve the entire tributary area at build-out densities conforming to the City's General Plan. Engineers for large developments may be required to provide trunk or collection system calculations or develop a wastewater model per the Sewer Study requirements listed in the previous section.

Population density is based on projected population densities determined and zoned by the City of Vallejo Planning Department and/or Solano County Planning Department. The average family unit is 2.7 persons per unit.

Table 3-1. Average Daily Discharge (ADD)	
Land Use	Average daily discharge (gallons per person, per day)
Residential	80
Commercial	20

Use Table 3-2 to estimate the amount of inflow and infiltration (I/I), depending on the age of construction.

Table 3-2. Infiltration Allowances	
Construction Timeframe	Infiltration allowance (gpd/acre)
Built before January 1970	4,000
From 1970 – New development	600

3.3.2 Design Flow Formulas

Use the following formulas to determine peak wet weather flow (PWWF) and average dry weather flow (ADWF). *Note: these formulas may change following the update of the District's Collection System Master Plan, currently planned for 2021.*

$$\text{Peak Wet Weather Flow (PWWF)} = (\text{ADWF, gpd} * \text{PF}) + \text{I/I, gpd}$$

$$\text{ADWF} = (\text{ADD, per Table 3 – 1, gpd/person}) * (\# \text{ persons/unit}) * (\# \text{ of units})$$

$$\text{I/I, gpd} = (\text{Infiltration allowance, per Table 3 – 2}) * (\# \text{ of acres})$$

$$\text{Peaking Factor (PF)} = 2.78$$

3.4 Hydraulic Design Requirements

3.4.1 Hydraulic Performance Design Criteria

The peak water surface elevation during wet weather shall not exceed the allowable d/D.

3.4.2 Minimum Diameter

The minimum size of a pipeline is defined as the actual inside diameter of the pipe. The minimum size of main lines is 8 inches.

Sewer lines installed with new development shall accommodate upstream future uses based on zoning at time of application.

3.4.3 Velocity and Manning's n

Use Manning's formula to determine the relation of slope, design flow, velocity, and diameter. For design purposes, the "n" value shall be 0.013 for all main line materials. Table 3-3 includes the minimum and recommended maximum velocities.

Table 3-3. Velocity Requirements	
Condition	Velocity
Minimum velocity	2.5 ft/sec
Maximum velocity	10 ft/sec

3.4.4 Slopes

Calculate pipe slope as the difference in elevation at each end of the main line segment divided by the horizontal length of the main line. Maintain a constant slope between nodes.

Minimum slope requirements are necessary to assure self-cleaning and self-oxidizing velocities to avoid significant generation of hazardous, odorous, and corrosive sulfur compounds. Where possible, use of minimum slopes should be avoided and should not be construed as guidelines for system design.

Table 3-4 shows the minimum slope based on the pipe diameter.

Larger diameter sewer pipe shall have a minimum slope as specified by the Engineer and approved by the District.

Table 3-4. Minimum Slope per Pipe Diameter	
Pipe Size (inches)	Standard Minimum Slope Accepted by District (foot per foot)
8	0.0052
10	0.0039
12	0.0030
15	0.0023
18	0.0018
21	0.0014
24	0.0012
27	0.0010
36	0.0007

3.4.5 Ratio of Depth of Flow to Pipe Diameter

Sewers are designed to flow at peak wet weather flows with a $d/D = 0.7$ for new pipe and $d/D = 0.9$ for existing pipe. Under no condition should a new gravity sanitary sewer be designed to flow under pressure.

3.5 Pipes

3.5.1 Allowable Materials

Table 3-6 identifies the types of pipes which can be utilized for the sanitary sewer system, where it can be used, and design criteria associated with the pipe material. For additional requirements, refer to the

technical specifications for each material. VFWD must approve a “Request for Deviation” for pipe materials other than what is listed in Table 3-5.

In general, connections to existing mains shall match existing pipe materials.

Table 3-5. Allowable Materials for Gravity Sewer		
Sewer Category	Allowable Materials	When to Use
Trunk and Main Sewers	Vitrified Clay Pipe (VCP)	For connections to existing VCP mains only
	Poly Vinyl Chloride (PVC) – DR 26	8”-15” diameter Standard cover
	PVC – ASTM F679, PS 115	>15” diameter Standard cover
	PVC – C900, DR 18	<12” diameter Can’t maintain required horizontal and vertical clearances or when cover is > 22 feet
	PVC – C905, DR 18	>12” diameter Can’t maintain required horizontal and/or vertical clearances
	Fusible PVC – C900/C905, DR 18	As approved by the Director of Engineering
	HDPE – DR 17	As approved by the Director of Engineering
Lower (Public) Laterals	PVC – DR 26 HDPE – DR 17	For general use
	PVC – C900/C905, DR 18 FPVC – C900/C905, DR 18	As approved by the Director of Engineering
Upper (Private) Laterals	Acrylonitrile Butadiene Styrene (ABS) – Schedule 40 PVC – DR 35	General use
	PVC – DR 26 HDPE – DR 17	General use or approved when cover < 1 foot or under driveway
	PVC – C900/C905, DR 18 FPVC – C900/C905, DR 18	For special cases

Use standard bell and spigot pipe or butt fusion for connecting pipes. Use flexible connections to accommodate ground settling (e.g. pipe connections outside maintenance holes and wet wells, and pipe connections outside of casings).

3.5.2 Cover Requirements

3.5.2.A Minimum Cover

Minimum cover for any sewer trunk or main shall be three feet. Any deviation from this cover shall require special designs and approval by the District. Any deviations to be approved by the District. See the section on laterals for minimum cover guidance.

3.5.2.B Special Cover

Special pipe cover for sewer trunk or main shall be used when total cover over main or trunk sewers is less than three (3) feet, and may be required when total cover will not be placed immediately after pipe installations, or when other special conditions exist, and is subject to the approval of the Engineer.

3.5.3 Alignment and Location

3.5.3.A Location in Streets

Main lines shall be parallel or perpendicular to the street centerline wherever possible. Mains should typically be located approximately eight (8) feet from face of curb or edge of road.

3.5.3.B Horizontal and Vertical Curves

Horizontally and vertically curved sewer lines shall not be allowed unless approved by the District.

3.5.3.C Clearances from Water Lines

Clearances from potable water lines shall be in accordance with the most recent California Administrative Code Title 22.

3.5.3.D Clearance from Other Utilities

Sanitary sewer lines shall have a horizontal clearance of at least 3 feet and a vertical clearance of at least 1 foot from all existing or proposed utilities.

3.5.3.E Clearances from Structures

Sanitary sewer line clearance from existing or proposed building foundations shall be a minimum of ten (10) feet.

3.5.4 Pipe Couplings

- Mission Rubber, or approved equal, double shear band shall be used
- Glue-by-glue (or slip-by-slip) couplings shall be used for ABS connections to: PVC SDR 35 and PVC SDR 26 (as an example, connection to wye at District cleanout).
- Fuse-on-wyes shall be used when connecting to HPDE main, unless approved by the District.

3.6 Maintenance Holes

Maintenance holes shall be sound watertight structures, constructed as shown on the Standard Details or on the improvement plans in the case of special structures.

3.6.1 Type and Size Criteria

The type of maintenance hole and its location is to be shown on the Plans. The design, the specification and the name of the manufacturer shall be submitted to the District for approval prior to the purchase of any precast maintenance hole units. Allowable maintenance hole configurations are shown in Table 3-6. Additional criteria are listed below:

- All maintenance hole bases shall be monolithically poured, unless approved by the District.
- Brick maintenance holes are not allowed. Existing brick maintenance holes shall be replaced per the Table 3-6.
- Drop maintenance holes are not allowed, unless approved by the District.
- Maximum chimney height is 18-inches.
- Cones shall be concentric unless space constraints require use of an eccentric cone. If an eccentric cone is required due to space constraints, the cone opening shall be installed over the downstream pipe.

Table 3-6. Approved Maintenance Hole Configurations				
Pipe Diameter	MH Diameter	Frame and Cover	Base	Notes
<24"	4 feet	24"	Pre-cast for all new sub-divisions. All other projects can be either cast-in-place or pre-cast ^(a) .	See Detail SS-7 or SS-9
>=24" and <=48"	5 feet	36", two-piece cover		See Detail SS-10
> 18" and flow direction changes >= 20°				
3+ pipes > 12" diam				
>48"	5 feet	36", two-piece cover	Cast-in-place around pipe	See Detail SS-11
(a) The designer must confirm that the maintenance hole base can be constructed by a manufacturer prior to final design approval.				

3.6.2 Pre-Cast Structure Requirements

- Bases: Bases shall have a monolithic base slab with riser barrel conforming to ASTM C478, AASHTO M199, and designed for AASHTO H20 loading.
- Risers: Riser sections shall have a minimum 5" wall for 48" diameter, 6" wall for 60" diameter, 7" wall for 72" diameter, 8" wall for 84" diameter, 9" wall for 96" diameter, 11" wall for 120" diameter, and 12" wall for 144" diameter and conform to ASTM C478 and AASHTO M199.
- Top Slabs: Top Slabs, if used, shall have a minimum thickness of 8" and conform to ASTM C478 and designed for AASHTO H20 loading.
- Anti-flotation collar on the pre-cast base shall be designed assuming groundwater elevation is one foot below finish grade.

3.6.3 Location

Maintenance holes shall be placed at the following locations:

- Intersections of all main and trunk sanitary sewer lines.
- Changes in alignment or slope.
- Changes in pipe material.
- End of cul-de-sacs. Rodding inlets shall not be used.

All maintenance holes must be accessible to standard maintenance vehicles for inspection, maintenance, and repair. Every effort shall be made to provide all-weather access to maintenance holes in open space areas, per Standard Detail G-5.

For street intersections other than residential streets, locate maintenance holes outside of the intersection in a configuration that allows maintenance to be performed by blocking only one lane of traffic at a time. Do not locate maintenance holes within a crosswalk or other alignments designated for pedestrian travel. Do not locate maintenance holes in areas designated for on-street parking.

Do not locate maintenance holes in medians or near raised concrete structures. Maintain a minimum clearance of 1 foot from the edge of the maintenance hole barrel to all existing and proposed medians and concrete structures.

3.6.4 Spacing

The maximum distance between maintenance holes shall be 400 feet for sanitary sewer pipe less than or equal to 24 inches and 500 feet for sanitary sewer pipes greater than 24 inches.

3.6.5 Elevation Criteria

The “IN” and “OUT” elevations of the incoming and outgoing sewers shall be shown on the plans, and unless authorized by the Engineer, the following shall apply:

The drop across all maintenance holes shall be 0.10 feet. For maintenance holes with intersecting pipes with different diameters, match crowns. Drops (i.e. pipe inverts above the maintenance hole shelf) are not allowed unless approved by the District.

3.6.6 Maintenance Hole Rim Elevation

The maintenance hole shall be constructed to the rim elevations as shown on the Plans, per the guidelines below.

- In street sections, maintenance hole rim shall be flush with the adjacent ground surface.
- In areas where future streets are proposed, rim elevation shall be shown and constructed to future finished grade.
- In open space areas, maintenance hole rim shall be 2-inches above the adjacent ground surface.

3.6.7 Maintenance Hole Markers

For maintenance holes located in open space, provide maintenance hole markers per standard detail G-4.

3.6.8 Maximum Deflection

The maximum deflection angle between two main sewers must not be greater than 90 degrees.

3.6.9 Connection to Existing Maintenance Holes

In areas where future development is planned, provide a stub to serve future development. The upstream stub diameter shall match the downstream diameter.

In existing maintenance holes where no stub exists, Contractor shall provide a channel in the portion of the base block located inside the maintenance hole two inches larger than the outside diameter of the proposed stub. If new channel cannot be accommodated, a new maintenance hole shall be provided.

3.6.10 Maintenance Hole Waterproofing

Coat maintenance hole interiors with a coating that limits bacterial-influenced corrosion and provides waterproofing, such as Xypex or approved equal. Maintenance hole joints shall be sealed using a cold-applied, ready-to-use plastic joint sealing compound such as Ram-Neck, or approved equal.

Use Wrapidseal or approved equal on the exterior of the maintenance hole at all joints and grade rings.

3.6.11 Bolt Down Maintenance Holes

Bolt down frame and covers without vent holes shall be required as directed by the District. See Detail SS-16.

3.7 Demolition or Abandonments

3.7.1 Sewer Mains

Main sewer pipe that is required to be abandoned shall be abandoned by one of the following methods:

- Fill with slurry: Slurry shall be a flowable mix containing a minimum of 2 sack cement per cubic yard. The sewer main to be abandoned shall be disconnected from the sewer system prior to filling with slurry.
- Removing the existing pipe and backfill to District standards.

3.7.2 Sewer Maintenance Holes

Castings and maintenance hole body shall be removed to a minimum of three (3) feet below final street grade or existing ground elevation, whichever is lower. The maintenance hole shall be filled and compacted with self-compacting material such as slurry or as approved by the District.

3.7.3 Sewer Laterals

See Section 5.5 for abandoning or capping sewer laterals.

3.8 Backfill for Trenches and Structures

Bedding and backfill are determined by height of cover over the pipeline, diameter, trench width, pipe strength, and other factors used to determine safe pipe loading. See Detail G-1 for guidance. Trench details 1 foot above the top of pipe shall be per the City's standard trench and backfill detail in the public right-of-way.

3.9 Groundwater-Related Requirements

3.9.1 Trench Dams

Trench dams are not required.

3.9.2 Trench Foundation

In the event that groundwater is expected to be encountered during construction, a geotechnical report shall make recommendations for the design.

3.10 Cathodic Protection

Cathodic protection shall be provided for any buried metallic sewer components (force mains, casings, valves, fittings, etc.). Dielectric isolation shall be provided for contact points between dissimilar metals.

A geotechnical report that includes a corrosivity analysis and makes recommendations for the design of a cathodic protection system shall be provided when buried metallic sewer components are proposed. Cathodic protection systems shall be designed by a licensed Corrosion Engineer. The cathodic protection system shall be designed such that protection for a minimum of 50 years is sustained.

A corrosion protection study shall be submitted with the plan and specification submittals for all metallic facilities being constructed. All cathodic protection devices shall be furnished with test stations.

Following completion of cathodic protection system installation, the proper operation of all cathodic protection components shall be tested in accordance with NACE SP0169 to ensure proper installation and operation. A baseline testing report including the effectiveness of dielectric insulation and adequacy of test stations shall be provided.

3.11 Special Cases

3.11.1 Geotechnical Reports

A geotechnical report shall be prepared by a registered Geotechnical Engineer or a Civil Engineer practicing in Geotechnical Engineering whenever:

- Sewers are proposed to be installed in easement locations where the existing or proposed cross-slope grade exceeds twenty percent (20%).
- Sewers are proposed to be installed within twenty-five (25) feet of the top of a creek bank or fifty (50) feet of the centerline (flowline) of a creek.
- Sewers are proposed to be installed in historical slide locations or within the area of influence of a potentially unstable hillside.
- Required by the District.

The geotechnical report shall address the following:

- Geological setting, general soils, and bedrock conditions along the proposed sewer alignment, and recommended setbacks from slides and creeks.
- Slope instability or other geotechnical hazards in the vicinity of the proposed sewer alignment.
- Potential groundwater issues.
- The effect of trenching and sewer installation on slope stability.
- Recommended requirements for trenching, bedding, backfill, or special supports that may be recommended.
- Erosion potential of soils around sewer near water courses.

- Recommended corrective work if geotechnical hazards are identified.
- Corrosive soil potential and recommendations for cathodic protection.

3.11.2 Waterway Crossings

For sewers proposed parallel to existing swales or creeks, the sewer shall be located at least fifty (50) feet from the centerline (flowline) of the creek or swale, and at least twenty-five (25) feet from the top of the bank if the bank is defined, to minimize the potential slope failure in the vicinity of the sewer resulting from undercutting at the toe. A Geotechnical Engineer shall review the proposed alignment and provide recommendations regarding long-term erosion and slope stability.

For sewers proposed to cross an existing swale or creek, the crossing shall occur perpendicular to the centerline of the waterbody, unless approved by District.

Maintenance holes to be installed at creek crossings shall be located at least fifty (50) feet from the center line of the creek, and at least twenty-five (25) feet from the top of the creek bank if the creek bank is defined.

3.11.3 Hillside Sewer Design

Sewer facilities installed on hillsides with slopes greater than 20% shall be considered a special case and be designed with physical anchors and slope stability measures based on the recommendations of a Registered Geotechnical Engineer or Civil Engineer in the State of California, and subject to District approval.

3.12 Access Roads and Easements

All access to District facilities shall be paved and graded for proper drainage per Detail G-5.

Easements must be fully accessible to VFWD personnel and equipment. Easements in backyards and side yards are not permitted unless approved by VFWD. The minimum width of all sewer easements over main lines is 20 feet, centered over the pipe. VFWD will determine the minimum width of all sewer easements over lower laterals. Wider easements may be required depending on location, type of soil, size and depth of line, locations of maintenance holes, or as determined necessary by VFWD. A minimum horizontal distance of 5 feet is required from the edge of all maintenance holes to the edge of the sewer easement. The sewer pipe must be located no less than 7 feet as measured from the edge of the pipe to the edge of the easement.



ENGINEERING STANDARDS



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Section 4. Storm Drainage Design Standards

4.1 General

In general, the District operates and maintains drainage infrastructure from the “grate to strait,” meaning that once runoff enters a District-owned drain inlet, pipe, or channel, the District is responsible for the conveyance. In some cases, private facilities are owned and maintained by private parties or other agencies (City, County, Caltrans).

The primary goals of these Storm Drainage Design Standards are to:

- Size the storm drain pipe systems to convey the peak 15-year, 24-hour design storm flows with the hydraulic grade line (HGL) at least 1.0 feet below the gutter flow lines and maintenance hole rims.
- Achieve 100-year, 24-hour design storm water surface elevations (WSEs) at least 1.0 feet below all building pad elevations (or design the building pads to be at least 1.0 feet above the 100-year WSE).
- Minimize the storm drainage system operations and maintenance (O&M) efforts and costs to the District.

If unusual conditions exist, the Director of Engineering may waive or modify these standards upon written request. The written request must explain why these standards cannot be achieved.

The District is divided into nine watersheds, as shown on Figure 4-1.

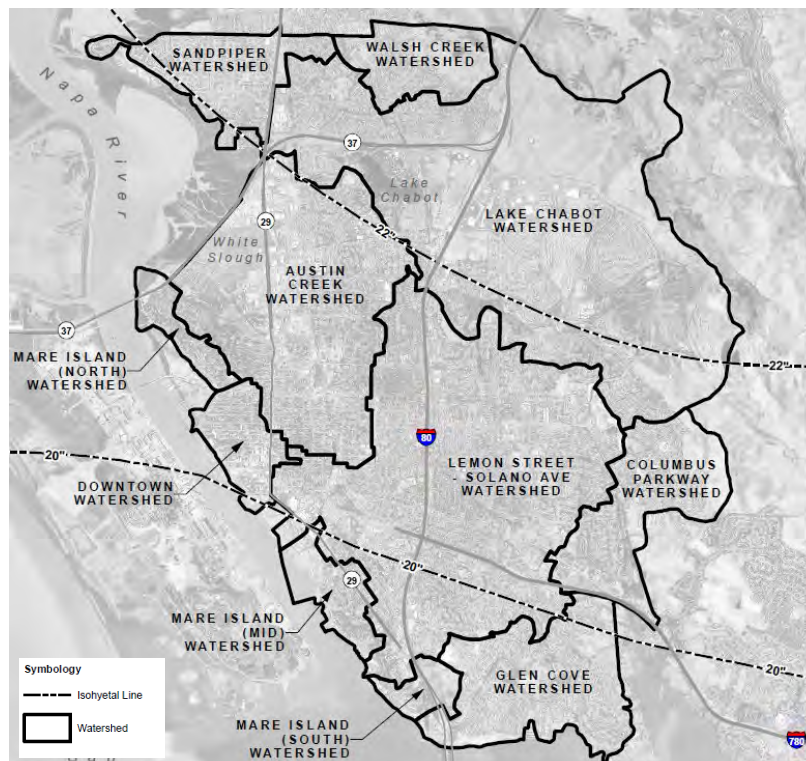


Figure 4-1. Storm Drain Watersheds

4.2 Drainage Study Guidelines

All proposed development that includes more than 15,000 square feet of impervious area must prepare a drainage study and receive VFWD approval of the drainage study. The drainage study shall include and address the following items:

- An evaluation of existing (pre-development) conditions, including:
 - Map(s) showing the watershed and subwatersheds, existing land uses, existing drainage facilities.
 - Table(s) summarizing the pre-development land uses, hydrologic data, and resulting peak runoff rates and total runoff volumes for each watershed and subwatershed.
 - Table(s) summarizing the pre-development hydraulic system data, peak flow rates, flow velocities, and maximum water surface elevations (WSEs). Also include the drain inlet/gutter flow line and maintenance hole rim elevations and the freeboard and/or flooding depths.
 - Identify in the tables where these Standards are not achieved for pre-development conditions (see Section 4.3 and 4.4 for the conditions to be evaluated).
- An evaluation of proposed (post-development) conditions, including:
 - Map(s) showing the watershed and subwatersheds, proposed land uses, proposed drainage facilities.
 - Table(s) summarizing the post-development land uses, hydrologic data, and resulting peak runoff rates and total runoff volumes for each watershed and subwatershed. Also include the changes from the pre-development conditions.
 - Table(s) summarizing the post-development hydraulic system data, peak flow rates, and maximum WSEs. Also include the drain inlet/gutter flow line and maintenance hole rim elevations and the freeboard and/or flooding depths. Also include the changes from the pre-development conditions.
 - Identify in the tables where these Standards are not achieved for post-development conditions (see Section 4.3 and 4.4 for the conditions to be evaluated).
- Extents of study:
 - The drainage study shall evaluate the area to be developed and include flow from all tributary areas draining to or through the proposed development.
 - The drainage study shall investigate and identify impacts from the proposed development on the upstream and downstream drainage facilities and water courses, including field verification of the existence, size, slope, and condition of off-site facilities for as far as is needed to document that no drainage impacts occur from the proposed development.
- Criteria:
 - The development shall not cause an increase in surface flow runoff crossing the property lines.
 - The proposed drainage system shall not cause or increase problems in any area or transfer drainage problem from one location to another.

- Planning and design shall be consistent with the requirements and flood boundaries and floodways delineated and regulated by the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA).
- Public storm drainage facilities shall be located within public rights-of-way or District easements.
- Storm drainage facilities shall be designed to minimize District operations and maintenance efforts and costs.
- Public and private storm drainage facilities shall comply with the current Municipal Regional Stormwater Permit (MRP) and City of Vallejo requirements.
- The drainage study shall be prepared by a civil engineer, licensed by the state of California. On the cover of the drainage report, the engineer shall sign and seal the following statement:
 - “I am familiar with the engineering design standards and policies of the Vallejo Flood and Wastewater District. The following calculations and report have been prepared by me, or under my direction, and are in accordance with the District’s engineering design standards and policies. These calculations verify that a storm drain collection system, designed and constructed in accordance with these calculations, will meet the requirements of the District.”
- Sizing and Selection of Facilities
 - The proposed drainage system shall use storm drain pipes and shall not use new open channels.
 - Drainage facilities that convey water through the development from off-site areas shall be sized to convey the runoff from the proposed development and the off-site area for buildout land use conditions as defined by the City of Vallejo and Solano County General Plans and any other known future developments.

4.3 Hydrologic Design Requirements

The mean annual precipitation (MAP) over the District varies from 20 inches per year in the south to 22 inches per year in the north, see Figure 4-1. This data is from the Solano County Water Agency (SCWA) Hydrology Manual, 1990 and will be updated as the Hydrology Manual is updated.

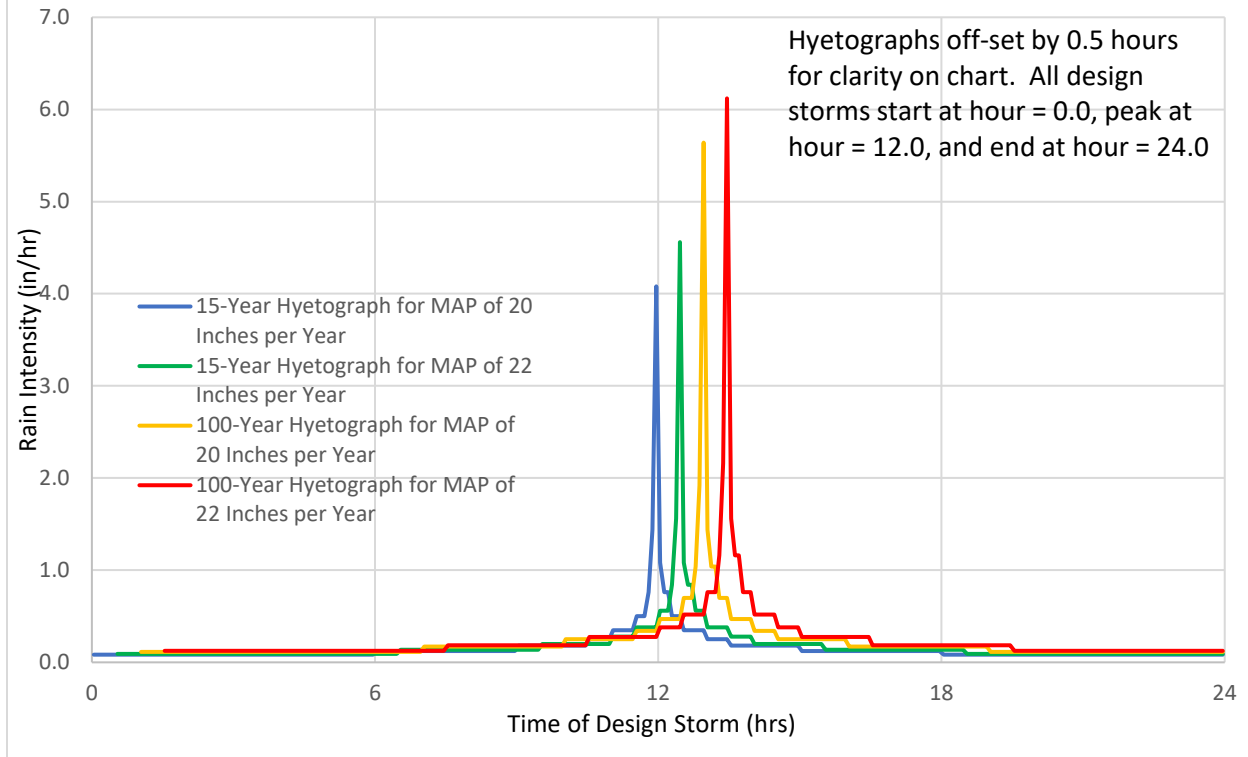
- The following watersheds have a MAP of 20 inches per year: Glen Cove, Mare Island, Solano Avenue – Lemon Street, Downtown, Columbus Parkway, and Austin Creek.
- The following watersheds have a MAP of 22 inches per year: Sandpiper, Walsh Creek, and Lake Chabot.

The design storm duration depth frequency data for the District are provided in Table 4-1. The 15-year through the 100-year were exported from the SCWA Hydrology Manual (1990) and the 1-year was extrapolated from the SCWA Hydrology Manual data. Hyetographs developed from these data are shown on Figure 4-2. An Excel file of the hyetographs is available on the District’s web site.

Table 4-1. Duration Depth Frequency Data

Duration	1-Year for sizing trash collection facilities	15-Year Depths for MAP of 20 inches per Year	15-Year Depths for MAP of 22 inches per Year	100-Year Depths for MAP of 20 inches per Year	100-Year Depths for MAP of 22 inches per Year
5 minutes		0.34	0.38	0.47	0.51
10 minutes		0.46	0.51	0.63	0.69
15 minutes		0.55	0.60	0.75	0.82
30 minutes		0.74	0.81	1.01	1.11
1 hour	0.52	0.99	1.09	1.36	1.49
2 hours		1.34	1.47	1.83	2.01
3 hours		1.59	1.75	2.17	2.39
6 hours		2.14	2.35	2.92	3.22
12 hours		2.88	3.17	3.94	4.33
1 day		3.88	4.27	5.30	5.83
2 days		5.16	5.64	7.19	7.86
3 days		5.59	6.17	7.78	8.58
4 days		6.19	6.82	8.53	9.40
5 days		6.72	7.42	9.13	10.09
6 days		7.18	7.93	9.77	10.78
8 days		8.01	8.86	10.85	12.00
10 days		8.58	9.48	11.39	12.58

Figure 4-2. 24-Hour Design Storm Hyetographs



4.3.1 Runoff Calculation Methods

For areas less than 200 acres, peak runoff may be calculated by the rational method or with hydrologic-hydraulic models. For areas larger than 200 acres or drainage systems with detention storage or significant flooding, hydrologic-hydraulic models shall be used. Examples of hydrologic-hydraulic modes include EPA SWMM, XPSWMM, PCSWMM, Mike Urban, HEC-HMS/HEC-RAS. Other commonly used hydrologic-hydraulic models are also acceptable.

Data for the hydrologic evaluations are provided in Tables 4-2 to 4-4.

Table 4-2. Hydrologic Data for the Land Uses in the City of Vallejo		
Land Use Category	Estimated Impervious Percentage	Rational Method C-Value
Residential		
Primarily Single Family	50.0	0.6
Mix of Housing Types	60.0	0.7
Primarily Multi-Family	70.0	0.8
Mixed Use		
District – Downtown/Waterfront	90.0	1.0
District – Mare Island	80.0	0.9
District – Solano 360	80.0	0.9
District – North Gateway	80.0	0.9
Central Corridor	80.0	0.9
Neighborhood Corridor	80.0	0.9
Business and Industry		
Retail/Entertainment	80.0	0.9
Business/Limited Residential	80.0	0.9
Business/Light Industrial	80.0	0.9
Industrial	85.0	0.9
Community		
Parks, Recreation, and Open Space	10.0	0.3
Public Facilities and Institutions	60.0	0.7
Other		
Right of Way	90.0	1.0
If the actual impervious coverage for a specific development can be determined from the development plans, then the actual impervious percentage can be used instead of the recommended values in this table. Include documentation of the actual impervious percentage in the Drainage Study.		

Table 4-3. Infiltration Rate Data			
Soil Hydrologic Group	Initial Infiltration Rate (inches/Hour)	Final Infiltration Rate (inches/Hour)	Infiltration Decay Coefficient
Group A	1.00	0.35	0.0007
Group B	1.00	0.19	0.0018
Group C	1.00	0.11	0.0018
Group D	1.00	0.08	0.0018
Soil Hydrologic Group mapping can be obtained from the NRCS Web Soils Survey at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx At the web site draw the area of interest and then map the hydrologic soil group using the Soil Properties and Qualities Tab and the Soil Qualities and Features data set item (then click on View Rating button). Include a map of the Soil Hydrologic Group in the Drainage Study.			

Table 4-4. Initial Loss and Sheet Flow Roughness Data		
Ground Surface Type	Initial Loss (inches)	Runoff Sheet Flow Roughness
Asphalt or Concrete	0.10	0.016
Flat Roofs	0.10	0.016
Sloped Roofs	0.05	0.016
Urban Lawn	0.35	0.250
Wooded areas or open fields	0.40	0.040

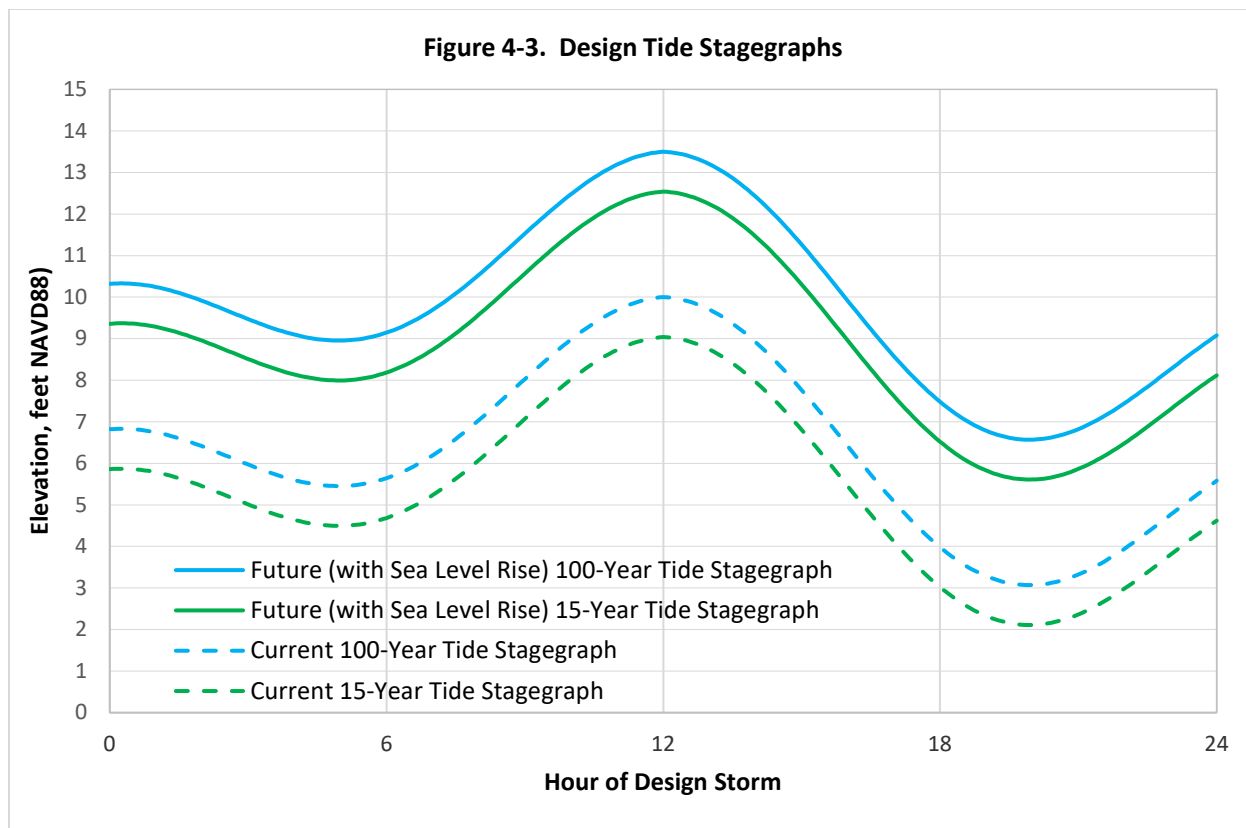
4.3.2 Tide Elevations and Sea Level Rise

The current 15-Year and 100-Year design tide levels are shown on Figure 4-3 for all the District Watersheds. Add one foot to the stage graphs for the western tip of the Sandpiper Watershed. An Excel file of the stage graphs is available on the District's web site. For developing hydrologic/hydraulic models, have the maximum tide correspond in time with the peak rainfall. The design shall be based on using the tailwater associated with the appropriate design storm (i.e. 100-year tailwater with 100-year design storm).

Drainage studies shall also include an evaluation on sea level rise.

- Use the City of Vallejo's guidance on sea level rise
- Evaluate a potential solution(s) to protect the development in the future from sea level rise. These solutions do not have to be designed and constructed as part of the current development. However, the flexibility and adaptability to construct solutions in the future should be accommodated. For example:

An evaluation for a new development has determined that a gravity-outlet detention basin is needed for the current development. The sea level rise evaluation for a 50-year horizon determines that a pump station will be needed in the future using the City of Vallejo's guidance on sea level rise. The construction of the detention basin does not need to include a pump station now, but the most appropriate location and access for the pump station shall be evaluated during the design.



4.4 Hydraulic Design Requirements

4.4.1 Minimum Diameter

The minimum inside diameter of a storm drain shall be 15 inches, except 12-inch diameters are allowed to connect catch basins (drain inlets) to main drainage lines.

4.4.2 Manning's 'n' and Minor Losses

Manning's n values for common pipes are summarized in Table 4-5. Minor losses are summarized in Table 4-6.

Table 4-5. Manning's n Values	
Pipe Type or Channel Condition	Manning's n Value
Closed storm drain pipe systems	
Smooth interior pipe materials (like RCP and HDPE pipes)	0.013
Corrugated interior pipe materials (like CMP pipes)	0.024
Open Channels	
Open channels owned and maintained by the District	0.060
Natural creeks and open channels not owned and maintained by the District	0.090

Table 4-6. Minor Loss Values	
Location or Condition	Minor Loss Value
Closed storm drain pipe systems	
Maintenance holes with no bend	0.05
Maintenance holes with a 45-degree bend	0.40
Maintenance holes with a 90-degree bend	1.30
Culverts	
Exit loss (all culverts)	1.0
Upstream end of pipe is the bell or groove end the pipe segment (like RCP) with or without headwalls	0.2
Box culverts with rounded inlet edges	0.2
Upstream end of pipe is the square end of pipe segment (like RCP, HDPE) with or without headwalls	0.5
Box culverts with square inlet edges	0.5
CMP pipe inlet with headwalls	0.5
CMP pipe inlet projecting from fill	0.9

4.4.3 Freeboard Requirements

Freeboard requirements include:

- Size the storm drain pipe systems to convey the peak 15-year, 24-hour design storm flows with the HGL at least 1.0 feet below the gutter flow lines and maintenance hole rims.
- Achieve 100-year, 24-hour design storm water surface elevations (WSEs) at least 1.0 feet below all building pad elevations (or design the building pads to be at least 1.0 feet above the 100-year WSE).

4.4.4 Velocity

The minimum design velocity shall be 2.5 feet per second. Maximum design velocity shall be 10 feet per second.

4.4.5 Slope

Minimum slope requirements are required for self-cleaning pipes. Where possible, higher velocities are preferred for the peak 15-year design storm flows. However, use of minimum slopes that produce a velocity of 2.5 feet per second will be accepted when necessary. See Table 4-7 for minimum pipe slopes.

Table 4-7. Minimum Slopes for Storm Drain Pipes	
Pipe Size, in.	Standard Minimum Slope (foot per foot)
12	0.0030
15	0.0023
18	0.0018
21	0.0014
24	0.0012
30	0.0009
36+	0.0007

4.5 Pipes

The following sections discuss VFWD standards for pipes, and include:

- Allowable materials
- Cover Requirements
- Minimum diameters
- Alignment and Location
- Hillside storm drains

4.5.1 Allowable Materials

Storm drainage materials shall be selected based on the application. See Table 4-8 for a summary of allowable pipe materials. Abrasion and corrosion shall also be considered.

The types of pipe allowed are shown below in Table 4-8.

Table 4-8. Allowable Materials	
Pipe Material	Design Requirements
Closed Conduit Pipe	
Reinforced concrete pipe (RCP) ≤ 36"	Use Class 5. Pipe shall conform to ASTM C76. Joint assembly shall be per manufacturer's recommendations and ASTM C443. Joints shall be watertight.
Reinforced concrete pipe (RCP) > 36"	Class shall be based upon depth as detailed in Table 4-9. Pipe shall conform to ASTM C76. Joint assembly shall be per manufacturer's recommendations and ASTM C443. Joints shall be watertight.
Polyvinyl Chloride (PVC)	Pipe shall conform to ASTM standards. Minimum SDR shall be 26.
High Density Polyethylene (HDPE)	Corrugated HDPE is allowed. Joints shall be water tight. Minimum SDR shall be 17.
Culverts	
Reinforced concrete pipe (RCP)	Shall meet the requirements of these standards for pipe in streets and Caltrans Standard Plans and Specifications for headwall construction.
Reinforced concrete box (RCB)	Shall meet the requirements of Caltrans Standard Plans and Specifications for the construction of highway RCB culvert and headwall construction.

4.5.2 Cover Requirements

Minimum cover for any storm drain shall be 3 feet. If a deviation from these requirements is needed, approval must be obtained from the District. Additionally, if cover is less than 3 feet, pipe shall be backfilled with CLSM. Maximum cover depends on the pipe type. See Table 4-9. for guidelines on allowable maximum cover for RCP. For pipe types other than RCP, provide calculations that support the proposed trench design and backfill for depths greater than ten feet.

Table 4-9. Recommended RCP Class Based on Pipe Cover			
Diameter	Maximum Pipe Cover (Measured to bottom of trench in feet)		
	Class 3, feet	Class 4, feet	Class 5, feet
42	18	27	62
48	19	30	60
54	20	31	58
60	21	31	57
66	22	32	56
72+	23	33	56
Note: All depths shown are for a minimum trench width equal to the outside diameter of the pipe plus 16 inches measured at the top of the pipe.			

4.5.3 Alignment and Location

- Curved alignments are not allowed except for if approved by the District and each of the following conditions is met:
 - No other alignment is possible
 - The diameter is equal to or greater than 24 inches
 - Has a minimum radius of 150 feet, but no less than the manufacturer's recommendation
 - Joint deflections shall be one half of the manufacturer's allowed deflection
 - No more than one curve between structures is allowed
- Storm drain alignments shall be installed from inlet to inlet below the curb and gutter, or flowing the exact alignment of the street.
- Slope shall be uniform between maintenance holes.
- Storm drains shall be centered a minimum of 7.5 feet from a structure foundation or a parallel fence.
- Storm drains shall be centered a minimum of 7.5 feet from edge of easement or a minimum of 5 feet clearance from the edge of easement, whichever is greater.
- Structures shall not be built over storm drains or drainage channels, such as culverts and ditches.
- Storm drain lines shall clear all other existing and proposed utilities by a horizontal distance of 3 feet and a vertical distance of one foot.

4.5.4 Hillside Storm Drains

Streets in excess of 6% grade shall be provided with catch basins having galleries (extended curb inlets) per detail SD-1. Drainage inlets shall not be placed in curb returns or out of path of flow.

Storm drain facilities installed on hillsides with slopes greater than 20% shall be considered a special case and be designed with physical anchors and slope stability measures based on the recommendations of a Registered Geotechnical Engineer or Civil Engineer in the State of California, and is subject to District approval.

4.6 Maintenance Holes

4.6.1 Type and Size Criteria

The type of maintenance hole and its location is to be shown on the Plans. Allowable maintenance hole configurations are listed in Table 4-10. Additional criteria are listed below:

- All maintenance hole bases shall be monolithically poured, unless approved by the District.
- Brick maintenance holes are not allowed. Existing brick maintenance holes shall be replaced per the table above.
- Maximum chimney height is 18-inches.
- Cone shall be concentric unless space constraints require use of an eccentric cone. If an eccentric cone is required, the cone opening shall be installed over the downstream pipe.

Table 4-10. Approved Storm Drain Maintenance Hole Configurations				
Pipe Diameter	MH Diameter	Frame and Cover	Base	Notes
<24"	4 feet	24"	Pre-cast for all new systems. All other projects can be either cast-in-place or pre-cast ^(a) .	See Detail SD-11
≥ 24"and < 48"	5 feet	36", two-piece cover	Pre-cast for all new systems. All other projects can be either cast-in-place or pre-cast ^(a) .	See Detail SD-11, SS-7, SS-10
> 18" and flow direction changes >= 20°				
3+ pipes, > 12" and <36"				
≥ 48" (through pipes only)	5 feet	36", two-piece cover	Cast-in-place around pipe	See Detail SS-11
+3 pipes, ≥ 36"	Pre-cast vault to be approved by District			
(a) The designer must confirm that the maintenance hole base can be constructed by a manufacturer in an acceptable time frame prior to final design approval.				

4.6.2 Pre-Cast Structure Requirements

- Bases: Bases shall have a monolithic base slab with riser barrel conforming to ASTM C478, AASHTO M199, and designed for AASHTO H20 loading.
- Risers: Riser sections shall have a minimum 5" wall for 48" diameter, 6" wall for 60" diameter, 7" wall for 72" diameter, 8" wall for 84" diameter, 9" wall for 96" diameter, 11" wall for 120" diameter, and 12" wall for 144" diameter and conform to ASTM C478 and AASHTO M199.
- Top Slabs: Top Slabs, if used, shall have a minimum thickness of 8" and conform to ASTM C478 and designed for AASHTO H20 loading.
- Anti-flotation collar on the pre-cast base shall be designed assuming groundwater elevation is one foot below finish grade.

4.6.3 Location

Maintenance holes shall be placed at the following locations:

- Maintenance holes shall be located at all changes of alignment, both horizontal or vertical.
- Maintenance holes or inlets shall be placed at the intersection of all storm drain lines.
- Maintenance holes shall be placed at the end of storm drain lines or cul-de-sacs.

All maintenance holes must be accessible to standard maintenance vehicles for inspection, maintenance, and repair. Every effort shall be made to provide all-weather access to maintenance holes in open space areas, per Detail G-5.

For street intersections other than residential streets, locate maintenance holes outside of the intersection in a configuration that allows maintenance to be performed by blocking only one lane of traffic at a time. Do not locate maintenance holes within a crosswalk or other alignments designated for pedestrian travel. Do not locate maintenance holes in areas designated for on-street parking.

Do not locate maintenance holes in medians or near raised concrete structures. Maintain a minimum clearance of 1 foot from the edge of the maintenance hole barrel to all existing and proposed medians and concrete structures.

4.6.4 Spacing

Maximum spacing for maintenance holes for storm drain pipes less than or equal to 24 inches shall be 400 feet, and shall be 500 feet for storm drain pipes greater than 24 inches.

4.6.5 Elevation Criteria

The “IN” and “OUT” elevations of the incoming and outgoing drains shall be shown on the plans.

Drops (i.e. pipe inverts above the maintenance hole shelf) in maintenance holes are not allowed unless approved by the District.

If there is no deflection in the maintenance hole, the storm drain shall have a slope greater than or equal to the slope of the flattest pipe.

4.6.6 Maintenance Hole Rim Elevation

The maintenance hole shall be constructed to the rim elevations as shown on the Plans, per the guidelines below.

- In street sections, maintenance hole rim shall be flush with the adjacent ground surface.
- In areas where future streets are proposed, rim elevation shall be shown and constructed to future finished grade.
- In open space areas, maintenance hole rim shall be 2-inches above the adjacent ground surface.

4.6.7 Maintenance Hole Markers

For maintenance holes located in open space, provide maintenance hole markers per detail G-4.

4.6.8 Maximum Deflection

The maximum deflection angle between two main storm drains must not be greater than 90 degrees.

4.6.9 Connection to Existing Maintenance Holes

In areas where future development is planned, provide a stub to serve future development. The upstream stub diameter shall match the downstream diameter.

4.6.10 Bolt Down Maintenance Holes

Bolt down frame and covers without vent holes shall be required as directed by the District. See Detail SS-16.

4.7 Drain Inlet Design

4.7.1 Inlet Types

Type B inlets, detail SD-2, shall be used on all public streets, except as follows:

- Use Type A inlets, SD-1, where the street grade is greater than or equal to 6%.
- Use Type C inlets, SD-3, in unimproved or landscaped areas.
- Use of Type D inlets, SD-4, shall require District approval.

In general:

- Privately owned grated drain inlets shall have a minimum dimension of 2-feet by 2-feet.
- All inlets for on-site use that are not shown in the Standard Details shall be clearly dimensioned on the plans.
- All grates shall be designed and located to provide adequate safety for automobile traffic, bicycles, and pedestrians.

4.7.2 Alignment and Location

Locate inlets to meet each of the following criteria during a 15-year, 24-hour design storm:

- Gutter flow does not extend more than 6 feet from the face of curb,
- Gutter flow does not exceed a depth of 4 inches,
- A 10-foot wide travel lane is maintained,
- Excessive flow is collected before it passes in front of a pedestrian ramp.
 - Drain inlets shall be placed adjacent to pedestrian ramps in high pedestrian traffic areas so that no more than 100 feet of curb and gutter drains through the ramp area.
- Length of flow in the gutter does not exceed 500 feet in either direction.
- Drain inlets shall be placed three (3) feet from driveway sections, pedestrian ramps, round corners, or pedestrian crosswalks.
- Drain inlets shall not be placed at round corners of intersections.
- All drain inlets shall have a “No Dumping” Public notice per Standard Detail SD-8.

4.8 Open Channel Design

New open channels are not allowed.

4.9 Detention Basin Design

Detention Basin Design Criteria are provided below:

4.9.1 Capacity

Detention storage facilities shall be designed to safely store the flow from the 10-day, 100-year storm event. Minimum freeboard during the 100-year design storm shall be one foot if the design water level is below the surrounding ground surface. Leveed detention basins shall not be allowed.

4.9.2 Configuration

Maximum depth shall not exceed 10 feet and the pond bottom shall be at least two feet above historic groundwater levels based on groundwater investigations approved by the Director of Engineering. The slope of all banks subject to inundation shall be no steeper than 4 horizontal to 1 vertical. All slopes shall be protected by hydroseeding or the equivalent. In addition, slopes within public access areas such as parks and green belts shall be no steeper than 6 horizontal to 1 vertical.

4.9.3 Access

Roads designed for maintenance access shall be provided around the perimeter of all storage facilities. The road shall be at least 12 feet wide and shall be constructed with 60 feet by 20 feet wide turnouts for maintenance vehicle passing at 400 feet intervals. The structural section shall be 8 inches of Class II aggregate base on geotextile fabric, and when required by the Director of Engineering, 3" of asphalt concrete. An access road shall also be provided to the floor of the basin with a maximum slope of 10%.

4.9.4 Detention Outlet facilities

The outlet for the detention basin shall be designed to discharge the allowable flow that achieves the hydraulic design criteria for the downstream storm drainage facilities. Discharge capacity shall be determined on a case-by-case basis and subject to review and approval of the Director of Engineering. An emergency spillway or overflow shall be provided for extreme conditions.

4.10 Pump Stations

Pump stations shall be designed to pump the 100-year, 1-day peak flow reaching the pump station using the firm capacity of the pump station. Pump stations shall include one redundant pump and stand-by generator capable of powering all the firm capacity pumps. The design of the pump station shall be coordinated with the Director of Engineering prior to initiating the pump station design and at key points during the design process.

Pump station design shall comply with the District's pump station standards.

4.11 Outfalls

Pipeline outfalls to improved open channels, natural streams, Carquinez Strait, or Mare Island Strait shall be designed to provide: 1) proper support of the pipe, 2) stability of the embankment, 3) control of erosive forces, 4) adequate access for maintenance and 5) provide overall safety of the public.

4.11.1 Outfall Types

See detail SD-10 for approved configurations. If outfalls need to be installed within the tidal zone, a licensed civil engineer shall submit a site-specific study and design for the outfall configuration, and will be subject to District approval.

4.11.2 Outfall Pipe Support, Bank Stability, and Public Safety

The Engineer shall submit a design using headwalls, flared end sections or other outfall structures that will adequately support the pipe and the adjacent embankment to the receiving system. Approval at the County, State, and Federal level may be required depending on the receiving system and related permit requirements. All weather access roads shall be provided to each outfall per District standard.

Safety railing and/or fencing on headwalls shall be provided on all headwalls over 5 feet high. The engineer shall submit a design for approval by the District.

4.11.3 Erosion Control at Outfalls

All outfall erosion control features shall be designed for the highest potential flow velocity from the pipe (using design storm criteria), while the receiving stream or channel is at its lowest stage. The Engineer shall provide hydraulic design calculations, including scour potential and provide measures if necessary to prevent channel scour downstream from the outfall.

Rock slope protection (RSP) provided per the State of California Specifications is a cost effective means to provide for outfall erosion mitigation. The Engineer shall provide calculations for rock sizing and for determining the extent of the required RSP.

4.12 Trash Capture and Debris Racks

Trash racks shall be installed at inlet and outlet pipes larger than 48-inch in diameter. The racks must have hinges at the top of the rack that allow the rack to be lifted using a backhoe.

Any development larger than 10,000 square feet shall install trash capture devices that meet the requirements of the Regional Water Quality Control Board trash requirements.

4.13 Access Roads and Easements

All access roads to storm drainage facilities, including maintenance holes and outfalls, must be paved per Detail G-5.

Most of the underground drainage facilities and roadside ditches shall be constructed in public street right of way. Developments that include open channel improvements, closed conduit, storage basins, or other facilities outside the street right-of-way shall provide permanent right-of-way (Drainage Easements) to the District for operations and maintenance of those facilities. The following are guidelines for minimum Drainage Easement requirements for various improvements:

Easements for closed conduits shall have a minimum width for any easement for closed conduit shall be 20 feet. Wider easements may be required depending on location, type of soil, size and depth of line, locations of maintenance holes, or as determined necessary by VFWD.

4.14 Site Grading

Site grading shall not block drainage from adjacent lands, nor create storm drainage problems within the graded area. Grading shall be done to enhance compliance with the District's standards.

All lots shall adequately drain. Surface water from each lot shall be conducted directly to the adjacent street or alley, or to underground storm drainage facilities or drainage channels. Drainage shall not be conveyed across other lots unless it is conveyed in a facility operated and maintained by the District, or other federal, state, or local government agency.

ENGINEERING STANDARDS



SECTION 5 – SEWER LATERAL DESIGN

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Section 5. Sewer Lateral Design Standards

5.1 General

Sewer laterals have both a private and public component, as shown in Figure 5-1 below.

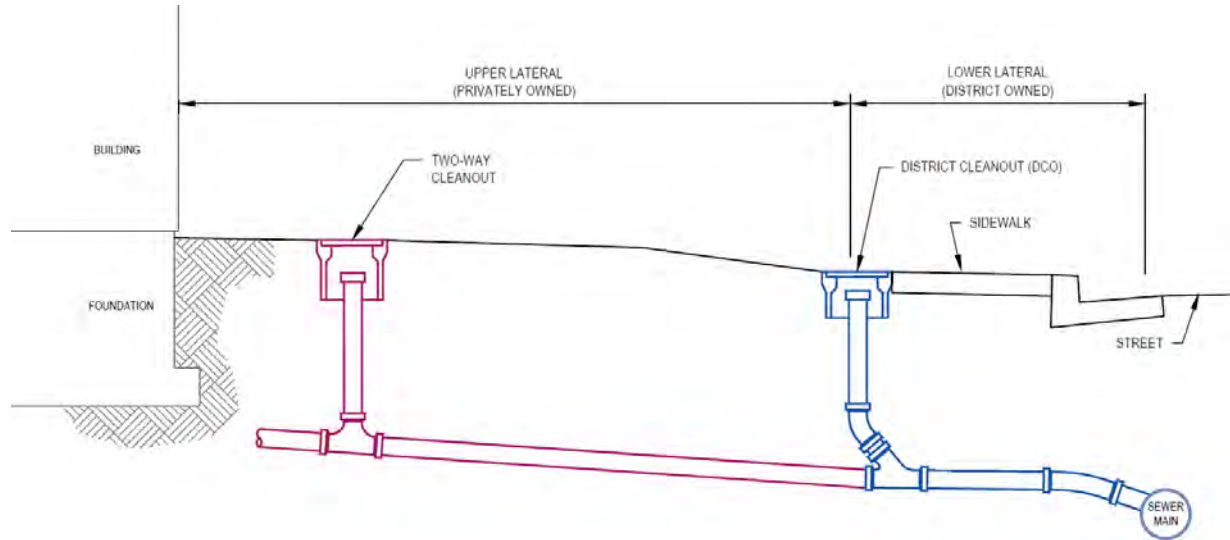


Figure 5-1. Upper and Lower Laterals

The District owns and maintains the sewer lateral up to and including the District-owned Clean out (DCO) and the property owner owns and maintains the sewer lateral from the DCO onward to the structure. The privately-owned lateral is called the Upper Lateral and the publicly-owned lateral is called the Lower Lateral.

Although the design and criteria for both Upper and Lower laterals are similar, there are some differences. They will be discussed in separate sections below.

5.2 Upper (Private) Lateral

5.2.1 Size and Slope

The minimum size of upper laterals serving single family residences are 4 inches inside diameter. The minimum size of upper laterals serving multi-family (more than 3 units) and commercial properties are 6 inches inside diameter. Upper laterals larger than 6 inches in diameter may be required depending on the flow generated. Plumbing fixture unit values, as established on the latest edition of the Uniform Plumbing Code, shall be used when designing the building sewer. The slope shall be constant from the building to the property line, unless approved by the District. Sizes and slopes are summarized in Table 5-1.

Table 5-1. Minimum Sewer Lateral Size and Slope		
Lateral Use	Pipe Diameter	Minimum Slope
Single family residential	4"	2.0%
Commercial, multi-family residential	6"	2.0% ^(a)
(a) A slope of no less than 1.0% may be accepted on a case-by-case basis.		

5.2.2 Materials

See Table 3-6 for allowable materials.

Glue-by-glue (or slip-by-slip) couplings shall be used for ABS connections to: PVC SDR 35 and PVC SDR 26 (e.g. a connection to wye at District cleanout).

5.2.3 Connection to Lower Lateral

Unless otherwise permitted or required by the District, the connection of the upper lateral shall be made at the clean out stub from the lower lateral at the property line, see standard detail SS-2. The connection of the upper lateral to the lower lateral shall be airtight and may require hydrostatic water testing, as directed by the District.

5.2.4 Connection Limitations

A secondary suite, ancillary dwelling, or additional dwelling unit (ADU) on a property that would normally accommodate only one dwelling unit may be connected to the upper lateral for the primary residence. The connection shall be located downstream of the two-way cleanout and the ADU shall have its own two-way cleanout.

5.2.5 Alignment and Location

Lateral alignment shall be as straight as possible. Lateral shall be located on the property it serves.

5.2.6 Depth and Cover

Minimum cover for upper lateral sewers shall be:

Table 5-2. Minimum Cover for Laterals	
Location	Cover Requirement
District Cleanout	3 feet
Upper Lateral	1 foot

5.2.7 Cleanouts

A District-owned cleanout (DCO) marks the change from an upper to a lower lateral. The DCO is a one-way cleanout and must be installed by a specially licensed contractor (A or C-42 licenses). The DCO shall be required directly behind the back of sidewalk (preferred) or in the sidewalk if there's an obstruction to accessing the DCO (i.e. retaining walls, fences, etc.). If a sidewalk doesn't exist, install the DCO just behind the property line. See standard detail SS-3.

When the main is located in a backyard easement of a property, locate the DCO three to five feet from the main where feasible, or as determined by the District.

When the main is located in a backyard easement of a neighboring property, locate the DCO three to five feet inside of the fence of the property that the lateral, or as determined by the District.

A two-way cleanout shall be installed within one to three feet from the foundation where the sewer exits the building. See standard detail SS-4.

5.2.8 Backflow Prevention Devices

Upper laterals shall have an approved backflow check valve installed if any structure finish floor is at or lower than the top elevation of the nearest upstream maintenance hole, or as required by the District.

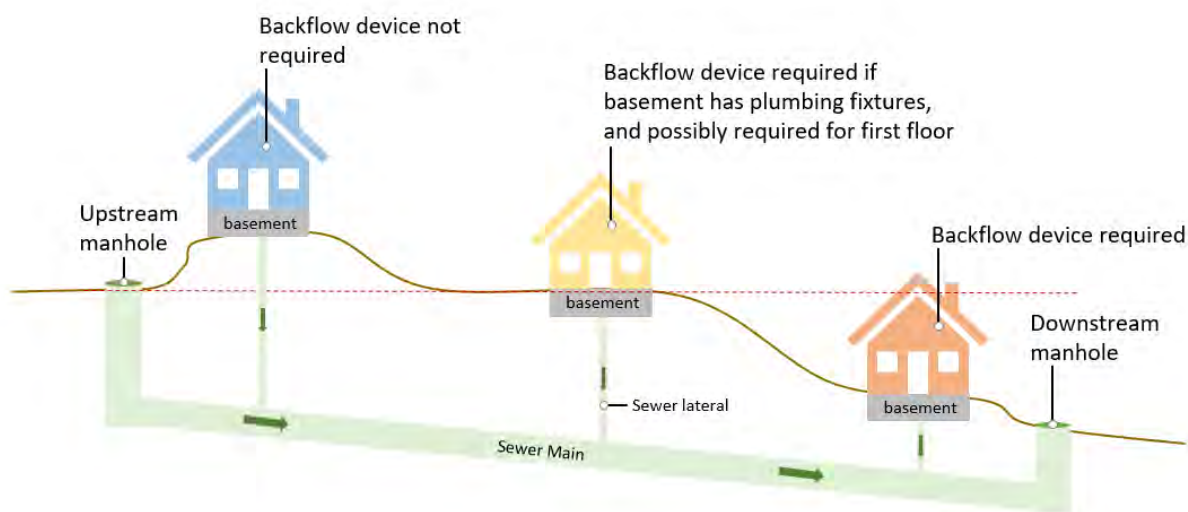


Figure 5-2. Backflow Prevention. If the lowest plumbing fixture in your house is below the next upstream maintenance hole, then you must have a sanitary backflow prevention device on your sewer lateral. If sewage backs up at the upstream maintenance hole, the device closes and protects your property from flooding.

Backflow prevention devices shall be installed on the upper lateral outside of structure being protected, downstream of the two-way cleanout and as close to the DCO as feasible. In the event any question exists whether such device is required, the final decision shall be made by the District.

The connection may be made per standard detail SS-5.

The device will be installed and maintained by the property owner.

For development projects, the design engineer shall note all facilities that require a backflow prevention device and shall include the following note: "The following listed lots will require a backflow prevention device to be installed in the sewer lateral per Standard Detail SS-5"

5.2.9 Private sanitary sewer lift stations

Private pump stations serving individual parcels or structures shall not be allowed where an alternative gravity option exists. Where a private pump station may be necessary, a backup generator will be required.

5.2.10 Accessory Dwelling Units (ADUs)

ADUs can be either attached or detached dwelling units to an existing dwelling. The lateral for the ADU should connect to the existing upper lateral between the two-way cleanout and the DCO.

5.3 Lower (Public) Lateral

5.3.1 Size and Slope

The minimum sizes for lower laterals are the same as upper laterals, see Table 5-1. Lower laterals larger than 6 inches in diameter may be required depending on the flow generated. In no case shall the lower lateral be smaller than the upper lateral.

5.3.2 Materials

See Table 3-6 for allowable materials.

Wyes shall be used for connecting to any new or existing main, unless approved by the District. Fuse-on-wyes shall be used when connecting to HPDE main. Tee connections to existing 8-inch mains or larger (such as Tap-Tite or Insert-a-tee) may be approved by District. Tee connections shall not be used on any main smaller than 8-inch.

5.3.3 Connection to Existing Main

To connect lower laterals to an existing main, the developer or owner must obtain a connection permit and pay the applicable fees.

The contractor will construct the lower lateral connections from new developments to existing main lines and maintenance holes. VFWD will inspect and approve the connection prior to backfill.

Connection fees are provided in the VFWD Sewer Ordinance 70A and updated fee information can be found on VFWD's website.

5.3.4 Connection Limitations

Lower laterals must not directly connect to sewer main lines 12-inches and greater or to main lines more than 10 feet deep without approval from the District.

Each parcel shall be served by a separate sanitary sewer lateral. Two or more buildings located on the same parcel may share a single lower lateral connection. In the event of a parcel subdivision, a separate lateral and easement will be required.

5.3.5 Alignment and Location

Sewer alignment shall be as straight as possible and perpendicular to the main.

- Do not locate lower laterals in front of driveways and driveway flares unless no alternative exists.
- Locate lower laterals at least 5 feet from other utilities when possible.

- Avoid locating the lower lateral within 10 feet of trees or shrubs that are or will be 5 feet and higher at maturity, or within 10 feet of utility poles and light standards.
- Place lower laterals on the low side of all parcels with a slope of 2% or greater to the main line.
- When lateral is parallel to property line it shall be placed a minimum of five feet from the property line.

5.3.6 Cleanouts

See the requirements for DCOs in the above section on cleanouts for upper laterals.

5.3.7 Backflow Prevention Devices

No requirements for lower laterals.

5.4 Use of Existing Laterals

Existing upper and lower laterals may be used for new buildings only when found by the District to be in suitable condition and in conformity with these Standards. For existing laterals to be re-used, they shall be free of sags, roots, offset joints, or any other physical deformation that would allow inflow or infiltration to enter the sewer system or pose risk of lateral failure (including a suitable connection to the public sewer main that is free of defects). Existing lateral conditions shall be confirmed at the cost of the property owner or permit applicant by television inspection. Television inspection shall be performed in the presence of the District's inspector, or recorded and submitted to the District for review and acceptance.

The aforementioned television inspection requirements apply to all existing laterals that serve:

- Vacant parcels
- Parcels that had structure(s) that were previously demolished
- Parcels that are not currently paying, or are delinquent in paying, sewer service charges
- Commercial parcels

The District will make the final determination on suitability for re-use as part of the plan review and permitting process. If the District determines a lateral is in poor condition, the property owner or permit applicant is responsible for replacing both the upper and lower lateral as part of their connection permit.

On existing parcels that do not have a DCO, the property owner will be required to install a DCO.

In all cases, existing laterals shall be sized appropriately for their proposed use or be upsized to serve increased uses.

5.5 Demolition and Abandonment of Existing Laterals

Demolition or abandonment of existing laterals shall be performed by contractors engaged with the District through an encroachment permit.

For buildings to be demolished, the sewer lateral shall be physically disconnected from the public sewer through the following process:

1. A permit shall be required prior to demolition.
2. The lower lateral shall be TV'ed and the video provided to the District.
3. The existing sewer lateral shall be capped directly behind the DCO if the lower lateral is in good condition, or capped at the main if the lower lateral is in poor condition.
4. If a DCO does not exist, a DCO shall be installed per District standards.
5. An inspection is required following disconnection, but prior to backfilling the excavation.

If a property owner wishes to change the configuration of an existing sewer service such that a new lower lateral connection is made, then the existing lower lateral shall be physically disconnected from the public sewer. The lower lateral shall be capped at the sewer main and filled with slurry.

If a building demolition is proposed that results in no occupied buildings on the property, or the sewer is disconnected such that no sewer and water use is proposed, then the property owner shall provide a letter to the District stating whether or not the property will continue to pay sewer service charges. If the property owner continues to pay sewer service charges, no sewer connection fee will be required upon reconnection (provided the use upon reconnection matches the existing use) and the existing sewer lateral may be used in the future. If the property owner does not continue to pay sewer service charges, then connection fees are due upon reconnection to the sewer, and sewer service charges will resume.

5.6 Private Sewer Mains

Development projects shall be designed per these Standards, with each parcel being served by a separate sanitary sewer lateral connected to a public sewer main. In special circumstances, due to configuration of parcels when District easement and setback and access requirements are not feasible, and it is acceptable to the District, property owner(s) and the District may agree that private ownership of a sewer main is preferable to a public sanitary sewer main owned and maintained by the District.

Private sewer mains shall be designed and constructed according to these Standards. Private sewer mains shall be a minimum of 6-inches in diameter. The owner/developer shall enter into a Private Main Agreement with the District that defines the responsibilities for the operation and maintenance of the private sewer main by the property owner(s). The Private Main Agreement shall be recorded against the affected parcel(s). The limits of the private sewer main and public and private sewer ownership shall be indicated on a recorded Parcel Map or Final Map.

Privately owned sanitary sewer facilities shall not be located in the public right-of-way.

The onsite sewer collection system for all developments containing more than one structure must be in accordance with these Standards for public sewer. Each separate building within a multiple building development must have a separate connection to VFWD's sewer collection system with a separate lower lateral serving only that building. The exceptions to this are:

- Multiple buildings under common ownership. One or more buildings located on one parcel of real property, owned by the same person, may be serviced by the same lower lateral if the jurisdiction is unlikely to approve separate ownership or division of the parcel in the future. If

for any reason the ownership of the parcel is subsequently divided, each building under separate ownership must be provided a separate lower lateral before final map recordation, as discussed in Section 5.3.2 above.

- Residential occupancies with common walls. The following structures may be served by a common lower lateral: single-family dwelling units with common walls, condominiums, stock cooperatives, community apartments or other improvements entitling owners of interest to occupy independent ownership interests and make joint use of utility and other services provided by facilities owned in common.



ENGINEERING STANDARDS

SECTION 6 – PRE TREATMENT REQUIREMENTS

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Section 6. Pre-Treatment Requirements

6.1 General

The District is responsible for the enforcement of nondomestic sewage discharger compliance with federal, state, and local pretreatment standards. The purpose of the District's Pretreatment Program Requirements is to protect the District's collections system, wastewater treatment plant, and the environment from adverse impacts that may occur when hazardous or toxic wastes are discharged into the sewage system.

6.2 Pre-Treatment Questionnaire

Any prospective food service, industrial user, or non-domestic user that will discharge into the District's sewer system is required to complete a [Pretreatment Questionnaire](#). Others may be required to submit a pre-treatment questionnaire on a case-by-case basis.

6.3 Users That Require Pre-Treatment

6.3.1 Food Service

For the purposes of this section, food service is any establishment that prepares or serves food to non-family members. This includes full-service restaurants, fast food restaurants, take-out restaurants, recreation facilities, cafeterias for employees, grocery store take-out facilities, catering facilities, bakeries, delicatessens, coffee house, food trucks, etc.

All food service establishments (FSE) shall be equipped with devices to remove fats, oils, and grease (FOG) to prevent them from being discharged to the District's sewer system. The size and type of restaurant and food service equipment shall dictate the size of the FOG removal device required.

Solano County requires that food trucks use a commissary for food, container and supply storage, utensil cleaning, food preparation, liquid and solid waste disposal, and obtaining potable water. Grease interceptors that meet the District's minimum standards are required at each commissary where food preparation is occurring or food wastes are being discharged to the sewer.

6.3.2 Industrial Users

Industrial users can include facilities such as breweries, wineries, distilleries, chemical manufacturers, commercial food production facilities, metal fabrication shops, car washes, commercial garages, gas stations, produce shops, butcher shops, or any business that discharges non-domestic waste.

Industrial users that have the potential to discharge a high concentration of solids or sediments, such as commercial garages, car washes, and gas stations, shall be required to install sand/water separators. Sand/water separators shall be sized as discussed below.

6.3.3 Significant Industrial Users

The District defines a Significant Industrial User (SIU) as any industrial user subject to Federal Categorical Standards, any industrial user with greater than 25,000 gallons per day of non-domestic wastewater flow, any industrial user contributing five percent or more of the District's dry weather hydraulic or organic capacity, or any industrial user with a reasonable potential to negatively impact the collections system or treatment plant. SIU requirements will be developed on a case-by-case basis and will require approval from the District's Environmental Compliance Division (ECD) during development or permitting process.

- All SIUs shall provide a sampling port on their effluent.
- All SIUs shall meter effluent flows.
- SIUs may be required to adjust pH and treat other water quality parameters as required by the District.

6.3.4 Trash Enclosures

The District does not require trash enclosures (TE) to include drains that connect to the sanitary sewer. However, other jurisdictions may require drains, hose bibs, or other features. No sanitary sewer connections are allowed at TE unless authorized by the District. TE drainage shall not enter the storm drain system.

In the case where sanitary sewer connections to TE are authorized, the applicant shall be responsible for:

1. Connecting TE waste discharges to an existing grease interceptor or installing a new grease interceptor. See sizing requirements below.
2. The applicant must contact the District for specific sanitary sewer connection and discharge requirements and seek approval for the connection prior to any building permit approval.
3. A roof shall be placed on the trash enclosure to prevent rainwater from entering the sanitary sewer system. The roof shall extend past open sides without a gate by a distance equal to $\frac{1}{2}$ the height of the opening (i.e. if the bottom of the roof is 2 feet above the top of the structure wall it is required to extend 1 foot past the outside edge of the wall). To allow garbage trucks to access the bins, the roof shall extend 6 inches past the outside edge of the gate (on the gate side of the structure only).
4. A grade break line shall be constructed at the inside edge of the wall with the slab sloping inwards on the inside of the structure and away from the structure on the outside.

6.3.5 Trash Compactors

If a trash compactor is installed, a containment curb is required around the device. A grease interceptor and drain to the sanitary sewer shall be installed. All other requirements for TE apply.

6.3.6 Hair Care/Dog Grooming Facilities

Barbershops, beauty salons, pet groomers, animal care facilities, and any other commercial facility that discharges wastewater containing significant amounts of hair and/or fibers shall install a hair trap or other pretreatment device as specified by VFWD. Hair traps shall be privately owned and maintained.

6.3.7 Dental Practices

All dental facilities must fill out the “One-Time Compliance Report for Dental Dischargers” form and provide to the District’s ECD. See the District’s website for more information on this program.

Dental practices that remove and/or place amalgam fillings must install an approved amalgam separator. Approved separators are those that meet ISO 11143 standards and are certified by the American Dental Association or other qualified testing laboratory to remove at least 95% of amalgam. Those dental facilities who install and/or remove amalgam are subject to all requirements of the District’s Dental Amalgam Program and must implement all required best management practices for amalgam.

6.3.8 Parking Structures

Standards for the connection of parking structures to the sanitary sewer system are as follows:

- Drainage from uncovered areas that are exposed to rainwater and/or storm water run-off shall be directed into the storm drainage system. This includes, but is not limited to, trench drains placed at the entrance and/or exit of parking structures.
- All interior floor drains and/or catch basins shall be plumbed to the sanitary sewer and shall be connected to an appropriately designed and sized sand-oil interceptor as specified by VFWD.

6.3.9 Swimming Pools, Spas, Fountains

A swimming pool, spa, or fountain shall not be connected to the public sewer unless approved by VFWD.

The draining of water from swimming pools, spas, and/or fountains to the sanitary sewer shall only be conducted under a Temporary Discharge Permit issued by VFWD. The discharge shall be controlled with a valve and/or the use of an approved temporary connection such as a hose into a sanitary sewer clean-out.

The discharge of pool, spa and/or fountain water is restricted to a flow rate less than the capacity of the sewer line to avoid surcharge at any portion of the sewer system. A flow restrictor or valve shall be installed on the discharge piping of the system to maintain the required flow rate.

Passive overflow drains shall not be connected to the sanitary sewer system, but rather shall be discharged to landscaped areas.

Any outdoor shower area with a drain to the sanitary sewer shall be bermed, raised and/or sloped to prevent the introduction of storm water. The outdoor shower area shall be roofed or equipped with a cover to prevent rainwater from entering the sanitary sewer system.

6.3.9.A Filter Backwash

All filter backwash media shall be prevented from entering the sanitary sewer system.

1. Diatomaceous Earth Filters - Wastewater from the backwash of diatomaceous earth filters shall pass through a solids separation system approved by VFWD prior to discharge to the sanitary sewer system.
2. Sand Filters - Wastewater from the backwash of sand filters shall pass through a sump or similar device approved by VFWD to capture any sand prior to the discharge to the sanitary sewer system.

6.4 FOG Removal

FSE shall prevent fats, oils, and greases (FOG) from being discharged to the public sanitary sewer system in a manner consistent with these Standards and acceptable to the Director of Engineering.

There are two main types of FOG removal devices:

- Interceptors, large below-ground precast concrete tanks, are typically installed outside of the building footprint, and are the District's standard requirement.
 - High-efficiency grease interceptors are composite material, FOG removal devices that can be installed inside or outside a building, but have a smaller footprint than the large, below-ground tanks.
- Traps are smaller devices that can be installed above or below ground within the building footprint and will only be approved under special circumstances.

FOG removal devices shall be privately owned and maintained by property owners, not operated or maintained by the District, and are subject to periodic District inspection.

A FSE will be required to install a grease interceptor or trap based on the following approach in Figure 6-1:

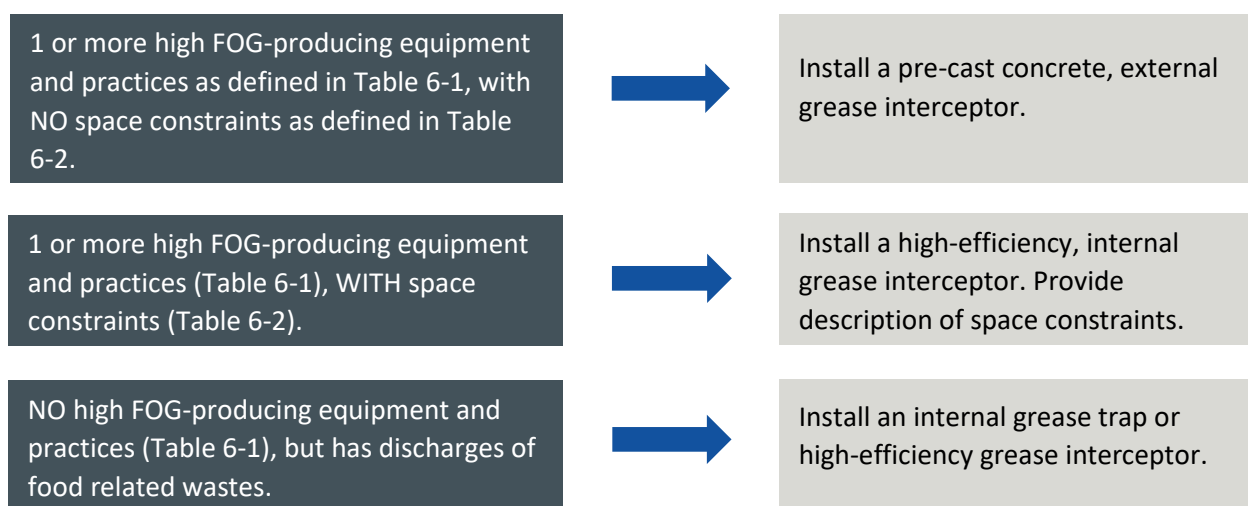


Figure 6-1. Criteria to determine whether a grease interceptor or grease trap is required.

Table 6-1 includes the high FOG-producing equipment and practices that trigger a grease interceptor.

Table 6-1. High FOG Producing Equipment and Practices			
Broiler	Char Broiler	Char broiler with grease burner	Deep fryer
Kettle	Griddle	Skillet	Smoker
Wok	Rotisserie	Tilt Skillet	Grill
Oven ^(a)	Stove/Range	Reusable Plates	--
^(a) Excludes toaster ovens, microwave ovens, and combi-ovens.			

Table 6-2 includes typical space constraints that might limit the installation of a grease interceptor.

Table 6-2. Typical Space Constraints ^(a)	
District-Accepted Space Constraints	District Will Not Accept
"Zero lot lines" would force an exterior grease interceptor to be installed in public right-of-way, which is not allowed.	Other utilities, landscaping, or hardscapes are in the way
Minimum sewer pipe slope is not feasible, even after other utilities are adjusted to accommodate pipe slope and alignment.	Parking lot is too small.
^(a) Applicant is required to provide a description of space constraints as part of the design and application package.	

If a FSE believes they should install a different FOG removal device than as shown in Figure 6-1, they can submit a grease removal device variance application with design and calculations for District approval. The grease removal device variance can be found on the District's website. For guidance on developing calculations, see the California Plumbing Code (CPC).

If a FSE does not have an external grease interceptor and is doing work that requires a building permit from the City of Vallejo, they will be required to install an external grease interceptor or trap based on the process shown in Figure 6-1. Events that trigger a grease interceptor evaluation include:

- New construction
- Remodels or tenant improvements
- Changes in operation
- New business licenses for food service
- Failure to properly maintain an existing FOG removal device
- Causing or contributing to a FOG related blockage in the collections system resulting in the need for the District to increase maintenance of the public sanitary sewer system
- Installation of trash enclosures with a drain to sewer

All new commercial buildings or tenant spaces intended for FSE at the time of building permit application shall be plumbed with dedicated interior grease waste lines that separate grease waste - producing plumbing fixtures from domestic use plumbing fixtures and will be routed to an exterior grease interceptor to capture FOG.

It is recommended that developers of new commercial shell buildings and new mixed-use commercial structures provide dedicated interior grease waste plumbing and reserve exterior space for grease interceptor(s) in order to accommodate potential food service uses in the future. The developer's decision to not provide dedicated grease waste facilities upon initial construction is not a valid reason

for the District to allow variances in FOG prevention requirements in the future. Future upgrades may be needed and may include but not be limited to: significant interior and exterior plumbing improvements, installation of multiple exterior grease interceptors to service individual food service tenant spaces, and the relocation and/or replacement of onsite private utilities as required to install grease waste facilities required by these Standards.

Submittals should include a plan set showing grease waste lines, the grease interceptor or trap location, and sizing calculations.

6.4.1 Grease Interceptor Requirements

The grease interceptor shall be sized according to criteria in the current CPC, but the minimum size of any grease interceptor is 750 gallons. A larger size may be required by the District using objective criteria such as the size and type of facility, volume of business or operation, plumbing fixtures, cooking fixtures and estimated flow rate (reference CPC, latest edition). The plan set submitted for review shall include the sizing calculations.

The following additional criteria apply:

1. Grease interceptors shall be two-compartment interceptors with sampling box as shown in the Standard Details and shall be manufactured by Jensen Precast, or approved equal.
2. It is recommended that proposed mixed-use facilities sharing a common sewer connection include both domestic and grease waste piping to avoid or minimize the construction of grease waste lines in the future if food services are likely uses. Multiple food service tenant spaces may share a common grease interceptor provided it is sized appropriately as noted above.
3. If located in an area subject to vehicular traffic, the grease interceptor shall be designed with a minimum of an HS-20 traffic rating.

Table 6-3 shows the plumbing fixture connection requirements to a grease interceptor:

Table 6-3. Fixtures Connections if Grease Interceptor is Used		
Fixture	Connect Direct to Sewer	Connect to Grease Interceptor
Pot/Pan Wash Sink		X
Prep Sink		X
Multi-Compartment Sink		X
Vegetable Prep Sink		X
Mop Sink		X
Floor Drain (in kitchen)		X
Hand Wash Sink (in kitchen)		X
Dishwasher		X
Commercial Trash Compactor		X
Trash Enclosure Drain		X
Floor Sink (with equipment drains)		X
Floor Sink (for beverage machine)	X	
Condensate Discharge	X	
Walk-in-Cooler Discharge		X

Note that garbage disposals/food grinders are prohibited unless specially approved by the District.

6.4.2 High-Efficiency Grease Interceptor Requirements

A high efficiency grease interceptor shall be sized according to criteria in the current CPC. The plan set submitted for review shall include the sizing calculations. The connections to a high-efficiency grease interceptor are the same as in Table 6-3.

6.4.3 Grease Trap Requirements

Grease traps shall be sized per the current edition of the CPC and installed per the District's standard detail. The minimum size of a grease trap shall have a flow rating of 35 gpm and 70 lbs of grease retention. A larger size may be required by the District (reference CPC, latest edition). The plan set submitted for review shall include the sizing calculations.

The inlet pipe to the grease trap shall be equipped with an external flow control fitting if the grease trap does not provide internal flow control. The flow control shall be designed so that the flow through the device does not exceed the designed input rate of the grease trap. If an external flow control fitting is used, it shall be installed to be readily accessible for inspection, cleaning, and maintenance, including in-ground installations. An external flow control fitting shall not have adjustable or removable parts.

Table 6-4 shows the plumbing fixture connection requirements to a grease trap:

Table 6-4. Fixtures Connections if Grease Trap is Used		
Fixture	Connect Direct to Sewer	Connect to Grease Trap
Pot/Pan Wash Sink		X
Prep Sink		X
Multi-Compartment Sink		X
Vegetable Prep Sink		X
Kitchen Mop Sink		X
Floor Drain (in kitchen)		X
Hand Wash Sink (in kitchen)		X
Dishwasher	X	
Commercial Trash Compactor		Grease Interceptor Required
Trash Enclosure Drain		Grease Interceptor Required
Floor Sink (with equipment drains)	X	
Floor Sink (for beverage machine)	X	
Condensate Discharge	X	
Walk-in-Cooler Discharge		X

Note that garbage disposals/food grinders are prohibited unless specially approved by the District.

6.5 Sand/Oil Interceptors

The term "sand-oil interceptor" shall mean a prefabricated or cast-in-place grease, oil, and/or solids removal device with a minimum capacity of three hundred twenty (320) gallons as shown in the Standard Drawings.

The sand-oil interceptor shall be designed in accordance with the following performance-based standards:

- The interceptor shall have the capacity for a thirty (30) minute retention time, based on the maximum influent flow rate.
- The interceptor shall be designed to reduce turbulence of the flow through the unit.
- The interceptor shall provide for the removal of floatables and settleables from the wastewater to the maximum extent practicable using multiple sedimentation chambers, pipe elbows installed between chambers, and/or other pretreatment design elements.
- The sand-oil interceptor shall be installed in a location that is readily accessible for periodic cleaning, inspection, and/or sampling. Typical installations of sand-oil interceptors are outside of the building. Proposals for installations within the interior of the building will be considered on a case-by-case basis.
- If the sand-oil interceptor is located in an area subject to vehicular traffic, the sand-oil interceptor shall be designed with a minimum of an HS-20 traffic rating.
- A sampling structure shall be installed immediately downstream of the sand-oil interceptor in accordance with the Standard Drawings.

Appendix F

Spill Emergency Response Plan (SERP)

Vallejo Flood & Wastewater District Spill Emergency Response Plan

- Section 1. Purpose and Definitions**
 - 1A. Purpose and Definitions
- Section 2. Cleaning Contractor Selection**
 - 2A. Cleaning Contractor Selection Criteria
 - 2B. Letter to Accompany Request to Provide Water Damage Restoration Service
 - 2C. Request to Provide Water Damage Restoration Services
 - 2D. Safety & Health Section 02160 for Contractor
 - 2E. Insurance Requirements for Contractors
 - 2F. Acknowledgement Form
 - 2G. List of Water Restoration Contractors
- Section 3. Customer Relations Practices**
 - 3A. Customer Service Practices
 - 3B. Call Out Service Request
- Section 4. Flow Chart, Received Service Request – Sewer Problems**
 - 4A. Flow Chart for responding to service request
 - 4B. Plumbing Contractor's Listing
- Section 5. SSOs – Inside Structure(s)**
 - 5A. Flow Chart for responding to a sewer overflow inside a building
 - 5B. Customer Acknowledgement of Sewage Cleaning Service Options
 - 5C. Customer Information Letter
 - 5D. Affected Personal Property Inventory Log
 - 5E. Sewer Overflow/First Responder Form
 - 5F. District Claim Form
 - 5G. Conditions of Temporary Relocation Form
 - 5H. Service Call Report (for Hansen Input)
 - 5I. Hansen History Report
- Section 6. Sanitary Sewer Overflows – Outside**
 - 6A. Procedure for Responding to a SSO from Collection System
 - 6B. Procedure for Responding to a SSO at Pump Station
 - 6C. Procedures for Responding to a SSO at Ryder Street Storage Basin or Outfall
- Section 7. Reporting Procedures for a SSO**
 - 7A. Reporting Procedures for a SSO
 - 7B. Category 1 Reporting Documentation
 - 7C. Category 2 Reporting Documentation
 - 7D. Category 3 Reporting Documentation
 - 7E. Procedure for Calculating Spill Volume – San Diego Reference Sheet
- Section 8. Requirements Governing Sewage Spills**
 - 8A. RWQCB 13267 Letter Requiring SSMP Creation, 2005
 - 8B. RWQCB 13267 Letter Defining SSMP Creation Schedule, 2006
 - 8C. Statewide General Waste Discharge Requirements – Order No. 2006-0003-DWQ
 - 8D. Amended Monitoring and Reporting Requirements – Order No. WQ 2008-0002-EXEC
 - 8E. Letter for SWRCB Amendment to the MRP Order No. 2008-0002-EXEC
 - 8F. Amended Monitoring and Reporting Program – Order No. 2013-0058-EXEC
- Section 9. Sewer Use/Backwater Prevention Devices/Specifications**
 - 9A. Engineering Sanitary Sewer Design Standards
 - 9B. Backwater Prevention Devices
 - 9C. Resolution for Reimbursements of Sewer Repairs
 - 9D. Upper Lateral/Upper Lateral Clean Out Detail
 - 9E. Lower Lateral/Lower Lateral Clean Out Detail
- Section 10. Business Continuity Plan**
 - 10A. Emergency Vendor Contact Information
 - 10B. Emergency Equipment Inventory & Location
 - 10C. Mobile Waste Haulers
 - 10D. Emergency Personnel Contact Information
 - 10E. District Cellular Phone List
 - 10F. Employee Call Numbers
 - 10G. Emergency Employee List

PURPOSE AND DEFINITIONS

1

TOPIC	LOCATION
Purpose and Definitions	1A

PURPOSE & DEFINITIONS

1A

PURPOSE

The purpose of this “Sanitary Sewer Overflow (SSO) Response Plan” is to insure that Vallejo Flood & Wastewater District (District) personnel follow established guidelines in cleaning up and decontaminating sewer spills, which may occur within the District service area.

DEFINITIONS

OVERFLOW:

Any sewage leaving the sewer system is called an overflow. The Sewer System includes all lines from the laterals, connected to the inside plumbing, through the main sewer trunk system (collection system) to the treatment plant.

All overflows need to be cleaned and sewer contained and not allowed to enter storm system. Follow procedures set forth in this manual.

OVERFLOW NOTIFICATION PROCEEDURES:

Within two hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water**, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.

REPORTING PROCEDURES:

- Category 1 Spills: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.
- Category 2 Spills: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.
- Category 3 Spills: Submit certified report within 30 calendar days of the end of month in which SSO the occurred.
- Category 4 Spills: Submit certified report within 30 calendar days of the end of month in which SSO the occurred.
- SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.
- “No Spill” Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.
- Annual Report: Update and certify by April 1 of each year.

For reporting protocol, follow section 7 of this manual.

CLEANING CONTRACTOR SELECTION	2
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TOPIC	LOCATION
Cleaning Contractor Selection Criteria	2A
Letter to Accompany Request to Provide Water Damage Restoration Service	2B
Request to Provide Water Damage Restoration Services	2C
Safety & Health Section 02160 for Contractor	2D
Insurance Requirements for Contractors	2E
Acknowledgement Form	2F
List of Water Restoration Contractors	2G

CLEANING CONTRACTOR SELECTION CRITERIA

Prior to dispatching a cleaning/Restoration Company to the site of an overflow, they must first be approved.

The approval process is as follows:

1. The following forms are sent to the prospective restoration company:
 - a cover letter (2B) outlining the process
 - a request to provide water damage restoration services form (2C),
 - Section 02160 of the District's Specification – Safety & Health (2D),
 - the insurance requirements for contractors (2E), and
 - the Acknowledgement Form (2F)
2. Prospective contractor return the request to provide water damage restoration services form (2C) and the acknowledgement form (2F) along with a certificate of insurance naming the District additional insured by endorsement.
3. The following criteria must be met to be on our active list:
 - ☐ Have general liability coverage with at least \$1,000,000 limits
 - ☐ Have an average response time of 1 hour or less
 - ☐ Has Workers' Compensation coverage
 - ☐ Has provided mold remediation training to its staff within the last 2 years and recognizes industry accepted protocol for remediating water damage (i.e. IICRC S500)
 - ☐ Must provide 3 references that have used their services in the last year
4. Water Restoration Contractors Listing (2G) is a current active list

[Cover letter to accompany Request to Provide Water Damage Restoration Services]

[date]

[name & address of company]

RE: Water Damage Restoration Services Request

As an operator of a sewage collection system, Vallejo Sanitation & Flood Control District (District) must be prepared to respond to sewer overflows that occur inside a home or business. Part of this preparation involves identifying local water damage restoration contractors that have the necessary training, equipment, experience and insurance to perform the job in a manner that does not expose the District to increased risk.

If you are interested in being placed on our preferred callout list, please complete the attached request and provide us with a certificate of insurance as outlined in Attachment 1 – Insurance Requirements for Contractors. We have enclosed for your reference a copy of a certificate of insurance with the additional named insured endorsement for your reference.

We have also enclosed a copy of section 02160 safety & health specification. The acknowledgement form must also accompany the above certificate in order for you to continue doing business with the District.

Because of the tremendous cost and potential health risks incorrect water damage remediation techniques can cause, it is imperative that the District only work with professionally trained and property insured contractors. By providing us with the requested forms, you will be demonstrating to us that you are that company and would like our business.

Very truly yours,

VALLEJO SANITATION & FLOOD CONTROL DISTRICT

Keith Sorsdal

Director of Safety & Risk Management

Enclosure

REQUEST TO PROVIDE WATER DAMAGE RESTORATION SERVICES

Name of Company: _____ Phone: _____

Address: _____

Years in Business: _____ Average Response Time: _____ # of Field Service Vehicles: _____

Please list any water damage restoration protocols your firm follows: _____
_____Is your staff trained & equipped to address mold prevention? ☐ Yes ☐ NoIf yes, please identify when this training was provided and by whom: _____

_____**Do you have: (please check all that apply)**

- ☐ General Liability Insurance? Limits: _____ Is there a mold exclusion in your policy? ☐ Yes ☐ No
- ☐ Mold Coverage? Limits: _____
- ☐ Errors & Omissions Coverage? Limits: _____
- ☐ Workers' Compensation Coverage?

Please identify at least three references that have used your services in the last year:

1. NAME: _____ PHONE: _____
2. NAME: _____ PHONE: _____
3. NAME: _____ PHONE: _____

If your firm is placed on our callout list, we will require that you submit a certificate of insurance naming Vallejo Sanitation and Flood Control District as the additional insured. Is this acceptable:

☐ Yes ☐ No

I certify that above is true and correct to the best of my ability:

NAME_____
DATE

**SECTION 02160
SAFETY & HEALTH**

PART 1 - GENERAL

1.01 SAFETY & HEALTH SECTION INCLUDES:

- 1.02 Contractor's Responsibility
- 1.03 District's Responsibility
- 1.04 Injury and Illness Prevention Plan
- 1.05 Health & Safety
- 1.06 Employee Training and Qualifications
- 1.07 Drug Free Workplace
- 1.08 Prohibited Acts
- 1.09 Public Safety and Convenience
- 1.10 Work Site
- 1.11 Personal Hygiene
- 1.12 Safety Equipment
- 1.13 Incident Reporting
- 1.14 Security
- 1.15 Compliance with Laws
- 1.16 Excavation and Trenching
- 1.17 Hazardous Wastes and Unforeseen Conditions
- 1.18 Flammable, Hazardous and/or Toxic Materials
- 1.19 Permits, Licenses and Inspections
- 1.20 Emergency Work
- 1.21 Submittals
- 1.22 Stop Orders

1.02 CONTRACTOR'S RESPONSIBILITIES FOR SAFETY

- 1.02.1 The Contractor will at all times be solely responsible for all means, methods, techniques, sequences and procedures of the Work, and the acts and omissions of all employees, Subcontractors and agents, and all other persons performing an of the Work. Contractor will at all times maintain strict discipline amount its employees, and will not employ any person unfit or unskilled in that portion of the Work assigned to him. This requirement shall apply continuously and not be limited to normal working hours.
- 1.02.2 The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1.02.2.1.1 All persons at the site and other persons and organizations who may be affected thereby;
 - 1.02.2.1.2 All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
 - 1.02.2.1.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction

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1.03 DISTRICT'S RESPONSIBILITY

- 1.03.1 The services of the District Engineer in conducting construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's work methods, equipment, bracing or scaffolding or safety measures, in, or near the construction site, and shall not be construed as supervision of the actual construction nor make the District Manager or the District responsible for providing a safe place for the performance of the work by the Contractor, Subcontractors or suppliers; or for access, visits, use work, travel or occupancy by any person.
- 1.03.2 A duty of the District engineering department personnel is to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's safety supervisor, the safety program or any safety measures taken in, on or near the construction site.
- 1.03.3 The District will review the safety related submittals of the Contractor's to verify the general scope of the work, to determine that appropriate professional services are used and to determine the construction techniques proposed for use. This review shall not in any way be construed to relieve the Contractor from sole responsibility for the design and/or use of safety equipment.

1.04 HEALTH & SAFETY

- 1.04.1 The Contractor shall promptly and fully comply with and carry out and shall, without separate charge to the District, enforce compliance with safety and health requirements stated herein, prescribed by all applicable Laws and Regulations (whether referred to herein or not) of any public body **including District's "Contractor Safety Handbook,"** having jurisdiction or charged with the enforcement thereof, for the safety of persons or property or to protect them from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. Where any of these safety regulations are in conflict, the more stringent requirement shall be followed.
- 1.04.2 The Contractor shall notify the District of adjacent property and utilities when performance of the WORK may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. The Contractor shall take such other measures as may be necessary to ensure that work is done in a safe manner and that the safety and health of the employees and people of the local communities is safeguarded.
- 1.04.3 Contractor agrees that Contractor has been retained by District for reasons which include, but are not limited to, contractor's expertise with regard to safety and health hazards associated with the work to be performed by Contractor. Contractor agrees that it has and will have sole responsibility for the health, safety, and welfare of its employees, Subcontractors, and agents performing Work under this Agreement. At all times while performing Work at an District location, Contractor, its employees, Subcontractors and agents will also comply with all applicable District health, safety, security and environmental procedures, policies, and guidelines. Contractor has the authority and responsibility to control, and/or correct all hazards associated with the work to be

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- performed by Contractor. If Contractor becomes aware of a hazard which Contractor contends was created or caused by District, Contractor must notify the District immediately in the case of an imminent hazard, and no later than 5 working days in all other cases. If Contractor fails to do so, contractor agrees to assume all responsibility to control and/or correct the hazard as if Contractor were the creator or cause of the hazard.
- 1.04.4 Contractors are prohibited from starting, stopping, or otherwise operating the District owned or leased equipment and utilities, unless specifically authorized to do so in written contractual documents.
- 1.04.5 Contractor employees must have their own individual locks and tags assigned to each employee for use in locking out and tagging out equipment required for their assigned work tasks. Lockout/tagout activities and control of hazardous energy must comply with state and Federal standards pertaining to these activities.
- 1.04.6 Contractors will be notified of the presence of any known or suspected asbestos-containing materials in their proposed work areas. Only those contractors with the required OSHA training, certification and permits for asbestos abatement and removal will be allowed to handle these materials. All other contractors are prohibited from entering areas with asbestos-containing materials.
- 1.04.7 Contractors are prohibited from welding, burning, cutting, or performing other "hot work" without prior written authorization from the District management. All hot work must comply with state and Federal OSHA standards for these work activities, including those standards pertaining to hot work permits and safe handling of compressed gases.
- 1.04.8 Contractor employees who drive vehicles or forklifts, or who operate heavy equipment on the District property or project sites, must first provide proof of a current driver's license and proof of appropriate training in accordance with state and Federal OSHA standards, Department of Transportation, and Department of Motor Vehicles codes and standards.
- 1.04.9 The District will provide the Contractor with all information in the District's possession regarding the location of underground or above ground mechanical, electrical, gas, telephone, sewers, storm drains, water lines and other utilities that are critical to the nature of the Work; provided, however, that District makes no warranty regarding the sufficiency or accuracy of such information. Contractor will promptly inform the District in writing if Contractor believes any information provided by the District is inaccurate in any material respect, or if Contractor encounters unexpected or previously unknown conditions at the site. Contractor will become thoroughly familiar with the tolerances, dimensions and location of all such utilities. If necessary, Contractor will contact representatives of utility companies and public agencies, and review plans and information, if any, provided by such representatives and agencies about the Work site.
- 1.04.10 Compliance with these by subcontractors shall be the sole responsibility of the Contractor.

1.05 INJURY AND ILLNESS PREVENTION PLAN

- 1.05.1 Contractor shall develop and implement a written Injury and Illness Prevention Plan (IIPP) and Code of Safe Practices that specifically apply to the Contractor's scope of work and anticipated work activities. The IIPP and Code of Safe Practices must comply with state and Federal OSHA standards, as applicable. Copies of the IIPP and Code of

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Safe practices must be provided to the District upon request.

1.06 EMPLOYEE TRAINING AND QUALIFICATIONS

- 1.06.1 Contractor will provide only properly trained and qualified personnel to perform work under this Contractor Agreement. Contractor will provide only employees who are trained in both general safe work practices and all applicable specific hazards of the Work. Contractor has the authority and responsibility to train Contractor's employees with regard to general and Work-specific hazards and safe practices. Contractor shall certify in writing that all of their employees, Subcontractors and vendors have been fully informed of tasks and specific hazards and safety requirements before beginning work on-site.

1.07 DRUG FREE WORKPLACE

- 1.07.1 Contractors shall certify to the District in writing that Contractor will maintain a drug free workplace in accordance with state and federal government contracting standards. Contractor's employees and Subcontractors are prohibited from possessing alcoholic beverages, controlled substances, illegal drugs, and drug paraphernalia in the District facilities and on the District property. Legitimate prescription medications must be in their original pharmacy containers, labeled with the patient's name, prescribing physician's name, and the pharmacy name and telephone number. It is the Contractor's responsibility to ensure that employees taking prescribed medication will not pose a safety hazard to themselves or any other personnel on-site, as a result of the side-effects of such medication. Contractor shall immediately remove any person found in unauthorized possession of alcoholic beverages, drugs, drug paraphernalia or medications.

1.08 PROHIBITED ACTS

- 1.08.1 Contractor employees and Subcontractors are prohibited from bringing firearms, knives, and weapons of any kind into the District facilities or onto the District property, unless specifically authorized to do so in written contractual documents. Contractor shall immediately and permanently remove any person found in unauthorized possession of such devices on the District facilities and property.
- Threats and acts of violence in the workplace are strictly prohibited.
 - Sexual harassment and any other form of harassment based on race, ethnicity, religion or medical disability are strictly prohibited.
 - Gambling in any form is prohibited in the District facilities and on the District property.
- Contractor employees and Subcontractors are prohibited from scavenging or otherwise salvaging or removing any the District equipment, tools, waste materials or other property unless specifically authorized to do so in written contractual agreements. Eating, drinking, smoking, chewing, taking medication and applying cosmetics will be allowed only in designated areas. Contractors will be notified of the location of those areas at the start of the first work shift. Food, drink, tobacco products, matches, medication and cosmetics must be stored only in clean break areas or employee lockers designated for clean materials.

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1.09 PUBLIC SAFETY AND CONVENIENCE

- 1.09.1 The Contractor shall conduct the work so as to ensure the least possible obstruction to traffic and inconvenience to the general public in the vicinity of the work and to ensure the protection of persons and property. No road or street shall be closed to the public except with the permission of the District and the proper governmental authorities. Fire hydrants on or adjacent to the work shall be accessible to fire-fighting equipment. Temporary provisions shall be made by the Contractor to insure the use of sidewalks, private and public driveways and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses.
- 1.09.2 Where a hazard exists to employees because of traffic or haulage conditions at work site that encroach upon public streets, CCR Title 8, Sections 1598 and 1599 regarding traffic control and flaggers will be followed.

1.10 WORK SITE

- 1.10.1 Contractor will perform the Work without interference with the District's employees or operations in areas around the Work site. Contractor will, at its own expense, keep the site of the Work and areas immediately adjacent thereto in an orderly and neat condition, clean and free from accumulation of waste materials and rubbish on a daily basis. Upon completion or termination of the Work, Contractor will remove all waste materials, rubbish, temporary structures, tools, equipment and surplus materials from the site of the Work.

1.11 SAFETY EQUIPMENT

- 1.11.1 Contractor must provide their own first aid supplies and emergency response equipment. Contractor must certify that at least one employee on each work shift has current training in emergency first aid and cardiopulmonary resuscitation (CPR). The District will not provide equipment maintenance or servicing for Contractor work activities. The District will not supply air monitoring or sampling equipment, respiratory protection, personal protective equipment (PPE) or other safety equipment to persons who are not the District employees. Contractor is required to provide their own tools and equipment and maintain their own PPE, respiratory protection, breathing air supplies, breathing air distributions systems and other safety equipment and supplies.

1.12 INCIDENT REPORTING

- 1.12.1 Contractor will immediately notify the District of any occupational injury or illness, employee exposure to hazardous substances, vehicle accidents, property damage, or environmental spills or releases. Contractor will provide a written incident report (using Appendix B forms 2 & 3) to the District's Project Manager within 24 hours of any such occurrence. The District reserves the right to review Contractor incident investigations and/or perform the District's own investigations, for the sole purpose of verifying facts, protecting the District personnel and property, and limiting the District's liability.

1.13 SECURITY

- 1.13.1 Contractors shall comply with the District's security and access procedures for entry onto

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the District's property or into the District's facilities. Contractor employees are authorized to enter only those work areas and structures specific to their contractual scope of work. Contractor will immediately and permanently remove any person found loitering or making unauthorized entry to the District property and facilities.

- 1.13.2 Contractors shall maintain a daily log of all employees present on-site. This log is to be used in an emergency to identify missing personnel. Contractor employees must be logged in and out of the site each day in accordance with the District's security procedures.
- 1.13.3 A **visitor** is defined as any person not covered by contractual agreements with the District, excluding regulatory inspectors and compliance officers. Visitors may include vendors, tour groups or guests of the District management or the contractor. All visitors to the District facilities or properties must have prior written authorization from the the District Project Manager. Visitors must be escorted by a Contractor supervisor or manager, or by the District personnel, at all times while on-site. Visitors are prohibited from contact with hazardous substances or materials on-site and are also prohibited from entering any area of the work site that requires PPE, respirators, or specialized medical monitoring or safety training.
- 1.13.4 Contractors shall immediately notify the District management of any regulatory agency inspectors or compliance personnel who request information about on-site activities or who request entry to the District facilities or property. This includes personnel from city, county, state or federal government agencies. Regulatory and government must provide appropriate identification prior to entering the District facilities or properties. In addition, regulatory and government personnel must provide proof of appropriate medical evaluations and safety and health training before entering any work area where such qualifications are required. Regulatory and government personnel must also comply with site requirements for safety equipment, PPE and respirators before entering work areas that require such equipment.

1.14 COMPLIANCE WITH LAWS

- 1.14.1 Contractor will perform the Work and any other obligations under this Agreement in strict compliance with all Applicable Laws. The District will not be responsible for monitoring Contractor's compliance with any Applicable Laws. Contractor shall formally inspect their work sites and work activities at least weekly to ensure a safe and healthy work environment. These inspections shall be documented in writing. Upon request, Contractor shall provide the District with copies of such documentation and any corrective actions.

1.15 SHORING AND TRENCHING SAFETY PLAN

- 1.15.1 Attention is directed to Section 832 of the Civil Code of the State of California relating to lateral and subjacent support, and the Contractor shall comply with this law. The submittal of this Plan to the District does not constitute the District approval of such Plan or any District liability thereof.
- 1.15.2 In accordance with Section 6705 of the State Labor Code, the Contractor shall submit to the District specific plans to show details of provisions for worker protection from caving

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ground. Not less than fourteen (14) days before beginning excavation for any trench or trenches five feet (5') or more in depth required under this Contract, the Contractor shall furnish to the District Engineer working drawings of his trench safety plan. The trench safety plan working drawing shall be detailed plans showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground. If such plan varies from the shoring system standards established by the Construction Safety Orders of the California Department of Industrial Relations or the Federal Safety and Health Regulations for Construction of the Occupational Safety and Health Administration, Department of Labor, the plan shall be prepared by a registered civil or structural engineer. The Contractor shall provide qualified supervision as required by applicable laws, regulations and the Contract Documents. In no event shall the Contractor use a shoring, sloping or protective system less than that required by said Construction Safety Orders, or less effective than that required by said Federal Safety and Health Regulations for Construction. Submission of this plan in no way relieves the Contractor from the requirements to maintain safety in all operations performed by him or his Subcontractors.

- 1.15.3 The Contractor shall promptly, and before the following conditions are disturbed, notify the District, in writing of any:
 - 1.15.3.1 Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law
 - 1.15.3.2 Subsurface or latent physical conditions at the site differing from those indicated; or
 - 1.15.3.3 unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract
- 1.15.4 The District shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work shall issue a change order under the procedures described in the contract.
- 1.15.5 In the event that a dispute arises between the District and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's costs of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The Contractor shall retain any and all rights provided either by contract or by law, which pertain to the resolution of disputes and protests between the contracting parties.
- 1.15.6 All excavations/trenches four feet (4') or deeper shall be considered a confined space. Appropriate atmospheric testing and documentation shall be instituted in accordance with Federal, State and local laws, ordinances and codes, and to the rules and regulations established by the California Division of Industrial Safety.

1.16 HAZARDOUS WASTES AND UNFORESEEN CONDITIONS –

- 1.16.1 In accordance with Section 7104 of the State Public Contract Code, if the work contemplated hereunder involves digging trenches or other excavations that extend deeper

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than four feet below the surface, the Contractor shall promptly, and before the following conditions are disturbed, notify the District, in writing, of any;

1.17 FLAMMABLE, HAZARDOUS AND/OR TOXIC MATERIALS

- 1.17.1 Solvents, gasoline, and other hazardous materials may be in the wastewater, and therefore, the work site may be hazardous to open flames, sparks, or unventilated occupancy. The Contractor shall take measures to ensure his personnel observe proper safety precautions when working in these areas. Any flammable, hazardous or toxic materials brought into the work area must be pre-approved, in writing, by the District and must be accompanied by the most current MSD sheet. Any flammable, hazardous or toxic materials brought into the work area must be properly stored to prevent spontaneous combustion or dispersion, and must be stored using the appropriate level of secondary spill containment. Flammable, hazardous or toxic materials may never be placed into any sewer or drain piping nor buried on the District's property. The Contractor shall maintain a current and up-to-date copy of all laws, ordinances, codes, rules, regulations and lawful orders of any regulatory authority having jurisdiction or control over flammable, hazardous or toxic materials and, at Contractor's expense, shall comply with said laws, ordinances, codes, rules, regulations and lawful orders.
- 1.17.2 The Contractor must provide all certificates and registrations as required by the California Business and Professions Code, CCR Title 22, and other regulations governing the removal or remediation of hazardous substances.

1.18 PERMITS, LICENSES AND INSPECTIONS

- 1.18.1 Contractor will secure and pay for all licenses, permits and inspections necessary for prosecution and completion of the Work. Within 5 working days of receiving such documents, Contractor will deliver to the District copies of all permits, written approvals, licenses and inspections.

1.19 EMERGENCY WORK

- 1.19.1 **Corrective action:** The Contractor shall perform any and all operations and shall furnish any materials and equipment necessary during an emergency endangering life or property. In all cases, Contractor shall notify the District of the emergency as soon as practicable, but shall not wait for instruction before proceeding to properly protect both life and property.
- 1.19.2 **Adjustments to the contract:** If as a result of an emergency, work is added to or deleted from the contract between the District and the Contractor, the contract shall be adjusted in terms of compensation, time for performance and/or other relevant contract conditions in accordance with the provisions of the contract governing such matters.
- 1.19.3 **Emergency contacts:** The Contractor shall file with the District a written list giving the names, addresses, and telephone numbers of at least two of his representatives who can be contacted at any time in case of emergencies. The representative shall be fully authorized and equipped to correct unsafe or inconvenient conditions on short notice. The Contractor shall promptly notify the District of all changes in the listing.
- 1.19.4 **Special Corrective Actions:** The District reserves the right, exercisable without advance

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notice to the Contractor, to take corrective action and to perform necessary repairs in an emergency if the District determines for any reason that the Contractor is or may be unable to respond to the emergency in as timely or effective a manner as the District could do so. Emergency work undertaken by the District under these circumstances may be performed by the District's own forces and resources, by contract with others, or both. The exercise of this right shall not terminate the contract between the Contractor and the District except as provided in 1.15.4.

1.20 SUBMITTALS

1.20.1 Prior to receiving Notice to Proceed, the Contractor shall submit to the District all documents indicated in Parts A-D of the "Contractor Safety; Assessment of Safety Programs" document submitted with this contract specification.

1.21 STOP ORDERS

1.21.1 In the event the Contractor fails to observe any of the necessary safety provisions, including the District's "Contractor Safety Handbook" guidelines, the District may stop the work and direct the Contractor to comply with the applicable provisions, or may order the necessary work be done by others. All impacts, both monetary and time-related, associated with stoppage of the work in order to comply with the contract specifications pertaining to safety requirements, and all costs of having the necessary work done by others shall be borne by and be the obligation of the Contractor.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SAFETY & HEALTH
02160-9

**ATTACHMENT 1
INSURANCE REQUIREMENTS FOR CONTRACTORS**

Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by Contractor, his agents, representative, or employees.

Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage (occurrence Form CG 0001).
2. Insurance Services Office Form Number CA 0001 covering Automobile Liability, Code 1 (any auto).
3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.

Minimum Limits of Insurance

Contractor shall maintain limits no less than:

- | | |
|--|---|
| 1. General Liability:
(Including operations, products and completed operations, as applicable.) | \$5,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. |
| 2. Automobile Liability: | \$1,000,000 per accident for bodily injury and property damage. |
| 3. Employer's Liability: | \$1,000,000 per accident for bodily injury or disease. |

Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the District. At the option of the District, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respected the District, its officers, officials, employees and volunteers; or Contractor shall provide a financial guarantee satisfactory to the District guaranteeing payment of losses and related investigations, claim administration and defense expenses.

Other Insurance Provisions

The commercial general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

1. The District, its officers, officials, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance, or as a separate owner's policy (CG 20 10 11 85).
2. For any claims related to this project, the Contractor's insurance coverage shall be primary insurance as respects the District, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the District, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
3. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the District.
4. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the District.

Verification of Coverage

Contractor shall furnish the District with original certificates and amendatory endorsements effecting coverage required by this clause. The endorsements should be on forms provided by the District or on other than the District's forms provided those endorsements conform to District requirements. All certificates and endorsements are to be received and approved by the District before work commences. The District reserves the right to require complete, certified copies of all required insurance policies, including endorsements effecting the coverage required by these specifications at any time.

Subcontractors

Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor to the District for review and approval. All coverages for subcontractors shall be subject to all the requirements stated herein.

Acknowledgment Form

The Vallejo Sanitation and Flood Control District Basic Safety Guidelines for Contractors has been developed to eliminate or reduce hazards and risks associated with Contractor's activities, to prevent accidents and injuries, and to prevent property damages.

The Contractor Safety Handbook provides an overview of safety requirements and does not address all safety issues that might be encountered, nor does it necessarily reflect the most current safety and health standards. Therefore, strict compliance with all of the most current safety, health and environmental regulations (federal, state and local) is required. Non-compliance with these regulations may result in suspension or termination of work in progress.

TO BE COMPLETED PRIOR TO COMMENCING WORK

Name of Contractor/Vendor _____
Purchase Order Number _____ Job location _____

I have been issued and have reviewed the Vallejo Sanitation and Flood Control District Contractor Safety Handbook. I will comply with the Vallejo Sanitation and Flood Control District Contractor Safety Handbook guidelines and all mandated Federal, State and Local safety, health and environmental regulations. I have been advised of the liabilities and consequences of non-compliance.

Signature

Date

WATER RESTORATION CONTRACTORS

CONTRACTOR	PHONE NUMBER
Restoration Management	(800) 400-5058
Service Master	(800) 480-8439

NOTICE: This is a list of contractors familiar with water damage claims. You may want to contact your homeowner's insurance agent for references. Vallejo Sanitation and Flood Control District does not endorse or recommend any specific restoration contractor on overflows located on private property.

CUSTOMER RELATIONS PRACTICES	3
-------------------------------------	----------

TOPIC	LOCATION
Customer Service Practices	3A
Call Out Service Request	3B

CUSTOMER SERVICE PRACTICES

It is important for employees to communicate effectively with District customers, especially in sewage backup situations. How we communicate – on the phone, in writing, or in person, is how we are perceived. Good communication with the homeowner results in greater confidence in our ability to address the problem satisfactorily, less chance of having the homeowner prolong the claims process, and less chance of him/her exaggerating the damage done to their property.

As a representative of the District, you will occasionally have to deal with an irate homeowner. A calm reasonable homeowner can become an unreasonable irate one should he/she perceive us as being indifferent, uncaring, unresponsive, or incompetent.

Although sometimes difficult, effective management of a sewage backup situation is critical. If it is not managed well, the situation can get out of hand and the District can end up with a costly prolonged battle with the homeowner. We want the homeowner to feel assured that the District is responsive and the homeowner's best interest is a top priority.

A Few Communication Tips

1. Give the homeowner ample time to explain the situation or to vent. Show interest in what the homeowner has to say, no matter how many times you have heard it before, or how well you understand the problem.
2. As soon as possible, let the customer know that you will determine if the source of the sewer backup is in the sewer main and if it is, will have it corrected as quickly as you can.
3. Acknowledge the homeowner's concerns. For example, if the homeowner seems angry or worried about property damage, say something like, "I understand you're concerned about the possible damage to your property, but a professional cleanup crew can restore the area, and if it is determined that the District is at fault, the property owner has the right to file a claim for any reasonable repairs or losses resulting from this incident."
4. Express regret for any inconveniences caused by the incident.
5. As much as possible, keep the homeowner informed on what is being done and will be done to correct the problem.
6. Keep focused on getting the job done in a very professional manner. Don't wander from the problem with too much unnecessary small talk with the homeowner.
7. Don't find fault or lay blame on anyone.
8. Before you leave, make sure the homeowner has the name and telephone number of someone at the District to call if he/she has questions or wants information.
9. Make sure someone follows up with a telephone call to ensure everything is being handled as it should be.

Date		 VFWD Call Out Service Request SSORP 3B	
Name		Reporting Address	Cross Street
Phone		Problem Location	Cross Street
Time Received	What kind of problem are you having?		
Taken By			
Given To			
Comments:			
When did you first observe this issue? _____ Is there a backup in the house? Yes ☐ No ☐ Is there a backup outside? Yes ☐ No ☐ Is it still overflowing? Yes ☐ No ☐ Will someone be home? Yes ☐ No ☐ Is there a dog that needs to be secured? Yes ☐ No ☐ If yes, will the dog be secured prior to our arrival?			

SP/Departments/Administration/Shared Documents/Call_Out_Service_Request

Date		 VFWD Call Out Service Request SSORP 3B	
Name		Reporting Address	Cross Street
Phone		Problem Location	Cross Street
Time Received	What kind of problem are you having?		
Taken By			
Given To			
Comments:			
When did you first observe this issue? _____ Is there a backup in the house? Yes ☐ No ☐ Is there a backup outside? Yes ☐ No ☐ Is it still overflowing? Yes ☐ No ☐ Will someone be home? Yes ☐ No ☐ Is there a dog that needs to be secured? Yes ☐ No ☐ If yes, will the dog be secured prior to our arrival?			

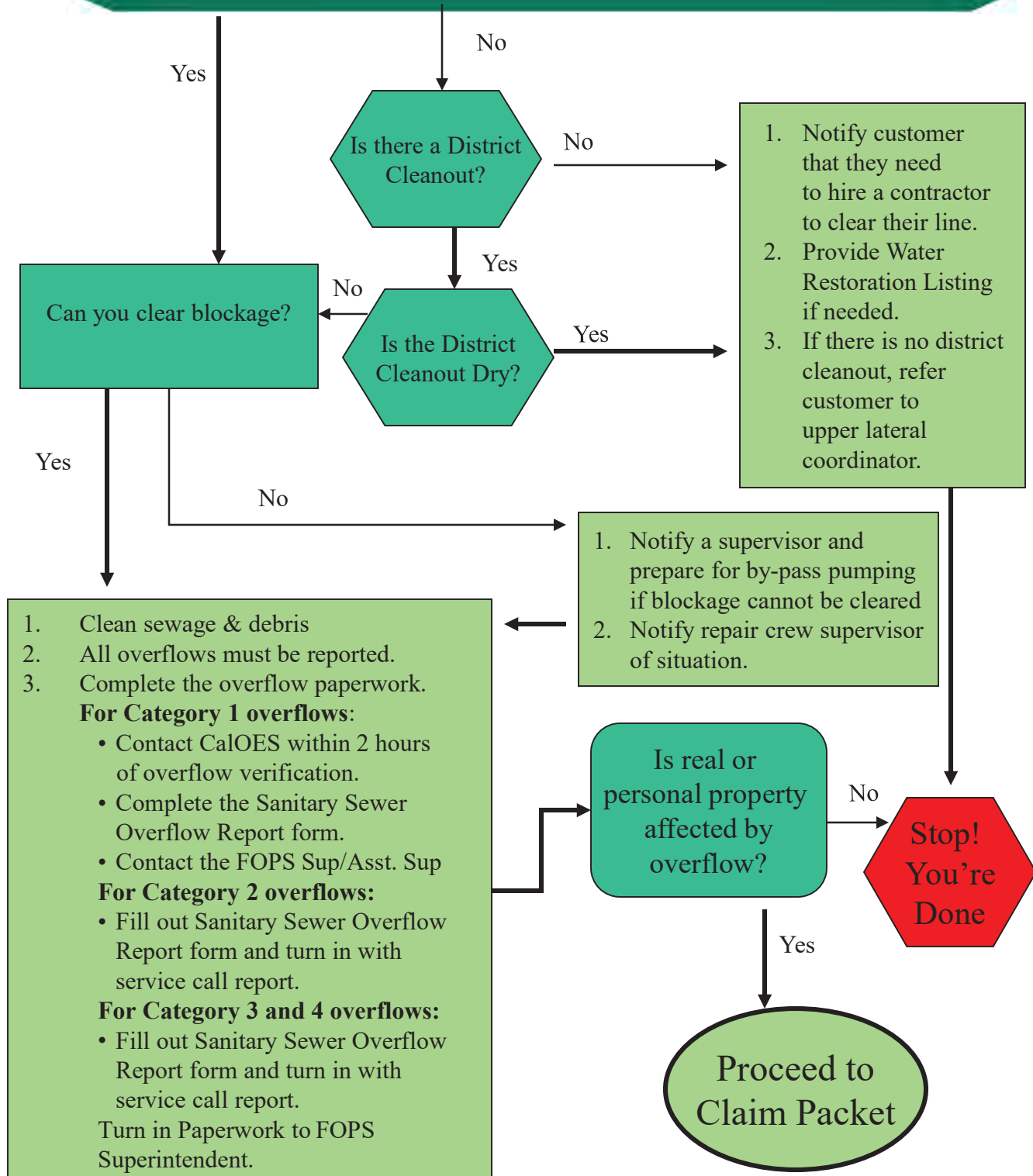
FLOW CHART, RECEIVED SERVICE REQUEST – SEWER PROBLEMS 4

TOPIC	LOCATION
Flow Chart for responding to service request	4A
Flow Chart for SSO Response Procedure	4A-1
Flow Chart for SSO Reporting	4A-2
Plumbing Contractors Listing	4B

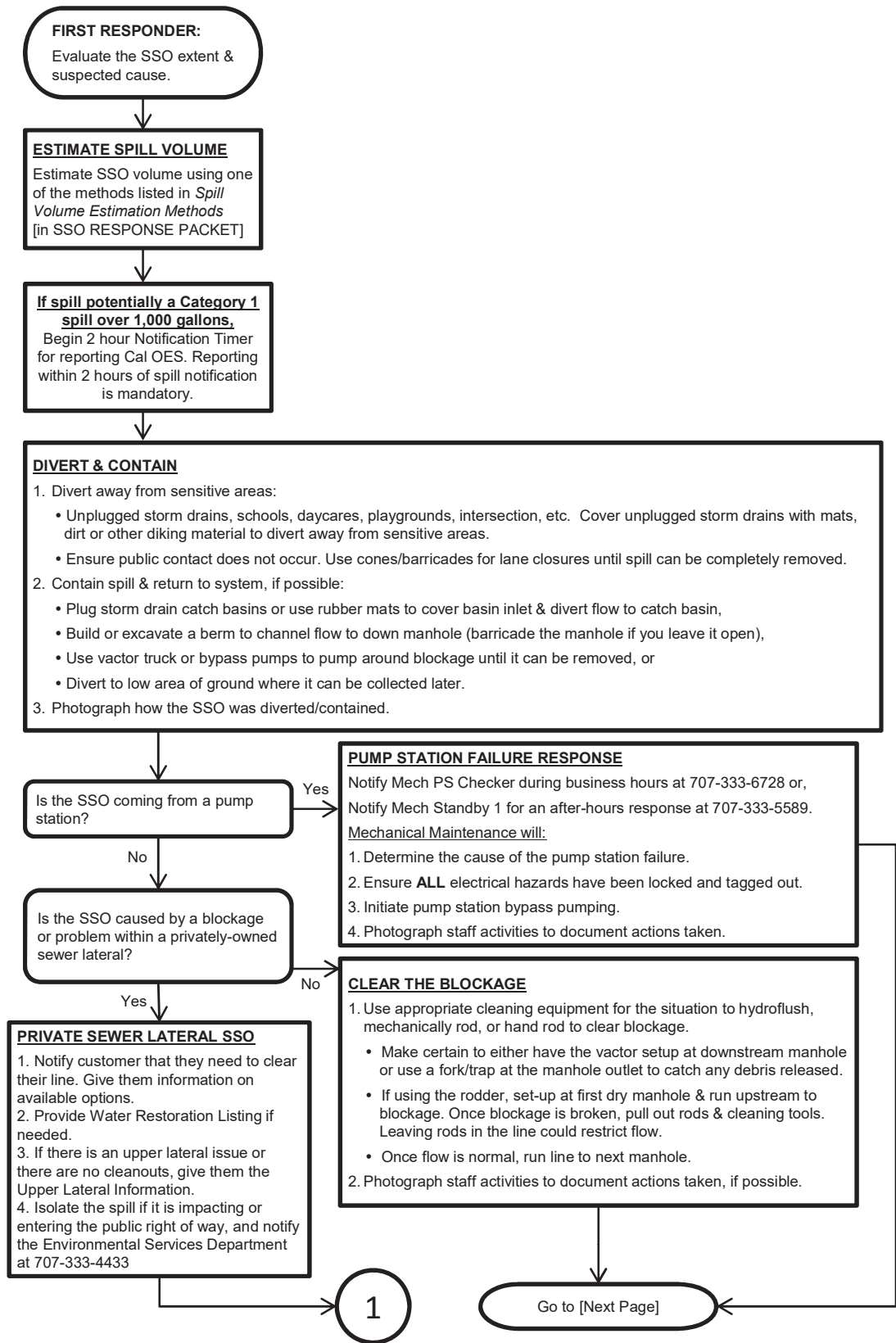
Flow Chart for SSO Response

4A

Received Service Request of Sewer Problem- Is the sewer/storm main blocked?

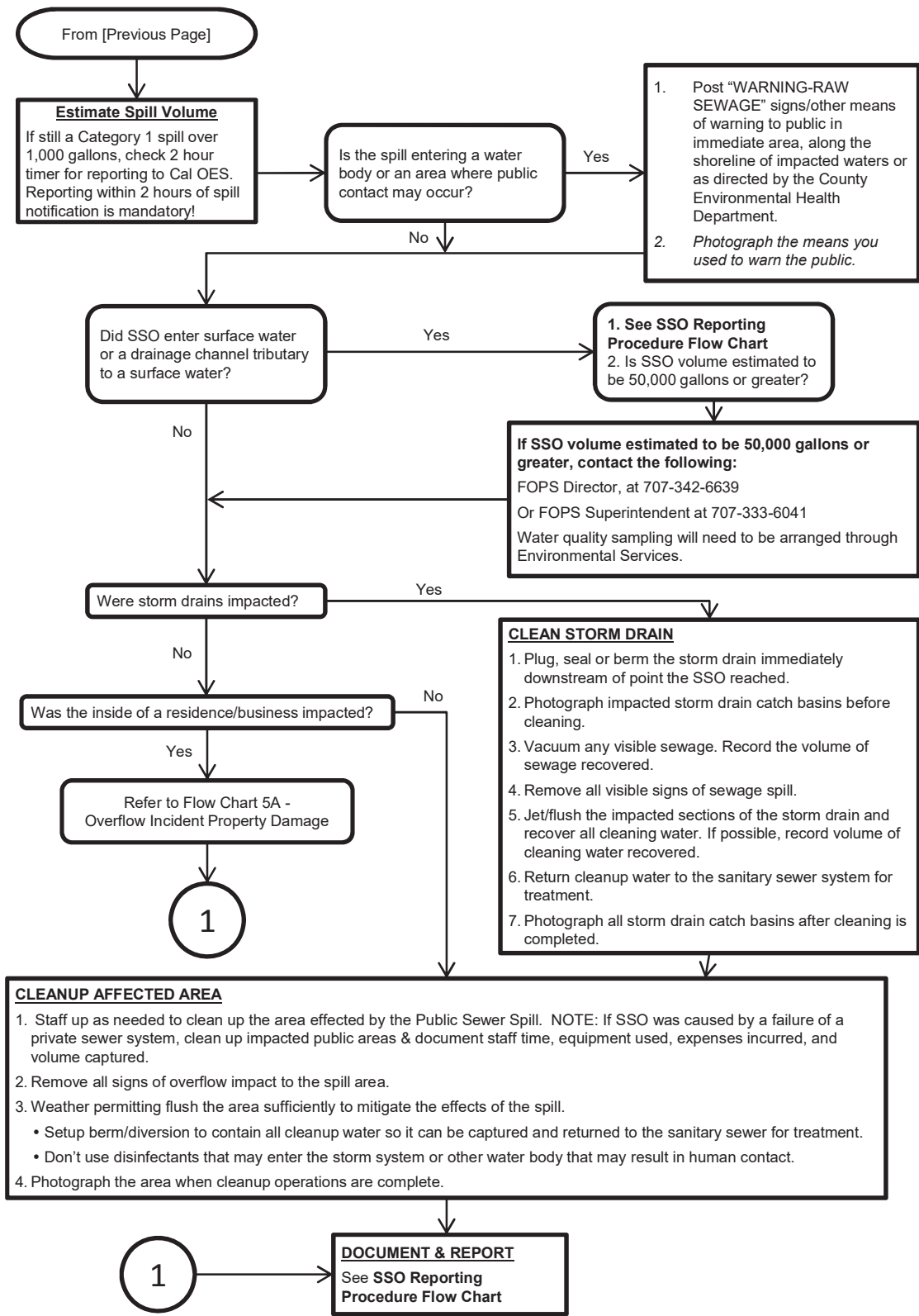


SSO Response Procedure Flowchart (page 1 of 2)

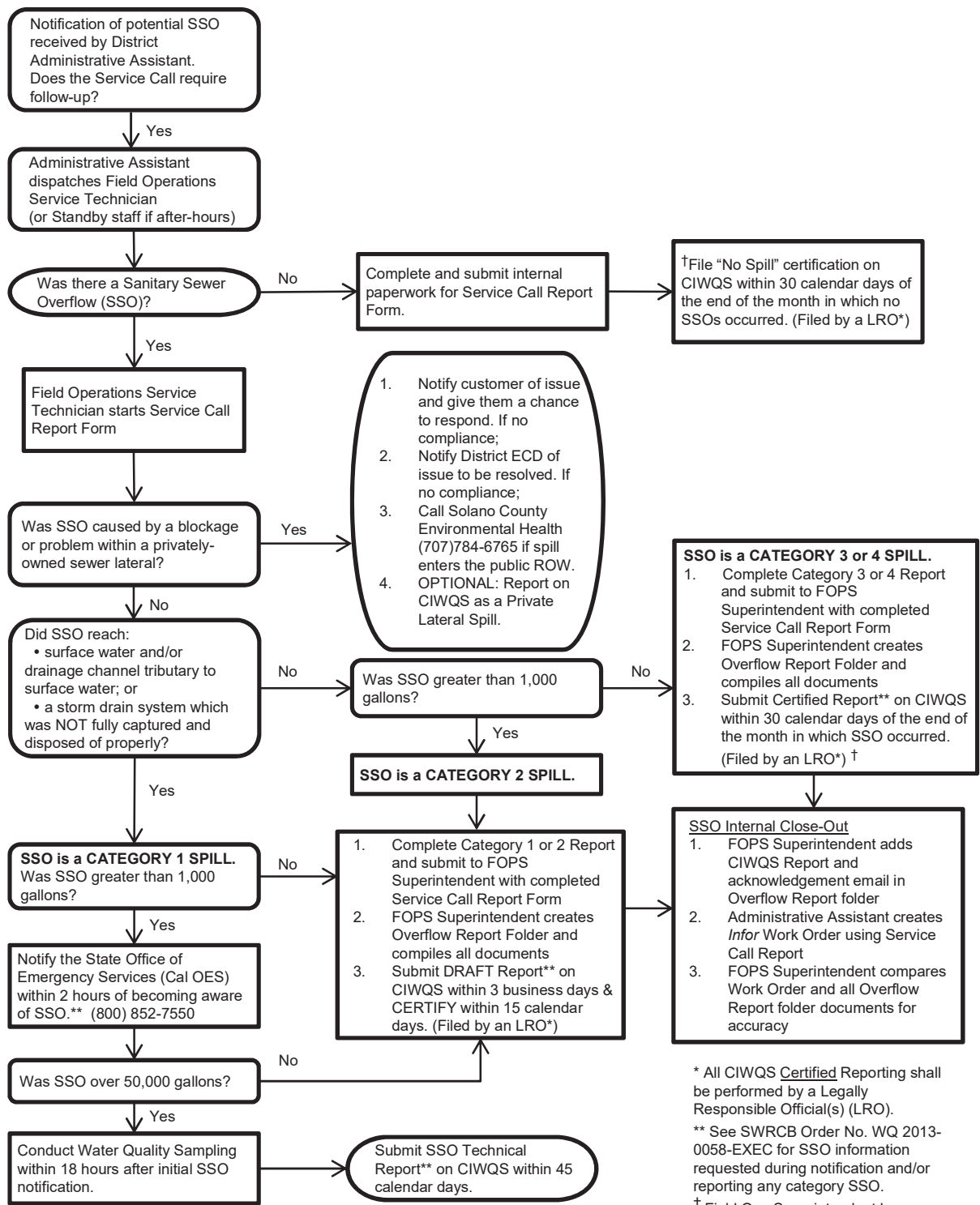


WEST YOST ASSOCIATES

SSO Response Procedure Flowchart (page 2 of 2)



SSO Reporting Procedure Flowchart



PLUMBING CONTRACTOR'S LIST
2-WAY CLEANOUT
DISTRICT CLEAN OUT
UPPER LATERAL WORK

CONTRACTOR	PHONE NUMBER
SEWER CONNECTION, INC.	800-655-7473
ROTO-ROOTER	707-642-9200
MARK'S PLUMBING	707-552-5952
LB PLUMBING	707-333-1597 OR 707-553-9246
C & M PLUMBING	707-552-4263
BYRON SMITH	707-647-2620
BRUNSON PLUMBING	707-644-5100
ADVANCED TRENCHLESS SEWER SOLUTIONS	707-644-7700
AARON PLUMBING	707-642-7518
A+ WATERWORKS	707-558-0221

CONTRACTOR	PHONE NUMBER
ABC (Drain Clearing Only)	707-644-4222

NOTICE: This is a list of contractors familiar with the Upper Lateral Program. Vallejo Sanitation and Flood Control District does not endorse or recommend any specific contractor. You may also hire a contractor not on this list. You may want to get two or more estimates before hiring a contractor. Listing or omission of a contractor does not imply a judgment of a contractor's capabilities.

MATERIAL SUPPLIERS

BAYSHORE MATERIALS, INC.

512 SOLANO AVE.
707-644-0859
M-SAT. 8-5 PM
SUN. 8-3 PM

GENERAL PLUMBING SUPPLY

3436 BROADWAY
AMERICAN CANYON
558-1900
M-F 7:30-5 PM
SAT. 8-2 PM
CLOSED SUNDAY

SSOs – INSIDE STRUCTURE(S)**5**

TOPIC	LOCATION
Flow Chart for responding to a sewer overflow inside a building	5A
Customer Acknowledgement of Sewage Cleaning Service Options	5B
Customer Information Letter	5C
Affected Personal Property Inventory Log	5D
Sewer Overflow/First Responder Form	5E
District Claim Form	5F
Conditions of Temporary Relocation Form	5G
Service Call Report (for Infor IPS input)	5H
Infor IPS History Report	5I

VFWD LINE BLOCKED OVERFLOW OF SEWAGE INTO RESIDENCE CHECKLIST

If our main sewer line was blocked, causing an overflow into a residence, open this envelope and check off the following upon completion:

FIRST RESPONDER:

- ☐ Clear Blockage
- ☐ Contact FOPS Superintendent/Assistant Superintendent with status. If unable to reach leave message
- ☐ Contact RMC at 1-800-400-5058 to report overflow. Verify that they will respond within 90 minutes. If RMC cannot respond within 90 minutes call ServiceMaster 1-800-480-8439
- ☐ Contact Alan Dialon of Carl Warren at (855)-763-5898 or (725)-502-6701 to alert him of the situation, be sure to leave number where you can be reached
- ☐ Take Pictures/video of outside debris (cleanout) and inside condition – don't forget to take pictures/video of items that may have been exposed or any area that looks to be previously damaged.
- ☐ Complete one of the following:
 - ☐ Customer Acknowledge of Sewage Cleaning Service Option (5B) – Give copy to occupant, original in this envelope; **or**
 - ☐ Complete Customer Information Letter (5C) – Give copy to occupant, Original in this envelope
- ☐ Complete Affected Personal Property Inventory Log with occupant (5D) – Give copy to occupant, Original in this envelope
- ☐ Confirm Affected Personal Property Inventory Log with RMC
- ☐ Give claim form (5F) to occupant
- ☐ Complete Sewer Overflow/1st Responder Form - both sides (5E) – Place in this envelope (ensure it is complete)
- ☐ Determine if occupant needs to be relocated for the night
- ☐ If they need to be relocated, contact FOPS Superintendent, Assistant Superintendent or SRM Director for approval to call one of the designated hotels (see 5A) for 1 nights stay.
- ☐ Review the Conditions of Temporary Relocation Form (5G) – Give (1) copy of occupant; original in this envelope

RESTORATION MANAGEMENT COMPANY (RMC):

- ☐ RMC will respond to overflow within 90 minutes of initial call
- ☐ RMC will contact VFWD with estimated time of arrival
- ☐ Once RMC cleaning crew has cleaned and sanitized, RMC Coordinator will contact Alan Dialon of Carl Warren, SRM staff with a status of situation and set up a time to go meet with claimant at location.
- ☐ RMC will send all invoices to Carl Warren and a copy to VFWD

Employee completing this packet (print name)

(CONTINUE ON BACKSIDE)

TURN IN TO SFTY/RM DEPARTMENT	GIVE TO RESIDENT
Customer Acknowledge of Sewage Cleaning Service Option (5B)	Customer Acknowledge of Sewage Cleaning Service Option (5B)
Affected Personal Property Inventory Log with occupant (5D)	Customer Information Letter (5C)
Sewer Overflow/1 st Responder Form - both sides (5E)	Affected Personal Property Inventory Log with occupant (5D)
Service Call Report (for Infor Input) (5H)	claim form
Infor History Report	
This overflow checklist	

SUPERVISOR:

- ☐ Copy Service Call Report (for Infor Input) (5H) – Place copy in this envelope
- ☐ Pull up Infor History Report – Place copy in this envelope

Date package was returned to Field Operations Superintendent: _____
Date

SUPERINTENDENT:

Reviewed for completeness and accuracy by FOPS Superintendent:

Signature of Superintendent

SAFETY & RISK MANAGEMENT STAFF:

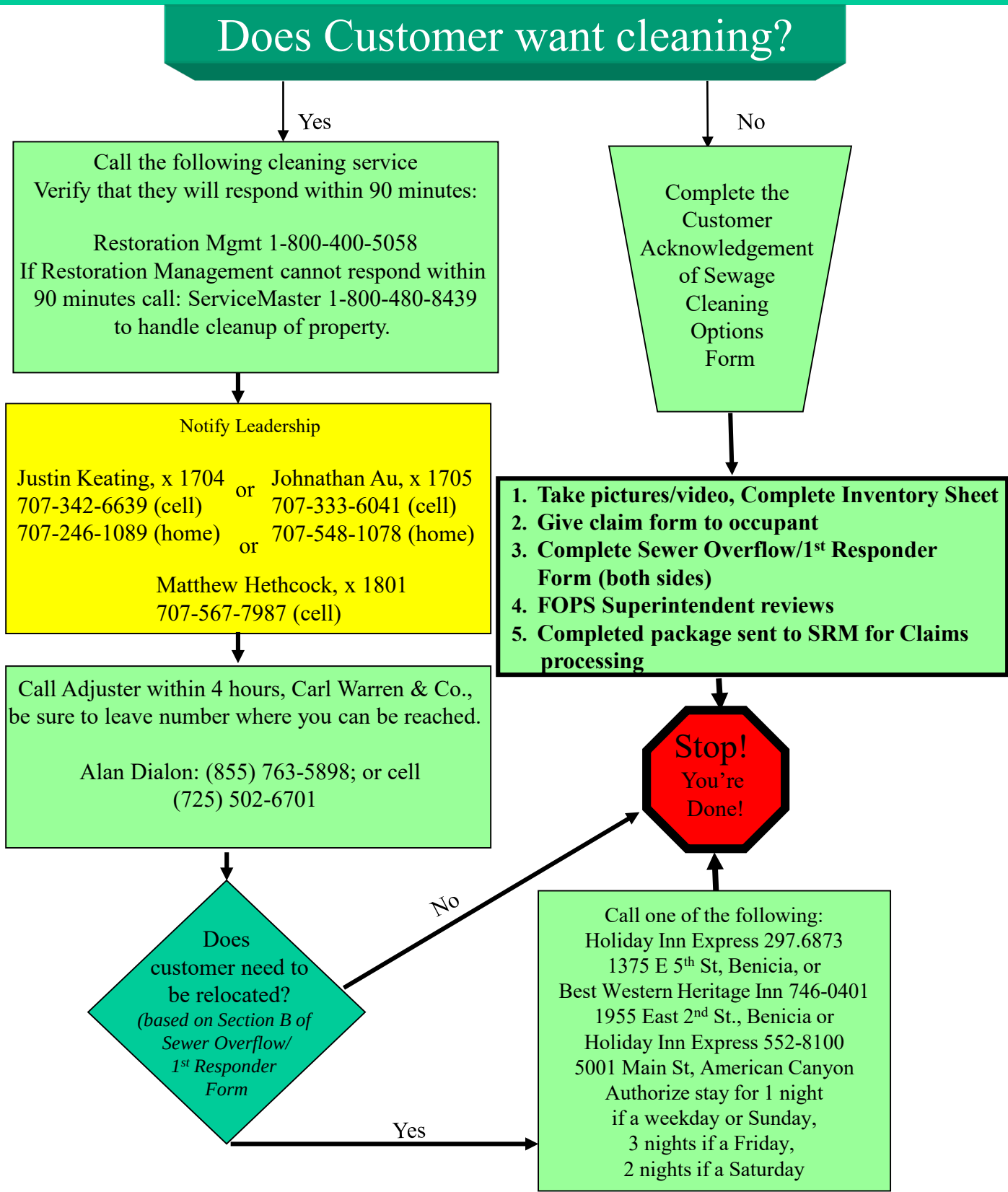
Date package was received by Risk Management: _____
Date

- ☐ Immediately scan and email the following items to Carl Warren:
 - ☐ Customer Acknowledge of Sewage Cleaning Service Option (5B)
 - ☐ Affected Personal Property Inventory Log with occupant (5D)
 - ☐ Sewer Overflow/1st Responder Form – both sides (5E)
 - ☐ Service Call Report (for Infor Input) (5H)
 - ☐ Infor History Report
 - ☐ Property Pro Real Estate Detail of homeownership
 - ☐ Pictures

CARL WARREN:

- ☐ Next business day Alan Dialon of Carl Warren will contact Risk Management staff to let them know who the claim adjuster will be for overflow.

Flow Chart for Overflow Incident Property Damage 5A



**CUSTOMER ACKNOWLEDGMENT OF SEWAGE CLEANING SERVICES OPTIONS
HAVE BEEN DECLINED**

5B



VALLEJO FLOOD & WASTEWATER DISTRICT
450 Ryder St., Vallejo, CA 94590
(707) 644-8949, extension 1801

OWNER NAME: _____ TELEPHONE NO. _____

TENANT NAME: _____ TELEPHONE NO. _____

PROPERTY ADDRESS: _____

On (date): _____ at (time) _____ approximately _____ gallons of (check one)

_____ Sewage _____ Toilet Bowl Water

Overflowed from (check one or more):

_____ Toilet _____ Shower/Tub _____ Washer

_____ Other (specify): _____

The overflow affected the following areas (check one or more):

_____ Heater/AC _____ Bathroom _____ Hallway _____ Kitchen _____ Bedroom _____

_____ Garage _____ Crawlspace _____ Other (specify): _____

The overflow affected the following materials (check one or more):

_____ Tile _____ Linoleum _____ Carpet _____ Wood Flooring _____ Duct work _____

_____ Other (specify): _____ Area Rugs _____ Towels _____ Clothing _____ Misc. (specify): _____

Photos Were _____ Were Not _____ Taken. Photos Denied _____ Number of Photos: _____

The suspected cause of the overflow: _____

This Form Completed By: _____ Date & Time: _____

CUSTOMER – PLEASE READ AND SIGN BELOW:

I/We acknowledge that Vallejo Flood & Wastewater District has offered to provide professional cleaning and decontamination services to remediate the sewage backup and/or overflow described above and that I/We declined the offer. I/We further understand and acknowledge that because I/we have declined, any necessary remediation activities will be conducted without Vallejo Flood & Wastewater District assistance and that Vallejo Flood & Wastewater District will not accept responsibility for work performed by persons other than those engaged by Vallejo Flood & Wastewater District.

This information above was explained to the customer by (please print): _____

OWNER'S SIGNATURE: _____

TENANT'S SIGNATURE: _____



Customer Information Regarding SSO Claims
Vallejo Flood & Wastewater District (VFWD)
450 Ryder St., Vallejo, CA 94590
(707) 644-8949, extension 1801

Address: _____
Dear Mr./Mrs. _____ **Date:** _____

We recognize sewer back flow incidents can be stressful and require immediate response when all facts regarding how the incident occurred are unknown. Rest assured that we do all we can to prevent this type of event from occurring. Nevertheless, tree roots or other debris in the sewer lines occasionally cause a backup into homes immediately upstream of the blockage. At this time the Vallejo Flood & Wastewater District is investigating the cause of this incident.

If VFWD is found to be responsible for the incident, we are committed to cleaning and restoring your property, and to protecting the health of those affected during the remediation process.

The cleaning contractor provided by Vallejo Flood & Wastewater District has been selected because of their adherence to established protocol designed to assure all parties thorough, cost-effective and expeditious restoration services.

The company assigned to provide the necessary cleaning and restoration is _____
And you can reach them directly at _____.

The staff of our Safety & Risk Management for VFWD will be handling your claim. If you have any questions, please contact them at (707) 644-8949 ext 1801, 1802. If no one answers, please leave a message including your name, telephone number, location of the overflow and time cleaning contractor arrived.

If you have questions regarding your claim, please call Alan Dialon with Carl Warren and Company at 725-502-6701.

What you need to do now:

Vallejo Flood & Wastewater District has prepared this brief set of instructions to help you minimize the impact of the loss by responding promptly to the situation.

- ✓ **Do not attempt to clean the area yourself, let the experts handle this.**
- ✓ **Keep people and pets away from the affected area(s).**
- ✓ **Do not remove items from the area – the experts will handle these contents.**
- ✓ **If you've had recent plumbing work, contact your plumber or contractor.**
- ✓ **File your claim with Vallejo Sanitation and Flood Control District as soon as practical – The California Government Code, Section 900-960, requires filing a written claim and outlines specific time lines and notice procedures that must be followed.**

I/We acknowledge receipt of this letter, the Affected Property Inventory Sheet and Claim Form.

Employee Signature: _____ Date: _____

Customer Signature: _____ Date: _____



AFFECTED PERSONAL PROPERTY INVENTORY SHEET 5D

Vallejo Flood & Wastewater District
450 Ryder St., Vallejo, CA 94590
(707) 644-8949, extension 1801, 1802

DATE OF LOSS: _____ ADDRESS OF LOSS: _____

QUANTITY	DESCRIPTION OF EACH ITEM	AGE	COST	REPLACEMENT VALUE
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				

TAKE PICTURE OF ALL DAMAGED ITEMS

Itemized by: _____

Date Itemized: _____

Owner's Signature: _____

Tenant's Signature: _____



SSO/First Responder Form
VALLEJO FLOOD & WASTEWATER DISTRICT

5E

Call # _____

Report # _____

Claims # _____

SECTION A

DATE:	TIME:	AGENCY REPRESENTATIVE
TENANT ☐ OWNER ☐	CREW:	
RESIDENT:	OWNER/PROPERTY MANAGERS:	
ADDRESS:	ADDRESS:	
STREET CITY, STATE AND ZIP	STREET CITY, STATE AND ZIP CODE	
PHONE:	PHONE:	
CLEANING CONTRACTOR CALLED/TIME:	INSURANCE ADJUSTOR CALLED/TIME:	
CAUSE OF FLOODING:		
LOCATION OF SEWER/STORM SYSTEM: ☐ STREET ☐ REAR EASEMENT ☐ SERVICE LINE ☐ MAINLINE ☐ MANHOLE #'S _____ TO _____		
DAMAGE: ☐ WASTEWATER ☐ STORM WATER		
COMMENTS:		
BACK FLOW PREVENTOR EXISTING? ☐ YES ☐ NO If no, do you recommend installing one? ☐ YES ☐ NO		
CLEANING SERVICES: ☐ REQUIRED ☐ NOT REQUIRED		
SECTION B LIVABILITY ASSESSMENT		
Does any resident have asthma or allergies? Yes ☐ No ☐ If so, please list: _____		
Does any resident have sensitivity to any chemicals? Yes ☐ No ☐ If so please list: _____		
Are there any residents that are under the age of 6 years old? Yes ☐ No ☐		
Are there any residents that are over the age of 65 years old? Yes ☐ No ☐		
Is the residence used as a childcare or extended care facility? Yes ☐ No ☐		
Is any resident currently under a doctor's care? Yes ☐ No ☐		
Are there any residents that have other respiratory problems? Yes ☐ No ☐		
Are there any residents that have a compromised immune system? Yes ☐ No ☐		
Is there any resident that is pregnant? Yes ☐ No ☐		
If yes to any of these questions, offer to relocate until area is disinfected.		
I/We acknowledge the receipt of these questions _____ Tenant/Owner		

DAMAGE ASSESSMENT



GOVERNMENT CLAIM FORM
VALLEJO FLOOD & WASTEWATER DISTRICT
450 Ryder St.
Vallejo, CA 94590
707.644.8949, Ext. 1801, 1802

Date/Time Received By District

5F

This form is provided pursuant to Government Code Sections 910 et seq. and shall be used by any person presenting a claim to Vallejo Flood & Wastewater District under Government Code Section 810 et seq. If additional space is needed please attach additional sheets.

*****Please return this claim form and all attachments to the District at the address stated above.*****

A. THE NAME AND POST OFFICE ADDRESS OF THE CLAIMANT: B: THE POST OFFICE ADDRESS TO WHICH THE PERSON PRESENTING THE CLAIM DESIRES NOTICES TO BE SENT:

DAYTIME TELEPHONE:

EVENING TELEPHONE:

TELEPHONE:

C. THE DATE, PLACE, AND OTHER CIRCUMSTANCES OF THE OCCURRENCE OR TRANSACTION WHICH GAVE RISE TO THE CLAIM ASSERTED:

DATE OF OCCURRENCE:

TIME OF OCCURRENCE:

PLACE OF OCCURRENCE:

CIRCUMSTANCES:

D. A GENERAL DESCRIPTION OF THE INDEBTEDNESS, OBLIGATION, INJURY, DAMAGE OR LOSS INCURRED SO FAR AS IT MAY BE KNOWN AT THE TIME OF PRESENTATION OF THE CLAIM:

E. THE NAME OR NAMES OF THE PUBLIC EMPLOYEE OR EMPLOYEES CAUSING THE INJURY, DAMAGE, OR LOSS, IF KNOWN

F. AMOUNT OF CLAIM: \$
(Only specify if the claim is for less than \$10,000.00)

WOULD THIS CLAIM BE A LIMITED CIVIL CASE (I.E., \$25,000.00 OR LESS)? YES _____ NO _____

BASIS OF COMPUTATION:

(Specify particular expenses, estimated prospective injury, damage or loss, general damages, and so on. Please attach copies of bills and/or estimates for repair of damage).

Before signing and presenting this claim, remember that presenting a false claim is a felony. (Penal Code §72.)

SIGNATURE OF CLAIMANT OR REPRESENTATIVE: _____ DATE: _____



CONDITIONS OF TEMPORARY RELOCATION (NON RAIN EVENT)

5G

Vallejo Flood & Wastewater District (VSFCD)
450 Ryder St, Vallejo, CA 94590
(707) 644-8949, ext. 1801, 1802

VFWD is currently working to relocate you to temporary housing until you can be returned to your current residence. At this time, we will contact one of the following hotels listed below and arrange for you to stay there.

Prior to relocating to one of the following hotels:

- **Holiday Inn Express**, 1375 E 5th St, Benicia, CA 94591, (707) 297-6873
- **Best Western Heritage Inn**, 1955 East 2nd Street, Benicia, CA 94510, (707) 746-0401
- **Holiday Inn Express**, 5001 Main Street, American Canyon, CA 94503, (707) 552-8100

(The hotel's Front Desk Manager has the list of authorized District personnel to make reservations), **the following statement must be signed:**

The District agrees to pay for the cost of lodging and food during the time of the relocation. The conditions of the relocation are as follows:

- ***No long distance telephone calls will be paid for by the District***
- ***No movie/games charges***
- ***No room service***
- ***Breakfast, Lunch and dinner meals will be reimbursed from a local restaurant. Meals will be paid up to a maximum of \$15/per meal per person, keep receipt for reimbursement with claim.***

The DISTRICT reserves the right to cancel the hotel and meal accommodation at any time that the DISTRICT determines that it should no longer provide the accommodations. This determination will be based upon several factors including DISTRICT investigation of the need for relocation.

_____ *I have discussed the above conditions with the DISTRICT representative,*
initial

_____ *I have read, understand, and agree to abide by the above conditions.*
initial

Signature of Person to be relocated

Date

Number of people to be put up: _____ Number of Rooms reserved: _____

Confirmation # _____ Hotel Contact: _____

If you have any questions regarding this disclaimer, please contact at Safety & Risk Staff at 707-644-8949 ext 1801, 1802.

White Copy: VFWD, Risk Management Dept./ Yellow Copy: Person relocated



**LONG TERM CONDITIONS OF TEMPORARY RELOCATION
(NON RAIN EVENT) 5G (LT)**

5G (LT)

Vallejo Flood & Wastewater District (VFWD)
450 Ryder St, Vallejo, CA 94590
(707) 644-8949, ext. 1801, 1802

VFWD is currently working to relocate you to temporary housing until you can be returned to your current residence. At this time, we will contact Best Western Heritage Inn and arrange for you to stay in a king kitchenette room.

Prior to relocating to the Best Western Heritage Inn, 1955 East Second Street, Benicia, CA 94510 (707) 746-0401. (Front Desk Manager has the list of authorized District personnel to make reservations), the following statement must be signed:

The District agrees to pay for the cost of lodging during the time of the relocation. The conditions of the relocation are as follows:

- ***No incidentals charges will be paid for by the District***
- ***No long distance telephone calls will be paid for by the District***
- ***No movie/games charges***
- ***No room service***

The DISTRICT reserves the right to cancel the hotel accommodation at any time that the DISTRICT determines that it should no longer provide the accommodations. This determination will be based upon several factors including DISTRICT investigation of the need for relocation.

_____ I have discussed the above conditions with the DISTRICT representative,
initial

_____ I have read, understand, and agree to abide by the above conditions.
initial

Signature of Person to be relocated

Date

Number of people to be put up: _____ Number of Rooms reserved: _____

Confirmation # _____ Best Western Heritage Inn Contact: _____

Authorized Stay: From _____ To _____

If you have any questions regarding this disclaimer, please contact Safety & Risk Management Staff at 707-644-8949 ext. 1801, 1802.

White Copy: VFWD, Risk Management Dept./ Yellow Copy: Person relocated

SERVICE CALL REPORT

5H

CALLER LOG

PROBLEM LOCATION	Problem code _____ Address _____	
Or Location _____		
Responsibility code _____	Inspector code _____	X st _____
CALLER INFORMATION	Last _____	First _____
Address (If different from problem location) _____		X st _____
Phone _____	Taken by (Your code) _____	Date _____
Time (In 24 hr format) _____ Caller Comments _____		

INSPECTION (All times in 24 hour format)	SC# _____	WO# _____
Time in (If first call) _____	Time out (If last call) _____	☐ No work order required
Start time (if multiple calls per log in) _____ Stop time (if multiple calls per log in) _____		
Comments : _____		

JOB COSTS						RESOLUTION (Check only one)	
Labor code	Hours	Eq. code	Hours	Mat. code	Num. used	☐ PP- Private problem ☐ CLR - Line Cleared ☐ PRRES - Problem resolved ☐ PHONE - Handled by phone ☐ RFP - Referred to approp. Party ☐ OTHER - See com. For resoluti ☐ INFO - Cust. Req. info see com. ☐ PLSD - Private SSL Discharge	☐ TEMP- Needs follow up ☐ PCDIN - PCD To Investigate ☐ RECOM - Repair complete ☐ CCB - cleared/cleaned C/B ☐ SSSUR - SS surcharge ☐ STSUR - Storm surcharge Spill Destination ____ State Waters ☐ Spill Recovered Gal.
		Truck					

WORK ORDER (Check only one)				____ Customer Survey Given To Resident	
ASSET		☐ SSL - Sewer service line ☐ SMN-Sewer Main ☐ STMN- Storm main ☐ SMH- Sewer MH ☐ STMH- Storm MH or CB		Activity code _____ Source Code _____ Maint. Type <u>SC</u> Problem Code _____ ☐ Overflow Quantity _____ Footage _____	
Up ID _____		Map page # _____		↓ ↓ This info required when work is preformed on Service line ↓ ↓ Upper lat. C/O: Y N Service line location code: _____	
Down ID _____				Lower lat. C/O: Y N L lat. C/O loc. _____	
SOURCE CODES				SERVICE LINE LOCATION CODES	
B = CATCHBASIN		Q = FORCE MAIN		A = STREET, HEAVY TRAFFIC	
D = DITCH		R = RODDING INLET		S = STREET	
E = BUBBLE OUT		S = SEWER MAIN		C = EASEMENT, POOR ACCESS	
H = MANHOLE		T = UP LAT. C/O		D = EASEMENT, GOOD ACCESS	
L = LOWER LATERAL		U = UPPER LATERAL		H = ALLEY, GOOD ACCESS	
N = DRAIN INLET		W = STORM MAIN		J = OPEN AREA	
O = L LAT. CLEANOUT		X = PRIVATE LATERAL		Footage from District Cleanout to the Main _____	
P = PUMP STATION		OTH = OTHER, SEE COM.			

CALLER PROBLEM CODES

BO = BAD ODOR
BP = BROKEN PIPE
CBCB = C/B COVER BROKEN
CBCO = C/B COVER OFF
CBS = C/B STOPPED
COCB = C/O COVER BROKEN
COCO = C/O COVER OFF
COO = C/O OVERFLOWING
DP = DITCH PLUGGED
HBF = HOME/BASEMENT FLOOD
HIS = HOLE IN STREET
MHCB = M/H COVER BROKEN
MHCN = M/H COVER NOISY
MHCO = M/H COVER OFF
MHO = M/H OVERFLOWING
RICO = R/I COVER OFF
SDS = S/D STOPPED
SF = STREET FLOODED
SI = SEWER INFORMATION
SIH = SEWAGE IN HOUSE
SIY = SEWAGE IN YARD
SL = SEWAGE LEAK
SS = SEWER STOPPED
WL = WATER LEAK
WUH = WATER UNDER HOUSE
YF = YARD FLOODED
OTH = OTHER; SEE COMMENTS

RESPONSIBILITY CODES

CA = DONREY CABLEVISION
CO = PRIVATE CONTRACTOR
CT = CALTRANS
CV = CITY OF VALLEJO
CW = CITY WATER DEPT.
DC = V.S.F.C.D. CONTRACTOR
DI = V.S.F.C.D.
PB = PACIFIC BELL
PG = PACIFIC GAS & ELECTRIC
PO = PROPERTY OWNER
SC = SOLANO COUNTY
OT = OTHER; SEE COMMENTS

ACTIVITY CODES

CCB = CLEAN CATCHBASIN
EEL = ELECTRIC EEL
HANDYJ = HANDY JETTING
FLUSHB = FLUSH BAG
HROD = HAND ROD
IN = INVESTIGATE
JET = JETTING
MF = MARK FACILITIES
MHR = MANHOLE REPAIR
MHSIL = SILENCE NOISY M/H
MLS = MAIN LINE SPOT REPAIR
OTH = OTHER; SEE COMMENTS
RC = REPLACE COVER/GRATE
RD = REMOVE DEBRIS
RFC = REPLACE FRAME/COVER
SLS = SSL SPOT REPAIR
SHOVEL = SHOVEL
SB = SAND BAG
SI = SEWER INFORMATION
VAC = VACUUM CLEAN

EMPLOYEE CODES

NICOLLE ROBINSON -
CONTROL 6-1
AAM = ANGEL MEDINA S-40
ALC = ADAM CLARK S-24
AJS = ADAM SHAFER S-29
BTB = BRIAN BURKET S-36
CLW = CHRIS WRIGHT S-31
DCS = DANILO STANOVICH S-48
HSB = SHANNON BOYT S-33
KJB = KEVIN BOOK S-26
JT = JEFF TALIAFERRO S-22
JD = JASON DEMARTINI S-39
JTR = JEREMIAH RICE S-25
JGG = JIMMY GIANULIAS S-27
JVA = JOHNATHAN AU S-45
JUS = JUSTIN KEATING S-20
KT = KEN TAYLOR S-47
MAG = MICHAEL GRAVES S-23
MAS = MIKE SISSON S-21
PM = PAUL MOORE S-34
RAP = ROB POLSON S-43
SMB = SEAN BAILEY S-46
STS = SEAN SANCHEZ S-28
TJR = TOM J. RIEDL S-35

PROBLEM CODES

BO = BAD ODOR
BP = BROKEN PIPE
CBB = C/B COVER BROKEN
CBO = C/B COVER/GRATE OFF
CBS = C/B STOPPED
CCB = C/O COVER BROKEN
CCM = C/O COVER MISSING
D = DEBRIS (BOTTLES/TRASH)
G = GREASE AND/OR SOAP
GT = GRIT
HS = HYDRAULIC SURCHARGE
L = LEAVES
MCB = M/H COVER BROKEN
MCN = M/H COVER NOISY
MCO = M/H COVER OFF
NOISE = NOISY M/H
O = OFFSET
PR = PAPER/RAGS
R = ROOTS
RCO = R/I COVER OFF
RI = REQUESTED INFO.
RM = ROCK/MUD
SLU = SLUDGE
UB = UNKNOWN BLOCKAGE
WL = WATER LEAK
OTH = OTHER; SEE COMMENTS

EQUIPMENT CODES

EEL = ELECTRIC EEL
HANDY = HANDY JET
JET = JET MACHINE
PR = POWER RODDER
TRUCK = PICKUP TRUCK
VAC = VACUUM / JET TRUCK
BACKH = BACKHOE
DUMP = 5 YD. DUMP TRUCK
OTHER = OTHER; SEE COMMENTS



Vallejo Wastewater
450 Ryder Street | Vallejo, CA 94590
(707) 644-8949

SEWER SERVICE LINE ASSET HISTORY

Report Date 08/23/2017 10:29 AM **Submitted By** FOPS9
Unit ID From 118-102375
Description X ST CORTLAND

Address 118 FALCON DR
VALLEJO CA
Qualifier X ST CORTLAND
Loc S—Street
Svc Status

UNIT SCHEDULED MAINTENANCE

Activity	Interval	Unit	Next Scheduled	Last Completed
EEL	12.00	M	02/13/2018	02/02/2017

WORK ORDER HISTORY

WO#	Activity	Initiated	Scheduled	Completed	Maint. Type	Pri.	Prob.
548596	EEL	01/27/2017	02/13/2017	02/02/2017	PM		
525653	EEL	02/09/2016	02/15/2016	02/18/2016	PM		R
499669	EEL	02/02/2015	02/13/2015	02/11/2015	PM		
472176	EEL	01/28/2014	02/13/2014	02/04/2014	PM		
446358	EEL	02/04/2013	02/13/2013	03/11/2013	PM		
419375	EEL	01/25/2012	02/13/2012	02/01/2012	PM		
398454	EEL	02/01/2011	02/14/2011	02/03/2011	PM		
372573	EEL	12/31/2009	01/13/2010	02/10/2010	PM	ACT	
356172	EEL	06/30/2009	07/13/2009	07/28/2009	PM		
344590	EEL	01/12/2009	01/13/2009	01/29/2009	PM		
333746	EEL	06/11/2008	07/14/2008	07/01/2008	PM		
325545	EEL	02/07/2008	01/14/2008	02/08/2008	PM		
315043	EEL	06/27/2007	07/13/2007	09/25/2007	PM		R
305633	EEL	12/26/2006	01/15/2007	12/29/2006	PM		R
293067	EEL	06/26/2006	07/13/2006	06/26/2006	PM		
284101	EEL	12/29/2005	01/13/2006	01/10/2006	PM		
274138	EEL	06/14/2005	07/13/2005	06/14/2005	PM		
264404	EEL	12/21/2004	01/13/2005	12/29/2004	PM		R
253196	EEL	06/08/2004	07/13/2004	06/14/2004	PM		

WORK ORDER HISTORY

WO#	Activity	Initiated	Scheduled	Completed	Maint. Type	Pri.	Prob.
250712	IULCO	02/20/2004		02/20/2004			
245119	EEL	12/23/2003	01/13/2004	12/29/2003	PM		R
234471	EEL	06/23/2003	07/14/2003	07/02/2003	PM		PR
219156	EEL	12/31/2002	01/13/2003	01/21/2003	PM		
216684	EEL	11/05/2002		11/05/2002	SC		R
269477	COR	07/10/2002		07/10/2002	UM		SC
205534	HROD	02/14/2002		02/14/2002	UM		OTHER
203133	EEL	12/04/2001		12/04/2001	SC		UB
126354	EEL	04/14/1998		04/14/1998	SC		UB

INSPECTION HISTORY

No Inspections

SANITARY SEWER OVERFLOWS – OUTSIDE

6

TOPIC	LOCATION
Procedure for Responding to a SSO from Collection System	6A
Procedure for Responding to a SSO at Pump Station	6B
Procedures for Responding to a SSO at Ryder St. Storage Basin or Outfall	6C

1. Determine if stoppage is in District's sewer line. Secure area with barricades or cones if necessary.
2. Call for assistance and relieve the stoppage immediately. Contain spill if possible. If line cannot be cleared, set up bypass.
3. **If there is an overflow and a structure or personal property has been affected follow the 5A Flow Chart and complete the claim packet.**
4. Take necessary photographs of the affected area for District records. (This is very important.)
5. To minimize health hazards and damage, provide proper cleanup by removing debris and cleaning affected area.
6. Do not volunteer or disown District liability. Instead, neutral comments should be used by District staff indicating the liability issues cannot be addressed until all of the relevant information has been evaluated.
 - A. If overflow is inside structure or affects private property, contact property owner.
 1. The on-call employee is to call outside professional cleaning service for cleaning, sanitizing, and dehumidifiers.
 2. District personnel to offer professional cleaning service at his/her discretion. District personnel to complete 5B – Acknowledgment of Sewage Cleaning Services Options. Property owner/occupant to sign acknowledgement of clean-up options.
 3. If property owner/occupant chooses to relocate, district personnel are to complete and have the 5G – Conditions of Temporary Relocation form completed.
 4. Dispose of water/debris properly.
 - B. If overflow is outside of structure:
 1. If overflow is on the grounds, remove debris by means of rake and shovel.
 2. Broom or hose the spilled material back into the cleanout or manhole.
 3. For streets, use sandbags and a vacuum truck to contain and collect.
 4. Plug storm drains to contain spill and use vacuum truck to collect.
 5. Dispose of debris properly.

The District will attempt to keep all overflows from getting into the bay via the storm drainage system and clean up property to as safe a level as is practical. Each spill has its own circumstances and site conditions, so flexibility is critical to getting this work done rapidly. If spill enters storm system and is controlled, it will be cleaned and vacuumed.
7. District personnel responding to overflow will advise property owner/occupant of procedure for filing a claim for damages, (only if there is damage to real estate and/or personal property). Complete 5E – Sewer Overflow/First Responder Form and 5D - Affected Personal Property Inventory Sheet TAKE PICTURES OF PERSONAL PROPERTY THAT WAS AFFECTED BY OVERFLOW.
8. Make certain that the District's main sewer and affected building's sewer, provided that cleanout meets District standards, are both functioning properly before leaving area.
9. Complete 5H - Service Call Report and follow the directions in Section 7 according to the size of the overflow.

PROCEDURES FOR RESPONDING TO A SANITARY SEWER OVERFLOW (SSO) FROM PUMP STATION

6B

1. Notify FOPS during regular hours or the FOPS standby person after hours for 2 HR reporting.
2. If pump station is not working, contain spill if possible and if necessary establish a by-pass of the station immediately.
3. If there is an overflow during normal hours and a structure or personal property has been affected, contact the Risk Management at: 707.644.8949. ext 1801, 1802. During off hours, contact the Field Operations on-call person to assist with the overflow.
4. Take necessary photographs of the affected area for District records. (This is very important.)
5. To minimize health hazards and damage, provide proper cleanup by removing debris and wash down affected area.
 - a. If overflow is on the grounds, remove debris by means of rake and shovel.
 - b. Broom or hose the spilled material back into the manhole.
 - c. For streets, use sandbags and vacuum truck to contain and collect.
 - d. Plug storm lines to contain spill clean affected storm system.
 - e. Dispose of debris properly.

The District will attempt to keep all overflows from getting in the bay via the storm drainage system and clean up property to as safe a level as is practical. Each spill has its own circumstances and site conditions, so flexibility is critical to getting this work done rapidly.

6. Follow procedures in Section 7 – Reporting Procedures for SSO.

PROCEDURES FOR RESPONDING TO AN OVERFLOW FROM RYDER STREET STORAGE BASIN OR RYDER STREET OUTFALL (Sanitary Sewer Overflow) **6C**

All Ryder Street Storage Basin and Ryder Street Outfall overflows will be designated Category 1 since the overflows will go to drainage ditches and/or waters of the US.

(see definition of Category 1 Overflow on reverse)

A Category 1 spill requires 2-hour notification to the California Office of Emergency Services (Cal OES) **FOPS will handle all the reporting requirements, but Operations will provide the necessary data and collect the samples.**

Ops Procedure:

1. Contact FOPS immediately. If it is after hours, call the FOPS standby person 1 or 2.
2. Complete the following information and provide to FOPS for the reporting:
 - a) The type of overflow (raw sewage/raw sewage diluted with rain water) _____

 - b). Location of overflow: ☐ south end of Storage Basin N 38 05' 23.30"/ W 122 15'00.09"
☐ Ryder Street Outfall N 38 05'24.26"/ W 122 15'11.94"
☐ Other, explain _____
 - c) Estimated volume overflowed (see reverse) _____ Units _____
 - d) Cause of overflow, e.g. system surcharged due to heavy rains, pump failure, etc. _____

 - e) Fate of the overflow i.e.: Mare Island Strait, storm drain _____

 - f) Date and time overflow started _____
 - g) Date and time overflow stopped _____
 - h) Any injuries, fatalities, or evacuations _____
 - i) Corrective actions, including any clean up procedures, i.e.: waited for rains to subside, portable pumps, etc. _____
3. Collect samples following the procedure on the reverse.
Sample Points:
For Storage Basin, collect samples of the flow going into the drainage ditch on the south side of the basin.
For Ryder Street, collect samples of the plant influent.

NOTES:

These events will take quite a bit of coordination with FOPS. It is possible that FOPS will have to make their 2-hour report before the event has finished, or before Ops can estimate the volume. If this is the case, tell FOPS the situation and get the information to them ASAP.

FOPS file this page in the SSO Event Envelope

Definition of a Category 1 Overflow

Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's Sanitary Sewer System failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g. Infiltration pit, percolation pond).

Calculation of Volumes, use the Storage Basin Trend:

For the Storage Basin use the 'Storage Basin Level' to determine the start and stop time of the event. It is confirmed that the basin will overflow at 16.3 feet, make visual verifications. Then compute the volume from the 'Weir A Total Flow to Basin' and the 'Weir B Total Flow to Basin' readings for the duration of the overflow.

For the Ryder Street Outfall use 'Level Deviation' trend to determine the duration of the event. An overflow occurs when the deviation is a positive number greater than zero. For the event, estimate the average deviation for each hour to the nearest tenth of a foot. Then enter the number of hours that the deviation was at each level using the Excel spreadsheet 'RyderStreet'. The total volume will be calculated by the spreadsheet.

A shortcut to the Ryder Street Excel worksheet should be on your desktop. It is kept in L drive in the OPS\Wet Weather Procedures folder

Sample Collection Procedure:

Collect sample of overflow in the brown, 2-liter plastic bottle (spare bottles on shelf beside refrigerators in the lab). Label clearly with the following information:

1. Location of the overflow
2. Date and time sample was collected
3. Initials of sample collector

Pour off a portion of the sample and measure the pH. Note the pH in the Log Book and on the brown sample bottle.

Put on safety glasses and gloves, shake the brown sample bottle then carefully pour a portion of the sample into one of the small round plastic bottles containing an acid preservative, located on the shelf in the Sample Receiving Area of the Lab.

Place the brown bottle and the small round bottle in one of the Ziploc bags located on the shelf in the Sample Receiving Area of the Lab. Place the two samples in one of the refrigerators in the lab.

L:\SafetyRiskManagement\SewerOverflowResponsePlan\2017 Updates\6C - Procedures for Responding to an Overflow from Ryder Street Storage Basin or Ryder Street Update 2017.doc

COVER FOR SECTION 7

REPORTING PROCEDURES FOR A SSO

<u>SSO Category Determination and VSFCD Reporting Procedures for SSOs</u>	LOCATION
Category 1 Overflows: Discharges of untreated or partially treated wastewater of any volume that: - results in a discharge to Surface Water - results in a discharge to a storm drain and is not fully captured Category 2 Overflows: Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly. Category 3 Overflows All discharges of untreated or partially treated wastewater, that are equal to or greater than 50 Gallons and Less than 1,000 Gallons that does not discharge to surface water. Category 4 Overflows All discharges of untreated or partially treated wastewater, Less than 50 Gallons that does not discharge to surface water.	7A
<u>VSFCD Category 1 Reporting Documentation</u>	7B 7B.1 7B.2 7B.3
<u>VSFCD Category 2 Reporting Documentation</u>	7C 7C.1 7C.2 7C.3
<u>VSFCD Category 3 and 4 Reporting Documentation</u>	7D 7D.1 7D.2 7D.3
<u>Procedure for Calculating Spill Volume - San Diego Reference Sheet</u>	7E
<u>Sanitary Sewer Overflow Water Quality Monitoring Program Plan</u>	7F

REPORTING PROCEDURES FOR SANITARY SEWER OVERFLOWS (SSO)

7A

Category 1 Overflows: Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

- **Reach W.O.S. or,**
 - **Reach Surface Waters and/or reach a drainage channel tributary to a surface water, or**
 - **Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly.**
1. Follow the instructions on large (9x12) envelope 7B – VSFCDD (or FOPS) Reporting Procedures for Category 1 Sanitary Sewer Overflows. **If unable to clear blockage on first attempt, start notification process while mobilizing resources to resolve overflow.**
 2. Complete 7B.1, 7B.2, 7B.3 –Sanitary Sewer Overflow Report Form, Additional Information pages inside Envelope 7B – VSFCDD (or FOPS) Reporting Procedures for Sewer Overflows.
 3. For Category 1 spills **IN EXCESS OF 1,000 GALLONS TO W.O.S.:** Within 2 hours of the Notification of the overflow, report the incident to the California Office of Emergency Services as outlined on the envelope. If the overflow TO W.O.S is LESS THAN 1,000 Gallons Cal OES Notification is NOT REQUIRED.
 4. The completed forms for 7B are to be placed in Envelope, 7B – VSFCDD (or FOPS) Reporting Procedures for Sewage Overflows. Complete the outside of the envelope and forward to the Field Operations Superintendent/Assistant ASAP. Outside of normal business hours turn in the report forms by 8am on the first workday following the incident.
 5. The FOPS Superintendent/Assistant Superintendent is to review the event and submit a draft report within 3 business days using the State's web-based reporting system.

Category 2 – Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.

1. Follow the instructions on 7C – VSFCDD Reporting Procedures for Sanitary Sewer Overflow, Category 2 and 7C.1, 7C.2, 7C.3 - Sanitary Sewer Overflow Report Form, Additional Information and return inside Envelope 7C
2. The completed forms for 7C are to be given to FOPS Superintendent/Assistant Superintendent along with the Service Call Sheet ASAP or the next business day.

Category 3 & 4 – All other discharges of untreated or partially treated wastewater, resulting from an enrollee's sanitary sewer system failure or flow condition.

1. The completed forms 7D, 7D.1, 7D.2, 7D.3 are to be given to FOPS Superintendent/Assistant Superintendent along with the Service Call Sheet ASAP or the next business day.

1. VFWD REPORTING PROCEDURES FOR A CATEGORY 1 SSO**7B**

Use this packet for Category 1 overflows which are any overflow that is:

- An SSO of any volume that results in a discharge to Surface Water.
- An SSO of any volume that results in a discharge to a storm drain and is not fully captured.

Remember All Category 1 Spills Require Photo Documentation.

If this SSO is above 50,000 gallons, contact FOPS Supervisor to initiate water quality monitoring.

2. The following information shall be recorded:

- a) **Overflow Location Address** _____
Cross Street, _____ City, _Vallejo_ County, _Solano_, ZIP _____ 94590 _____
- b) **Your name** _____, **agency** _VFWD_, and
Phone # Service Call (707) 310-4230 or Fops 1 Standby (707) 333-8851
- c) **The type of overflow:** Wastewater / Partially Treated Wastewater / Wastewater diluted by I/I
- d) **Overflow Volume:** _____ gal **Volume Recovered:** _____ gal
Overflow Volume that went to W.O.S. _____
**If spill is currently ongoing: Estimated Overflow Rate: _____ gpm
- e) **Brief SSO Incident Description:** _____

- f) **Call Rec:** Time _____ Date _____
- g) **Arrival Time:** Time _____ Date _____
- h) **Overflow Started:** Time _____ Date _____
- i) **Overflow Stopped:** Time _____ Date _____
- j) **Cause of Overflow, line blockage due to:** Roots, Grease, Sludge, Grit, Vandalism, System Failure, Other (explain): _____
- k) **Fate of the Overflow :** Completely Captured and Returned to Sanitary Sewer, Partially Captured and Returned to Sanitary Sewer, Absorbed into Ground, Surface Water Impact, Other(explain) _____
- l) **Corrective actions:** Spill Contained, Line Blockage Cleared with: _____ Area cleaned, Overflow Volume Recovered and returned to Sanitary Sewer: _____
- m) **Drinking Water Impact:** Yes / No (Hiddenbrooke is the only area with this potential)
- n) **Did the spill reach a municipal separate SD System** Yes / No?
- o) **Name of Surface Water impacted by the SSO, if applicable:** _____
- p) **Any injuries, fatalities, or evacuations:** _____
- q) **The responsible party is:** _VFWD_ _____
- r) **Other known SSO impacts:** _____

3. Is this spill to W.O.S. 1,000 gallons or Greater? YES / NO If YES then: Within 2 hours of Notification of the Overflow, Report the Incident to CalOES. If NO then skip to Section 4.

- a) **The California Office of Emergency Services (Cal OES):** (800) 852-7550
Reported to CalOES Date _____ / _____ / _____ **Time** _____ **Control #** _____ **Name of CalOES Contact** _____

4. Complete this SANITARY SEWER OVERFLOW FORM, and the SERVICE CALL REPORT FORM.**5. Give ALL Overflow documentation to the FOPS Superintendent.****6. FOPS Director / FOPS Superintendent:**

Review the event and submit a Draft Report within 3 business days using the STATE web-based reporting system. (<http://ciwqs.waterboards.ca.gov/>) Certify within 15 calendar days of the SSO end date

OVERFLOW Lateral Main Line Manhole **Location on Mare Island** Yes No

PHOTO DOCUMENTATION OF ALL SPILLS: PHOTOS WERE TAKEN ON WHAT DEVICE?

Phone Name _____ Camera _____

How many Pictures were taken? _____ Pictures E-Mailed to: _____

OVERFLOW POINT Manhole Pipe Cleanout Pump Station Multiple Overflow Points

If Multiple Overflow Points, List Overflow Points _____

Other, If OTHER, explain _____

FINAL DESTINATION OF OVERFLOW storm drain captured in storm drain

building/structure

yard/land street/curb & gutter surface water impact groundwater no water involved
unknown

CAUSE OF OVERFLOW

Line blockage due to Infrastructure failure Roots Inflow & Infiltration Grease/Soap Build Electrical Power Failure Vandalism Bypass Flow
Capacity Deficiency Natural Disaster Unknown

Other If Other, explain _____

CORRECTIVE ACTION

Waited for rains to stop/flows to subside.

WEATHER _____

Used jet machine to clear blockage.

Used rodder to clear blockage.

Used eel to clear blockage.

Other, (explain) _____

Area around overflow cleaned of debris.

OBSERVATIONS (check all that apply)

Overflow discolored (explain) _____

Strong Odor (explain) _____

Human or wildlife contact (explain) _____

Paper

Grease

Foam

Other, (explain) _____

ADDITIONAL COMMENTS or REMARKS

POSSIBLE METHODS FOR ESTIMATING SPILL VOLUME**Method 1 Visual “Eyeball” Estimate**

The volume of very small spills can be estimated using an “eyeball estimate.” To use this method imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 to arrive at the gallons.

Number of 5 Gallon Buckets _____ X 5 = _____ Gallons

Number of 50 Gallon Barrels _____ X 50 = _____ Gallons

Method 2 Measured Volume

The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Step 1 – Sketch the shape of the contained sewage

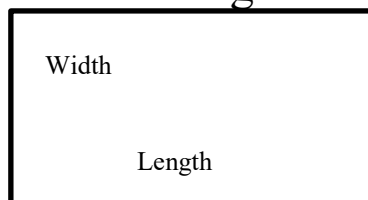
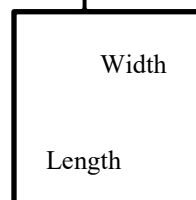
Step 2 – Measure or pace of the dimensions

Step 3 – Measure the depth in several locations (Remember: Convert the Inch Measurements, to Feet. (Inches / 12 for example: 9 inches/12 = .75 Ft)

(Loc. 1 _____ + Loc. 2 _____ + Loc. 3 _____ / 3 = Average Depth _____ Feet)

- Depth of wet stain on concrete surface: .0026” (1/32”)
- Depth of wet stain on asphalt surface: .0013” (1/64”)

Step 4 – Calculate the area using the following formulas:

Rectangle**Square**

Length x Width x Average Depth = Volume

Length _____ x Width _____ x Average Depth _____ = _____ Cubic Feet

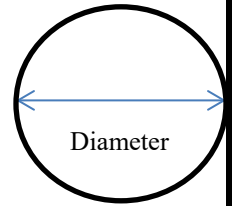
Cubic Feet _____ x 7.48 Gallons / Cubic Foot = _____ Gallons

Circle

$$\text{Volume} = 0.785 \times (\text{diameter} \times \text{diameter}) \times \text{Average Depth}$$

$$0.785 \times (\text{Diameter} \times \text{Diameter}) \times \text{Average Depth} = \text{Cubic Feet}$$

$$\text{Cubic Feet} \times 7.48 \text{ Gallons / Cubic Foot} = \text{Gallons}$$



Overflow Volume Estimation and Methods Worksheet.

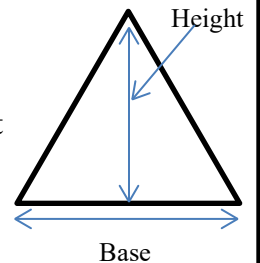
7B.3

Triangle

$$0.5 \times \text{base} \times \text{height} = \text{Area}$$

$$0.5 \times \text{base} \times \text{height} \times \text{average depth} = \text{Cubic Feet}$$

$$\text{Cubic Feet} \times 7.48 \text{ Gallons / Cubic Foot} = \text{Gallons}$$



Method 3 Duration and Flow Rate

Calculating the volume of spills where it is difficult or impossible to measure the area and depth requires a different approach. In this method separate estimates are made of the duration of the spill and the flow rate. The methods of estimating duration and flow rate are:

Duration: Estimated Start Date _____ and Time _____
Stop Date _____ and Time _____
Overflow Duration: Hours _____ Minutes _____
Convert to Minutes: (Hrs. _____ X 60) + Minutes _____ = Total Minutes _____

- Flow Rate: The flow rate is the average flow in GPM leaving the sewer. Here are three ways to estimate the flow rate:
- San Diego Manhole Flow Rate Reference Sheet (7E): This sheet, presented at tab 7E, shows the sewage flowing from a manhole cover for a variety of flow rates. The observations of the field crew are used to select the approximate flow rates from the chart.
 - Flow meter: Changes in flows in the downstream flow meters can be used to estimate the duration and total flow during the spill (better for large SSOs)
 - Estimate based on up-stream connections: Once the location of the spill is known, the number of upstream connections can be determined from the field books. Multiply the number of connection by 200 to 250 gallons per day per connection or 8-10 gallons per hour per connection, or other flow rates that are consistent with the agency’s data for its connections.

Once the duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours or days times the flow rate in gallons per hour or gallons per day.

Flow Rate _____ GPM x _____ Minutes = _____ Gallons



SSCSC MANHOLE OVERFLOW GAUGE

Overflow Simulation courtesy of Eastern Municipal Water District



DISCLAIMER: This overflow simulation may appear differently from those in other systems because of the manhole lid pick hole configuration. Manhole lids with single or multiple pick holes may appear differently during overflow conditions. However, the volume of exfiltration and the footprint of the wet area should appear relatively the same under similar slope conditions.



5 gpm

25 gpm

50 gpm

100 gpm



150 gpm

200 gpm

300 gpm

400 gpm



PROVIDING QUALITY TRAINING FOR COLLECTION SYSTEM PERSONNEL

SINCE 1991

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DISCLAIMER: This overflow simulation may appear differently from those in other systems because of the manhole lid pick hole configuration. Manhole lids with single or multiple pick holes may appear differently during similar overflow conditions. However, the volume of exfiltration and the footprint of the wet area should appear relatively the same under similar slope conditions.

1. VFWD REPORTING PROCEDURES FOR A CATEGORY 2 SSO

7C

Use this packet for Category 2 overflows which are any overflow that is: Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.

Photo Documentation is Required on ALL spills.

2. The following information shall be recorded:

- a) Overflow Location Address _____
Cross Street, _____ City, Vallejo County, Solano, ZIP 94590
- b) Your name _____, agency VFWD, and
Phone # Service Call (707) 310-4230 or Fops 1 Standby (707) 333-8851
- c) The type of overflow: Wastewater / Partially Treated Wastewater / Wastewater diluted by I/I
- d) Overflow Volume: _____ gal Volume Recovered: _____ gal
- e) Brief SSO Incident Description: _____

- f) Call Rec: Time _____ Date _____
- g) Arrival Time: Time _____ Date _____
- h) Overflow Started: Time _____ Date _____
- i) Overflow Stopped: Time _____ Date _____
- j) Cause of Overflow, line blockage due to: Roots, Grease, Sludge, Grit, Vandalism, System Failure, Other (explain): _____
- k) Fate of the Overflow : Completely Captured and Returned to Sanitary Sewer, Partially Captured and Returned to Sanitary Sewer, Absorbed into Ground, Surface Water Impact, Other(explain) _____
- l) Corrective actions: Spill Contained, Line Blockage Cleared with: _____ Area cleaned, Overflow Volume Recovered and returned to Sanitary Sewer: _____
- m) Drinking Water Impact: Yes / No (Hiddenbrooke is the only area with this potential)
- n) Did the spill reach a municipal separate SD System Yes / No?
- o) Name of Surface Water impacted by the SSO, if applicable: _____
- p) Any injuries, fatalities, or evacuations: _____
- q) The responsible party is: VFWD
- r) Other known SSO impacts: _____

3. Complete this SANITARY SEWER OVERFLOW FORM, and the SERVICE CALL REPORT FORM.

4. Give ALL Overflow documentation to the FOPS Superintendent.

5. **FOPS Director / Superintendent:** Review the event and submit a Draft Report within 3 business days using the STATE web-based reporting system. (<http://ciwqs.waterboards.ca.gov/>) Certify within 15 calendar days of the SSO end date.

VFWD REPORTING PROCEDURES FOR A CATEGORY 2 SSO**7C.1****Use this form for a SSO Greater than 1,000 gallons that doesn't meet category 1 criteria****OVERFLOW** Lateral Main Line Manhole **Location on Mare Island** Yes No**PHOTO DOCUMENTATION OF ALL SPILLS: PHOTOS TAKEN ON WHAT DEVICE?****Phone Name** _____ **Camera** _____

How many Pictures were taken? _____ Pictures E-Mailed to: _____

OVERFLOW POINT Manhole Pipe Cleanout Pump Station Multiple Overflow Points

If Multiple Overflow Points, List Overflow Points _____

Other, If OTHER, explain _____

FINAL DESTINATION OF OVERFLOW storm drain captured in storm drain

building/structure

yard/land street/curb & gutter surface water impact groundwater no water involved
unknown**CAUSE OF OVERFLOW**Line blockage due to
Infrastructure failureRoots
Inflow & InfiltrationGrease/Soap Build
Electrical Power FailureVandalism
Bypass

Flow Capacity Deficiency

Natural Disaster

Unknown

Other If Other, explain _____

CORRECTIVE ACTION

Waited for rains to stop/flows to subside.

WEATHER _____

Used jet machine to clear blockage.

Used rodder to clear blockage.

Used eel to clear blockage.

Other, (explain) _____

Area around overflow cleaned of debris.

OBSERVATIONS (check all that apply)

Overflow discolored (explain) _____

Strong Odor (explain) _____

Human or wildlife contact (explain) _____

Paper

Grease

Foam

Other, (explain) _____

ADDITIONAL COMMENTS or REMARKS _____

POSSIBLE METHODS FOR ESTIMATING SPILL VOLUME

Method 1 Visual “Eyeball” Estimate

The volume of very small spills can be estimated using an “eyeball estimate.” To use this method imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 to arrive at the gallons.

Number of 5 Gallon Buckets _____ X 5 = _____ Gallons

Number of 50 Gallon Barrels _____ X 50 = _____ Gallons

Method 2 Measured Volume

The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Step 1 – Sketch the shape of the contained sewage

Step 2 – Measure or pace of the dimensions

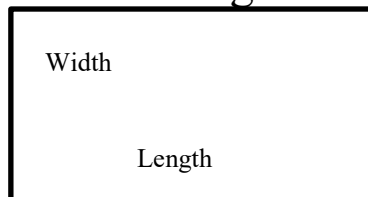
Step 3 – Measure the depth in several locations (Remember: Convert the Inch Measurements, to Feet.
(Inches / 12 for example: 9 inches/12 = .75 Ft)

(Loc. 1 _____ + Loc. 2 _____ + Loc. 3 _____ / 3 = Average Depth _____ Feet)

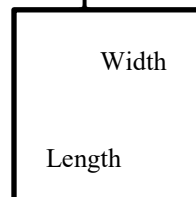
- Depth of wet stain on concrete surface: .0026” (1/32”)
- Depth of wet stain on asphalt surface: .0013” (1/64”)

Step 4 – Calculate the area using the following formulas:

Rectangle



Square



Length x Width x Average Depth = Volume

Length _____ x Width _____ x Average Depth _____ = _____ Cubic Feet

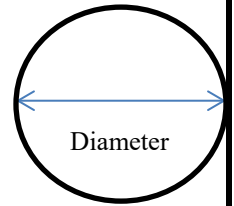
Cubic Feet _____ x 7.48 Gallons / Cubic Foot = _____ Gallons

Circle

$$\text{Volume} = 0.785 \times (\text{diameter} \times \text{diameter}) \times \text{Average Depth}$$

$$0.785 \times (\text{Diameter } ____ \times \text{Diameter } ____) \times \text{Average Depth } ____ = ____ \text{ Cubic Feet}$$

$$\text{Cubic Feet } ________ \times 7.48 \text{ Gallons / Cubic Foot} = ________ \text{ Gallons}$$



Overflow Volume Estimation and Methods Worksheet.

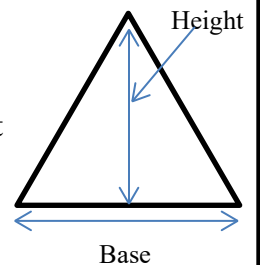
7C.3

Triangle

$$0.5 \times \text{base} \times \text{height} = \text{Area}$$

$$0.5 \times \text{base } ______ \times \text{height } ______ \times \text{average depth } ______ = ______ \text{ Cubic Feet}$$

$$\text{Cubic Feet } ________ \times 7.48 \text{ Gallons / Cubic Foot} = ________ \text{ Gallons}$$



Method 3 Duration and Flow Rate

Calculating the volume of spills where it is difficult or impossible to measure the area and depth requires a different approach. In this method separate estimates are made of the duration of the spill and the flow rate. The methods of estimating duration and flow rate are:

Duration: Estimated Start Date _____ and Time _____
Stop Date _____ and Time _____
Overflow Duration: Hours _____ Minutes _____
Convert to Minutes: (Hrs. _____ X 60) + Minutes _____ = Total Minutes _____

Flow Rate: The flow rate is the average flow in GPM leaving the sewer. Here are three ways to estimate the flow rate:

- San Diego Manhole Flow Rate Reference Sheet (7E): This sheet, presented at tab 7E, shows the sewage flowing from a manhole cover for a variety of flow rates. The observations of the field crew are used to select the approximate flow rates from the chart.
- Flow meter: Changes in flows in the downstream flow meters can be used to estimate the duration and total flow during the spill (better for large SSOs)
- Estimate based on up-stream connections: Once the location of the spill is known, the number of upstream connections can be determined from the field books. Multiply the number of connection by 200 to 250 gallons per day per connection or 8-10 gallons per hour per connection, or other flow rates that are consistent with the agency’s data for its connections.

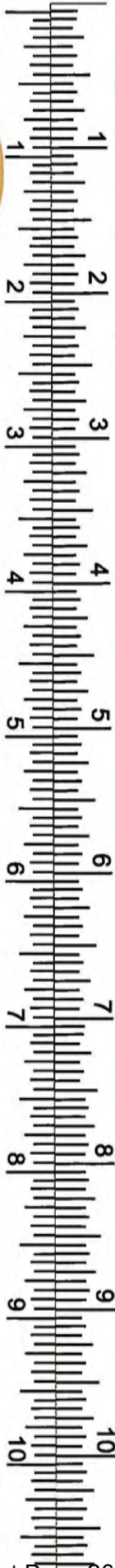
Once the duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours or days times the flow rate in gallons per hour or gallons per day.

Flow Rate _____ GPM x _____ Minutes = _____ Gallon

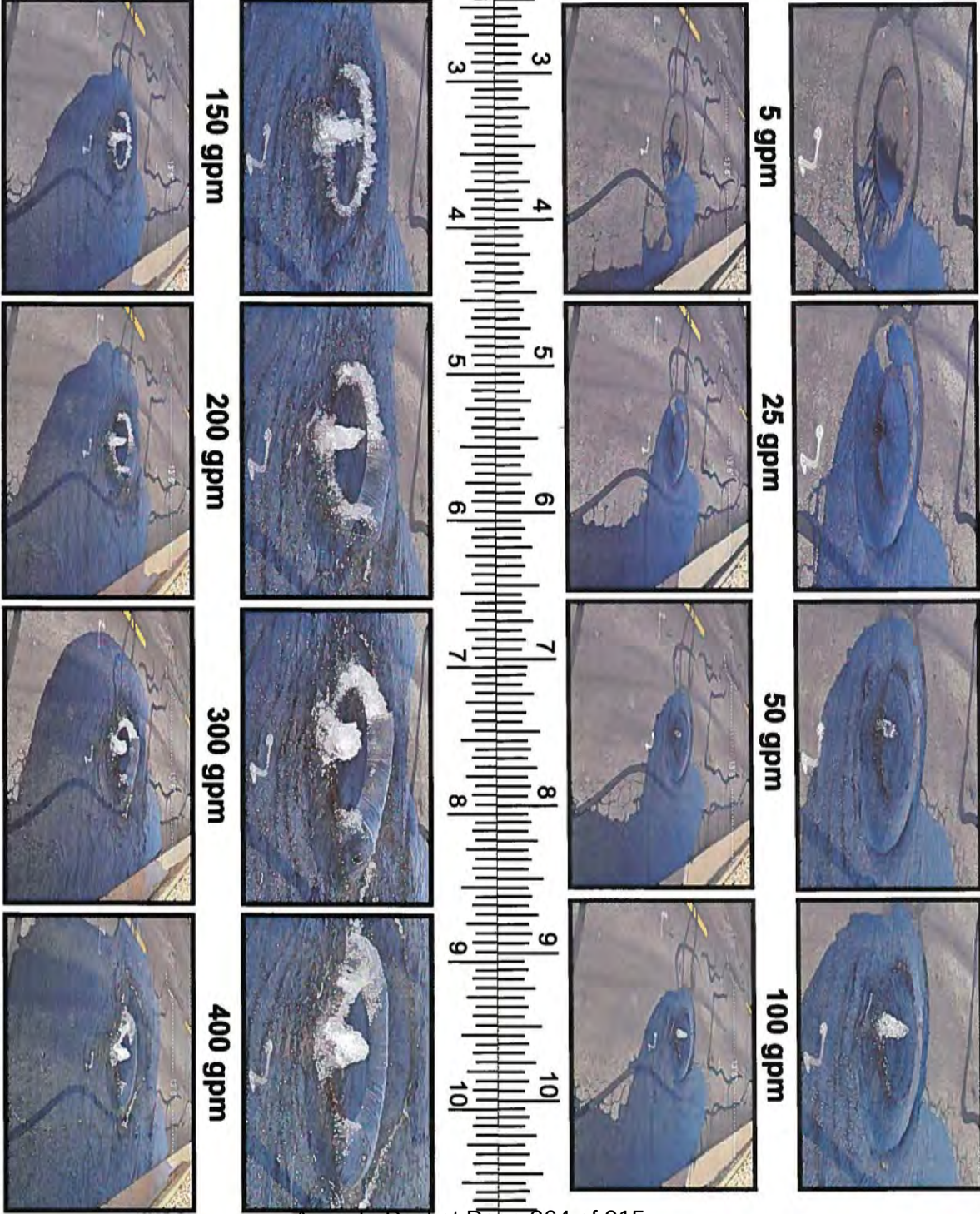


SSCSC MANHOLE OVERFLOW GAUGE

Overflow Simulation courtesy of Eastern Municipal Water District



DISCLAIMER: This overflow simulation may appear differently from those in other systems because of the manhole lid pick hole configuration. Manhole lids with single or multiple pick holes may appear differently during overflow conditions. However, the volume of exfiltration and the footprint of the wet area should appear relatively the same under similar slope conditions.



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Use this packet for:

Category 3 Overflows
 All discharges of untreated or partially treated wastewater, that are equal to or greater than 50 Gallons and Less than 1,000 Gallons that does not discharge to surface water.

Category 4 Overflows
 All discharges of untreated or partially treated wastewater, Less than 50 Gallons that does not discharge to surface water.

Category 3 _____ Category 4 _____

Photo Documentation is Required on ALL spills.

2. The following information shall be recorded:
- a) **Overflow Location**Address _____
 Cross Street, _____ City, _Vallejo_ County, __Solano__, ZIP ____94590__
 - b) **Your name** _____, agency VFWD
 Phone # Service Call (707) 310-4230 or Fops 1 Standby (707) 333-8851
 - c) **The type of overflow:** Wastewater / Partially Treated Wastewater / Wastewater diluted by I/I
 - d) **Overflow Volume:** _____ gal **Volume Recovered:** _____ gal
 - e) **Brief SSO Incident Description:** _____

 - f) **Call Rec:** Time _____ Date _____
 - g) **Arrival Time:** Time _____ Date _____
 - h) **Overflow Started:** Time _____ Date _____
 - i) **Overflow Stopped:** Time _____ Date _____
 - j) **Cause of Overflow, line blockage due to:** Roots, Grease, Sludge, Grit, Vandalism, System Failure, Other (explain): _____
 - k) **Fate of the Overflow :** Completely Captured and Returned to Sanitary Sewer, Partially Captured and Returned to Sanitary Sewer, Absorbed into Ground, Surface Water Impact, Other(explain) _____
 - l) **Corrective actions:** Spill Contained, Line Blockage Cleared with: _____Area cleaned, Overflow Volume Recovered and returned to Sanitary Sewer: _____
 - n) **Did the spill reach a municipal separate SD System Yes / No?** _____
 - o) **Name of Surface Water impacted by the SSO, if applicable:** _____
 - p) **Any injuries, fatalities, or evacuations:** _____
 - q) **The responsible party is:**__ VFWD _____
 - r) **Other known SSO impacts:** _____

3. Complete this SANITARY SEWER OVERFLOW FORM, and the SERVICE CALL REPORT FORM.
4. Give ALL Overflow documentation to the FOPS Superintendent.
5. FOPS Director / Superintendent:
 Review the event and submit a Certified Report within 30 Calendar days of the end of the month in which the SSO occurred.

VFWD REPORTING PROCEDURES FOR A CATEGORY 4 SSO

OVERFLOW Lateral Main Line Manhole **Location on Mare Island** Yes No

PHOTO DOCUMENTATION OF ALL SPILLS: PHOTOS TAKEN ON WHAT DEVICE?

Phone Name _____ **Camera** _____

How many Pictures were taken? _____ Pictures E-Mailed to: _____

OVERFLOW POINT Manhole Pipe Cleanout Pump Station Multiple Overflow Points

If Multiple Overflow Points, List Overflow Points _____

Other, If OTHER, explain _____

FINAL DESTINATION OF OVERFLOW storm drain captured in storm drain
 building/structure yard/land street/curb & gutter surface water impact
 groundwater no water involved unknown

CAUSE OF OVERFLOW

Line blockage due to Infrastructure failure Roots Inflow & Infiltration Grease/Soap Build Electrical Power Failure Vandalism Bypass Flow
 Capacity Deficiency Natural Disaster Unknown

Other If Other, explain _____

CORRECTIVE ACTION

Waited for rains to stop/flows to subside. WEATHER _____
 Used jet machine to clear blockage.
 Used rodder to clear blockage.
 Used eel to clear blockage.
 Other, (explain) _____
 Area around overflow cleaned of debris.

OBSERVATIONS (check all that apply)

Overflow discolored (explain) _____
 Strong Odor (explain) _____
 Human or wildlife contact (explain) _____
 Paper Grease Foam
 Other, (explain) _____

ADDITIONAL COMMENTS or REMARKS _____

Overflow Volume Estimation and Methods Worksheet.

7D.2

POSSIBLE METHODS FOR ESTIMATING SPILL VOLUME

Method 1 Visual “Eyeball” Estimate

The volume of very small spills can be estimated using an “eyeball estimate.” To use this method imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 to arrive at the gallons.

Number of 5 Gallon Buckets _____ X 5 = _____ Gallons

Number of 50 Gallon Barrels _____ X 50 = _____ Gallons

Method 2 Measured Volume

The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Step 1 – Sketch the shape of the contained sewage

Step 2 – Measure or pace of the dimensions

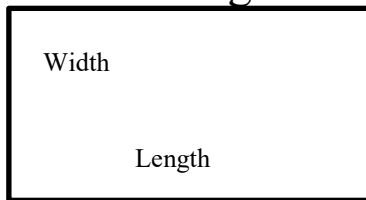
Step 3 – Measure the depth in several locations (Remember: Convert the Inch Measurements, to Feet. (Inches / 12 for example: 9 inches/12 = .75 Ft)

(Loc. 1 _____ + Loc. 2 _____ + Loc. 3 _____ / 3 = Average Depth _____ Feet)

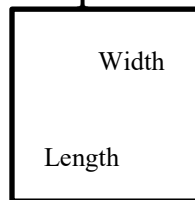
- Depth of wet stain on concrete surface: .0026” (1/32”)
- Depth of wet stain on asphalt surface: .0013” (1/64”)

Step 4 – Calculate the area using the following formulas:

Rectangle



Square



Length x Width x Average Depth = Volume

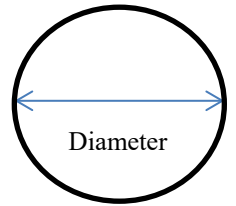
Length _____ x Width _____ x Average Depth _____ = _____ Cubic Feet

Cubic Feet _____ x 7.48 Gallons / Cubic Foot = _____ Gallons

Circle

$$\text{Volume} = 0.785 \times (\text{diameter} \times \text{diameter}) \times \text{Average Depth}$$

$$0.785 \times (\text{Diameter} \times \text{Diameter}) \times \text{Average Depth} = \text{Cubic Feet}$$



$$\text{Cubic Feet} \times 7.48 \text{ Gallons / Cubic Foot} = \text{Gallons}$$

Overflow Volume Estimation and Methods Worksheet.

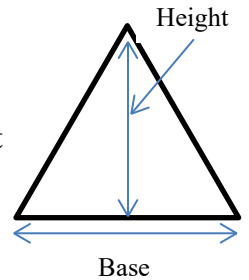
7D.3

Triangle

$$0.5 \times \text{base} \times \text{height} = \text{Area}$$

$$0.5 \times \text{base} \times \text{height} \times \text{average depth} = \text{Cubic Feet}$$

$$\text{Cubic Feet} \times 7.48 \text{ Gallons / Cubic Foot} = \text{Gallons}$$



Method 3 Duration and Flow Rate

Calculating the volume of spills where it is difficult or impossible to measure the area and depth requires a different approach. In this method separate estimates are made of the duration of the spill and the flow rate. The methods of estimating duration and flow rate are:

Duration: Estimated Start Date _____ and Time _____
Stop Date _____ and Time _____
Overflow Duration: Hours _____ Minutes _____
Convert to Minutes: (Hrs. _____ X 60) + Minutes _____ = Total Minutes _____

Flow Rate: The flow rate is the average flow in GPM leaving the sewer. Here are three ways to estimate the flow rate:

- San Diego Manhole Flow Rate Reference Sheet (7E): This sheet, presented at tab 7E, shows the sewage flowing from a manhole cover for a variety of flow rates. The observations of the field crew are used to select the approximate flow rates from the chart.
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Flow Rate _____ GPM x _____ Minutes = _____ Gallon



SSCSC MANHOLE OVERFLOW GAUGE

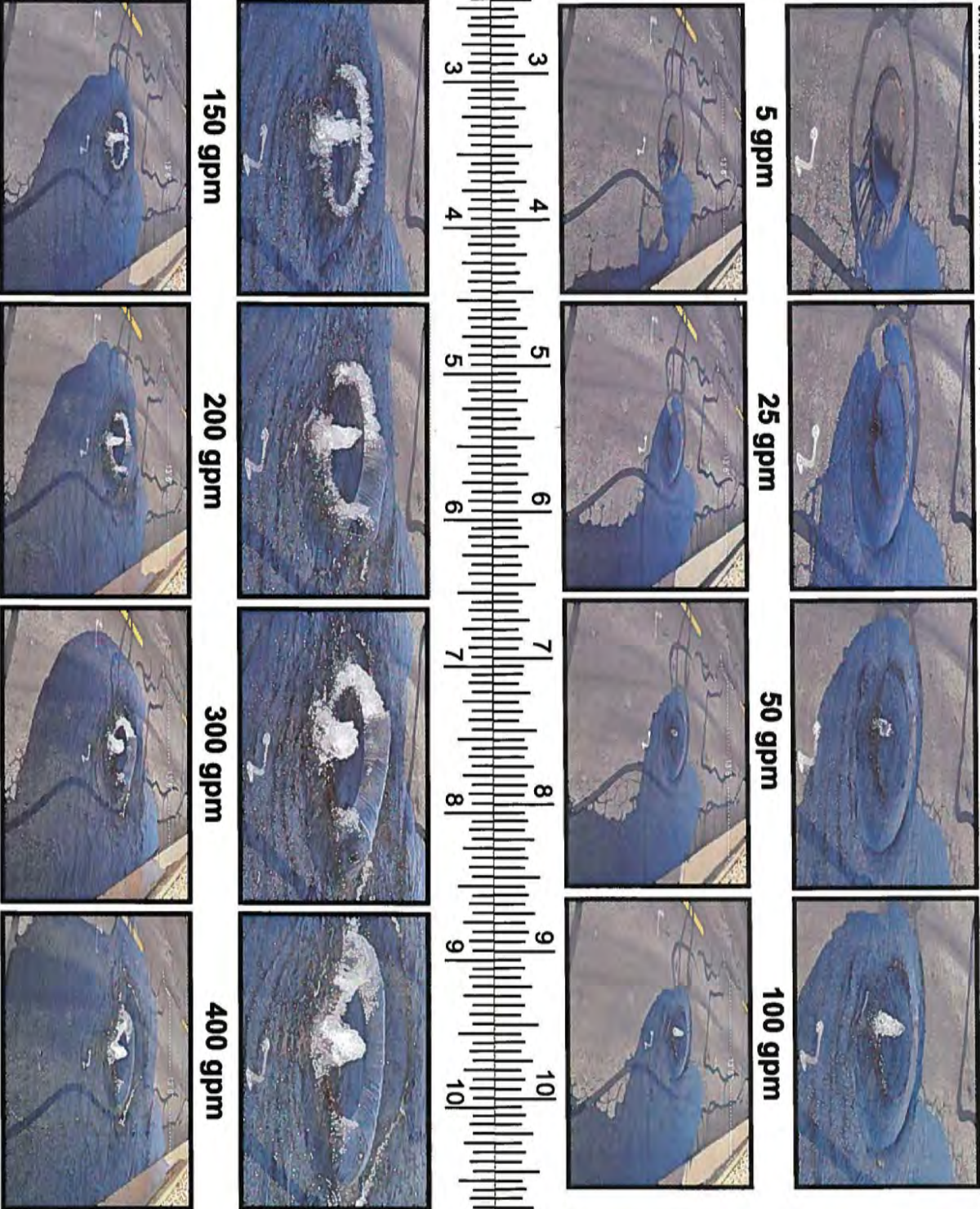
Overflow Simulation courtesy of Eastern Municipal Water District



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Sanitary Sewer Overflow Water Quality Monitoring Program Plan

Introduction

The following procedures have been implemented in compliance with the Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems. The plan outlines the policies and procedures that will be followed to perform water quality sampling within 48 hours of becoming aware of a Category 1 Sanitary Sewer Overflow (SSO) that results in the discharge of 50,000 gallons or greater to surface waters.

Initial Response and Notification of Appropriate Personnel

Initial Response Personnel (the Field Operations (FOPs) department or Maintenance department) will determine if the SSO is a spill that requires sample collection. Initial Response Personnel (IRP) will contact Environmental Services (ES) for sample collection. If samples are to be collected during normal business hours, contact Nicole Van Aken at x1602 or 707-333-7254, to coordinate sample collection. If Nicole is unavailable, Jennifer Harrington at x1600 or 707-656-9844. If samples need to be collected outside of normal business hours, contact Jennifer Harrington at 707-656-9844. At least two ES staff should be sent to collect samples. If possible, IRP should meet ES staff at the SSO site, help determine the sample collection locations and assist with sample collection. If ES staff cannot collect samples within 36 hours of the District becoming aware of the SSO, IRP will collect samples for analysis. IRP are responsible for entering all relevant information and reports on the SSO into CIWQS.

Water Quality Monitoring – Key Elements

- **Trigger for Sampling.** Water quality sampling must be performed for sanitary sewer overflows (SSOs) that are 50,000 gallons or greater and reach surface water.
- **Safety and Access.** Water quality sampling should only be performed if it is safe to do so and access to the surface water is not restricted. Unsafe conditions include, but are not limited to, heavy rains, flooding, slippery and/or steep riverbanks or visibility issues. When sampling is not possible, details of the situation will be recorded in the certified Category 1 SSO Report and the SSO Summary Report submitted to the CIWQS Online SSO Database.
- **When to Sample.** Sampling must be performed (when and if it is safe to do so) within 48 hours of the District becoming aware of the SSO. Water quality sampling should not interfere with stopping the SSO.
- **Where to Sample.** Sampling should account for spill travel time in surface water (see Sample Collection Procedure below).
- **Required Water Quality Analyses.** At a minimum, analyze for ammonia and appropriate bacterial indicators per the RWQCB Basin Plan (see Sampling Parameters below). Also collect a sample to analyze for Salinity to assess the salinity of samples collected.

Water Quality Sampling – Protocol

Observations to record

- Any wastewater debris (paper, solids etc.).
- State of site (water flowing, water stopped etc.).
- Any evidence of impact to environment (fish kill etc.).
- Current weather.

Initially record these observations on the COC for each site, and then transfer the observations to the SSO Summary Report worksheet.

SSO Sample Collection Kit Inventory:

- Cooler
- Ice Pack (stored in freezer)
- 3 sample bottles labeled for ammonia analyses
- 3 sample bottles labeled for enterococcus analyses
- 3 sample bottles labeled for salinity analysis
- Safety gloves
- Safety glasses
- District COC (chain of custody)
- Pen

Sampling Parameters:

- Ammonia
- Enterococcus bacteria
- Salinity

Sampling Locations (for more detail on location see also below):

- “Upstream” of SSO*
- Immediate vicinity where SSO enters water body (“entry”)
- “Downstream” of SSO*

Sample Collection Procedure:

- 1) Retrieve SSO Sample Collection Kit (cooler) and sample collection pole from the back counter of the laboratory.
- 2) Obtain ice pack from freezer & place in cooler.
- 3) Determine the point that the SSO entered waterway and photograph this location (include a reference point in the photo).

If sampling is performed after the SSO has stopped, estimate SSO travel time. This may be done by observing or dropping floatable debris in the surface water and timing how long it takes to travel over a measured distance (e.g., 100 feet). Include

* The terms “upstream” and “downstream” may depend on the tidal cycle if the water body is tidally-influenced. Check the tide chart(s) and table at the following link:
< <http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9415623> >.

sections in the surface water where there are bends, bottlenecks, or other characteristics that may slow down the flow. If the first measurement is uncertain, this time estimate may be performed three to five times, and the values averaged to determine the estimated travel time. The velocity in the upper portion of the water body can then be calculated by dividing the measured distance by the average time.

An alternative way to measure the SSO travel time is to use a velocity probe (such as a Global Water FP111-S Flow Probe) to determine the rate of flow in the water body.

- 4) Determine the “entry” location for water quality sampling by accounting for SSO travel time.
 - If the SSO is occurring, the “entry” location is the point where the SSO is entering the waterway.
 - If the SSO has stopped, calculate the approximate downstream distance from the original SSO location by dividing the time since the SSO occurred by the estimated velocity. This is the approximate downstream distance from the SSO discharge point to the “entry” sampling location.

Due to possible tidal action in the surface water and other factors, another method may be used to determine the “entry” location at the discretion of the Environmental Services Director or the Field Operations Director.

- 5) Put on safety gloves and safety glasses from the SSO Sample Collection Kit.

Upstream Sample Collection: Collect the upstream samples first. Move approximately one hundred feet (100') upstream of Source location. Collect samples in each of the sample bottles marked “Upstream salinity”, “Upstream ammonia” and “Upstream entero”, and fill in the date and time.

- a. Take a photo of the sample location, including a reference point in the photo.
- b. Fill the two labeled bottles against the direction of the water flow. Collect samples well away from the bank, preferably at a point where water is visibly flowing. Avoid sampling debris or scum layer from the surface. Make your best effort to get as little dirt/sediment in the sample as possible; it can influence sample results.
- c. Place each sample in the cooler after collection.

Source Sample Collection: Collect the “entry” samples next. Move approximately ten feet (10') downstream of the Source location. Label one each of the sample bottles marked “Entry salinity”, “Entry ammonia”, and “Entry entero”, with the date and time.

- a. Take a photo of the sample location, including a reference point in the photo.
- b. Fill the two labeled bottles against the direction of the water flow. Collect samples well away from the bank, preferably at a point where water is visibly flowing. Avoid sampling debris or scum layer from the surface. Make your best effort to get as little dirt/sediment in the sample as possible; it can influence sample results.
- c. Place each sample in the cooler after collection.

Downstream Sample Collection: Lastly, collect the downstream sample. Move one hundred feet (100') downstream of the source location. Label one each of the sample bottles marked "Downstream salinity", "Downstream ammonia" and "Downstream entero" with the date and time.

- a. Take a photo of the sample location, including a reference point in the photo.
 - b. Fill the two labeled bottles against the direction of the water flow. Collect samples well away from the bank, preferably at a point where water is visibly flowing. Avoid sampling debris or scum layer from the surface. Make your best effort to get as little dirt/sediment in the sample as possible; it can influence sample results.
 - c. Place each sample in the cooler after collection.
- 6) Complete the District COC.
 - 7) Transport the cooler containing the samples and the completed District COC to the laboratory as soon as possible after first sample collection. The parameter with the shortest holding time is enterococcus bacteria at 8 hours (from sample collection to beginning of analysis), but sample analysis should begin as soon as possible after sample collection.
 - 8) Restock the SSO Sample Collection Kit with the items listed on page 1.
 - 9) After the analyses have been performed (see "Water Quality Analyses Protocols" below) and the results have been reviewed and finalized, check if either of the following conditions are satisfied:
 - Both the ammonia and bacteria levels downstream are approximately equal to or less than the upstream levels.
 - Consult the following table (excerpt from Part 3 of the *Water Quality Control Plan for Inland Surface waters, Enclosed Bays, and Estuaries of California-Bacteria Provisions and a Water Quality Standards Variance Policy*, dated August 7, 2018).

Table 1. REC-I Bacteria Water Quality Objectives

Applicable Waters	Objective Elements	Estimated Illness Rate (NGI): 32 per 1,000 water contact recreators	
		Magnitude	
	Indicator	GM (cfu/100 mL)	STV (cfu/100 mL)
All waters where the salinity is equal to or less than 1 ppth 95 percent or more of the time	<i>E. coli</i>	100	320
All waters where the salinity is greater than 1 ppth more than 5 percent of the time	Enterococci	30	110
The waterbody GM shall not be greater than the applicable GM magnitude in any six-week interval, calculated weekly. The applicable STV shall not be exceeded by more than 10 percent of the samples collected in a CALENDAR MONTH, calculated in a static manner. NGI = National Epidemiological and Assessment of STV = statistical threshold value cfu = colony forming units thousand gastrointestinal illness rate mL = milliliters			

As soon as one of the above conditions are satisfied, monitoring for this SSO may stop. If neither are satisfied, repeat the Sample Collection Procedure steps until either or both of the conditions are satisfied or other information is available to suggest the SSO is no longer causing a potentially adverse effect on the waterbody.

Warnings for Sample Collection:

- **Avoid Contamination.** Be careful. Make every effort not to touch the sample contents, because the sample containers may contain hazardous chemicals and the sample results may be easily affected by human contamination.
- **Deliver Sample to Lab.** All samples need to be delivered to the laboratory expeditiously due to the limited hold time required for maintaining sample integrity.

Water Quality Analyses – Protocols

Laboratory Analyses:

The District Laboratory is accredited by the Environmental Laboratory Accreditation Program (ELAP). The methods will be performed according to the laboratory's Standard Operating Procedures (SOPs) and specific methods used for laboratory analyses are expected to be as follows:

Parameter	Method
Ammonia (if Salinity is < 33 g/L)*	SM 4500-NH3 D/E-2011
Ammonia (if Salinity is $\geq$ 33 g/L)*	SM 4500-NH3 F-2011(contract laboratory will analyze)
Enterococcus bacteria	EPA 1600
Salinity	In House Meter

Maintenance and Calibration of Monitoring Instruments and Devices:

All laboratory monitoring instruments and devices used for water quality analyses are maintained and calibrated according to the SOPs to ensure their continued accuracy. The SSO Sample Collection Kit is checked by the laboratory staff at least annually to verify its contents, and laboratory staff replace chemical preservatives in the sample bottles at that time.

Reporting Requirements

The Field Operations Director is responsible for submitting water quality monitoring information with the certified Category 1 SSO report in the CIWQS Online SSO Database, which must be submitted within 15 calendar days of the SSO end date.

The Field Operations Supervisor is responsible for submitting information related to the Technical Report in the CIWQS Online SSO Database, which must be done within 45 calendar days of the SSO end date. The SSO Technical Report must include the following water quality monitoring information:

- Description of all water quality sampling activities conducted
- Analytical results and evaluation of the results
- Detailed location map showing all water quality sampling points

* The Clean Water Team Guidance Compendium for Watershed Monitoring and Assessment, State Water Resources Control Board, CWT 2004

REQUIREMENTS GOVERNING SEWAGE SPILLS

8

TOPIC	LOCATION
Requirements Governing Sewage Spills	8
RWQCB 13267 Letter Requiring SSMP Creation 2005	8A
RWQCB 13267 Letter Defining SSMP Creation Schedule 2006	8B
State Water Board Order No.2006-0003-DWQ	8C
SWRCB Order No.WQ 2008-0002-EXEC Adopting Amended MRP for Statewide General WDR for Sanitary Sewer Systems	8D
SWRCB Amendment to the MRP Order 2008-0002 EXEC Letter	8E
MRP Order 2013-0058-EXEC	8F



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Agency Secretary

California Regional Water Quality Control Board San Francisco Bay Region

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Arnold Schwarzenegger
Governor

Date: JUL 07 2005
File No. 1210.57 (MTC)

Daniel Tafolla
Environmental Services Director
Vallejo Sanitary & Flood Control District
450 Ryder Street
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SUBJECT: New Requirements for Preparing Sewer System Management Plans

This letter is to notify you, as a Sanitary Sewer Collection System Agency, that you are required to prepare a Sewer System Management Plan (SSMP) pursuant to Section 13267 of the California Water Code. The enclosed SSMP Development Guide should be used to develop your plan, which will contain the following ten elements:

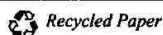
1. Goals
2. Organization
3. Overflow Emergency Response Plan
4. Fats, Oils, and Grease (FOG) Control Program
5. Legal Authority
6. Measures and Activities
7. Design and Construction Standards
8. Capacity Management
9. Monitoring, Measurement, and Program Modifications
10. SSMP Audits

As indicated in the attached guide, if you believe any element of this program is not applicable to your agency, your SSMP does not need to address it, but an explanation in the SSMP should be provided, indicating why that element of the SSMP is not applicable. Failure to prepare and maintain an SSMP will subject you to monetary liabilities that may be imposed by the San Francisco Bay Regional Water Quality Control Board (Regional Water Board). The following paragraphs provide some background and further details on the requirements and liabilities.

Background

This requirement is the result of a collaborative effort between the Bay Area Clean Water Agencies (BACWA) and the Regional Water Board to reduce and prevent sanitary sewer overflows. Over the past two years, BACWA and Regional Water Board staff met to develop

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Sewer System Authorities (attached list)
Page 2

draft SSMP guidelines. In 2004, six workshops were held for collection system agencies to present the draft SSMP guidelines and refine the contents for a comprehensive sanitary sewer overflow (SSO) control program for the region. This program comprises two components: 1) electronic reporting of SSOs; and, 2) development and implementation of SSMPs. The requirement for electronic SSO reporting began on December 1, 2004. The enclosed SSMP Development Guide incorporates input from collection system agencies in the San Francisco Bay Area.

Response Form

The first step of the process for developing your SSMP is to return a completed copy of the attached **SSMP Form A** to the Regional Water Board, to indicate that you have received this letter, understand the requirements, and intend to comply. There is a space on the form for feedback about the regional SSO control program. The Regional Water Board will continue working with BACWA to ensure successful implementation of this program.

Schedule

Individual elements of the SSMP are required to be completed according to the schedule shown below:

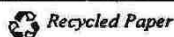
Required Schedule for SSMP Elements

SSMP Item	Required Completion Date
- Goals - Organization - Emergency Response Plan - FOG Control Program	August 31, 2006
- Legal Authority - Measures and Activities - Design and Construction Standards	August 31, 2007
- Capacity Management - Monitoring, Measurement, and Program Modifications - SSMP Audits	August 31, 2008

Notification to Regional Water Board of Completed SSMP Elements

You must notify the Regional Water Board when you complete each set of SSMP elements. Use the attached forms as follows:

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Sewer System Authorities (attached list)
Page 3

- Use SSMP Form B-1 to indicate completion of the first set of SSMP elements
- Use SSMP Form B-2 to indicate completion of the second set of SSMP elements
- Use SSMP Form B-3 to indicate completion of the third and last set of SSMP elements

Applicability to NPDES Permitted Facilities

For Publicly-Owned Treatment Works (POTWs) whose discharges are regulated in NPDES permits, and who also operate sanitary sewer systems, any requirement for development of an SSMP in your NPDES permit should be considered fulfilled using the requirements outlined in this letter.

Annual Reports for Reporting of SSOs

As indicated in a previous letter from the Regional Water Board dated November 15, 2004, the first annual report for your agency's SSO control activity is due March 15, 2006, and should cover 13 months from December 1, 2004, through December 31, 2005. Subsequent annual reports are due March 15th, and should contain information for the preceding 12-month calendar year. Additional detail on requirements for annual reports will be forwarded to your agency later this year.

Basis for Requirement and Liabilities

Because SSOs are a threat to water quality, you should be aware that this letter establishes formal requirements for technical information pursuant to California Water Code Section 13267. Failure to respond, late response, or incomplete response may subject you to civil liability imposed by the Water Board to a maximum of \$1,000 per day. Any revisions of the request set forth must be confirmed in writing by Regional Water Board staff.

State-wide SSO Control Program

The State Water Resources Control Board (State Water Board) has recently begun the development of a state-wide SSO control program. Regional Water Board and BACWA representatives are working with State representatives to ensure compatibility between the Regional and State programs. In the event the State program has additional requirements beyond the Regional program, these elements will need to be incorporated into the SSMP. Collection System agencies will be notified of any new requirements as they occur. Currently, the State Water Board's proposed SSMP has a more aggressive development and implementation time schedule.

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 Recycled Paper

Sewer System Authorities (attached list)

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Questions

If your agency has questions about program requirements or SSMPs, please contact Michael Chee at mchee@waterboards.ca.gov or (510) 622-2333.

Sincerely,


Bruce H. Wolfe
Executive Officer

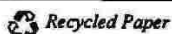
Attachments:

- Sanitary Sewer Authorities Mailing List
- SSMP Form A: Notification Form To Indicate Receipt of Letter Requiring the Development of an SSMP
- SSMP Form B-1: Notification Form To Indicate Completion of First Set of Sewer System Management Plan (SSMP) Elements
- SSMP Form B-2: Notification Form To Indicate Completion of Second Set of Sewer System Management Plan (SSMP) Elements
- SSMP Form B-3: Notification Form To Indicate Completion of Third (and Final) Set of Sewer System Management Plan (SSMP) Elements
- Fact Sheet – Requirements For Submitting Technical Reports Under Section 13267 of the California Water Code

Enclosure:

Sanitary Sewer Management Plan (SSMP) Development Guide

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California Regional Water Quality Control Board

San Francisco Bay Region



Linda S. Adams
Secretary for
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Arnold Schwarzenegger
Governor

Date: SEP 29 2006
File No. 1210.57 (MTC)

TO: Sewer System Authorities (attached list)

SUBJECT: Impact of Statewide Sanitary Sewer Overflow Requirements (State Water Board Order No.2006-003) on SF Bay Water Board Sewer System Authorities

This letter is to notify you, as a Sanitary Sewer Collection System Agency, that new statewide sanitary sewer overflow (SSO) requirements were recently adopted by the State Water Resources Control Board (State Water Board) on May 2, 2006. These General Waste Discharge Requirements (SSO WDR) are applicable to federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly-owned treatment facility in the State of California.

The SSO WDR contains a schedule for sanitary sewer collection system agencies to accomplish the following:

1. Apply for coverage under the new statewide system – November 2, 2006
2. Begin regular reporting to a new statewide electronic reporting system – May 2, 2007
3. Develop sewer system management plans – see below for deadlines.

Bay Area collection system agencies should continue to report SSOs through the SF Bay Water Board's existing electronic reporting system up through May 1, 2007; on May 2, 2007, they should switch over to the statewide system. **Bay Area collection system agencies will still submit their Annual Reports to the SF Bay Water Board by March 15th of each year.** Your agency is required to enroll in the statewide electronic reporting system, and State Water Board staff will provide you with enrollment instructions.

SF Bay Water Board and the Bay Area Clean Water Agencies staffs have been meeting with State Water Board staff over the last couple of years, prior to the adoption of the new statewide requirements, to ensure that as much as possible that requirements of the new statewide SSO WDR are compatible with the SSO control program in place in the SF Bay Region. However, there are some differences between the programs that we would like to bring to your attention. Please refer to the attachment, which shows a *summary* comparison of the two programs.

We would like to especially call your attention to the deadlines associated with submittal of your Sewer System Management Plan (SSMP). For the SF Bay Water Board, the deadlines established by the July 7, 2005, letter to your agency still apply and are listed in the following table:

Required Schedule for SSMP Elements

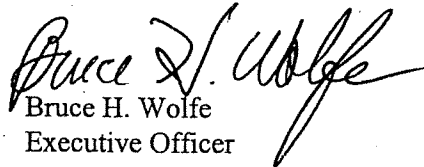
SSMP Element	Required Completion Date
- Goals - Organization - Overflow Emergency Response Plan - Fats, Oils, and Grease (FOG) Control Program	August 31, 2006
- Legal Authority - Measures and Activities - Design and Construction Standards	August 31, 2007
- Capacity Management - Monitoring, Measurement, and Program Modifications - SSMP Audits	August 31, 2008

Although the contents of SSMP elements are slightly different between the regional and statewide programs, it is recommended that only one SSMP be developed, with information required by both programs incorporated. It is satisfactory to use the SF Bay Water Board SSMP element headings for the documentation.

The State Water Board, in cooperation with the California Water Environment Association, is currently in the process of developing training materials and workshops for the new statewide program. It is anticipated that this training will start in Fall 2006, and that SF Bay Area trainings will be conducted in early 2007. It is important that collection system agencies participate in these trainings since the statewide reporting system differs somewhat from the SF Bay Water Board's existing program.

If your agency has questions about program requirements or SSMPs, please contact Michael Chee at mchee@waterboards.ca.gov or (510) 622-2333.

Sincerely,


Bruce H. Wolfe
Executive Officer

Attachment: List of Sewer System Authorities
Comparison of Statewide SSO WDR with SF Bay Water Board Program

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**Summary Comparison of Statewide SSO WDR with
SF Bay Water Board SSO Control Program Requirements
(this is not an exhaustive list)
August 23, 2006**

1. Definition of a Sanitary Sewer Overflow

SF Bay Water Board Program	Statewide SSO WDR
• Overflows or releases of untreated or partially treated wastewater that reach waters of the <u>State</u> • Overflows or releases of untreated or partially treated wastewater that do not reach waters of the <u>State</u> • Wastewater back-ups into buildings that are caused by a problem in the collection system agency's sewer line	• Overflows or releases of untreated or partially treated wastewater that reach waters of the <u>United States</u> • Overflows or releases of untreated or partially treated wastewater that do not reach waters of the <u>United States</u> • Wastewater back-ups into buildings that are caused by a problem in the collection system agency's sewer line

2. Application Process

SF Bay Water Board Program	Statewide SSO WDR
• Submit "Questionnaire" to obtain password for electronic reporting, prior to 12/1/04. • Submit Forms for SSMP Completion.	• Submit Notice of Intent (NOI) and fee for coverage under SSO WDR 6 months after adoption date of May 2, 2006, which is November 2, 2006. • Permit coverage is effective after approval by State Water Board. • Register with CIWQS to obtain username and password for reporting. • Submit questionnaire for reporting within 30 days of registering. • Submit Forms for SSMP Completion.

3. Prohibitions

SF Bay Water Board Program	Statewide SSO WDR
• None specified.	• Any SSO that results in a <u>discharge</u> of untreated or partially treated wastewater <u>to</u> <u>waters of the United States</u> is prohibited. • Any SSO that results in a discharge of untreated or partially treated wastewater that <u>creates a nuisance</u> as defined in California Water Code Section 13050(m) is prohibited.

4. Enforcement Discretion

SF Bay Water Board Program	Statewide SSO WDR
None specified.	In any enforcement action, the State and/or Regional Water Boards will consider the appropriate factors under the duly adopted State Water Board Enforcement Policy. Consistent with the Enforcement Policy, the State and/or Regional Water Boards must consider the Enrollee's efforts to contain, control, and mitigate SSOs when considering the California Water Code Section 13327 factors. In assessing these factors, the State and/or Regional Water Boards will also consider whether: (i) The Enrollee has complied with the requirements of the SSO WDR, including requirements for reporting and developing and implementing a SSMP; (ii) The Enrollee can identify the cause or likely cause of the discharge event; (iii) There were no feasible alternatives to the discharge, such as temporary storage or retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, collecting and hauling of untreated wastewater to a treatment facility, or an increase in the capacity of the system as necessary to contain the design storm event identified in the SSMP. It is inappropriate to consider the lack of feasible alternatives, if the Enrollee does not implement a periodic or continuing process to identify and correct problems. (iv) The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Enrollee; (v) The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for: • Proper management, operation and maintenance; • Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow (I/I), etc.); • Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);

	• Installation of adequate backup equipment; and • Inflow and infiltration prevention and control to the extent practicable. (vi) The sanitary sewer system design capacity is appropriate to reasonably prevent SSOs. (vii) The Enrollee took all reasonable steps to stop and mitigate the impact of the discharge as soon as possible.
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5. Sewer System Management Program - Elements

SF Bay Water Board Program	Statewide SSO WDR
• Ten required elements to be developed over three years: ○ Goals ○ Organization ○ Emergency Response Plan ○ FOG Control Program ○ Legal Authority ○ Measures and Activities ○ Design and Construction Standards ○ Capacity Management ○ Monitoring, Measurement, and Program Modifications ○ SSMP Audits	• Eleven required elements to be developed over three years: ○ Goal ○ Organization ○ Legal Authority ○ Operation and Maintenance Program ○ Design and Performance Provisions ○ Overflow Emergency Response Plan ○ FOG Control Program ○ System Evaluation and Capacity Assurance Plan ○ Monitoring, Measurement, and Program Modifications ○ SSMP Audits ○ Communications Plan (new)

↔ Double-head arrows indicate comparable sections

6. Sewer System Management Program - General

SF Bay Water Board Program	Statewide SSO WDR
• SSMP element does not need to be addressed if not applicable. • Exceptions to elements for small communities.	• SSMP element does not need to be addressed if not applicable. • No exceptions for small communities. • SSMP must be stamped by a "Professional." • SSMP must be approved by governing board at a public meeting.

7. FOG Control Program

SF Bay Water Board Program	Statewide SSO WDR
• Each wastewater collection system agency shall evaluate its service area to determine whether a FOG control program is needed. If so, a FOG control program shall be developed as part of the SSMP. If an agency determines	Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is

that a FOG program is not needed, the agency must provide justification for why it is not needed.	found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate: (a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG; (b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area; (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG; (d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements; (e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance; (f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and (g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.
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8. Reporting Program - Initiation

SF Bay Water Board Program	Statewide SSO WDR
• Electronic reporting is ongoing now. • Regional electronic reporting will cease when statewide electronic reporting begins.	• Electronic reporting will begin on May 2, 2007, for Region 2.

9. Reporting Program - Conditions

SF Bay Water Board Program	Statewide SSO WDR
• 24-Hour reporting on Long Form for: ○ Any SSO greater than or equal to 1,000 gallons, ○ Any SSO that may imminently and substantially endanger human health, or ○ Any SSO that causes fish kills. • 10-Day Reporting on Short Form for all other SSOs greater than 100 gallons • Annual Report – all SSOs (including those less than 100 gallons) • Private lateral SSOs – voluntary reporting on separate database • If not SSOs, no reporting	• Report as soon as possible but not later than 3 days following SSO for: ○ Any SSO greater than or equal to 1,000 gallons; ○ Results in a discharge to a drainage channel and/or surface water; or ○ Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system ○ 15 days for final report • 30-Day reporting for all other SSOs • No annual reports • Private lateral SSOs – voluntary reporting but NOT separate database • Must report each month, even if no SSOs.

10. Record Keeping

SF Bay Water Board Program	Statewide SSO WDR
• Keep records of SSOs for three years.	• Keep records of SSOs for a minimum of five years from the date of the SSO. • Records shall be made available for review upon State or Regional Water Board staff's request. • Details of information to be maintained are listed in the Monitoring and Reporting Program for the SSO WDR.

**STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2006-0003-DWQ**

**STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS**

The State Water Resources Control Board, hereinafter referred to as "State Water Board", finds that:

1. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California are required to comply with the terms of this Order. Such entities are hereinafter referred to as "Enrollees".
2. Sanitary sewer overflows (SSOs) are overflows from sanitary sewer systems of domestic wastewater, as well as industrial and commercial wastewater, depending on the pattern of land uses in the area served by the sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. SSOs may cause a public nuisance, particularly when raw untreated wastewater is discharged to areas with high public exposure, such as streets or surface waters used for drinking, fishing, or body contact recreation. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.
3. Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.
4. Major causes of SSOs include: grease blockages, root blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, excessive storm or ground water inflow/infiltration, debris blockages, sanitary sewer system age and construction material failures, lack of proper operation and maintenance, insufficient capacity and contractor-caused damages. Many SSOs are preventable with adequate and appropriate facilities, source control measures and operation and maintenance of the sanitary sewer system.

SEWER SYSTEM MANAGEMENT PLANS

5. To facilitate proper funding and management of sanitary sewer systems, each Enrollee must develop and implement a system-specific Sewer System Management Plan (SSMP). To be effective, SSMPs must include provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. Additionally, an SSMP must contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions.
6. Many local public agencies in California have already developed SSMPs and implemented measures to reduce SSOs. These entities can build upon their existing efforts to establish a comprehensive SSMP consistent with this Order. Others, however, still require technical assistance and, in some cases, funding to improve sanitary sewer system operation and maintenance in order to reduce SSOs.
7. SSMP certification by technically qualified and experienced persons can provide a useful and cost-effective means for ensuring that SSMPs are developed and implemented appropriately.
8. It is the State Water Board's intent to gather additional information on the causes and sources of SSOs to augment existing information and to determine the full extent of SSOs and consequent public health and/or environmental impacts occurring in the State.
9. Both uniform SSO reporting and a centralized statewide electronic database are needed to collect information to allow the State Water Board and Regional Water Quality Control Boards (Regional Water Boards) to effectively analyze the extent of SSOs statewide and their potential impacts on beneficial uses and public health. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. 2006-0003-DWQ, are necessary to assure compliance with these waste discharge requirements (WDRs).
10. Information regarding SSOs must be provided to Regional Water Boards and other regulatory agencies in a timely manner and be made available to the public in a complete, concise, and timely fashion.
11. Some Regional Water Boards have issued WDRs or WDRs that serve as National Pollution Discharge Elimination System (NPDES) permits to sanitary sewer system owners/operators within their jurisdictions. This Order establishes minimum requirements to prevent SSOs. Although it is the State Water Board's intent that this Order be the primary regulatory mechanism for sanitary sewer systems statewide, Regional Water Boards may issue more stringent or more

prescriptive WDRs for sanitary sewer systems. Upon issuance or reissuance of a Regional Water Board's WDRs for a system subject to this Order, the Regional Water Board shall coordinate its requirements with stated requirements within this Order, to identify requirements that are more stringent, to remove requirements that are less stringent than this Order, and to provide consistency in reporting.

REGULATORY CONSIDERATIONS

12. California Water Code section 13263 provides that the State Water Board may prescribe general WDRs for a category of discharges if the State Water Board finds or determines that:

- The discharges are produced by the same or similar operations;
- The discharges involve the same or similar types of waste;
- The discharges require the same or similar treatment standards; and
- The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.

This Order establishes requirements for a class of operations, facilities, and discharges that are similar throughout the state.

13. The issuance of general WDRs to the Enrollees will:

- a) Reduce the administrative burden of issuing individual WDRs to each Enrollee;
- b) Provide for a unified statewide approach for the reporting and database tracking of SSOs;
- c) Establish consistent and uniform requirements for SSMP development and implementation;
- d) Provide statewide consistency in reporting; and
- e) Facilitate consistent enforcement for violations.

14. The beneficial uses of surface waters that can be impaired by SSOs include, but are not limited to, aquatic life, drinking water supply, body contact and non-contact recreation, and aesthetics. The beneficial uses of ground water that can be impaired include, but are not limited to, drinking water and agricultural supply. Surface and ground waters throughout the state support these uses to varying degrees.

15. The implementation of requirements set forth in this Order will ensure the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisance. The requirements implement the water quality control plans (Basin Plans) for each region and take into account the environmental characteristics of hydrographic units within the state. Additionally, the State Water Board has considered water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect

water quality in the area, costs associated with compliance with these requirements, the need for developing housing within California, and the need to develop and use recycled water.

16. The Federal Clean Water Act largely prohibits any discharge of pollutants from a point source to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. Hence, the unpermitted discharge of wastewater from a sanitary sewer system to waters of the United States is illegal under the Clean Water Act. In addition, many Basin Plans adopted by the Regional Water Boards contain discharge prohibitions that apply to the discharge of untreated or partially treated wastewater. Finally, the California Water Code generally prohibits the discharge of waste to land prior to the filing of any required report of waste discharge and the subsequent issuance of either WDRs or a waiver of WDRs.
17. California Water Code section 13263 requires a water board to, after any necessary hearing, prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge. The requirements shall, among other things, take into consideration the need to prevent nuisance.
18. California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
 - a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
 - b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
 - c. Occurs during, or as a result of, the treatment or disposal of wastes.
19. This Order is consistent with State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) in that the Order imposes conditions to prevent impacts to water quality, does not allow the degradation of water quality, will not unreasonably affect beneficial uses of water, and will not result in water quality less than prescribed in State Water Board or Regional Water Board plans and policies.
20. The action to adopt this General Order is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt

this Order is exempt from CEQA pursuant to Cal.Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute “existing facilities” as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

21. The Fact Sheet, which is incorporated by reference in the Order, contains supplemental information that was also considered in establishing these requirements.
22. The State Water Board has notified all affected public agencies and all known interested persons of the intent to prescribe general WDRs that require Enrollees to develop SSMPs and to report all SSOs.
23. The State Water Board conducted a public hearing on February 8, 2006, to receive oral and written comments on the draft order. The State Water Board received and considered, at its May 2, 2006, meeting, additional public comments on substantial changes made to the proposed general WDRs following the February 8, 2006, public hearing. The State Water Board has considered all comments pertaining to the proposed general WDRs.

IT IS HEREBY ORDERED, that pursuant to California Water Code section 13263, the Enrollees, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

A. DEFINITIONS

1. **Sanitary sewer overflow (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:
 - (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
 - (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
 - (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.
2. **Sanitary sewer system** – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

For purposes of this Order, sanitary sewer systems include only those systems owned by public agencies that are comprised of more than one mile of pipes or sewer lines.

3. **Enrollee** - A federal or state agency, municipality, county, district, and other public entity that owns or operates a sanitary sewer system, as defined in the general WDRs, and that has submitted a complete and approved application for coverage under this Order.
4. **SSO Reporting System** – Online spill reporting system that is hosted, controlled, and maintained by the State Water Board. The web address for this site is <http://ciwqs.waterboards.ca.gov>. This online database is maintained on a secure site and is controlled by unique usernames and passwords.
5. **Untreated or partially treated wastewater** – Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.
6. **Satellite collection system** – The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.
7. **Nuisance** - California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
 - a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
 - b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
 - c. Occurs during, or as a result of, the treatment or disposal of wastes.

B. APPLICATION REQUIREMENTS

1. **Deadlines for Application** – All public agencies that currently own or operate sanitary sewer systems within the State of California must apply for coverage under the general WDRs within six (6) months of the date of adoption of the general WDRs. Additionally, public agencies that acquire or assume responsibility for operating sanitary sewer systems after the date of adoption of this Order must apply for coverage under the general WDRs at least three (3) months prior to operation of those facilities.
2. **Applications under the general WDRs** – In order to apply for coverage pursuant to the general WDRs, a legally authorized representative for each agency must submit a complete application package. Within sixty (60) days of adoption of the general WDRs, State Water Board staff will send specific instructions on how to

apply for coverage under the general WDRs to all known public agencies that own sanitary sewer systems. Agencies that do not receive notice may obtain applications and instructions online on the Water Board's website.

3. Coverage under the general WDRs – Permit coverage will be in effect once a complete application package has been submitted and approved by the State Water Board's Division of Water Quality.

C. PROHIBITIONS

1. Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.
2. Any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.

D. PROVISIONS

1. The Enrollee must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for enforcement action.
2. It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with the general WDRs. Nothing in the general WDRs shall be:
 - (i) Interpreted or applied in a manner inconsistent with the Federal Clean Water Act, or supersede a more specific or more stringent state or federal requirement in an existing permit, regulation, or administrative/judicial order or Consent Decree;
 - (ii) Interpreted or applied to authorize an SSO that is illegal under either the Clean Water Act, an applicable Basin Plan prohibition or water quality standard, or the California Water Code;
 - (iii) Interpreted or applied to prohibit a Regional Water Board from issuing an individual NPDES permit or WDR, superseding this general WDR, for a sanitary sewer system, authorized under the Clean Water Act or California Water Code; or
 - (iv) Interpreted or applied to supersede any more specific or more stringent WDRs or enforcement order issued by a Regional Water Board.
3. The Enrollee shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, the Enrollee shall take all feasible steps to contain and mitigate the impacts of an SSO.
4. In the event of an SSO, the Enrollee shall take all feasible steps to prevent untreated or partially treated wastewater from discharging from storm drains into

flood control channels or waters of the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.

5. All SSOs must be reported in accordance with Section G of the general WDRs.
6. In any enforcement action, the State and/or Regional Water Boards will consider the appropriate factors under the duly adopted State Water Board Enforcement Policy. And, consistent with the Enforcement Policy, the State and/or Regional Water Boards must consider the Enrollee's efforts to contain, control, and mitigate SSOs when considering the California Water Code Section 13327 factors. In assessing these factors, the State and/or Regional Water Boards will also consider whether:
 - (i) The Enrollee has complied with the requirements of this Order, including requirements for reporting and developing and implementing a SSMP;
 - (ii) The Enrollee can identify the cause or likely cause of the discharge event;
 - (iii) There were no feasible alternatives to the discharge, such as temporary storage or retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, collecting and hauling of untreated wastewater to a treatment facility, or an increase in the capacity of the system as necessary to contain the design storm event identified in the SSMP. It is inappropriate to consider the lack of feasible alternatives, if the Enrollee does not implement a periodic or continuing process to identify and correct problems.
 - (iv) The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Enrollee;
 - (v) The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for:
 - Proper management, operation and maintenance;
 - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow (I/I), etc.);
 - Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);
 - Installation of adequate backup equipment; and
 - Inflow and infiltration prevention and control to the extent practicable.
 - (vi) The sanitary sewer system design capacity is appropriate to reasonably prevent SSOs.

- (vii) The Enrollee took all reasonable steps to stop and mitigate the impact of the discharge as soon as possible.
7. When a sanitary sewer overflow occurs, the Enrollee shall take all feasible steps and necessary remedial actions to 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.

The Enrollee shall implement all remedial actions to the extent they may be applicable to the discharge and not inconsistent with an emergency response plan, including the following:

- (i) Interception and rerouting of untreated or partially treated wastewater flows around the wastewater line failure;
 - (ii) Vacuum truck recovery of sanitary sewer overflows and wash down water;
 - (iii) Cleanup of debris at the overflow site;
 - (iv) System modifications to prevent another SSO at the same location;
 - (v) Adequate sampling to determine the nature and impact of the release; and
 - (vi) Adequate public notification to protect the public from exposure to the SSO.
8. The Enrollee shall properly, manage, operate, and maintain all parts of the sanitary sewer system owned or operated by the Enrollee, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.
9. The Enrollee shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.
10. The Enrollee shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. Capacity shall meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance Plan for all parts of the sanitary sewer system owned or operated by the Enrollee.
11. The Enrollee shall develop and implement a written Sewer System Management Plan (SSMP) and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the Internet. This SSMP must be approved by the Enrollee's governing board at a public meeting.

12. In accordance with the California Business and Professions Code sections 6735, 7835, and 7835.1, all engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. Specific elements of the SSMP that require professional evaluation and judgments shall be prepared by or under the direction of appropriately qualified professionals, and shall bear the professional(s)' signature and stamp.
13. The mandatory elements of the SSMP are specified below. However, if the Enrollee believes that any element of this section is not appropriate or applicable to the Enrollee's sanitary sewer system, the SSMP program does not need to address that element. The Enrollee must justify why that element is not applicable. The SSMP must be approved by the deadlines listed in the SSMP Time Schedule below.

Sewer System Management Plan (SSMP)

- (i) **Goal:** The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.
- (ii) **Organization:** The SSMP must identify:
 - (a) The name of the responsible or authorized representative as described in Section J of this Order.
 - (b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and
 - (c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).
- (iii) **Legal Authority:** Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:
 - (a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);

- (b) Require that sewers and connections be properly designed and constructed;
 - (c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
 - (d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and
 - (e) Enforce any violation of its sewer ordinances.
- (iv) **Operation and Maintenance Program.** The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:
- (a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;
 - (b) Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;
 - (c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
 - (d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and

- (e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

(v) **Design and Performance Provisions:**

- (a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and
- (b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

(vi) **Overflow Emergency Response Plan** - Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- (b) A program to ensure an appropriate response to all overflows;
- (c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

- (vii) **FOG Control Program:** Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:
- (a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
 - (b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
 - (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
 - (d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
 - (e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
 - (f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and
 - (g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.
- (viii) **System Evaluation and Capacity Assurance Plan:** The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:
- (a) **Evaluation:** Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs

that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;

- (b) **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and
 - (c) **Capacity Enhancement Measures:** The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
 - (d) **Schedule:** The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.
- (ix) **Monitoring, Measurement, and Program Modifications:** The Enrollee shall:
- (a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
 - (b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
 - (c) Assess the success of the preventative maintenance program;
 - (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
 - (e) Identify and illustrate SSO trends, including: frequency, location, and volume.
- (x) **SSMP Program Audits** - As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the

Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

- (xi) **Communication Program** – The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

14. Both the SSMP and the Enrollee's program to implement the SSMP must be certified by the Enrollee to be in compliance with the requirements set forth above and must be presented to the Enrollee's governing board for approval at a public meeting. The Enrollee shall certify that the SSMP, and subparts thereof, are in compliance with the general WDRs within the time frames identified in the time schedule provided in subsection D.15, below.

In order to complete this certification, the Enrollee's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the form to:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
P.O. Box 100
Sacramento, CA 95812

The SSMP must be updated every five (5) years, and must include any significant program changes. Re-certification by the governing board of the Enrollee is required in accordance with D.14 when significant updates to the SSMP are made. To complete the re-certification process, the Enrollee shall enter the data in the Online SSO Database and mail the form to the State Water Board, as described above.

15. The Enrollee shall comply with these requirements according to the following schedule. This time schedule does not supersede existing requirements or time schedules associated with other permits or regulatory requirements.

Sewer System Management Plan Time Schedule

<u>Task and Associated Section</u>	Completion Date			
	Population > 100,000	Population between 100,000 and 10,000	Population between 10,000 and 2,500	Population < 2,500
Application for Permit Coverage Section C	6 months after WDRs Adoption			
Reporting Program Section G	6 months after WDRs Adoption ¹			
SSMP Development Plan and Schedule No specific Section	9 months after WDRs Adoption ²	12 months after WDRs Adoption ²	15 months after WDRs Adoption ²	18 months after WDRs Adoption ²
Goals and Organization Structure Section D 13 (i) & (ii)	12 months after WDRs Adoption ²		18 months after WDRs Adoption ²	
Overflow Emergency Response Program Section D 13 (vi)	24 months after WDRs Adoption ²	30 months after WDRs Adoption ²	36 months after WDRs Adoption ²	39 months after WDRs Adoption ²
Legal Authority Section D 13 (iii)				
Operation and Maintenance Program Section D 13 (iv)				
Grease Control Program Section D 13 (vii)				
Design and Performance Section D 13 (v)	36 months after WDRs Adoption	39 months after WDRs Adoption	48 months after WDRs Adoption	51 months after WDRs Adoption
System Evaluation and Capacity Assurance Plan Section D 13 (viii)				
Final SSMP, incorporating all of the SSMP requirements Section D 13				

1. In the event that by July 1, 2006 the Executive Director is able to execute a memorandum of agreement (MOA) with the California Water Environment Association (CWEA) or discharger representatives outlining a strategy and time schedule for CWEA or another entity to provide statewide training on the adopted monitoring program, SSO database electronic reporting, and SSMP development, consistent with this Order, then the schedule of Reporting Program Section G shall be replaced with the following schedule:

Reporting Program Section G	
Regional Boards 4, 8, and 9	8 months after WDRs Adoption
Regional Boards 1, 2, and 3	12 months after WDRs Adoption
Regional Boards 5, 6, and 7	16 months after WDRs Adoption

If this MOU is not executed by July 1, 2006, the reporting program time schedule will remain six (6) months for all regions and agency size categories.

2. In the event that the Executive Director executes the MOA identified in note 1 by July 1, 2006, then the deadline for this task shall be extended by six (6) months. The time schedule identified in the MOA must be consistent with the extended time schedule provided by this note. If the MOA is not executed by July 1, 2006, the six (6) month time extension will not be granted.

E. WDRs and SSMP AVAILABILITY

1. A copy of the general WDRs and the certified SSMP shall be maintained at appropriate locations (such as the Enrollee's offices, facilities, and/or Internet homepage) and shall be available to sanitary sewer system operating and maintenance personnel at all times.

F. ENTRY AND INSPECTION

1. The Enrollee shall allow the State or Regional Water Boards or their authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

G. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. The Enrollee shall furnish to the State or Regional Water Board, within a reasonable time, any information that the State or Regional Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Enrollee shall also furnish to the Executive Director of the State Water Board or Executive Officer of the applicable Regional Water Board, upon request, copies of records required to be kept by this Order.
2. The Enrollee shall comply with the attached Monitoring and Reporting Program No. 2006-0003 and future revisions thereto, as specified by the Executive Director. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 2006-0003. Unless superseded by a specific enforcement Order for a specific Enrollee, these reporting requirements are intended to replace other mandatory routine written reports associated with SSOs.
3. All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within 30 days of receiving an account and prior to recording spills into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding a Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.
4. Pursuant to Health and Safety Code section 5411.5, any person who, without regard to intent or negligence, causes or permits any untreated wastewater or other waste to be discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State, as soon as that person has knowledge of the discharge, shall immediately notify the local health officer of the discharge. Discharges of untreated or partially treated wastewater to storm drains and drainage channels, whether man-made or natural or concrete-lined, shall be reported as required above.

Any SSO greater than 1,000 gallons discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State shall also be reported to the Office of Emergency Services pursuant to California Water Code section 13271.

H. CHANGE IN OWNERSHIP

1. This Order is not transferable to any person or party, except after notice to the Executive Director. The Enrollee shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new Enrollee containing a specific date for the transfer of this Order's responsibility and coverage between the existing Enrollee and the new Enrollee. This agreement shall include an acknowledgement that the existing Enrollee is liable for violations up to the transfer date and that the new Enrollee is liable from the transfer date forward.

I. INCOMPLETE REPORTS

1. If an Enrollee becomes aware that it failed to submit any relevant facts in any report required under this Order, the Enrollee shall promptly submit such facts or information by formally amending the report in the Online SSO Database.

J. REPORT DECLARATION

1. All applications, reports, or information shall be signed and certified as follows:
 - (i) All reports required by this Order and other information required by the State or Regional Water Board shall be signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or by a duly authorized representative of that person, as described in paragraph (ii) of this provision. (For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online SSO database procedures, meet this certification requirement.)
 - (ii) An individual is a duly authorized representative only if:
 - (a) The authorization is made in writing by a person described in paragraph (i) of this provision; and
 - (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.

K. CIVIL MONETARY REMEDIES FOR DISCHARGE VIOLATIONS

1. The California Water Code provides various enforcement options, including civil monetary remedies, for violations of this Order.
2. The California Water Code also provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or

falsifying any information provided in the technical or monitoring reports is subject to civil monetary penalties.

L. SEVERABILITY

1. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
2. This order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Enrollee from liability under federal, state or local laws, nor create a vested right for the Enrollee to continue the waste discharge.

CERTIFICATION

The undersigned Clerk to the State Water Board does hereby certify that the foregoing is a full, true, and correct copy of general WDRs duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 2, 2006.

AYE: Tam M. Doduc
Gerald D. Secundy

NO: Arthur G. Baggett

ABSENT: None

ABSTAIN: None



Song Her
Clerk to the Board

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER NO. WQ 2008-0002-EXEC

**ADOPTING AMENDED MONITORING AND REPORTING REQUIREMENTS FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER
SYSTEMS**

The State of California, Water Resources Control Board (State Water Board) finds:

1. The State Water Board is authorized to prescribe statewide general waste discharge requirements for categories of discharges that involve the same or similar operations and the same or similar types of waste pursuant to Water Code 13263, subdivision (i).
2. The State Water Board on May 2, 2006, adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, pursuant to that authority.
3. The State Water Board on May 2, 2006, adopted Monitoring and Reporting Requirements to implement the General Waste Discharge Requirements for Sanitary Sewer Systems.
4. State Water Board Order No. 2006-0003-DWQ, paragraph G.2., and the Monitoring and Reporting Requirements, both provide that the Executive Director may modify the terms of the Monitoring and Reporting Requirements at any time.
5. The time allowed in those Monitoring and Reporting Requirements for the filing of the initial report of an overflow is too long to adequately protect the public health and safety or the beneficial uses of the waters of the state when there is a sewage collection system spill. An additional notification requirement is necessary and appropriate to ensure the Office of Emergency Services, local public health officials, and the applicable regional water quality control board are apprised of a spill that reaches a drainage channel or surface water.
6. Further, the burden of providing a notification as soon as possible is de minimis and will allow response agencies to take action as soon as possible to protect public health and safety and beneficial uses of the waters of the state.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Resolution No. 2002-0104 and Order No. 2006-0003-DWQ, the Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems No. 2006-0003-DWQ is hereby amended as shown in Attachment A, with new text indicated by double-underline.

Dated:

February 20, 2008

Dorothy Rice

Dorothy Rice
Executive Director

ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD MONITORING AND REPORTING PROGRAM NO. 2006-0003-DWQ (AS REVISED BY ORDER NO. WQ 2008-0002-EXEC)

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order No. 2006-2003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems." Revisions to this MRP may be made at any time by the Executive Director, and may include a reduction or increase in the monitoring and reporting.

NOTIFICATION

Although State and Regional Water Board staff do not have duties as first responders, this Monitoring and Reporting Program is an appropriate mechanism to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any discharges of sewage that results in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the appropriate Regional Water Quality Control Board.
2. As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Discharger shall submit to the appropriate Regional Water Quality Control Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.

A. SANITARY SEWER OVERFLOW REPORTING

SSO Categories

1. Category 1 - All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that:
 - A. Equal or exceed 1000 gallons, or
 - B. Result in a discharge to a drainage channel and/or surface water; or
 - C. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

2. Category 2 – All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.
3. Private Lateral Sewage Discharges – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SSO Reporting Timeframes

4. Category 1 SSOs – Except as provided above, all SSOs that meet the above criteria for Category 1 SSOs must be reported as soon as: (1) the Enrollee has knowledge of the discharge, (2) reporting is possible, and (3) reporting can be provided without substantially impeding cleanup or other emergency measures. Initial reporting of Category 1 SSOs must be reported to the Online SSO System as soon as possible but no later than 3 business days after the Enrollee is made aware of the SSO. Minimum information that must be contained in the 3-day report must include all information identified in section 9 below, except for item 9.K. A final certified report must be completed through the Online SSO System, within 15 calendar days of the conclusion of SSO response and remediation. Additional information may be added to the certified report, in the form of an attachment, at any time.

The above reporting requirements are in addition to do not preclude other emergency notification requirements and timeframes mandated by other regulatory agencies (local County Health Officers, local Director of Environmental Health, Regional Water Boards, or Office of Emergency Services (OES)) or State law.

5. Category 2 SSOs – All SSOs that meet the above criteria for Category 2 SSOs must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g. all SSOs occurring in the month of January must be entered into the database by March 1st).
6. Private Lateral Sewage Discharges – All sewage discharges that meet the above criteria for Private Lateral sewage discharges may be reported to the Online SSO Database based upon the Enrollee's discretion. If a Private Lateral sewage discharge is recorded in the SSO Database, the Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known.
7. If there are no SSOs during the calendar month, the Enrollee will provide, within 30 days after the end of each calendar month, a statement through the Online SSO Database certifying that there were no SSOs for the designated month.
8. In the event that the SSO Online Database is not available, the enrollee must fax all required information to the appropriate Regional Water Board office in

accordance with the time schedules identified above. In such event, the Enrollee must also enter all required information into the Online SSO Database as soon as practical.

Mandatory Information to be Included in SSO Online Reporting

All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within thirty (30) days of receiving an account and prior to recording SSOs into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

At a minimum, the following mandatory information must be included prior to finalizing and certifying an SSO report for each category of SSO:

9. Category 2 SSOs:

- A. Location of SSO by entering GPS coordinates;
- B. Applicable Regional Water Board, i.e. identify the region in which the SSO occurred;
- C. County where SSO occurred;
- D. Whether or not the SSO entered a drainage channel and/or surface water;
- E. Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;
- F. Estimated SSO volume in gallons;
- G. SSO source (manhole, cleanout, etc.);
- H. SSO cause (mainline blockage, roots, etc.);
- I. Time of SSO notification or discovery;
- J. Estimated operator arrival time;
- K. SSO destination;
- L. Estimated SSO end time; and
- M. SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

10. Private Lateral Sewage Discharges:

- A. All information listed above (if applicable and known), as well as;
- B. Identification of sewage discharge as a private lateral sewage discharge; and
- C. Responsible party contact information (if known).

11. Category 1 SSOs:

- A. All information listed for Category 2 SSOs, as well as;
- B. Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
- C. Estimated SSO amount recovered;
- D. Response and corrective action taken;
- E. If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected.
- F. Parameters that samples were analyzed for (if applicable);
- G. Identification of whether or not health warnings were posted;
- H. Beaches impacted (if applicable). If no beach was impacted, NA must be selected;
- I. Whether or not there is an ongoing investigation;
- J. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
- K. OES control number (if applicable);
- L. Date OES was called (if applicable);
- M. Time OES was called (if applicable);
- N. Identification of whether or not County Health Officers were called;
- O. Date County Health Officer was called (if applicable); and
- P. Time County Health Officer was called (if applicable).

Reporting to Other Regulatory Agencies

These reporting requirements do not preclude an Enrollee from reporting SSOs to other regulatory agencies pursuant California state law. These reporting requirements do not replace other Regional Water Board telephone reporting requirements for SSOs.

1. The Enrollee shall report SSOs to OES, in accordance with California Water Code Section 13271.

Office of Emergency Services
Phone (800) 852-7550

2. The Enrollee shall report SSOs to County Health officials in accordance with California Health and Safety Code Section 5410 et seq.
3. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSOs. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department if the county desires this information, and the appropriate Regional Water Board.

B. Record Keeping

1. Individual SSO records shall be maintained by the Enrollee for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.

[2. Omitted.]

3. All records shall be made available for review upon State or Regional Water Board staff's request.
4. All monitoring instruments and devices that are used by the Enrollee to fulfill the prescribed monitoring and reporting program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;
5. The Enrollee shall retain records of all SSOs, such as, but not limited to and when applicable:
 - a. Record of Certified report, as submitted to the online SSO database;
 - b. All original recordings for continuous monitoring instrumentation;
 - c. Service call records and complaint logs of calls received by the Enrollee;
 - d. SSO calls;
 - e. SSO records;
 - f. Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
 - g. Work orders, work completed, and any other maintenance records from the previous 5 years which are associated with responses and investigations of system problems related to SSOs;
 - h. A list and description of complaints from customers or others from the previous 5 years; and
 - i. Documentation of performance and implementation measures for the previous 5 years.
6. If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the Enrollee or its agent(s), as a result of any SSO, records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical technique or method used; and,
 - f. The results of such analyses.

C. Certification

1. All final reports must be certified by an authorized person as required by Provision J of the Order.
2. Registration of authorized individuals, who may certify reports, will be in accordance with the CIWQS' protocols for reporting.

Monitoring and Reporting Program No. 2006-0003 will become effective on the date of adoption by the State Water Board. The notification requirements added by Order No. WQ 2008-0002-EXEC will become effective upon issuance by the Executive Director.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order amended by the Executive Director of the State Water Board.



Jeanne Townsend
Clerk to the Board

State Water Resources Control Board

July 26, 2013

All Enrollees Subject to the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

Dear Enrollees:

AMENDMENT OF STATEWIDE MONITORING AND REPORTING PROGRAM (MRP) REQUIREMENTS FOR SANITARY SEWER OVERFLOWS; MRP ORDER 2006-0003-DWQ

Effective September 9, 2013, the MRP for the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order 2006-0003-DWQ) are amended. The amendments to the MRP set forth in Order 2013-0058-EXEC address compliance and enforceability in the existing MRP. The amendments additionally address stakeholder concern regarding cost of compliance issues. A copy of the amending Order and corresponding Fact Sheet describing my Executive Officer action, are enclosed.

Monitoring and reporting requirements in MRP Order 2008-0002-EXEC that have been effective since 2008 are superseded by the amended requirements set forth in Order 2013-0058-EXEC. If you have any questions regarding these amendments, please contact Russell Norman, Water Resource Control Engineer at (916) 323-5598 or rnorman@waterboards.ca.gov.

Sincerely,



Thomas Howard
Executive Director

Enclosures

cc: Regional Water Quality Control Board Executive Officers

STATE OF CALIFORNIA
WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
SANITARY SEWER SYSTEMS

The State of California, Water Resources Control Board (hereafter State Water Board) finds:

1. The State Water Board is authorized to prescribe statewide general Waste Discharge Requirements (WDRs) for categories of discharges that involve the same or similar operations and the same or similar types of waste pursuant to Water Code section 13263(i).
2. Water Code section 13193 *et seq.* requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) to gather Sanitary Sewer Overflow (SSO) information and make this information available to the public, including but not limited to, SSO cause, estimated volume, location, date, time, duration, whether or not the SSO reached or may have reached waters of the state, response and corrective action taken, and an enrollee's contact information for each SSO event. An enrollee is defined as the public entity having legal authority over the operation and maintenance of, or capital improvements to, a sanitary sewer system greater than one mile in length.
3. Water Code section 13271, *et seq.* requires notification to the California Office of Emergency Services (Cal OES), formerly the California Emergency Management Agency, for certain unauthorized discharges, including SSOs.
4. On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ, "Statewide Waste Discharge Requirements for Sanitary Sewer Systems"¹ (hereafter SSS WDRs) to comply with Water Code section 13193 and to establish the framework for the statewide SSO Reduction Program.
5. Subsection G.2 of the SSS WDRs and the Monitoring and Reporting Program (MRP) provide that the Executive Director may modify the terms of the MRP at any time.
6. On February 20, 2008, the State Water Board Executive Director adopted a revised MRP for the SSS WDRs to rectify early notification deficiencies and ensure that first responders are notified in a timely manner of SSOs discharged into waters of the state.
7. When notified of an SSO that reaches a drainage channel or surface water of the state, Cal OES, pursuant to Water Code section 13271(a)(3), forwards the SSO notification information² to local government agencies and first responders including local public health officials and the applicable Regional Water Board. Receipt of notifications for a single SSO event from both the SSO reporter

¹ Available for download at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf

² Cal OES Hazardous Materials Spill Reports available Online at:

[http://w3.calema.ca.gov/operational/mal haz.nsf/\\$defaultview](http://w3.calema.ca.gov/operational/mal haz.nsf/$defaultview) and <http://w3.calema.ca.gov/operational/mal haz.nsf>

and Cal OES is duplicative. To address this, the SSO notification requirements added by the February 20, 2008 MRP revision are being removed in this MRP revision.

8. In the February 28, 2008 Memorandum of Agreement between the State Water Board and the California Water and Environment Association (CWEA), the State Water Board committed to re-designing the CIWQS³ Online SSO Database to allow "event" based SSO reporting versus the original "location" based reporting. Revisions to this MRP and accompanying changes to the CIWQS Online SSO Database will implement this change by allowing for multiple SSO appearance points to be associated with each SSO event caused by a single asset failure.
9. Based on stakeholder input and Water Board staff experience implementing the SSO Reduction Program, SSO categories have been revised in this MRP. In the prior version of the MRP, SSOs have been categorized as Category 1 or Category 2. This MRP implements changes to SSO categories by adding a Category 3 SSO type. This change will improve data management to further assist Water Board staff with evaluation of high threat and low threat SSOs by placing them in unique categories (i.e., Category 1 and Category 3, respectively). This change will also assist enrollees in identifying SSOs that require Cal OES notification.
10. Based on over six years of implementation of the SSS WDRs, the State Water Board concludes that the February 20, 2008 MRP must be updated to better advance the SSO Reduction Program⁴ objectives, assess compliance, and enforce the requirements of the SSS WDRs.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Water Code section 13267(f), Resolution 2002-0104, and Order 2006-0003-DWQ, the MRP for the SSS WDRs (Order 2006-0003-DWQ) is hereby amended as shown in Attachment A and shall be effective on September 9, 2013.

8/6/13

Date



Thomas Howard
Executive Director

³ California Integrated Water Quality System (CIWQS) publicly available at
<http://www.waterboards.ca.gov/ciwqs/publicreports.shtml>

⁴ Statewide Sanitary Sewer Overflow Reduction Program information is available at:
http://www.waterboards.ca.gov/water_issues/programs/ssr/

ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM FOR STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems" (SSS WDRs). This MRP shall be effective from September 9, 2013 until it is rescinded. The Executive Director may make revisions to this MRP at any time. These revisions may include a reduction or increase in the monitoring and reporting requirements. All site specific records and data developed pursuant to the SSS WDRs and this MRP shall be complete, accurate, and justified by evidence maintained by the enrollee. Failure to comply with this MRP may subject an enrollee to civil liabilities of up to \$5,000 a day per violation pursuant to Water Code section 13350; up to \$1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. The State Water Resources Control Board (State Water Board) reserves the right to take any further enforcement action authorized by law.

A. SUMMARY OF MRP REQUIREMENTS

Table 1 – Spill Categories and Definitions

CATEGORIES	DEFINITIONS [see Section A on page 5 of Order 2006-0003-DWQ, for Sanitary Sewer Overflow (SSO) definition]
CATEGORY 1	Discharges of untreated or partially treated wastewater of <u>any volume</u> resulting from an enrollee's sanitary sewer system failure or flow condition that: • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
CATEGORY 2	Discharges of untreated or partially treated wastewater of <u>1,000 gallons or greater</u> resulting from an enrollee's sanitary sewer system failure or flow condition that <u>do not</u> reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
CATEGORY 3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems <u>within a privately owned sewer lateral</u> connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be <u>voluntarily</u> reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION (see section B of MRP)	Within two hours of becoming aware of any Category 1 SSO <u>greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water</u>, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.	Call Cal OES at: (800) 852-7550
REPORTING (see section C of MRP)	- Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. - Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. - Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred. - SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. “No Spill” Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred. - Collection System Questionnaire: Update and certify every 12 months.	Enter data into the CIWQS Online SSO Database (http://ciwqs.waterboards.ca.gov/), certified by enrollee’s Legally Responsible Official(s).
WATER QUALITY MONITORING (see section D of MRP)	Conduct water quality sampling <u>within 48 hours</u> after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING (see section E of MRP)	- SSO event records. - Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. - Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. - Collection system telemetry records if relied upon to document and/or estimate SSO Volume.	Self-maintained records shall be available during inspections or upon request.

B. NOTIFICATION REQUIREMENTS

Although Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) staff do not have duties as first responders, this MRP is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.
2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:
 - i. Name of person notifying Cal OES and direct return phone number.
 - ii. Estimated SSO volume discharged (gallons).
 - iii. If ongoing, estimated SSO discharge rate (gallons per minute).
 - iv. SSO Incident Description:
 - a. Brief narrative.
 - b. On-scene point of contact for additional information (name and cell phone number).
 - c. Date and time enrollee became aware of the SSO.
 - d. Name of sanitary sewer system agency causing the SSO.
 - e. SSO cause (if known).
 - v. Indication of whether the SSO has been contained.
 - vi. Indication of whether surface water is impacted.
 - vii. Name of surface water impacted by the SSO, if applicable.
 - viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
 - ix. Any other known SSO impacts.
 - x. SSO incident location (address, city, state, and zip code).
3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).
4. PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.

C. REPORTING REQUIREMENTS

1. **CIWQS Online SSO Database Account:** All enrollees shall obtain a CIWQS Online SSO Database account and receive a “Username” and “Password” by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.
2. **SSO Mandatory Reporting Information:** For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.
3. **SSO Categories**
 - i. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee’s sanitary sewer system failure or flow condition that:
 - a. Reach surface water and/or reach a drainage channel tributary to a surface water; or
 - b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
 - ii. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee’s sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.
 - iii. **Category 3** – All other discharges of untreated or partially treated wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition.
4. **Sanitary Sewer Overflow Reporting to CIWQS - Timeframes**
 - i. **Category 1 and Category 2 SSOs** – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:
 - a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section 8.i.a. below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section 8.i.c below.
 - b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section 8.i.b below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section 8.i.d below.

- ii. **Category 3 SSOs** – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section 8.i.e below.
- iii. **“No Spill” Certification** – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a “No Spill” certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, “No Spill” certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/May/June, Q3 - July/August/September, and Q4 - October/November/December.

If there are no SSOs during a calendar month but the enrollee reported a PLSD, the enrollee shall still certify a “No Spill” certification statement for that month.
- iv. **Amended SSO Reports** – The enrollee may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. SSO reports certified in the CIWQS Online SSO Database prior to the adoption date of this MRP may only be amended up to 120 days after the effective date of this MRP. After 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5. **SSO Technical Report**

The enrollee shall submit an SSO Technical Report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

- i. **Causes and Circumstances of the SSO:**
 - a. Complete and detailed explanation of how and when the SSO was discovered.
 - b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).
 - c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
 - d. Detailed description of the cause(s) of the SSO.
 - e. Copies of original field crew records used to document the SSO.
 - f. Historical maintenance records for the failure location.
- ii. **Enrollee’s Response to SSO:**
 - a. Chronological narrative description of all actions taken by enrollee to terminate the spill.
 - b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.

- c. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. **Water Quality Monitoring:**

- a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
- b. Detailed location map illustrating all water quality sampling points.

6. **PLSDs**

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database.

- i. The enrollee is also encouraged to provide notification to Cal OES per section B above when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the enrollee is also encouraged to file a spill report as required by Health and Safety Code section 5410 et. seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.
- ii. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

7. **CIWQS Online SSO Database Unavailability**

In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or e-mail all required information to the appropriate Regional Water Board office in accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in CIWQS Online SSO Reporting**

All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, all enrollees must complete a Collection System Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

i. **SSO Reports**

At a minimum, the following mandatory information shall be reported prior to finalizing and certifying an SSO report for each category of SSO:

- a. **Draft Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:
1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
 2. SSO Location Name.
 3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
 4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
 5. Whether or not the SSO reached a municipal separate storm drain system.
 6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
 7. Estimate of the SSO volume, inclusive of all discharge point(s).
 8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
 9. Estimate of the SSO volume recovered (if applicable).
 10. Number of SSO appearance point(s).
 11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
 12. SSO start date and time.
 13. Date and time the enrollee was notified of, or self-discovered, the SSO.
 14. Estimated operator arrival time.
 15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
 16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.
- b. **Certified Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section 8.i.a :
1. Description of SSO destination(s).
 2. SSO end date and time.
 3. SSO causes (mainline blockage, roots, etc.).
 4. SSO failure point (main, lateral, etc.).
 5. Whether or not the spill was associated with a storm event.
 6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
 7. Description of spill response activities.
 8. Spill response completion date.
 9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.

10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
 11. Whether or not health warnings were posted as a result of the SSO.
 12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
 13. Name of surface water(s) impacted.
 14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
 15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
 16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
 17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.
- c. **Draft Category 2 SSOs:** At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report:
 1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO.
 - d. **Certified Category 2 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:
 1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-9, and 17 in section 8.i.b above for Certified Category 1 SSO.
 - e. **Certified Category 3 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:
 1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-5, and 17 in section 8.i.b above for Certified Category 1 SSO.
- ii. **Reporting SSOs to Other Regulatory Agencies**

These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.
 - iii. **Collection System Questionnaire**

The required Questionnaire (see subsection G of the SSS WDRs) provides the Water Boards with site-specific information related to the enrollee's sanitary sewer system. The enrollee shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.
 - iv. **SSMP Availability**

The enrollee shall provide the publicly available internet web site address to the CIWQS Online SSO Database where a downloadable copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the enrollee shall comply with the following procedure:

- a. Submit an **electronic** copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to the State Water Board, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
1001 I Street, 15th Floor, Sacramento, CA 95814

D. WATER QUALITY MONITORING REQUIREMENTS:

To comply with subsection D.7(v) of the SSS WDRs, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
 - i. Ammonia
 - ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

E. RECORD KEEPING REQUIREMENTS:

The following records shall be maintained by the enrollee for a minimum of five (5) years and shall be made available for review by the Water Boards during an onsite inspection or through an information request:

1. General Records: The enrollee shall maintain records to document compliance with all provisions of the SSS WDRs and this MRP for each sanitary sewer system owned including any required records generated by an enrollee's sanitary sewer system contractor(s).
2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to:
 - i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not

result in SSOs. Each complaint record shall, at a minimum, include the following information:

- a. Date, time, and method of notification.
 - b. Date and time the complainant or informant first noticed the SSO.
 - c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels or storm drains.
 - d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.
 - e. Final resolution of the complaint.
- ii. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with section D.7 of the SSS WDRs.
 - iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.
3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.
 4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from:
 - i. Supervisory Control and Data Acquisition (SCADA) systems
 - ii. Alarm system(s)
 - iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

F. CERTIFICATION

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the SSS WDRs. This designated person is also known as a Legally Responsible Official (LRO). An enrollee may have more than one LRO.
2. Any designated person (i.e. an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.
3. Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.
4. The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO's or DS's contact information, shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.

5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the state as stated in the CIWQS Online SSO Database at the time of certification.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order amended by the Executive Director of the State Water Resources Control Board.

Date

7/30/13


Jeanine Townsend
Clerk to the Board

**SEWER USE/BACKWATER PREVENTION
DEVICES/SPECIFICATIONS****9**

TOPIC	LOCATION
Engineering Sanitary Sewer Design Standards	9A
Backwater Prevention Devices	9B
Resolution for reimbursements of sewer repairs	9C
Upper Lateral/Upper Lateral Clean out Detail	9D
Lower Lateral/Lower Lateral Clean out Detail	9E

Section 5. Sewer Lateral Design Standards

5.1 General

Sewer laterals have both a private and public component, as shown in Figure 5-1 below.

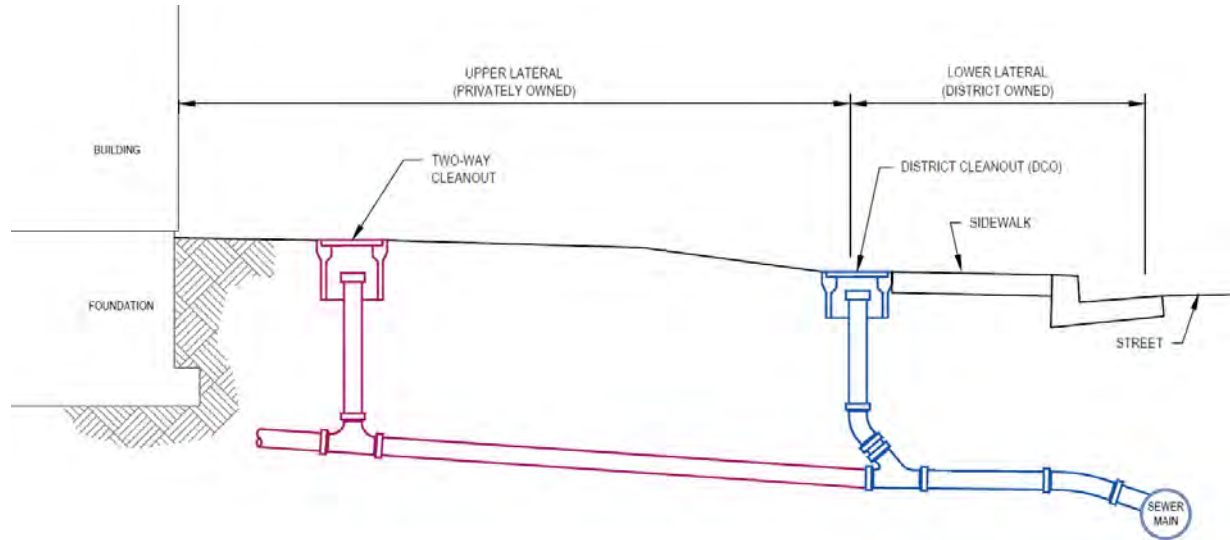


Figure 5-1. Upper and Lower Laterals

The District owns and maintains the sewer lateral up to and including the District-owned Clean out (DCO) and the property owner owns and maintains the sewer lateral from the DCO onward to the structure. The privately-owned lateral is called the Upper Lateral and the publicly-owned lateral is called the Lower Lateral.

Although the design and criteria for both Upper and Lower laterals are similar, there are some differences. They will be discussed in separate sections below.

5.2 Upper (Private) Lateral

5.2.1 Size and Slope

The minimum size of upper laterals serving single family residences are 4 inches inside diameter. The minimum size of upper laterals serving multi-family (3 or more units) and commercial properties are 6 inches inside diameter. Upper laterals larger than 6 inches in diameter may be required depending on the flow generated. Plumbing fixture unit values, as established on the latest edition of the Uniform Plumbing Code, shall be used when designing the building sewer. The slope shall be constant from the building to the property line, unless approved by the District. Sizes and slopes are summarized in Table 5-1.

Table 5-1. Minimum Sewer Lateral Size and Slope		
Lateral Use	Pipe Diameter	Minimum Slope
Single family residential	4"	2.0%
Commercial, multi-family residential	6"	2.0% ^(a)
(a) A slope of no less than 1.0% may be accepted on a case-by-case basis.		

5.2.2 Materials

See Table 3-6 for allowable materials.

Glue-by-glue (or slip-by-slip) couplings shall be used for ABS connections to: PVC SDR 35 and PVC SDR 26 (e.g. a connection to wye at District cleanout).

5.2.3 Connection to Lower Lateral

Unless otherwise permitted or required by the District, the connection of the upper lateral shall be made at the clean out stub from the lower lateral at the property line, see standard detail SS-2. The connection of the upper lateral to the lower lateral shall be airtight and may require hydrostatic water testing, as directed by the District.

5.2.4 Connection Limitations

A secondary suite, ancillary dwelling, or additional dwelling unit (ADU) on a property that would normally accommodate only one dwelling unit may be connected to the upper lateral for the primary residence. The connection shall be located downstream of the two-way cleanout and the ADU shall have its own two-way cleanout.

5.2.5 Alignment and Location

Lateral alignment shall be as straight as possible. Lateral shall be located on the property it serves.

5.2.6 Depth and Cover

Minimum cover for upper lateral sewers shall be:

Table 5-2. Minimum Cover for Laterals	
Location	Cover Requirement
District Cleanout	3 feet
Upper Lateral	1 foot

5.2.7 Cleanouts

A District-owned cleanout (DCO) marks the change from an upper to a lower lateral. The DCO is a one-way cleanout and must be installed by a specially licensed contractor (A or C-42 licenses). The DCO shall be required directly behind the back of sidewalk (preferred) or in the sidewalk if there's an obstruction to accessing the DCO (i.e. retaining walls, fences, etc.). If a sidewalk doesn't exist, install the DCO just behind the property line. See standard detail SS-3.

When the main is located in a backyard easement of a property, locate the DCO three to five feet from the main where feasible, or as determined by the District.

When the main is located in a backyard easement of a neighboring property, locate the DCO three to five feet inside of the fence of the property that the lateral, or as determined by the District.

A two-way cleanout shall be installed within one to three feet from the foundation where the sewer exits the building. See standard detail SS-4.

5.2.8 Backflow Prevention Devices

Upper laterals shall have an approved backflow check valve installed if any structure finish floor is at or lower than the top elevation of the nearest upstream maintenance hole, or as required by the District.

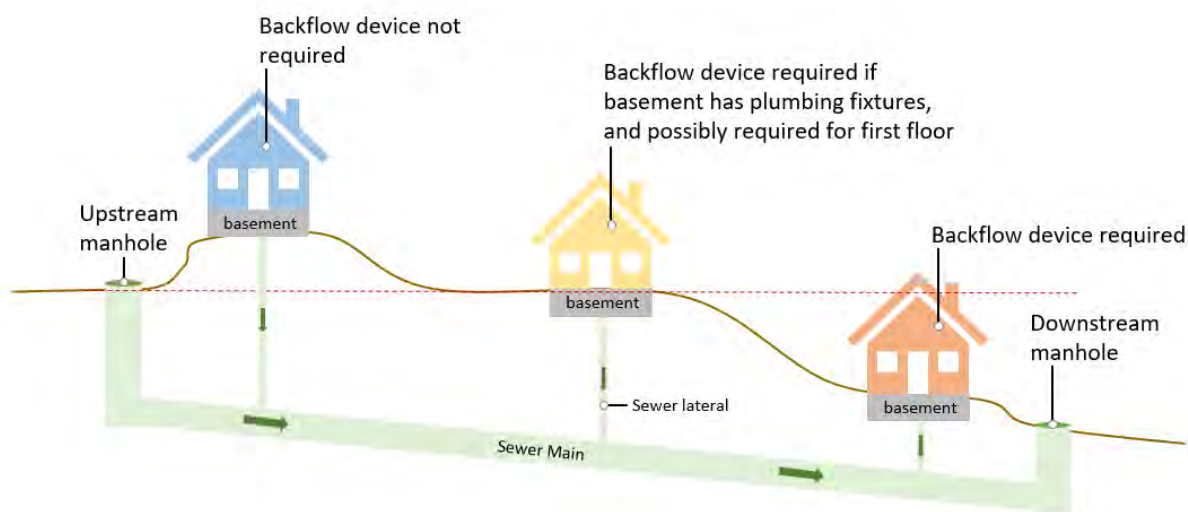


Figure 5-2. Backflow Prevention. If the lowest plumbing fixture in your house is below the next upstream maintenance hole, then you must have a sanitary backflow prevention device on your sewer lateral. If sewage backs up at the upstream maintenance hole, the device closes and protects your property from flooding.

Backflow prevention devices shall be installed on the upper lateral outside of structure being protected, downstream of the two-way cleanout and as close to the DCO as feasible. In the event any question exists whether such device is required, the final decision shall be made by the District.

The connection may be made per standard detail SS-5.

The device will be installed and maintained by the property owner.

For development projects, the design engineer shall note all facilities that require a backflow prevention device and shall include the following note: "The following listed lots will require a backflow prevention device to be installed in the sewer lateral per Standard Detail SS-5"

5.2.9 Private sanitary sewer lift stations

Private pump stations serving individual parcels or structures shall not be allowed where an alternative gravity option exists. Where a private pump station may be necessary, a backup generator will be required.

5.2.10 Accessory Dwelling Units (ADUs)

ADUs can be either attached or detached dwelling units to an existing dwelling. The lateral for the ADU should connect to the existing upper lateral between the two-way cleanout and the DCO.

5.3 Lower (Public) Lateral

5.3.1 Size and Slope

The minimum sizes for lower laterals are the same as upper laterals, see Table 5-1. Lower laterals larger than 6 inches in diameter may be required depending on the flow generated. In no case shall the lower lateral be smaller than the upper lateral.

5.3.2 Materials

See Table 3-6 for allowable materials.

Wyes shall be used for connecting to any new or existing main, unless approved by the District. Fuse-on-wyes shall be used when connecting to HPDE main. Tee connections to existing 8-inch mains or larger (such as Tap-Tite or Insert-a-tee) may be approved by District. Tee connections shall not be used on any main smaller than 8-inch.

5.3.3 Connection to Existing Main

To connect lower laterals to an existing main, the developer or owner must obtain a connection permit and pay the applicable fees.

The contractor will construct the lower lateral connections from new developments to existing main lines and maintenance holes. VFWD will inspect and approve the connection prior to backfill.

Connection fees are provided in the VFWD Sewer Ordinance 70A and updated fee information can be found on VFWD's website.

5.3.4 Connection Limitations

Lower laterals must not directly connect to sewer main lines 12-inches and greater or to main lines more than 10 feet deep without approval from the District.

Each parcel shall be served by a separate sanitary sewer lateral. Two or more buildings located on the same parcel may share a single lower lateral connection. In the event of a parcel subdivision, a separate lateral and easement will be required.

5.3.5 Alignment and Location

Sewer alignment shall be as straight as possible and perpendicular to the main.

- Do not locate lower laterals in front of driveways and driveway flares unless no alternative exists.
- Locate lower laterals at least 5 feet from other utilities when possible.

- Avoid locating the lower lateral within 10 feet of trees or shrubs that are or will be 5 feet and higher at maturity, or within 10 feet of utility poles and light standards.
- Place lower laterals on the low side of all parcels with a slope of 2% or greater to the main line.
- When lateral is parallel to property line it shall be placed a minimum of five feet from the property line.

5.3.6 Cleanouts

See the requirements for DCOs in the above section on cleanouts for upper laterals.

5.3.7 Backflow Prevention Devices

No requirements for lower laterals.

5.4 Use of Existing Laterals

Existing upper and lower laterals may be used for new buildings only when found by the District to be in suitable condition and in conformity with these Standards. For existing laterals to be re-used, they shall be free of sags, roots, offset joints, or any other physical deformation that would allow inflow or infiltration to enter the sewer system or pose risk of lateral failure (including a suitable connection to the public sewer main that is free of defects). Existing lateral conditions shall be confirmed at the cost of the property owner or permit applicant by television inspection. Television inspection shall be performed in the presence of the District's inspector, or recorded and submitted to the District for review and acceptance.

The aforementioned television inspection requirements apply to all existing laterals that serve:

- Vacant parcels
- Parcels that had structure(s) that were previously demolished
- Parcels that are not currently paying, or are delinquent in paying, sewer service charges
- Commercial parcels

The District will make the final determination on suitability for re-use as part of the plan review and permitting process. If the District determines a lateral is in poor condition, the property owner or permit applicant is responsible for replacing both the upper and lower lateral as part of their connection permit.

On existing parcels that do not have a DCO, the property owner will be required to install a DCO.

In all cases, existing laterals shall be sized appropriately for their proposed use or be upsized to serve increased uses.

5.5 Demolition and Abandonment of Existing Laterals

Demolition or abandonment of existing laterals shall be performed by contractors engaged with the District through an encroachment permit.

For buildings to be demolished, the sewer lateral shall be physically disconnected from the public sewer through the following process:

1. A permit shall be required prior to demolition.
2. The lower lateral shall be TV'ed and the video provided to the District.
3. The existing sewer lateral shall be capped directly behind the DCO if the lower lateral is in good condition, or capped at the main if the lower lateral is in poor condition.
4. If a DCO does not exist, a DCO shall be installed per District standards.
5. An inspection is required following disconnection, but prior to backfilling the excavation.

If a property owner wishes to change the configuration of an existing sewer service such that a new lower lateral connection is made, then the existing lower lateral shall be physically disconnected from the public sewer. The lower lateral shall be capped at the sewer main and filled with slurry.

If a building demolition is proposed that results in no occupied buildings on the property, or the sewer is disconnected such that no sewer and water use is proposed, then the property owner shall provide a letter to the District stating whether or not the property will continue to pay sewer service charges. If the property owner continues to pay sewer service charges, no sewer connection fee will be required upon reconnection (provided the use upon reconnection matches the existing use) and the existing sewer lateral may be used in the future. If the property owner does not continue to pay sewer service charges, then connection fees are due upon reconnection to the sewer, and sewer service charges will resume.

5.6 Private Sewer Mains

Development projects shall be designed per these Standards, with each parcel being served by a separate sanitary sewer lateral connected to a public sewer main. In special circumstances, due to configuration of parcels when District easement and setback and access requirements are not feasible, and it is acceptable to the District, property owner(s) and the District may agree that private ownership of a sewer main is preferable to a public sanitary sewer main owned and maintained by the District.

Private sewer mains shall be designed and constructed according to these Standards. Private sewer mains shall be a minimum of 6-inches in diameter. The owner/developer shall enter into a Private Main Agreement with the District that defines the responsibilities for the operation and maintenance of the private sewer main by the property owner(s). The Private Main Agreement shall be recorded against the affected parcel(s). The limits of the private sewer main and public and private sewer ownership shall be indicated on a recorded Parcel Map or Final Map.

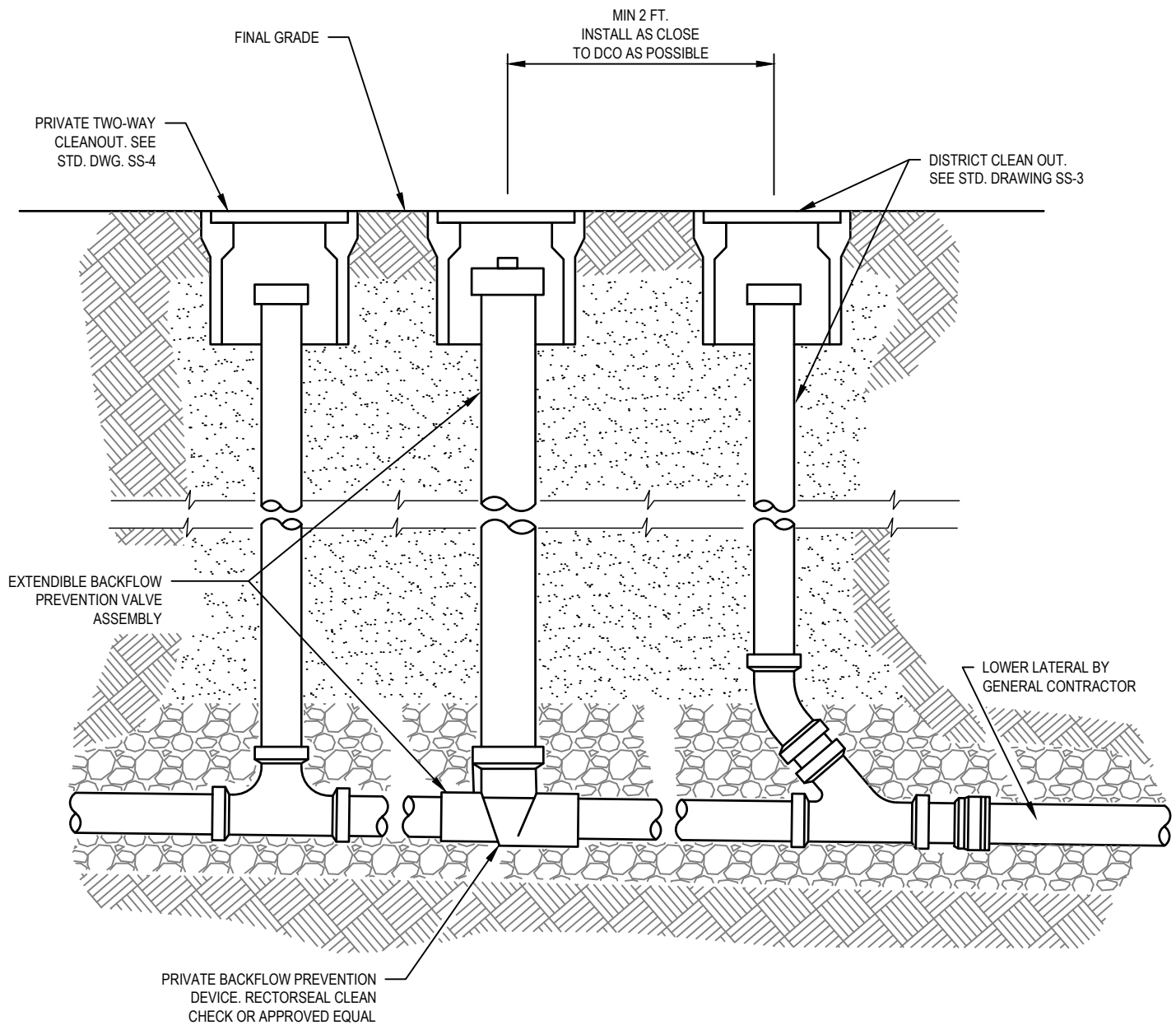
Privately owned sanitary sewer facilities shall not be located in the public right-of-way.

The onsite sewer collection system for all developments containing more than one structure must be in accordance with these Standards for public sewer. Each separate building within a multiple building development must have a separate connection to VFWD's sewer collection system with a separate lower lateral serving only that building. The exceptions to this are:

- Multiple buildings under common ownership. One or more buildings located on one parcel of real property, owned by the same person, may be serviced by the same lower lateral if the jurisdiction is unlikely to approve separate ownership or division of the parcel in the future. If

for any reason the ownership of the parcel is subsequently divided, each building under separate ownership must be provided a separate lower lateral before final map recordation, as discussed in Section 5.3.2 above.

- Residential occupancies with common walls. The following structures may be served by a common lower lateral: single-family dwelling units with common walls, condominiums, stock cooperatives, community apartments or other improvements entitling owners of interest to occupy independent ownership interests and make joint use of utility and other services provided by facilities owned in common.



NOTES:

1. MAINTENANCE OF THE BACKFLOW PREVENTION VALVE TO BE PERFORMED BY THE PROPERTY OWNER OR OCCUPANT PER THE MANUFACTURER'S RECOMMENDATIONS. NEVER ROD THROUGH THE BACKFLOW PREVENTION VALVE SEAT AREA. REMOVE THE VALVE ASSEMBLY BEFORE MAINTENANCE ACTIVITIES.
2. ANY MODIFICATION OR RELOCATION OF THE BACKFLOW PREVENTION VALVE TO BE DONE PER THE MANUFACTURER'S RECOMMENDATIONS.

VALLEJO FLOOD & WASTEWATER DISTRICT

BACKFLOW PREVENTION DEVICE

STANDARD DETAIL

SS-5



SCALE:

NONE

APPROVED:

MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE:

JULY 2020

RESOLUTION NUMBER 99-4533

A RESOLUTION ADJUSTING REIMBURSEMENT VALUES REGARDING OWNER INITIATED SEWER REPAIRS

BE IT RESOLVED by the Board of Trustees of Vallejo Sanitation and Flood Control District as follows:

WHEREAS, Ordinance No. 94-69, adopted by the Board of Trustees on July 13, 1994, requires the establishment by resolution of procedures, criteria for evaluation, and reimbursement values, if any, pertaining to repair of the upper sewer lateral initiated by a property owner;

WHEREAS, Resolution Number 94-4408, adopted by the Board of Trustees on August 24, 1994, established such procedures, criteria, and reimbursement values; and provided for their annual adjustment by resolution;

WHEREAS, increases in construction cost have made an adjustment of the reimbursement values necessary;

NOW THEREFORE, said reimbursement values are adjusted for owner initiated sewer repairs.

REIMBURSEMENT VALUES FOR OWNER INITIATED REPAIR

THE FOLLOWING reimbursement values are established for owner initiated sewer lateral repairs which have complied with procedures and criteria for evaluation for owner initiated repairs and have been determined to be eligible for reimbursement upon completion of the repair.

FIXED REIMBURSEMENT STEPS

The following table shall be used when determining reimbursement amounts:

LENGTH RANGE OF LATERAL (Center of two-way cleanout to center of District cleanout)	BASIC REIMBURSEMENT
0 to 5ft.	\$815
5 to 10 ft.	\$1035
10 to 20 ft.	\$1255
20 to 30 ft.	\$1530
30 to 40 ft.	\$1805
40 to 50 ft.	\$2025

For laterals exceeding 50 feet in length, the basic reimbursement shall be increased by \$25 per foot in excess of 50 feet. The basic reimbursement amount shall be reduced by \$300 if the installation of a two-way cleanout is not required. The basic reimbursement amount will be reduced by \$350.00 if the installation of a District cleanout is not required. Reimbursement shall not exceed the amount of a paid invoice from a properly licensed contractor, if one was retained by the owner to perform the repair and installation. In cases where no paid invoice is provided, the reimbursement shall not exceed the amounts determined using the above formula.

Reimbursement may be made for cleanout installations. The reimbursement amount for installation of a two-way cleanout shall be \$300. The reimbursement amount for installation of a District cleanout shall be \$350.

UPPER LATERAL REPLACEMENT PROGRAM

9C

Adopted by the Board of Trustees of the Vallejo Sanitation and Flood Control District at its regular meeting of October 26, 1999, by the following vote:

AYES: President Exline, Trustees Schivley, Martin, Donahue, Pitts, Hicks, Rey
and Silva

NOES: None

ABSENT: None

GLORIA EXLINE, PRESIDENT

ATTEST:

CHERYL LYNN MCBRIDE, CLERK OF THE BOARD



VALLEJO SANITATION AND FLOOD CONTROL DISTRICT

Upper Sewer Lateral Program

9C

The Vallejo Sanitation and Flood Control District has an Upper Sewer Lateral Program and affects every property within the District's boundaries. The most common questions about the ordinance are:

What is the upper sewer lateral?

The upper sewer lateral is the portion of the sewer pipe system that runs from the interior plumbing of the building to the property line (see drawing).

What is the Upper Sewer Lateral Program?

The Upper Sewer Lateral Program is part of a larger District effort to repair all damaged private and public sewer pipes. The program calls for the evaluation of all Upper Sewer Laterals.

Why is the program needed?

The program will reduce the amount of rainwater and groundwater entering the sewer system through damaged pipes. Rainwater and groundwater entering the sewer can fill the system beyond its capacity and result in sewerage overflows.

What does the evaluation consist of?

The evaluation includes a review of past and current problems with the lateral and an inspection of the lateral. Points are given for specific criteria

and the lateral passes or fails the evaluation according to the points.

What happens if my lateral passes the evaluation?

If your lateral passes the evaluation, the District does not consider repairs necessary. Any work you may want to do on the lateral will be your own choice and at your own cost. You may request to have your lateral evaluated again in the future.

What happens if my lateral fails the evaluation?

If your lateral fails the evaluation, you will be required to hire a contractor or to do the necessary repairs yourself. You will have to pay for the work prior to being reimbursed by the District. The District will determine the amount you will be reimbursed according to a schedule described in the ordinance. You are only entitled to be reimbursed once for the repair of your lateral or any portion of it. Any future repairs will be your responsibility.

What do I do if my lateral plugs?

Call the District first (644-8949) any time day or night! District crews will determine if the backup in the lateral is caused by a problem in the public sewer. If the problem is in the public sewer, District crews will take necessary action. If the problem is in the upper lateral on your property, the District

will recommend that you call a plumber. The plumber will check if he can unplug the lateral without digging it up. If the plumber finds that he has to dig it up, you must obtain a permit form the District before the repairs are made and the lateral is covered up again. If the plumber discovers that contrary to the District crew's findings, the problem is in the public sewer, the District will take necessary action and reimburse you for the cost of the plumber's investigations.

Who will pay for the repairs?

You are responsible for all costs to repair your private lateral. If your lateral fails the District's evaluation, you will be reimbursed according to the District cost schedule, as funds are available. The source of the reimbursement is the Upper Lateral Fee collected with your Sewer User Fee.

Can I ask the District to evaluate my lateral if it isn't plugged?

Yes, the District will schedule an evaluation upon your request. If your lateral fails the evaluation, you must repair it.

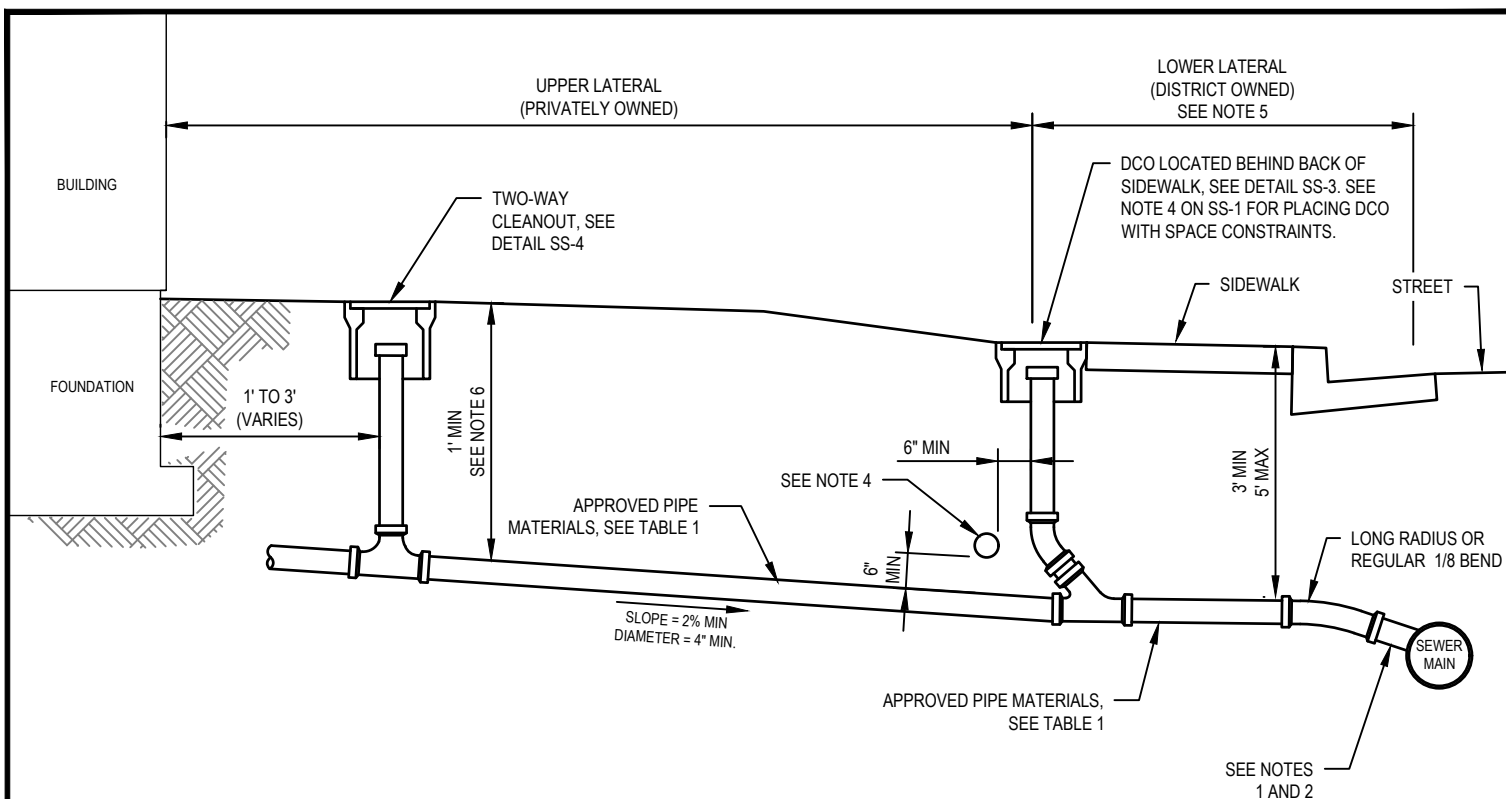


TABLE 1. ALLOWABLE MATERIALS FOR LATERALS

SEWER CATEGORY	ALLOWABLE MATERIALS	WHEN TO USE
LOWER (PUBLIC) LATERALS	PVC-DR26 HDPE-DR17	FOR GENERAL USE
	PVC-C900/C905, DR18 FPVC-C900/C905, DR18	AS REQUIRED BY THE DISTRICT ENGINEER
UPPER (PRIVATE) LATERALS	ACRYLONITRILE BUTADIENE (ABS) - SCHEDULE 40 PVC-DR35	GENERAL USE
	PVC-DR26 HDPE-DR17	GENERAL USE OR REQUIRED WHEN COVER <1FOOT OR UNDER DRIVEWAY
	PVC-C900/C905, DR18 FPVC-C900/C905, DR18	FOR SPECIAL CASES

NOTES:

1. FOR NEW AND EXISTING CONNECTIONS, A NEW FACTORY WYE SHALL BE CUT INTO THE MAIN SEWER. WYE MATERIAL TO MATCH EXISTING MAIN OR BE AN ALLOWED MATERIAL.
2. A TEE CONNECTION (SUCH AS TAP-TITE) MAY BE USED ON MAINS WITH 8" DIAMETER OR GREATER IF APPROVED BY THE DISTRICT.
3. WHEN JOINING TWO PIECES OF MAIN OR LATERAL, USE A NEOPRENE RUBBER SLEEVE WITH TWO STAINLESS STEEL BANDS AND STAINLESS STEEL SHEER COLLAR, MISSION RUBBER, OR APPROVED EQUAL. JOINTS SHALL BE ADEQUATE LENGTH TO PROTECT AGAINST PULL-OUT.
4. CONTRACTOR SHALL HAND DIG AROUND EXISTING UTILITIES.
5. IF NO DISTRICT CLEANOUT EXISTS, HOMEOWNER OWNS AND MAINTAINS THE SEWER LATERAL FROM THE HOUSE TO THE SEWER MAIN.
6. IF COVER OF 1 FOOT CANNOT BE ACHIEVED, INSTALL A "MUSHROOM" OR POPPER BACKWATER OVERFLOW DEVICE IN PLACE OF CLEANOUT BOX.

VALLEJO FLOOD & WASTEWATER DISTRICT

SEWER LATERAL LAYOUT

STANDARD DETAIL

SS-2



SCALE:

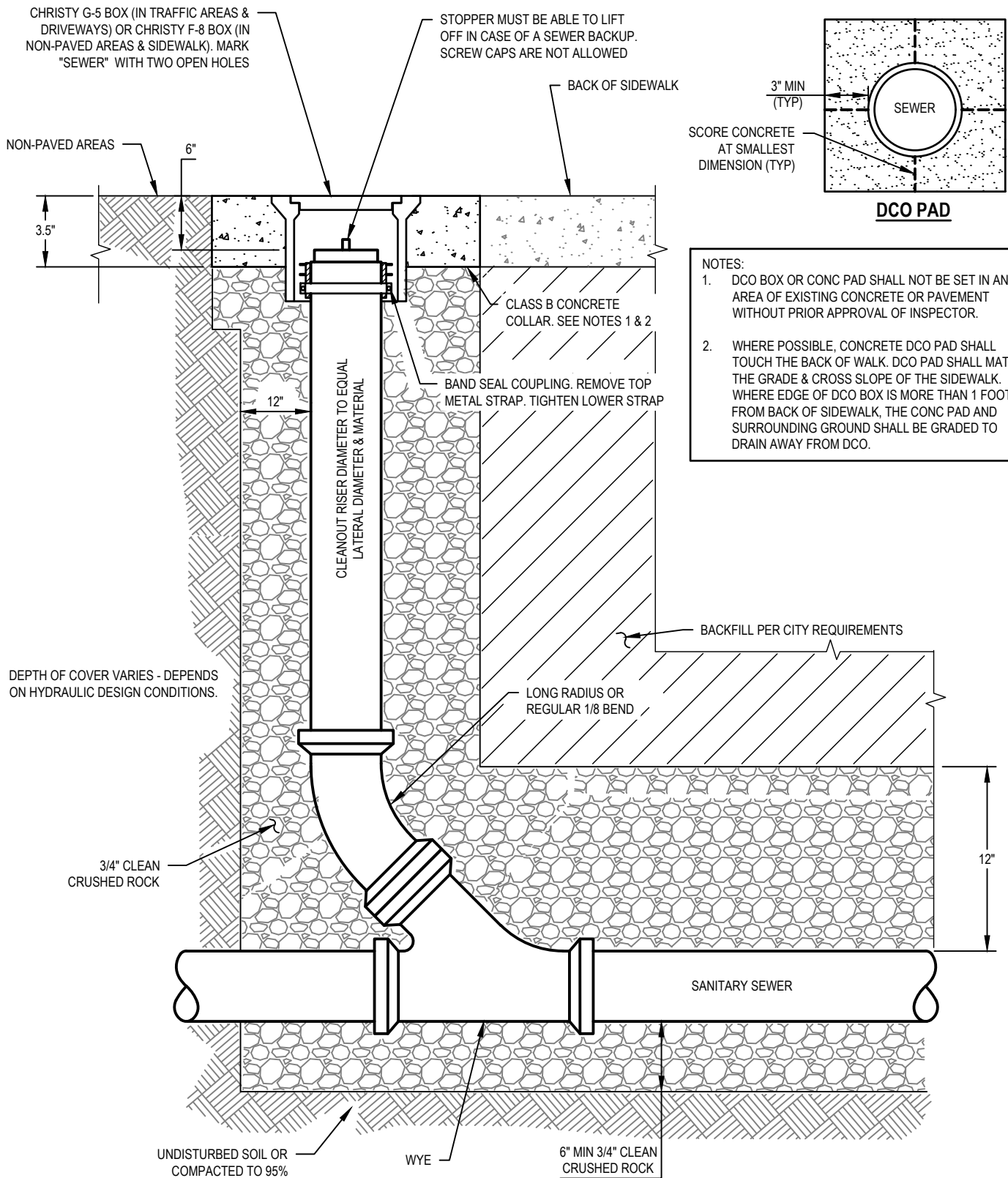
NONE

APPROVED:

MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE:

JULY 2020



VALLEJO FLOOD & WASTEWATER DISTRICT

DISTRICT CLEANOUT (DCO)

STANDARD DETAIL

SS-3

SCALE:

NONE

APPROVED:

MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE:

JULY 2020

JULY 2020

BUSINESS CONTINUITY PLAN

10

TOPIC	LOCATION
Emergency Vendor Contact Information (3 pgs)	10A
Emergency Equipment Inventory & Location (4 pgs)	10B
Mobile Waste Haulers (1 pg)	10C
Emergency Personnel Contact Information (1 pg)	10D
District Cellular Phone List (1 pg)	10E
VSFCD Employee Call Numbers (1 pg)	10F
VSFCD Emergency Employee List (2 pgs)	10G

EMERGENCY MACHINE WORK**ALFRED CONHAGEN INC. OF CALIFORNIA**

3900 Oregon Street
Benicia, CA 94510
Office: 707-746-4848
Fax: 707-746-4840
Contact: Dale Ramirez
Phone: 707-332-6156

PUMP REPAIR SERVICE

405 Allan St, Daly City 94134
Keith Britto, cell 925-915-0593
Wayne Archer, cell 415-716-5461
Shop, 415-467-2150

VALLEJO ELECTRIC

1509 Solano Ave.
Vallejo, CA 94590
707.642.4315
707.643.8705 (after hours)
Contact: Mike Bowers

GENERATORS TO RUN PLANT**AGGREKO**

160 W. Industrial Way
Benicia, CA 94510
Office: 707-746-8812- use this number
Fax: 707-746-8068
Contact: Ray Debenebepto
Cell: 916-871-2133
Email: RayD@Aggreko.com

FIX LEAKS IN PUMPING/PIPING SYSTEMS**TAP MASTER**

1647 Willow Pass Road #136
Concord, CA 94520
Office: 925-439-7975
Fax: 925-439-1871
Email: onehottap@aol.com
Contact: Stan McCallister
Cell: 925-766-6535

ONLY COMPANY TO INSTALL EMERGENCY PIPE

RAIN FOR RENT
www.rainforrent.com
Woodland Office (our branch)
Contact: Ian Prindle
Phone: 530-662-1024
Fax: 530-662-1030
Cell: 530-330-6509
www.rainforrent.com
(Can hard pipe around pump station)

PUMPS & GENERATORS

PAC MACHINE COMPANY (Godwin Pumps)
5326 Gateway Plaza Dr
Benicia 94510
Office: 707-746-4940
Fax: 707-746-1845
Sacramento office: 916-387-1336
www.pacmachine.com
Contact: David Kesich
Cell: 707-732-4068
Or Fred Kesich
Cell: 916-416-4222

RAIN FOR RENT – Industrial Division
805 Port Chicago Hwy
Bay Point, CA 94565
Contact: Tiffanie Vik
Cell: 925-679-2803
Or Jami Brady
Cell: 925-250-6309
Fax: 925-679-2839

STANDBY GENERATORS**PETERSON POWER SYSTEMS, INC.**

2828 Teagarden Street
San Leandro, CA 94577
Office: 510-895-8400- 24 hours/365
Fax: 510-352-2064
Contact: Steve Cushman – ext. 5504, engineer
Contact: Matt George-ext.5555 service Manager
Rentals – 1750 KW

EMERGENCY VENDOR CONTACT INFORMATION

10A

GENERAL CONTRACTORS

BRUCE BALALA EXCAVATING
1516 Shannon Court
Benicia, CA 94510-2737
Home: 707-644-9609
Cell: 707-853-3769
Contact: Bruce Balala

GHILOTTI CONSTRUCTION

600 South Napa Junction Road
American Canyon, CA 95403
Office: 707-556-9145
Fax: 707-556-9682
Cell: 707-396-0350
Contact: Mark Bower (Area Manager)

MAHONEY'S BACKHOE

1941 Magazine St
Vallejo, CA 94590
707-315-7728

HESS CONSTRUCTION

4484 Hess Dr, American Canyon
Office: 707-552-7931
Contact: Larry Hess
Cell: 707-310-3780

PFISTER EXCAVATING, INC.

P.O. Box 4312
Vallejo, CA 94590
Greg Pfister
(707)643-7715

PLUMBING CONTRACTORS

A+ Waterworks
P.O. Box 4068
Vallejo, CA 94590
Nasser Nijem
707.558.0221

Advanced Trenchless
4740 E. 2nd St.
Benicia, CA 94510
Ryan Charles
707.644.7700

Roto-Rooter Plumbers
1708 Enterprise Dr.
Fairfield, CA 94533
Robert Cortez
707.558.0221

EMERGENCY RENTAL EQUIPMENT

BAY POWER GENERATOR SYSTEMS
1677 Swallow Way, Hercules, 94547
Office: 510-385-4565
Fax: 510-799-4285
Contact: Scot Campbell
Scot@BayPower.com
(Help on Generators in Plant)

CRESCO RENTALS

197 Howe Road, Martinez
Office: 925-228-9811- 24/7/365
(Day or night; larger pumps & hoses)

FERGUSON WATERWORKS

(Was Westburne)
2112 Loveridge Rd, Pittsburg 94565
Office: 925-431-0688- after hours 24/7/365
Fax: 925-431-0690
www.ferguson.com
(Pipe fittings)

FLYGT CORP. Rental pumps

790 Chadbourne Road
Fairfield, CA 94533
Office: 707-422-9894
Contact: Louis Tafoya, 707-372-5037
Contact: Donnie Dyer, 707-290-9409

HERTZ BIG 4 RENT

Benicia, CA 94510
Office: 707-747-4444 - 24/7/365
Smaller pumps & hoses (4" and under), Cranes,
Lifts, Power Tools, etc.

DW Pumps (formerly PACO pumps)

14855 Wicks Blvd, San Leandro 94577
Office: 510-633-2040 Fax: 510-633-2060
Emergency Contacts:
Dan Wathor 916-599-2054
Dave Lang 510-774-7642
Doug Wathor 925-200-0711
Roger Marshall 510-714-8110

EMERGENCY VENDOR CONTACT INFORMATION

10A

United Rentals
1855 Soscol Avenue
Napa, CA 94558
Dennis Gordon
Cell: (707)689-3492 (emergency#)

EMERGENCY HAZARDOUS RESPONSE CLEAN -UP

PSC INDUSTRIAL SERVICES
395 West Channel Road, Benicia, 94510
Office: 707-746-8287, 24/7/365
Fax: 707-746-8297

CLEAN HARBORS, INC.
4101 Industrial Way, Benicia, 94510
Office: 707-747-6699, 800-645-8265
Fax: 707-747-1927

KM Industrial,
3867 Teal Ct, Benicia, 94510
747-8280, Fax 747-5171
Cell 707-396-3225
Vac trucks etc, lime pipe cleaning

LD Transportation
PO Box 606, Winters 95694
David Marcum
Office: 707-449-4123
Cell: 510-517-2914
idhazhaul@sbcglobal.net
Will haul hazmat or debris

CHEMICAL SUPPLIERS

SODIUM HYPOCHLORITE (12.5%)
Olin Chemical
Customer Service
1-800-753-3669

SODIUM BISULFITE (25%)
Brenntag Pacific Inc.
525 Seaport BLVD.
Redwood City, Ca. 94063-2711
1-877-229-6305
Denise (or any other Customer Service Rep.)

DRY LIME
Graymont Western US Inc.
3950 South 700 East, Suite 301
Salt Lake City, Utah 84107
1-916-871-3832 (Woodland)
Chuck Goodwin

POLYMER
Kubwater
Andy Kubiak - Field Rep (503) 740-3979

SODIUM HYDROXIDE (50%) &
SULFURIC ACID (93%)
UNIVAR
525 SEAPORT BLVD
REDWOOD CITY, CA 94063-2711
1-650-363-1661

LNG
Clean Energy Fuel
1-562-546-0331
Christa Peila
cpeila@cleanenergyfuels.com
logistics@cleanenergyfuels.com

Chart Industries
1-800-925-9187

EMERGENCY VENDOR CONTACT INFORMATION

10A

GENERATOR REPAIRS/RENTALS

UNITED RENTALS – POWER & HVAC

Chad Galaviz
510-670-0373/510-684-2466

cgalaviz@ur.com

Dennis Gordon
707-255-1066/707-689-3492

dgordon@ur.com

BAY POWER GENERATOR SYSTEMS

Scot Campbell
1677 Swallow way, Hercules, 94547
Office 510-385-4565

Scot@BayPower.com

Generators/diesels

CUMMINS WEST

875 Riverside Pkwy, West Sacramento, 95605

916-371-0630, 24/7/365

Cummins engines/diesels

VALLEY POWER SYSTEMS NORTH

(Was Sierra Detroit, Stuart & Stevenson)

30490 San Antonio, Hayward, 94544

510-635-8991,

After hours, 510-675-8400 &

800-635-8991

PETERSON POWER SYSTEMS

2828 Teagarden St, San Leandro, 94577

510-895-8400, 24/7/365

Fax: 510-352-2064

Matt George, service manager, ext 5555

PACIFIC POWER SERVICE CORP

1801 Walters ct Fairfield, 94533

707-422-4844 24/7/365

FAX: 426-1026

Gino Westcott - x. 316

CRANE & RIGGING SERVICES

CB Cranes

P.O. Box 5994

Napa, CA

Cindy – 707-738-6200

Hatten Cranes

Hayward, CA

510-670-0737

800-533-1633

MARE ISLAND CONTACTS

LENNAR/KENNEDY WILSON PROPERTIES

Kaye Hadsell - 562-4009 24/7/365

Neal Siler – (cell 557-8224)

Brian McDonough (cell 310-2204)

ISLAND ENERGY

Peter Guadagni

562-5000

After hours 707-750-4477 (answer service)

CH2M Hill

562-1015

Steve Reynolds – (cell 503-952-6833)

Portland Office (503-736-4177)

CITY OF VALLEJO

Public Works 648-4315

Water Emergencies 648-4313

VALLEJO SANITATION & FLOOD CONTROL DISTRICT				10B
EQUIPMENT WITHIN THE DISTRICT				
October 30, 2012				
TYPE OF EQUIP	VEHICLE EQUIP #	DEPT	NUMBER OF ITEMS	
AED Units	No number	PLANT	6	
Air Compressor, 2003 Compare Diesel	197	FOPS	1	
Air Compressor, 2003 Compare Diesel	198	FOPS	1	
Airboat, 2006 Aluminum with trailer	209/210	FOPS	1	
Airboat, 2006 Aluminum with trailer	211/212	FOPS	1	
Arrowboard, 200+A116 Wanco Solar Trailer mounted	217	FOPS	1	
Arrowboard, 2006 Wanco Solar Trailer mounted	214	FOPS	1	
ArrowBoards (portable)	No number	FOPS	2	
Backhoe Trailer	134	FOPS	1	
Backhoe Trailer, 1993 Trail King	141	FOPS	1	
Backhoe, 1996 john deere 410D	150	FOPS	1	
Backhoe/Front Loader, 1992 John Deere	132	FOPS	1	
Backhoe/Loader, 2006 John Deere	213	FOPS	1	
Bobcat Excavator, 2004 BO Model - 322S w/ trailer	205	FOPS	1	
Bobcat Loader, Model 763	166	FOPS	1	
Bronco, 1992 Ford	135	FOPS	1	
Cargo Van, 2005 Chevrolet G3500 Express	207	ENV SVC	1	
Concrete Saw trailer, Target Pro6511 Saw	168	FOPS	1	
Concrete Saw, Target MC 18	No number	FOPS	1	
Confined Space Van (step), 12' walk in Chevrolet, 1999	226	SAFETY	1	
Crane Truck, 2001 F-350 (9' Crane)	176	MAIN	1	
Cutoff Saw, Stihl 14"	No number	FOPS	3	
Cutoff Saw, Stihl 20"	No number	FOPS	2	
Delineators 3.5'	No number	FOPS	60	
Ditchwitch Trailer, 1986	102	FOPS	1	
Dump Truck, 1993 White GMC	139	FOPS	1	
Dump Truck, 1994 Freightliner	147	FOPS	1	
Dump Truck, 1998	164	FOPS	1	
Easement Machine, 2006 Prowler w/ Trailer	215	FOPS	1	
Escape, Ford 4x4 2008	225	ENG	1	
Escape, Ford 4x4 2009	227	PCD	1	
Flusher Truck, 2006 Sreco-Flexible	218	FOPS	1	
Forklift, CatP5000 (capacity 4500#)	234	MAIN	1	
Gas Monitors, Portable Industrial Scientific 4-gas(various models)	No number	FOPS/MAIN	10	
Generator 100KW 480 volts 3 phase, White Horse trailer	146	MAIN	1	
Generator Fuel Storage - Diesel - 6000	No number	PLANT	1	
Generator Load Bank Test Set, Mobile	169	FOPS	1	
Generator, 2002 Honda EB3500	199	FOPS	1	
Generator, 2002 Honda ES6500K2A	180	FOPS	1	
Generator, 2002 Honda ES6500K2A	200	FOPS	1	
Generator, 2002 Honda EU3000IS	201	FOPS	1	
Generator, Honda EU2000I	177	FOPS	1	
Generator, Honda EU2000I	178	FOPS	1	
Generator, Honda EU2000I	179	FOPS	1	

VALLEJO SANITATION & FLOOD CONTROL DISTRICT				10B
EQUIPMENT WITHIN THE DISTRICT				
October 30, 2012				
TYPE OF EQUIP	VEHICLE EQUIP #	DEPT	NUMBER OF ITEMS	
Generator, Kohler Portable - 50KW Trailer General 240 30 Gas - 60 gal tank & 4.2 GPH	125	MAIN	1	
Hose Trailer 2/3000 "6" 150lb rated Hose		MAIN	1	
Hose, 1½", 25 Ft., Discharge Hose	No number	FOPS/MAIN	6	
Hose, 1½", 25 Ft., Suction Hose	No number	FOPS/MAIN	3	
Hose, 2", 25 Ft., Discharge Hose	No number	FOPS	2	
Hose, 2", 25 Ft., Suction Hose	No number	FOPS	1	
Hose, 3", 25 Ft., Suction Hose	No number	FOPS	4	
Hose, 3", 25Ft., Discharge Hose	No number	FOPS	14	
Jet Cleaning Trailer Mounted Machine	236-T	FOPS	1	
Jet Machine, 1995 Ford	148	FOPS	1	
Jet Machine, 2003 Sterling	194	FOPS	1	
Lighted Barricades	No number	FOPS	50	
Pickup Truck - F-150 Supercab	188	ENG	1	
Pickup Truck - F-150 Supercab	189	ENV SVC	1	
Pickup Truck Chevrolet Silverado 4x4 2008	224	FOPS	1	
Pickup Truck F-250, 1999 Ford	160	FOPS	1	
Pickup Truck F-350, 1997 Ford	161	FOPS	1	
Pickup Truck, 2000 4x2 Supercab Ford F250	170	FOPS	1	
Pickup Truck, 2000 Ford F150 supercab	171	ENG	1	
Pickup Truck, 2011 Ford F-250	235	MAIN	1	
Pickup truck, 2002 Ford F-150	185	FOPS	1	
Pickup Truck, 2005 Chevrolet Colorado 4WD	208	ENV SVC	1	
Pickup Truck, 2007 Chevy Silverado	216	FOPS	1	
Pickup Truck, 2008 Chevrolet 2500 HD	229	FOPS	1	
Pickup Truck, 4 x 4 Ford Ranger	195	MAIN	1	
Pickup Truck, C3500 Utility Body, 2004 Chrvrolet	206	FOPS	1	
Pickup truck, Chevrolet Silverado	219	FOPS	1	
Pickup Truck, F-150 Supercab	191	ENG	1	
Pickup Truck, F350 Chassis Cab w/12' Svc Bdy	174	FOPS	1	
Pickup Utility Truck 2009 Ford F-350 flatbed	228	MAIN	1	
Pickup Utility Truck Svc Body, 2001 F-350 Crew-cab	174	FOPS	1	
Pickup Utility Truck Svc Body, 2001 F-350 Crew-cab	175	FOPS	1	
Pickup Utility Truck Svc Body, 2002 F-350	192	FOPS	1	
Pickup Utility Truck Svc Body, 2008 Ford F-350,	220	MAIN	1	
Pickup Utility Truck Svc. Body, F-350 Electrical	187	MAIN	1	
Pickup Utility Truck, Svc Body, 2001 F-250	172	FOPS	1	
Pressure Washer, Honda 2500 psi	No number	FOPS	1	
Pump Trailer, for 4414T Cornel Sewer Pump	186	MAIN	1	
Pump, 1 1/2" 53GMP Gas Driven Trash pump	No number	FOPS	2	
Pump, 2" 100 GMP Gas Driven Diaphragm Pump	No number	FOPS	1	
Pump, 2", 300 GPM, Gas Driven Trash Pumps	No number	FOPS	1	
Pump, 3", 150 GPM, Submersible Flygt Pumps	No number	MAIN	2	
Pump, 3", 300 GPM, Gas Driven Trash Pumps	No number	FOPS	3	
Pump, 4414T Cornell Redi-Prime 4" 700GMP @ 300'Head	181	MAIN	2	
Pump, 6" Godwin Driprime 1200 GMP - 160' Head	204	FOPS	1	

VALLEJO SANITATION & FLOOD CONTROL DISTRICT				10B
EQUIPMENT WITHIN THE DISTRICT				
October 30, 2012				
TYPE OF EQUIP	VEHICLE EQUIP #	DEPT	NUMBER OF ITEMS	
Pump, Trailer Mounted E6, T3/Engine Driven Sewage Pump	233-T	MAIN	1	
Reliance trailer 1989, transferred no from eq 111-T	221-T	OPS	1	
Reliance trailer 1991, transferred no from eq 120-T	222-T	OPS	1	
Rodder, 2003 F-650 Chassis	196	FOPS	1	
Sedan 4-door, Ford	193	ADMIN	1	
Shoring - 24: x 45": x 3.5'	No number	FOPS	2	
Shoring - 24: x 45": x 5'	No number	FOPS	4	
Shoring - 24: x 45": x 7'	No number	FOPS	3	
Shoring - 24: x 54": x 5'	No number	FOPS	1	
Shoring - 24: x 54": x 7'	No number	FOPS	2	
Shoring box 7.5' x 7;.5' x 4' H	No number	FOPS	1	
Shoring box 7.5' x 7;.5' x 8' H	No number	FOPS	1	
Shoring pump	No number	FOPS	2	
Shoring Shield 8' x 8' x 52" x 87"	No number	FOPS	1	
Sterling Jet Truck 2008	223	FOPS	1	
Sterling LT95 Tractor truck chassis	221	OPS	1	
Sterling LT95 Tractor truck chassis	222	OPS	1	
Toilet trailer, portable 1995	149	FOPS	1	
Traffic Cones 24"	No number	FOPS	100	
Trailblazer, 2004 Chevrolet	202	FOPS	1	
TV Van, 2002	182	FOPS	1	
TV Van, 2002	183	FOPS	1	
Vacon Flusher/Vactor Truck, 2009	230	FOPS	1	
Vacon Flusher/Vactor Truck, 2010	232	FOPS	1	
Vacuum System, 2004 Pacific Tek Trailer Mounted Self-Contained	203	FOPS	1	
Vacuum Truck, 1999	165	FOPS	1	
Van - 1990 Areostar	119	ADMIN	1	
Van, 2002 Ford Windstar Mini Van	190	ENV SVC	1	
Vehicle Fuel - Diesel Tank at plant - 6000 gallons	No number	PLANT	1	
Vehicle Fuel - Gasoline Tank at plant - 6000 gallons	No number	PLANT	1	
Ventilation Blower, 1997 Air Power	167	FOPS	1	
Wacker IO 500 Tamper	No number	FOPS	2	
Wacker WP 1550 Vibrating Plate	No number	FOPS	1	

MOBILE WASTE HAULERS

10C

08/16/13

Truck Capacities

Far West Sanitation
5600 Imhoff Dr Suite D
Concord 94520
925-686-1625

15+ trucks
Most 1,000 Gal
1 5000 gal

Dependable Septic Systems, Rene Bagman & Mike Malcom
Mail: 11-G Poco Way #119, Yard: 500 Tower Road

1 @ 5500 gal

American Canyon 94589
707-257-2127 035C4004

1 @ 1600 gal
1 @ 2500 gal
1 @ 3425 gal

United site Service, formerly: PortoSan, Redwood,, Acme & Sons, Farmers
945 Teal Dr
Benicia 94510
800-322-2263

Large number of
Trucks of all sizes

Clean Harbor Inc
Mail: PO Box 996, Yard: 4101 Industrial Way
1 @ 2,500 gal
Benicia, CA 94510
707-747-6699 Fax: 707-747-1927

1 @ 5,000 gal

Ernie's Plumbing & Sewer Service
4 Goree Ct.
Martinez, CA 94553
925-228-5242
Robert Blessing and/or Larry Harvey Sr.

1 @ 1,600 gal

Far West Sanitation
5600 Imhoff Dr. Ste. D
Concord, CA 94520
925 686 1625
Sharon Larry

7 @ 1,000 gal

M & M Sanitary
P.O. Box 10009
American Canyon, CA 94503
707 642 3555
Bruce McMahon

1 @ 2,000 gal

Roto Rooter
1708 Enterprise Dr.
Fairfield, CA 94533
707 642 9200
Jerry Bristol

1@ 1,500 gal

Roy's Sewer Service
577 Portal Street
Cotati, CA 94931
415 308 1200
Kevin Berry

3@ 2,000 gal
3 10 yards. Vac Trucks

Vallejo Flood and Wastewater District Employee Contact Information - 4610

10 D

Dept	Last Name	First Name	MI	City	Zip	County	Primary Phone Number	Secondary Phone Number	District Cell Phone Number	Radio Call Number	EOC Activation
Admin	ADMIN (RV Dump)								(707) 333-5131		
Admin	ADMIN (Shipping/Receiving)								(707) 333-5588		
Admin	BROWN	MARY (MJ)	J	NOVATO	94947	Marin	(415) 572-9204		(707) 246-7524		
Admin	CANONES	RACHELLE	E	FAIRFIELD	94534	Solano	707-342-3568		707-319-0570		
Admin	MORTON	MELISSA	A	WALNUT CREEK	94596	Contra Costa	(707) 319-4776	(925) 876-4471	(707) 319-4776	S-01	IC
Admin	WOOTEN	KINJI	S	FAIRFIELD	94533	Solano	(510) 809-7213				
Engineering	ASH	WILLIAM	J	VACAVILLE	95688	Solano	(707) 673-7105		(707) 567-9280		
Engineering	GUORGUI	GEORGE	W	FAIRFIELD	94534	Solano	(707) 422-3432	(707) 333-8488	(707) 333-8488	S-03	
Engineering	HENDERSON	MARIAH	R	VALLEJO	94591	Solano	(707) 654-7535		(707) 333-5696	S-04	
Engineering	MURADIAN	NATALIE	K	MARTINEZ	94553	Contra Costa	(559) 333-3172		(707) 567-6964	S-15	
Engineering	RIDEOUT	TRACY	P	DIXON	95620	Solano	707-480-2629		707-805-4920	S-06	
Engineering	SILVA	GUSTAVO	F	DIXON	95620	Solano	(707) 208-4961		(707) 333-6020	S-02	
Engineering	TOMKO	MARK	A	FAIRFIELD	09534	Solano	(707) 249-7389	(707) 320-7143	(707) 249-7389	S-05	Alt IC
Env. Svcs	CHASE	CARRIE	A	FAIRFIELD	94533	Solano	(707) 305-3646		(707) 333-8020	S-66	
Env. Svcs	DECOUPIGNY	CAROLE-ANNE	V	SAN RAMON	94583	Contra Costa	510-759-5993			S-63	
Env. Svcs	GUTIERREZ	JOSE	L	DIXON	95620	Solano	(707) 688-6268	(707) 678-5054	(707) 333-5093	S-67	
Env. Svcs	HALL	MARK	A	RICHMOND	94806	Contra Costa	(210) 478-9262		(707) 654-7096	S-69	
Env. Svcs	HARRINGTON	JENNIFER	A	VALLEJO	94591	Solano	(707) 853-2198	(707) 556-9133	(707) 656-9844	S-61	PLN
Env. Svcs	KAISER	JENNIFER	NMN	BENICIA	94510	Solano	(707) 747-0701	(707) 980-8362	(707) 333-8661	S-92	PIO
Env. Svcs	LI	SANDY	S	VALLEJO	94591	Solano	(707) 592-6887			S-63	
Env. Svcs	MOORE	CRAIG	C	BENICIA	94510	Solano	(707) 590-0235		(707) 333-8464	S-68	
Env. Svcs	SETTY	ANITA	V	WALNUT CREEK	94596	Contra Costa	(510) 685-6666		(707) 319-2016	S-65	
Env. Svcs	SHEETENHELM	ERIKA	L	WALNUT CREEK	94598	Contra Costa	(530) 848-3851		(707) 310-3327	S-64	
Env. Svcs	VIDAMO	PATRICK	D	SANTA ROSA	95401	Sonoma	(707) 528-3764	(707) 529-4250		S-63	
Field Ops	AU	VYRITH (JOHNATHAN)	J	SANTA ROSA	95403	Sonoma	(707) 548-1078		(707) 333-6041	S-20	
Field Ops	BOOK	KEVIN	J	MARYSVILLE	95901	Yuba	(530) 565-5143		(707) 310-2809	S-26	
Field Ops	BURKET	BRIAN	T	ROCKLIN	95677	Placer	(707) 319-4137	(707) 319-4201	(707) 333-9381	S-30	
Field Ops	CASTANEDA	JOE	V	VALLEJO	94590	Solano	(707) 704-4937		(707) 246-6094	S-29	
Field Ops	CLARK	ADAM	L	FAIRFIELD	94534	Solano	(707) 853-2514		(707) 333-6484	S-24	
Field Ops	DEMARTINI	JASON	E	VACAVILLE	95688	Solano	(707) 330-2003		(707) 333-8660	S-39	
Field Ops	FOPS DISPATCH								(707) 333-9661		
Field Ops	FOPS SERVICE CALL								(707) 310-4230		
Field Ops	FOPS STANDBY 1								(707) 333-8851		
Field Ops	FOPS STANDBY 2								(707) 333-9387		
Field Ops	GIANULIAS	JAMES	G	VALLEJO	94590	Solano	(707) 246-5438	(707) 643-7054	(707) 333-9658	S-27	
Field Ops	GRAVES	MICHAEL	A	VALLEJO	94591	Solano	(707) 334-1319	(918) 519-0036	(707) 333-6365	S-23	
Field Ops	JARAMILLO	DAVID	A	VALLEJO	94590	Solano	(925) 783-1056		(707) 246-5101	S-33	
Field Ops	JOHNSON	NICOLLE	M	FAIRFIELD	94533	Solano	(707) 720-5953				
Field Ops	KEATING	JUSTIN	J	VALLEJO	94590	Solano	(707) 246-1089		(707) 342-6639	S-47	OPS/Alt IC
Field Ops	KENT	LEATIOGIE	A	VACAVILLE	95688	Solano	(808) 365-8630		(707) 246-0478	S-31	

Vallejo Flood and Wastewater District Employee Contact Information - 4610

10 D

Dept	Last Name	First Name	MI	City	Zip	County	Primary Phone Number	Secondary Phone Number	District Cell Phone Number	Radio Call Number	EOC Activation
Field Ops	MOORE	PAUL	R	SUISUN	94585	Solano	(707) 398-5353		(707) 333-4106	S-34	
Field Ops	POLSON	ROBERT	A	BENICIA	94510	Solano	(707) 980-4735	(707) 980-2687	(707) 654-5966	S-38	
Field Ops	RAMIREZ	JAVIER	NMN	DIXON	95620	Solano	(707) 803-9922		(707) 333-9663	S-22	
Field Ops	RAMOS	EDUARDO	NMN	VALLEJO	94590	Solano	(707) 301-2147		(707) 319-2626	S-41	
Field Ops	RICE	JEREMIAH	T	BENICIA	94510	Solano	(707) 217-2752		(707) 333-6942	S-25	
Field Ops	RIEDL	THOMAS	J	VALLEJO	94590	Solano	(707) 553-1740	(707) 712-9328	(707) 333-7162	S-35	
Field Ops	SANCHEZ	SEAN	T	VACAVILLE	95687	Solano	(707) 592-9323		(707) 333-9659	S-28	
Field Ops	SISSON	MICHAEL	A	VALLEJO	94591	Solano	(707) 853-3019	(707) 648-2540	(707) 333-9660	S-21	
Field Ops	TAUTUAA	JOEL	M	VALLEJO	94591	Solano	(650) 704-5356		(707) 315-6728	S-44	
Field Ops	VARGAS, JR.	FLORENTINO (TINO)	NMN	VACAVILLE	95687	Solano	(530) 383-8266		(707) 333-6351	S-43	
Field Ops	WRIGHT	CHRISTOPHER	L	VACAVILLE	95687	Solano	(707) 580-3692		(707) 333-6319	S-32	
Finance	DINIZ	JENNIFER	O	HERCULES	94547	Contra Costa	(510) 816-8432				
Finance	FADRIGO	CHASTITY (CHAS)	A	FAIRFIELD	94533	Solano	(707) 718-1608		(707) 648-6827		
Finance	HERBER	JASMINE	Y	FAIRFIELD	94533	Solano	(707) 246-8429				
Finance	MARTINEZ-FULGENCIO	INES	T	VALLEJO	94590	Solano	(951) 217-1999	(707) 653-4236			
Finance	RELADO	GISELLE	G	VALLEJO	94591	Solano	(707) 342-3321				
Finance	TUCKER	JEFFERY	A	NAPA	94558	Napa	(503) 799-7007		(707) 333-4410		
HR/SRM	BELL	ALEXANDRIA	I	BENICIA	94510	Solano	(707) 580-2000		(707) 567-6568		
HR/SRM	HETHCOCK	MATTHEW	L	SUISUN CITY	94585	Solano	(707) 980-1548		(707) 567-7987	S-55	
HR/SRM	FOSTER	KIMBERLY	M	FAIRFIELD	94534	Solano	(707) 315-4101		(707) 315-7605		
HR/SRM	PEREZ	ANDRIANE	N	VALLEJO	94591	Solano	(707) 315-0363		(707) 342-6490		
HR/SRM	SIMMONS	GEZEL	R	VALLEJO	94589	Solano	(707) 246-6909	(707) 328-3126	(707) 246-6909		
Maintenance	AUSTIN	PAUL (JEFF)	J	DIXON	95620	Solano	(707) 863-1737	(707) 678-8468	(707) 567-4904	S-53	
Maintenance	BACKHOLM	ARVO	E	SANTA ROSA	95407	Sonoma	(707) 484-4993		(707) 333-6508	S-11	
Maintenance	BAILEY	SEAN	M	BENICIA	94510	Solano	(707) 246-9904		(707) 315-8470	S-12	
Maintenance	BURKETT	MICHAEL	E	NAPA	94559	Napa	(707) 548-3421		(707) 704-8232	S-07	
Maintenance	CHATMAN	TERRY	S	VALLEJO	94591	Solano	(707) 315-3942	(707) 590-5684	(707) 315-3942		
Maintenance	CONTRERAS	PEDRO	NMN	SACRAMENTO	95822	Sacramento	(831) 262-6940		(707) 319-6577	S-10	
Maintenance	HOPE	JERAD	R	VALLEJO	94591	Solano	(707) 853-6859		(707) 333-9368	S-19	
Maintenance	HUMPHREY	RONALD	D	VACAVILLE	95687	Solano	(707) 249-0835		(707) 319-7840	S-18	
Maintenance	KADUK	JASON	A	VALLEJO	94591	Solano	(707) 647-0500	(707) 567-4844	(707) 567-4844		
Maintenance	KERSTHOLD	ERIC	J	VALLEJO	94591	Solano	(707) 334-8865		(707) 333-5518	S-14	
Maintenance	KESSLER	ROBERT	T	VALLEJO	94591	Solano	(707) 649-9754	(707) 333-0042	(707) 319-3830	S-08	
Maintenance	LAMPHEAR	MICHAEL (JAMES)	J	VACAVILLE	95688	Solano	(707) 446-6918	(707) 580-4790	(707) 333-5344	S-51	
Maintenance	LANDERS	TYLER	M	VALLEJO	94591	Solano	(707) 712-4024		(707) 567-6614	S-57	
Maintenance	LYNSKEY	ANDREW	M	FAIRFIELD	94534	Solano	(707) 249-4733		(707) 333-6519	S-13	
Maintenance	MCGRANE	BRIAN	T	FAIRFIELD	94533	Solano	(707) 386-3138		(707) 333-6938	S-09	
Maintenance	MCKENNA	ROBERT	NMN	BENICIA	94510	Solano	(510) 501-0738		(707) 567-5107	S-52	
Maintenance	MECH PS CHECKER								(707) 333-6728		
Maintenance	MECH STANDBY 1								(707) 333-5589		

Vallejo Flood and Wastewater District Employee Contact Information - 4610

10 D

Dept	Last Name	First Name	MI	City	Zip	County	Primary Phone Number	Secondary Phone Number	District Cell Phone Number	Radio Call Number	EOC Activation
Maintenance	MECH STANDBY 2								(707) 567-9189		
Maintenance	QUINN	COLBY	R	CONCORD	94521	Contra Costa	(925) 238-4049				
Maintenance	RIST III	ARMOND	E	NAPA	94558	Napa	(707) 738-4227	(707) 254-0254	(707) 319-6100	S-17	
Maintenance	SHAFFER	ADAM	J	FAIRFIELD	94534	Solano	(707) 333-5506		(707) 567-8303	S-59	
Maintenance	STANOVICH	DANILO	C	BENICIA	94510	Solano	(707) 567-8242		(707) 333-9662	S-48	
Maintenance	UNSON	CARMEN LAUREN	G	BENICIA	94510	Solano	(707) 688-3046				
Maintenance	ZEDEDA	JOSE	P	FAIRFIELD	94534	Solano	(707) 738-3160	(707) 426-7914	(707) 333-5195	S-58	
Operations	BELAIDI	AKLI	NMN	VALLEJO	94591	Solano	(707) 704-4793				
Operations	BOTELLO	MICHAEL	B	FAIRFIELD	94534	Solano	(707) 319-6333				
Operations	CORTEZ	ORLANDO	J	VALLEJO	94591	Solano	(510) 334-9143		(707) 319-7220	S-56	
Operations	DEAL	QUINCY	L	TRAVIS AFB	94535	Solano	(619) 793-6237				
Operations	DOROUGH	ROBERT	C	VACAVILLE	95687	Solano	(707) 322-4605				
Operations	ENRIQUEZ EUFRACIO	ABISAITH	NMN	RIO VISTA	94571	Solano	(707) 495-4412				
Operations	HAMMOND	MITCHEL	A	BENICIA	94510	Solano	(707) 319-1219				
Operations	HO	JOHNSON	NMN	SAN FRANCISCO	94127	San Francisco	(707) 315-6291		(707) 315-6291	S-54	OPS. / Aft IC
Operations	LOKKESMOE	RYAN	J	ESPARTO	95627	Yolo	(530) 304-9205				
Operations	PHUNG	JAMES	H	VALLEJO	94589	Solano	(707) 342-8090				
Operations	REYES	ANTHONY	J	VALLEJO	94590	Solano	(510) 672-0552				
Operations	SHIFT SUPERVISOR								(707) 333-8319		
Operations	SMITH	MICHAEL	R	FAIRFIELD	94533	Solano	(707) 853-7617				
Operations	WILLIAMS	ROBERT	L	VACAVILLE	95687	Solano	(707) 469-7473	(707) 330-1925			

Effective 3/30/22

Dept Managers
Supervisors

VSFCD EMPLOYEE RADIO CALL NUMBERS
as of October 13, 2017

10F

Control 6	Admin	Control 6-2	Engineering
S-01	Melissa Morton	S-02	Gus Silva
S-99	Admin Car	S-03	George Guorgui
S-98	Blue Van	S-04	Cathy Carpenter
Control 6-1	FOPS	S-05	Mark Tomko
S-20	Justin Keating	S-06	Kyle Broughton
S-21	Mike Sisson	S-15	
S-22	Jeff Taliaferro		
S-23	Michael Graves	Control 6-3	Operations/Enviro
S-24		S-54	Johnson Ho
S-25	Don White	S-56	Dan Ferguson
S-26	Kevin Book	S-58	Jose Zepeda
S-27	Jim Gianulias	S-59	
S-28	Sean Sanchez	S-60	
S-29		S-61	
S-30	Tyler Armitage	S-62	Bradley Harms
S-31		S-63	Patrick Vidamo
S-32	Angel Medina	S-64	Nicole Van Aken
S-33	Shannon Boyt	S-65	Jennifer Harrington
S-34	Paul Moore	S-66	
S-35	Tom Riedl	S-67	
S-36	Brian Burket	S-68	Craig Moore
S-37		S-69	Mark Hall
S-38		S-92	Jennifer Kaiser
S-39	Jason DeMartini		
S-40	Jay Frazelle	Control 6-5	Fac. Main
S-41		S-07	Michael Burkett
S-42		S-08	Ron Eakin
S-43	Robert Polson	S-09	Brian McGrane
S-44	Mike Lamphear	S-10	
S-45	Johnathan Au	S-11	Arvo Backholm
S-46	Sean Bailey	S-12	Rob Smith
S-47	Ken Taylor	S-13	Drew Lynskey
S-48	Danilo Stanovich	S-14	Eric Kershold
S-49		S-16	Frank Silveira
S-50	Gary Meeker	S-17	Armond Rist
		S-18	Dustin Barry

Safety/Risk Management	S-19	Jared Hope
S-55	Keith Sorsdal	S-57
		Greg Harris

FOG Program Public Outreach Materials

What Restaurant and Building Owners Need to Know About Grease Traps or Interceptors

Restaurants, large buildings, such as apartment complexes; and other commercial establishments may have grease traps or interceptors that keep grease out of the sewer system. For a grease trap or interceptor to work correctly, it must be properly

1 Designed (sized and manufactured to handle the amount that is expected),

2 Installed (level, vented, etc.), and

3 Maintained (cleaned and serviced on a frequent basis).

Solids should never be put into grease traps or interceptors. Routine, often daily, maintenance of grease traps and interceptors is needed to ensure that they properly reduce or prevent blockages.

Be cautious of chemicals and additives (including soaps and detergents) that claim to dissolve grease. Some of these additives simply pass grease down pipes where it can clog the sewer lines in another area.

Fat-Free Sewers

This brochure was prepared under Cooperative Agreement Assistance #CX824505-01-0 between the Water Environment Federation (WEF) and the U.S. Environmental Protection Agency. For more information, contact your local sewer system authority or the

Water Environment Federation
601 Wyrthe Street
Alexandria, VA 22314-1004
Phone: 703/684-2400
Fax: 703/684-2492
Web site: <http://www.wef.org>

For additional copies of this brochure, contact WEF at 1-800-666-0206, 1-703-684-2452 or <http://www.wef.org>

 **Water Environment Federation®**

How to Prevent Fats, Oils, and Greases from Damaging Your Home and the Environment



Fats, Oils, and Greases aren't just bad for your arteries and your waistline; they're bad for sewers, too.

Sewer overflows and backups can cause health hazards, damage home interiors, and threaten the environment. An increasingly common cause of overflows is sewer pipes blocked by grease. Grease gets into the sewer from household drains as well as from poorly maintained grease traps in restaurants and other businesses.

Where does the grease come from?

Most of us know grease as the byproduct of cooking. Grease is found in such things as:

- Meat fats
- Lard
- Cooking oil
- Shortening
- Butter and margarine
- Food scraps
- Baking goods
- Sauces
- Dairy products

Too often, grease is washed into the plumbing system, usually through the kitchen sink. Grease sticks to the insides of sewer pipes (both on your property and in the streets). Over time, the grease can build up and block the entire pipe.

Home garbage disposals do not keep grease out of the plumbing system. These units only shred solid material into smaller pieces and do not prevent grease from going down the drain.

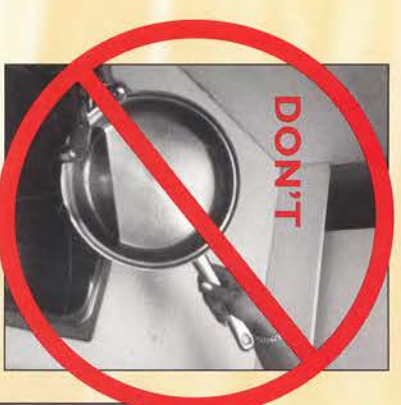
Commercial additives, including detergents, that claim to dissolve grease may pass grease down the line and cause problems in other areas.



© James L. Graham, Jr., P.E.

The results can be:

- Raw sewage overflowing in your home or your neighbor's home;
- An expensive and unpleasant cleanup that often must be paid for by you, the homeowner;
- Raw sewage overflowing into parks, yards, and streets;
- Potential contact with disease-causing organisms; and
- An increase in operation and maintenance costs for local sewer departments, which causes higher sewer bills for customers.



What we can do to help

The easiest way to solve the grease problem and help prevent overflows of raw sewage is to keep this material out of the sewer system in the first place.



© NYCDP

There are several ways to do this.

- 1) Never pour grease down sink drains or into toilets.
- 2) Scrape grease and food scraps from trays, plates, pots, pans, utensils, and grills and cooking surfaces into a can or the trash for disposal (or recycling where available).
- 3) Do not put grease down garbage disposals. Put baskets/strainers in sink drains to catch food scraps and other solids, and empty the drain baskets/strainers into the trash for disposal.
- 4) Speak with your friends and neighbors about the problem of grease in the sewer system and how to keep it out. Call your local sewer system authority if you have any questions.



Lo que los propietarios de restaurantes y edificios deben saber sobre los recolectores o interceptores de grasa.

Los restaurantes, edificios grandes como complejos habitacionales u otros establecimientos comerciales pueden contar con recolectores o interceptores que mantienen a la grasa fuera del sistema de alcantarillado. Para que un recolector o interceptor de grasa funcione correctamente debe estar bien

- Diseñado (del tamaño y fabricación apropiados para controlar la cantidad de grasa esperada);
- Instalado (nivelado, ventilado, etc.) y
- Mantenido (limpio y con mantenimiento frecuente).

Nunca deben depositarse materiales sólidos en los recolectores o interceptores de grasa. El mantenimiento de rutina, con frecuencia diario, de los recolectores e interceptores de grasa es necesario para garantizar que reduzcan o eviten los bloqueos correctamente.

Sea precavido con las sustancias químicas y aditivos (incluyendo jabones y detergentes) que afirman disolver la grasa. Algunos de estos aditivos simplemente permiten que la grasa continúe a través de las tuberías y pueda obstruir las tuberías del sistema de alcantarillado en otra área.

For more information about water pollution prevention call:

Vallejo Flood & Wastewater District
Pollution Control Department
(707) 644-8949 ext. 1600

Solano County Resource Management
(707) 421-6765

State Water Resources Control Board
San Francisco Bay Region
(510) 622-2300

*Vallejo Flood &
Wastewater District*

Alcantarillas para el Agua Sucia libres de Grasa



Cómo evitar que las grasas y los aceites ocasionen daños a su hogar y al medio ambiente



450 Ryder Street
Vallejo, California 94590
Teléfono: 707-644-8949
www.VallejoWastewater.org
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Los aceites y las grasas no sólo son dañinos para las arterias y el tamaño de la cintura, sino que también ocasionan daños en el sistema de alcantarillado.



Los desbordamientos y obstrucciones de las aguas del sistema de alcantarillado pueden ocasionar problemas de salud, dañar el interior de los hogares y constituir una amenaza contra el medio ambiente. Una causa cada vez más común de desbordamientos e inundaciones son las tuberías del sistema de alcantarillado bloqueadas por la grasa. La grasa ingresa al sistema de alcantarillado a través de los desagües del hogar y de recolectores de grasa en malas condiciones usados en restaurantes y otros negocios.

¿De dónde proviene la grasa?

La mayoría de nosotros identificamos a la grasa como un producto derivado de las actividades de cocina. La grasa se encuentra presente en productos tales como:

- Grasa en la carne
- Manteca animal
- Aceite para cocinar
- Manteca vegetal
- Mantequilla y margarina
- Residuos de alimentos
- Productos horneados
- Salsas
- Productos lácteos

Con mucha frecuencia, la grasa ingresa al sistema de tuberías, generalmente a través del fregadero de la cocina. La grasa se adhiere a las paredes interiores de la tubería del sistema de alcantarillado (tanto en su propiedad como en las calles). Con el paso del tiempo, la grasa puede acumularse hasta llegar a obstruir una tubería por completo.

Los trituradores de alimentos de uso en el hogar no mantienen a la grasa fuera del sistema de tuberías, ya que estos dispositivos simplemente trituran los materiales sólidos para convertirlos en residuos más pequeños, pero no evitan que la grasa se escurra por el desagüe del fregadero.



Algunos aditivos comerciales que afirman disolver la grasa, incluyendo los detergentes, con frecuencia simplemente le permiten a la grasa seguir su camino a través de las tuberías y ocasionar problemas en otras áreas. Los resultados pueden ser:

- Desbordamientos de aguas negras en su hogar o en el de algún vecino;
- Costosas y desagradables actividades de limpieza que, con frecuencia, usted debe pagar
- Inundaciones de aguas negras en parques, jardines y calles;
- Contacto potencial con organismos que ocasionan enfermedades; y
- Aumentos en los costos operativos y de mantenimiento de los departamentos locales de alcantarillado, lo cual ocasiona facturas más elevadas para los clientes.

Lo que usted puede hacer para ayudar

La forma más sencilla de resolver el problema de la grasa y ayudar a evitar desbordamientos de aguas negras es mantener este material fuera del sistema de alcantarillado desde el principio.

Hay muchas formas de lograrlo.

1. Nunca deseche grasa por el desagüe de fregaderos y lavabos ni a través de los inodoros.
2. Retire la grasa y los residuos alimenticios de las bandejas, platos, ollas, sartenes, utensilios, parrillas y superficies de cocción y deposítelos en una lata o en la basura para que sean desechados (o reciclados en donde este servicio esté disponible).
3. No deseche grasa a través del triturador de alimentos del fregadero. Instale recolectores/coladeras en los desagües del fregadero con el fin de atrapar los residuos de comida y otros materiales sólidos, y vacíe estos recolectores/coladeras en la basura.
4. Discuta con sus amigos y vecinos el problema que representa la grasa en el sistema de alcantarillado y hablen sobre cómo pueden mantenerla fuera de él. Llame al Distrito de Salubridad y Control de Inundaciones de Vallejo (Vallejo Sanitation & Flood Control District) al 644-8949 si tiene alguna pregunta.



No Fats, Oil or Grease Down the Drain

Wipe greasy pans with a paper towel
and dispose in trash before washing.

Vallejo Flood & Wastewater District

Flooding or sewer emergencies

644-8949

Billing questions

644-8976

City of Vallejo

Water Emergencies

648-5235

Water Saving Tips

648-4482

Recology Vallejo

Trash, yard waste, used oil collection

552-3110

VALCORE Recycling

645-8258

www.VallejoWastewater.org

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LEAF RAKING TIME

When it rains, storm drains help keep Vallejo neighborhoods from flooding. Leaves and branches often collect in gutters and block storm drains, which can cause water to back up, cause ponding that slows or stops traffic, and even flood yards and homes. Our crews work hard to maintain storm drains and keep them free of debris. But with thousands of drains spread out across the city, we need your help too.

- Avoid piling up yard waste. Keep it in a yard waste bin or other container.
- Use a rake or broom to remove leaves and debris from the tops of storm drains, and then place the material in your yard waste bin. Never reach in or poke something down into a storm drain.
- If the drain is still clogged after you've removed the debris on top, call us at 707.644.8949 and we will address the problem.



SAFE MEDICINE DISPOSAL

The best way to dispose of unwanted medications is to bring them to a free drop-off site, like these listed below. The sites provide safe disposal, and keep unwanted drugs out of your toilet or drain, which can pollute local waters.

Transfer pills to a sealable plastic bag before putting them in the bin. Leave liquids in their bottles, but seal them in a bag to prevent leaks. Do not include needles (sharps) or anything else in the bag, only medicine. Over-the-counter supplements, drugs, and vitamins, as well as any pet medicines, can also be dropped off in the bins.



FREE medicine take-back boxes are available at the Kaiser Vallejo 24-hour pharmacy (975 Sereno) and the Walgreens 24-hour pharmacy (1050 Redwood). A box is also located at the Vallejo Police Department at 111 Amador Street (drop off hours are Monday, Wednesday and Thursday, 9:00 a.m. - 5:00 p.m.).

FREE Napa-Vallejo Household Hazardous Waste Facility at 889-A Devlin Road in American Canyon (Friday and Saturday, 9:00 a.m. - 4:00 p.m.).

Pick up a FREE pre-paid mailing envelope at the Vallejo Flood & Wastewater District at 450 Ryder Street. Fill envelope at home and drop in the nearest mailbox. (current office hours are Monday - Thursday, 10:00 a.m. - 2:00 p.m.).

VOLUNTEER OPPORTUNITIES

The Vallejo Watershed Alliance is a community-based volunteer group that hosts habitat restoration projects and waterway cleanups throughout the year. Group cleanups as well as DIY cleanups (we'll provide supplies, you pick the time and place) are available. You can find out more (and sign up for the email announcement list) at VallejoWatershedAlliance.org.



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SANDBAG TIME!

During the rainy season, the District supplies free sand and burlap bags to Vallejo residents, and provides instruction in filling and stacking bags. Even if it hasn't started raining, it's great to be prepared -- and the station can get crowded during storms.

Sandbags are available at our self-serve sandbag station, located at the west end of Ryder Street. The station is open 7 days a week, 24 hours a day from October 15 to April 15.



INFRASTRUCTURE PROJECT

The 2022 Sewer Rehabilitation Project is scheduled to be awarded by the District's Board of Trustees on September 13, 2022 to APB General Engineering. Construction work is anticipated to begin this October. The project includes replacement of existing sewer main lines and lower laterals, and rehabilitation of existing sewer maintenance holes. These improvements replace aging infrastructure and will reduce the amount of non-sewage related flows, referred to as inflow and infiltration, which enter the collection system through pipe breaks, separated joints, cracks and manholes and other infrastructure related deficiencies. Main line replacements have been selected in accordance with the District's collection system prioritization schedule and in conjunction with street maintenance activities scheduled by the City of Vallejo's Public Works Department. The project area is depicted in the location exhibit above. For information on this project, please call (707) 644-8949 and follow the voicemail prompts to reach the District's Engineering Department.



BOARD OF TRUSTEES	
President Robert McConnell	Tina Arriola
Hakeem Brown	Pippin Dew
Mina Loera-Diaz	Erin Hannigan
Katie Miessner	Rozzana Verder-Aliga
Melissa Morton, District Manager	

LAKE DALWIGK HISTORY & UPDATE

Starting in the early 1900s, the shorelines of Mare Island and Vallejo were extended, narrowing the Mare Island Strait. Nearly 500 acres of waterfront were added, from the Highway 37 bridge down to the Sperry Mill site on Derr Street. The USGS has fascinating historic maps that show the effect of this project over time.

In the late 1980s, Lake Dalwigk was excavated to increase stormwater capacity, and in 2012, another major project was initiated to enhance the habitat value of the lake, enable Vallejo Wastewater to control vegetation growth and reestablish the flood protection the lake provided in earlier years. Deep channels were dredged to increase the capacity of the flood basin, which also created two new islands. Our District was justifiably proud of the project, but saw an opportunity to continue improving it by partnering with the Solano Resource Conservation District (RCD) to replace non-native plant species with native vegetation. With GVRD, this partnership resulted in a successful California Coastal Conservancy grant to cover 5 acres with 240 native California trees, thousands of native shrubs and flowers, and countless native grasses and wildflowers. Regular bird surveys are conducted by the Napa-Solano Audubon Society. The Vallejo Watershed Alliance provides volunteer support.

Today, Vallejo Flood & Wastewater District and the Greater Vallejo Recreation District (GVRD) own most of the land parcels in the lake area, with the City of Vallejo owning a smaller piece near Curtola Parkway. Both GVRD and our District help to maintain the property, with GVRD managing the path, park, and grassy areas and our District maintaining the “bowl” of the lake and the movement of water from the lake to our pump station in Wilson Park.

Late last year, CalTrans announced the Clean California Local Grant Program. A partnership of the City of Vallejo, GVRD, Vallejo Flood & Wastewater District, the Solano RCD, and the Vallejo Watershed Alliance applied for the grant and solicited feedback through a public gathering at the lake and a public survey which helped focus the grant priorities. Nearly \$4.8 million was approved by CalTrans for the project at Lake Dalwigk. It will encompass traffic calming measures along Lemon and Fifth Streets, 3.8 more acres of drought-tolerant landscaping, replacement of the broken concrete pedestrian path including grading for ADA access, restrooms, extensive pathway and park lighting, a restored culvert, new signs, as well as new picnic tables, drinking fountains, trash receptacles, and dog waste stations. Interpretive signs and education programs are included. While much of the heavy work will be done by contractors, volunteers will be needed during planting and other phases of the project. To participate, email Info@VallejoWatershedAlliance.org or call (707) 652-7812.



ENJOYING SPECIAL TREATS OVER THE HOLIDAYS?

Many sewer overflows in Vallejo residences are caused by too much cooking grease heading into the sink instead of the trash. Over time, grease can build up and block the entire pipe. Overflows are expensive, and can create health hazards as well.

To prevent this from happening, scrape plates into the trash and wipe out small amounts of pan grease before washing. If you have large

amounts of used cooking oil, it's easy to recycle it! You can bring it to Recology Vallejo at 2021 Broadway in Vallejo (maximum 10 gallons).

Current hours are Saturdays only, 8:00 a.m. to 4:00 p.m. You don't need an appointment, but Recology is closed on Thanksgiving, Christmas and New Year's Day. Recology also offers curb-side pickup of cooking oil (maximum 1 gallon). Please put oil in a tightly sealed plastic container. For more info call 707.552.3110.

For a free brochure on Fat Free Sewers, call us at 707.652.7812 and leave your name and address. We'll mail you one!



WEBSITE HIGHLIGHT: CAREERS

Our District employs more than 90 individuals in a wide range of roles including wastewater treatment plant operators, collection system technicians, mechanics, engineers, electricians, inspectors, laboratory analysts and technicians, IT specialists, accounting and administrative support.

For current job opportunities and ways to learn more about careers and education paths in wastewater and stormwater, please click on the blue Careers button on our website at VallejoWastewater.org.





RESTAURANTS AND FOOD HANDLERS FACT SHEET

Pollution Prevention Tips for Restaurants & Other Food Service Facilities

Restaurants and food handling facilities must prevent food wastes, oil, grease, and toxic chemicals such as cleaning products, disinfectants and pesticides from entering the environment.

If cooking oil, grease, food wastes, toxic chemicals or soapy wash waters are dumped in the street gutter, parking lot, alley or a storm drain, they will eventually end up untreated in local creeks and waterways.

Dumping pollutants down sinks or toilets can be just as harmful. Even though everything that is poured down these drains goes to the local wastewater treatment plant, toxic pollutants such as pesticides and cleaning products that cannot be removed by the treatment process end up in our waterways.

Annual Inspections

Vallejo Flood & Wastewater District inspectors visit food service facilities annually. During an inspection, we will ask to see your grease trap or vault, view your records of proper grease removal, and confirm good housekeeping. There is no charge for these inspections.

TRAINING YOUR EMPLOYEES

Ongoing employee training is essential to preventing pollution. Managers should train employees regularly about pollution prevention requirements and good housekeeping practices.

For more information, please call the District's Environmental Compliance Division 707.652.7813.

To report an overflow, call the 24-hour hotline at

707.644.8949

For emergencies, dial **911**.





Keep Grease Out Of Drains

The following good housekeeping practices can save money and drastically reduce the chance of clogging drains with food and grease. Scrape plates thoroughly into a separate container before rinsing them to reduce grease and food buildup and blockages in your plumbing system. Install screens and traps in sinks and floor drains to catch larger solids. Clean these screens and traps frequently. Don't try to dissolve grease by adding hot water or chemicals. It is only a temporary fix and sends it further down the line.

Recycle your used cooking grease and oil instead of throwing it in the garbage. Use tallow bins or sealed containers with tamper-proof lids. Keep recycling containers closed except when adding oil or grease. Store grease and oil containers away from floor drains and storm drain inlets. Keep exterior of grease recycling containers clean. Avoid spilling grease. Spilled grease is hard to clean up and it will end up in the storm drain system when it rains.

Maintain Grease Traps & Interceptors

Clean grease traps and interceptors on a regular basis to avoid overflows. Both devices need to be cleaned frequently so they work properly. Inspect your service company's work after it is done to make sure that the grease and all liquid is completely removed. Ask for a written receipt and keep maintenance records on site for at least three years.

Keep Garbage Areas Clean

Leaky or overflowing dumpsters, garbage cans and tallow bins are common pollution sources. Follow these steps to keep litter, grease, leftover food and other pollutants under control and out of the storm drain system. Sweep garbage areas daily. Don't use soap or bleach for clean up unless you have a dumpster area that drains to the sanitary sewer. Keep dumpsters and other containers closed and locked to prevent illegal dumping. Bag and seal food waste before disposal. Don't dump liquid waste (grease or fluids) into dumpsters or garbage cans. Inspect your dumpster regularly for leaks. Have your waste hauler repair or replace leaky dumpsters.

Cleaning Outdoor Areas

You're polluting if you clean outdoor areas or equipment in ways that wash soapy water, oil, grease and other pollutants to the ground or storm drain system. Never leave cleaning agents or chemicals on outdoor surfaces because they can be carried into the storm drain system when it rains.

The District requires all businesses in Vallejo to ensure that outdoor cleaning practices include appropriate safeguards to prevent pollutants from entering the storm drain. Businesses are required to train employees about proper cleaning practices or use a recognized cleaning service if outdoor surface cleaning is performed on a for-hire basis. Cleaning of dumpsters, floor mats, exhaust baffles, etc. must be performed indoors or in a dedicated wash area that drains to the sanitary sewer system. Clean up spills quickly to prevent potentially serious problems. Assemble an emergency spill kit (absorbents, broom, mop, etc.) and have it ready in case of a spill.

Deep frying this holiday?



It's easy for Vallejo residents to recycle used cooking oil and prevent clogged drains. Simply bring it to Recology Vallejo at 2021 Broadway in Vallejo (*maximum 10 gallons*). They are open on Saturdays from 8 AM to 3:30 PM. You don't need an appointment, but Recology is closed on Thanksgiving, Christmas and New Year's Day. Recology also offers curbside oil pickups. For either option, please put oil in a non-breakable container, not larger than one gallon, that has a sturdy lid.

For more info call 552-3110.

VALLEJO FLOOD & WASTEWATER DISTRICT

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www.VallejoWastewater.org

Fat-Free Sewers

Prevent Fats, Oils, and Greases
from Damaging Your Home
and the Environment



ALCANTARILLAS SIN GRASA

Evite que las grasas y los aceites
dañen su hogar y el medio
ambiente

Water Environment
Federation
For water quality people

**For a free
brochure on Fat
Free Sewers, call
(707) 652-7812**



A storm drain dumping violation has been reported in your neighborhood.

The Vallejo Flood & Wastewater District's stormwater ordinance prohibits discharge of any residential or industrial waste to storm drains, which flow directly to creeks and the San Francisco Bay. The storm drain system is separate from the sewer system. Pollution that enters storm drains is not removed before reaching the Bay. Storm drain violations carry a maximum penalty of \$5,000 per day and possible imprisonment.

The substance(s) checked on the other side of this hanger have been detected in or around a storm drain near your home or business.

If you notice any unusual substance in or around your storm drain, or if you wish to report a dumping violation, call us immediately at 707.644.8949 ext. 260.



A storm drain dumping violation has been reported in your neighborhood.

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If you notice any unusual substance in or around your storm drain, or if you wish to report a dumping violation, call us immediately at 707.644.8949 ext. 260.



The substance(s) checked below have been detected in the storm drain system near your home or business.

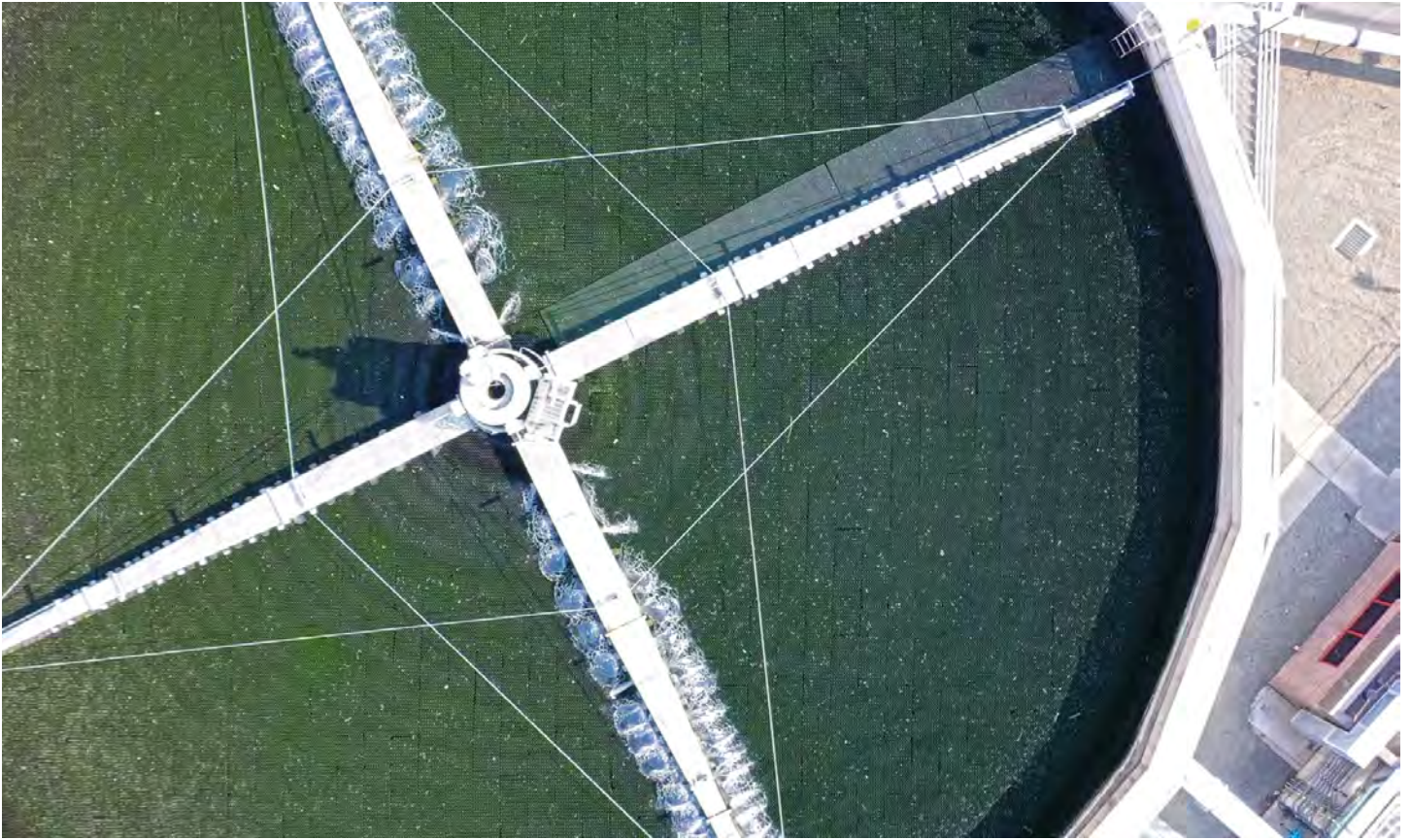
Read the other side of this hanger for more information.

- ☐ Motor oil
- ☐ Antifreeze
- ☐ Grease
- ☐ Paint/paint products
- ☐ Leaves or garden clippings
- ☐ Construction debris
- ☐ Fresh concrete mortar, cement, etc.
- ☐ Chemicals
- ☐ Other _____

The substance(s) checked below have been detected in the storm drain system near your home or business.

Read the other side of this hanger for more information.

- ☐ Motor oil
- ☐ Antifreeze
- ☐ Grease
- ☐ Paint/paint products
- ☐ Leaves or garden clippings
- ☐ Construction debris
- ☐ Fresh concrete mortar, cement, etc.
- ☐ Chemicals
- ☐ Other _____



Pollution Prevention 2021-22



COVER

LARGE PHOTO: *Drone view of one of Vallejo Flood & Wastewater District's biotowers in action.*

BOTTOM LEFT: *Volunteers with the District-led Vallejo Watershed Alliance restore native habitat at Glen Cove, in partnership with the Solano Resource Conservation District and the Yocha Wintun Debe tribe.*

INSET: *Field Operations staff member Tom Reidl performs maintenance on a pipe in the District's collection system.*

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I. Executive Summary

A. Treatment Plant and Process

Vallejo Flood & Wastewater District's (the District's) service area receives wastewater from approximately 121,000 people who reside either in the city of Vallejo, or inside the city limits in unincorporated tracts of Solano County. The area covers nearly 50 square miles. The District owns and maintains 473 miles of sewer collection pipes, as well as 253 miles of stormwater pipes.

The wastewater treatment plant has a dry weather design of 15.5 MGD and a wet weather capacity of 60 MGD. The District has two deep water outfalls. The primary outfall is located at the treatment plant and leads directly to the Mare Island Strait nearby. The Carquinez Strait location is now primarily used as a wet weather outfall. During wet or dry weather periods, flows up to 35 MGD are discharged to the Mare Island Strait. When flows exceed 35 MGD, the blended excess is discharged to the Carquinez Strait.

The process stream consists of bar screens, aerated grit removal, primary sedimentation, biotowers, short-term aeration basins, secondary clarification, disinfection with sodium hypochlorite, and sodium bisulfite for dechlorination. Primary raw sludge and waste activated sludge are pumped to a blend tank where the pH is elevated to >12.0 by the addition of lime slurry. The treated sludge is dewatered by two belt filter presses, which use polymer as a conditioning chemical.

In calendar year 2021, the District produced 3,594 dry tons of lime-stabilized sludge. These biosolids are used as a soil amendment to enhance the growth of hay, wheat, oats and silage on agricultural land owned by the District at Tubbs Island in Sonoma County.

B. Pollution Prevention (P2) Program

During the reporting period, the District's Pretreatment Program regulated 6 Significant Industrial Users (SIUs). The Pretreatment Program also regulated approximately 630 minor commercial/industrial dischargers. These include vehicle repair shops, dental offices, and food service facilities. Periodic inspection of these dischargers ensures that the District evaluates pollution prevention (P2) practices. A routine inspection evaluates the following elements: cleaning practices for outdoor surfaces; material and waste storage practices; use of secondary containment for stored chemicals and materials; waste disposal practices; spill containment and cleanup practices; PCBs, copper and mercury source potential, pesticide, herbicide, and fertilizer use practices; and landscape maintenance practices. Based on the results of the inspection, District personnel may take the opportunity to introduce P2 concepts or require the implementation of P2 practices when a violation is identified.

The Environmental Compliance Division was fully staffed during the reporting period. Due to the COVID-19 pandemic, however, in-field inspections were largely curtailed, which led to a significantly reduced number of inspections compared to a normal year.

Temporary discharge permits are issued as needed for short-term projects. 13 temporary discharge permits were issued during this reporting period.

Vallejo Flood & Wastewater District has several award-winning outreach and other programs, including:

- Vallejo Watershed Alliance (VWA), a community-based volunteer group with monthly workdays to enhance and protect local waterways, and engage the public in creek and lake stewardship;
- Watershed Explorers field trips for third graders;
- Wastewater treatment plant tours for fourth and fifth graders;
- Creek Biomonitoring classes for high school students;
- Our Water Our World Integrated Pest Management (IPM) retail partnership;
- Outreach and educational materials distributed to the public and employees so that less toxic options are understood and available, supporting choices that benefit the environment;
- Environmental Compliance staff performs wastewater and stormwater inspections at businesses and industries in Vallejo;
- Laboratory staff regularly sample and analyze constituents to identify and monitor pollutants of concern and determine the effectiveness of our efforts;
- District staff provide leadership and expertise on local, regional, and statewide issues that impact wastewater and stormwater;
- The District partners with a variety of organizations to maximize effectiveness in water quality improvement and save resources;
- Our Upper Lateral Program is a unique reimbursement program that encourages repair and replacement of private sewer laterals to prevent overflows;
- The District actively partners with agencies and organizations to increase the impact of funding and consistent messaging, bolstering local-to-national efforts for reducing pollutants.

C. Pollutants of Concern

Pollutants of concern are identified in the course of monitoring to determine National Pollutant Discharge Elimination System (NPDES) permit compliance, or in conjunction with the District's Pretreatment Program. They are identified through the evaluation of monitoring data for the District's influent, effluent, biosolids, and industrial discharges; by reviewing monitoring reports submitted by industrial dischargers; by performing special studies for the wastewater treatment plant and sources within our service area; designated as such by our NPDES permit; and in conjunction with the cooperative efforts of professional associations and groups that address pollutants of concern for the San Francisco Bay, including regional monitoring performed by the San Francisco Estuary Institute and the Bay Area Pollution Prevention Group's (BAPPG) annual pollutant prioritization process. For this reporting period, the District's Pollutants of Concern were:

Mercury
Cyanide
Copper
PCBs
Ammonia
FOG
Flushables
Selenium
Pesticides
Microplastics
Pharmaceutical and personal care products

D. Summary of P2 Activities

Mercury

Dental Program

There are approximately 60 dental offices in the District's service area. During the report period, staff conducted 0 inspections due to the COVID-19 pandemic. 100% of dental offices that generate mercury amalgam waste are participating in the program. No Notices of Violation (NOV) were issued. In accordance with the Federal Dental Office Category Rule, the District issued One-Time Compliance Reports to all dental facilities in our service area.

Other Mercury P2 Programs

The District educates the public about problems associated with mercury, holds an annual mercury thermometer collection event, and promotes proper disposal of other mercury containing items (fluorescent lamps, thermometers, thermostats, etc.) to our local household hazardous waste facility. In addition, District employees are encouraged to bring these items from home to the District, where they are added to our accumulated waste and disposed of properly through our universal waste hauler.

Planned Activity	Measurement of Activity Effectiveness	Results
Maintain mercury amalgam separator program, including permitting new dentists. Continue routine inspections.	Conduct dental office inspection.	0 inspections / 0 NOVs All dental facilities are in compliance with amalgam separator installation.
Host mercury thermometer collection event as part of Earth Day activities.	Track the number and type of items collected; provide free digital fever thermometers in exchange. Promote event in newspaper and newsletter.	Due to the COVID-19 pandemic, the 2021 Earth Day festival was cancelled. N/A; see above
Continue proper disposal of mercury-containing fluorescent lamps and allow staff to bring theirs from home.	Track total amount of light bulbs and mercury-containing equipment recycled per year.	630 pounds of bulbs and 5,500 pounds of mercury-containing equipment were disposed of properly.
Continue to encourage residents to properly dispose of household hazardous waste, including fluorescent bulbs.	Provide information through quarterly newsletter and on District website.	Due to cancellation of the Earth Day thermometer exchange due to the COVID-19 pandemic, the thermometer article did not run; however, we continue to provide information on our website on proper disposal of household hazardous waste.

Cyanide

Planned Activity	Measurement of Activity Effectiveness	Results
Continue to monitor cyanide levels at treatment plant.	Conduct monitoring and report any observed trends.	All plant influent samples were below the reporting limit of 3.0 µg/L.
Continue to be aware of any new industries that might impact treatment plant.	Review new business licenses issued by City of Vallejo.	There are no new dischargers with the potential to contribute significant amounts of cyanide.

Copper

Planned Activity	Measurement of Activity Effectiveness	Results
Continue Pretreatment Program, which includes inspections of small industrial and commercial operations such as auto repair shops and facilities, as well as car washes, including permitting new facilities.	Track the number of pretreatment inspections (performed every two years). Separators and BMPs are required.	260 small industrial/commercial facilities 5 inspections conducted 1 NOV issued <i>Note: Due to the COVID-19 pandemic, vehicle service facilities received far fewer inspections than in prior years.</i>
Continue implementation of the Copper Action Plan, which includes the following elements: • Support of BAPPG's Regional Copper Project • Continue issuing permits for emptying residential pools and spas.	Participate in BAPPG programs. Track permits for pools and spas.	See Table 3. 0 residential permits were issued; 9 discharge permits were issued to Greater Vallejo Recreation District for their municipal pool discharges.
Distribute BAPPG-created Proper Copper Pipe Installation brochure.	Provide brochures to City of Vallejo planning department and in our District lobby.	No brochure refills needed; in-office traffic limited due to the COVID-19 pandemic.

PCBs

Planned Activity	Measurement of Activity Effectiveness	Results
Continue to monitor PCBs levels at treatment plant.	Conduct monitoring on influent and effluent, and evaluate sites during pretreatment inspections.	No sources were identified.
Continue to be aware of any new industries that might impact wastewater treatment plant.	Review new business licenses issued by City of Vallejo.	There are no new dischargers with the potential to contribute significant amounts of PCBs.

Ammonia

Planned Activity	Measurement of Activity Effectiveness	Results
Continue to monitor ammonia levels at treatment plant.	Existing SIUs provide self-monitoring reports to assess ammonia levels.	Self-monitoring reports indicated no cause for concern.
Continue to be aware of any new industries that might impact wastewater treatment plant.	Review new business licenses issued by City of Vallejo.	There are no new dischargers with the potential to contribute significant amounts of ammonia.

FOG

The District's Environmental Services Department has a comprehensive FOG program that includes regular food service establishment (FSE) inspections, outreach to commercial and residential audiences, and coordination with our Field Operations Department to identify and address "hot spots" with repeated problems. There are approximately 310 FSEs in our service area. As noted in last year's P2 report, we have reprioritized our FSE inspections. We now do fewer inspections at FSEs that have demonstrated a history of compliance, and increase our enforcement efforts on those that need more vigilance to achieve or maintain compliance.

Planned Activity	Measurement of Activity Effectiveness	Results
Continue routine inspections of FSEs.	Track the number of inspections. Track enforcement actions taken.	5 inspections conducted; number reduced due to COVID-19 pandemic. 7 NOVs issued.
Continue outreach on proper FOG disposal.	Inform residents via newsletter about problems associated with used cooking oil and provide local disposal option (see below). Place ads in Holiday insert in <i>Vallejo Times-Herald</i> .	1 article in Fall issue of newsletter. 1 full page ad in newspaper insert in December Holiday Guide.
Continue to fund used cooking oil receptacle at Recology Vallejo.	Track number of gallons of oil collected.	2,511 of gallons of oil collected in calendar year 2021.

Flushables

Planned Activity	Measurement of Activity Effectiveness	Results
Continue to target neighborhoods with high levels of wipes found in nearby pump stations, as needed.	Mail letters directly to residents in impacted neighborhoods.	No letters sent during this reporting period.

Selenium

Planned Activity	Measurement of Activity Effectiveness	Results
Continue investigating potential sources of selenium in our service area.	Identify any sources found.	No significant sources of selenium identified.

Pesticides

Planned Activity	Measurement of Activity Effectiveness	Results
Educate residents on how to use less toxic garden products through the Our Water Our World Program.	Continue partnership with Home Depot to provide literature racks, fact sheets, shelf talkers, staff training, and table events.	IPM Advocate hosted store trainings, kept fact sheet display and shelf talkers up to date monthly, and interacted with customers. 7 mentoring and maintenance visits. Store training for 13 employees. No table events possible due to the COVID-19 pandemic, instead, two educational webinar events were provided and well-attended. See program description (<i>page 17</i>) for details.
Host less toxic gardening booth as part of Earth Day and annual Garden Tour festival.	Provide samples, fact sheets, and educated advice during Earth Day celebration at Farmers Market and Garden festival.	April Earth Day and May Garden Tour Festival cancelled due to the COVID-19 pandemic.
Year-round outreach to residents on less toxic options for garden pests.	Year round on District website, includes a link to OurWaterOurWorld.org. Quarterly newsletter articles highlight specific pest issues sent to 30K+ households.	VallejoWastewater.org <i>OWOW highlight</i> : Summer 2021 <i>Fleas</i> : Spring 2022
Educate about pesticides during school tours.	During wastewater treatment plant tours, students learn about the impact of pesticides on water quality. Our Water Our World fact sheets are sent home to parents.	Due to the COVID-19 pandemic, no tours were hosted.
Continue to provide nursery space for local chapter of California Native Plant Society.	Native plants grown at nursery are used for habitat restoration projects in Solano County and CNPS fundraising efforts. Native plants are more insect-resistant, reducing the need for pesticides.	Plants grown in the District nursery are sold to Solano County residents at native plant sales. Revenue from sales are used to fund native plant conservation activities.

Pharmaceutical and Personal Care Products

We continue to be pleased with the feedback we've gotten from residents regarding the pharmaceutical mailers. Because Kaiser Permanente in Vallejo offers a free take-back kiosk, we give away fewer envelopes but are still committed to providing them. We plan to continue this program in the same way in the coming fiscal year.

Planned Activity	Measurement of Activity Effectiveness	Results
Alert residents to environmental problems associated with improper disposal of pharmaceuticals; promote use of Baywise.org for medicine disposal options.	Dedicated website page; article in District newsletter every other year.	Residents have access to this information year-round through the website.
Offer free pre-paid mailers in our office and other local sites.	Distributed at our Cashier's Window, Florence Douglas Senior Center, local dialysis center, VALCORE Recycling, and Recology Vallejo.	<50 envelopes were distributed; distribution locations were closed due to the COVID-19 pandemic.
Promote proper disposal and options for disposal to Kaiser Permanente telephone advice nurses.	Annual Kaiser health fair at call center.	Health fair cancelled due to the COVID-19 pandemic.
Continue to encourage residents to properly dispose of household hazardous waste, with different focus each time.	Provide information through quarterly newsletter and on District website.	Continued access through website; no article in newsletter during this reporting period.

Microplastics

Planned Activity	Measurement of Activity Effectiveness	Results
Educate students, teachers, and chaperones during tours about microplastic impacts.	Include information about microplastics during tours.	No tours due to the COVID-19 pandemic.
Include microplastics as cleanup targets during monthly volunteer activities and Coastal Cleanup Day.	Host monthly cleanup activities and coordinate Vallejo's Coastal Cleanup Day. Pieces of plastic removed during cleanups reduce the available plastic that can degrade into microplastics.	See breakdown of results on pages 20-21.

E. Pollution Prevention Plan (2022-23)

The District's plan for next fiscal year reflects our continued efforts to address pollutants of concern and other issues in our watershed.

Pollutant	Planned Activity	Measurement of Activity Effectiveness
Mercury	Maintain mercury amalgam separator program, including permitting new dentists. Continue routine inspections.	Conduct dental office inspections.
	Host mercury thermometer collection event as part of Earth Day activities when possible.	Track the number and type of items collected; provide free digital fever thermometers in exchange. Place ads in newspaper and article in newsletter to promote event.
	Continue proper recycling of mercury-containing fluorescent lamps at District and allow employees to bring theirs from home.	Track total number of light bulbs recycled per year and switch to LED lamps where feasible. Starting this reporting period, new vendor changed metric from number of bulbs to pounds of bulbs.
	Continue to encourage residents to properly dispose of household hazardous waste, including fluorescent bulbs.	Provide information through quarterly newsletter and on District website.
Cyanide	Continue to monitor cyanide levels at treatment plant.	Conduct monitoring and report any observed trends.
	Continue to be aware of any new industries that might impact wastewater treatment plant.	Review new business licenses issued by City of Vallejo.
Copper	Continue Pretreatment Program, which includes inspections of auto repair shops and facilities, as well as car washes, including permitting new facilities.	Track the number of pretreatment inspections (performed every two years). Oil-water separators and BMPs are required.
	Continue implementation of the Copper Action Plan, which includes the following elements: • Support of BAPPG's Regional Copper Project • Continue issuing permits for emptying residential pools and spas	Participate in BAPPG programs; track permits for pools and spas.
	Distribute BAPPG-created Proper Copper Pipe Installation brochure.	Provide brochures to City of Vallejo planning department and in our District lobby.

Pollutant	Planned Activity	Measurement of Activity Effectiveness
PCBs	Continue to monitor PCBs levels at treatment plant.	Conduct monitoring and report any observed trends.
	Continue to be aware of any new industries that might impact wastewater treatment plant.	Review new business licenses issued by City of Vallejo.
Ammonia	Continue to monitor ammonia levels at treatment plant.	Conduct monitoring and report any observed trends.
	Continue to be aware of any new industries that might impact wastewater treatment plant.	Review new business licenses issued by City of Vallejo.
FOG	Continue routine inspections of FSEs.	Track the number of inspections and number of enforcement actions taken.
	Continue outreach on proper FOG disposal. District provides funding to local garbage company for grease bin.	Inform residents via newsletter about problems associated with putting used cooking oil and grease down their sinks; local disposal option offered. Place ads in Holiday insert in the <i>Vallejo Times-Herald</i> .
	Continue to fund used cooking oil receptacle at Recology Vallejo.	Inform residents (<i>see above</i>).
Flushables	Continue outreach to encourage proper disposal of wipes.	Article in District newsletter.
	Continue to target neighborhoods with high levels of wipes found in nearby pump stations, as needed.	Mail letters directly to residents in impacted neighborhoods.
Selenium	Continue investigating potential sources of selenium in our service area.	Identify any sources found.
Pesticides	Educate residents on how to use less toxic garden products through the Our Water Our World Program.	Continue partnership with Home Depot to provide literature racks, fact sheets, shelf talkers, staff training, and table events.
	Host less toxic gardening booth as part of Earth Day and annual Garden Tour festival.	Provide samples, fact sheets, and educated advice during Earth Day celebration at Farmers Market and Garden Festival.
	Year-round outreach to residents on less toxic options for garden pests.	Quarterly newsletter articles and District website.
	Educate students about pesticides during school tours.	During wastewater treatment plant tours, students learn about the impact of pesticides on water quality. OWOW fact sheets are sent home to parents.
	Continue to provide nursery space for local chapter of California Native Plant Society.	Native plants grown at nursery are used for habitat restoration projects and CNPS fundraising efforts.

Pollutant	Planned Activity	Measurement of Activity Effectiveness
Pharmaceuticals	Alert residents to environmental problems associated with improper disposal of pharmaceuticals; promote use of Baywise.org for medicine disposal options.	Dedicated Unwanted Pharmaceutical Disposal website page; article in District newsletter.
	Offer free pre-paid mailers in our office and other local sites.	Distributed at our Cashier's Window, Florence Douglas Senior Center, local dialysis center, VALCORE Recycling, and Recology Vallejo.
	Promote proper disposal and options for disposal to Kaiser Permanente telephone advice nurses.	Participate in annual Kaiser health fair at call center, if occurring.
	Continue to encourage residents to properly dispose of household hazardous waste, including fluorescent bulbs.	Provide information through quarterly newsletter and on District website.
Microplastics	Continue educating students and general public during school tours about the impact of microplastics on marine habitats.	Include information about microplastics during tours, events, and Coastal Cleanup site captain trainings.
	Continue including microplastics as cleanup targets during monthly volunteer activities and Coastal Cleanup Day.	Host monthly cleanup activities and coordinate Coastal Cleanup Day.

II. Required Status Reports

The San Francisco Bay Regional Water Quality Control Board required reporting on the status of the following items.

A. Cyanide Control Program

In July 2008, the U.S. EPA approved cyanide site-specific objectives for all segments of San Francisco Bay. The District was required to submit to the Water Board an inventory of potential contributors of cyanide to the treatment plant. The District conducted a review of the businesses within its service area and determined that there are no known dischargers with the potential to contribute significant amounts of cyanide to the treatment plant. There are no metal plating operations, hazardous waste recycling facilities, pharmaceutical, pesticide, chemical or plastics manufacturers within the District's service area. Incidental amounts from some SIUs have been detected. The NPDES permit notes that a significant cyanide discharge is occurring if the plant's influent cyanide concentration exceeds 7.8 µg/L. All plant influent samples for cyanide were below the reporting limit of 3.0 µg/L.

B. Copper Control Program

In January 2009 the U.S. EPA approved copper site-specific objectives for all segments of the San Francisco Bay north of the Dumbarton Bridge. The District was required to perform an inventory of potential copper sources to the wastewater treatment plant. The results of the inventory have been reported in several P2 reports and have not changed. To ensure that our copper concentrations remain well below the maximum allowable, the District:

- Requires businesses that wash vehicles as part of their work to install wash pads equipped with solids removal devices;
- Directs auto repair shops to dry sweep and place residues such as dirt and brake dust in the trash prior to mopping;
- The District considers pools and spas a very low potential copper source in Vallejo. A review of satellite imagery shows a low number of residential pools and spas, and there is only one pool installation business based in the city.
- A study performed in 1996 indicated that the most significant source of copper was drinking water, due to the corrosion of copper plumbing. In 1997, the District negotiated with the City of Vallejo Water Division to increase the drinking water pH.
- In 2001-2002, data clearly showed a reduction of copper concentration and loading in the District's effluent; remaining copper load was found to come primarily from alum sludge from the water treatment plant. The District gave the City two years to stop discharging and build their own solids handling facility; during which time discharges to the District were highly limited and regulated. By 2003, when the City's new facility was built, data showed reduction of copper concentration and loading in the District's effluent. Since that time, District copper concentrations have remained well below the maximum allowable.

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- The District has participated in region-wide technical studies to investigate possible copper sediment toxicity and sub-lethal effects on salmonids.
 - As part of a BASMAA/BAPPG collaboration, District staff helped coordinate the creation of a Pools, Spas and Fountains fact sheet that is available on the OurWaterOurWorld.org website. The District prints and distributes the fact sheet, and publishes articles on the topic in its newsletter.

The District inspects car washes and auto repair/service shops every two years to ensure that they are in compliance. There are approximately 260 facilities of this type in Vallejo. During this report period, 5 inspections were conducted. 1 Notice of Violation was issued.

C. Polychlorinated Biphenyls

The new Mercury/PCBs permit (R2-2017-0041) became effective January 1, 2018. As required by the amendment, the District is to evaluate and identify controllable sources of PCBs to its treatment plant and submit results of this evaluation within this report.

No sources have been identified to date. The District monitors its effluent and biosolids for PCBs and District staff regularly evaluate sites throughout Vallejo for PCBs during pretreatment inspections.

III. Detailed Discussion of P2 Activities

A. Pretreatment Program

See page 4 for the program description. Detailed program results can be found in the District's Pretreatment Annual Report.

B. Dental Amalgam Program

Environmental Compliance staff implement a Dental Amalgam Program to reduce mercury from dental operations. This Program consists of issuing permits to dental offices in our service area that generate amalgam waste, requiring them to adhere to dental BMPs, including installation and maintenance of an ISO-certified amalgam separator. Program elements:

- Issue permits to new dental offices;
- Keep dental office database up to date;
- Inspect dental offices to ensure compliance with BMPs and verify proper amalgam separators are properly maintained.

C. Stormwater Program

Vallejo Flood & Wastewater District is a co-permittee with the City of Vallejo to ensure compliance with the Municipal Regional Stormwater NPDES Permit. During inspections of businesses and SIUs for wastewater compliance, Environmental Compliance staff also check stormwater-related concerns. A detailed description of the program and accomplishments can be found in the District's Stormwater Annual Report. Food service and vehicle service facilities are the largest number of facilities inspected.

D. Integrated Pest Management Program

Overview

The District's Integrated Pest Management (IPM) program includes our partnership with Vallejo's Home Depot, region-wide support of the Our Water Our World program through BAPPG, hosting the California Native Plant Society's nursery at our treatment plant, educating the public through tabling opportunities at Home Depot, Earth Day, and a Garden Festival, and more. Additionally, the pest control company that services the District's wastewater treatment plant and pump stations is IPM-certified and uses IPM approaches for controlling pest issues. Details on our internal IPM program are available in the District's Stormwater Annual Report.

Our Water, Our World Campaign

The Our Water, Our World (OWOW) campaign is a region-wide partnership of wastewater and stormwater agencies, which was previously coordinated through the Bay Area Stormwater Management Agencies Association (BASMAA) with additional funding from BAPPG, to reduce the impact of pesticides on waterways. The District has been an active participant in the campaign since 1999, and our Public Information Officer serves as the ongoing OWOW project champion to BAPPG. For the past three years, she served as the Chair of the BASMAA Public Information, Participation & Outreach Committee (that role has now ended) and served on the work group that redesigned the new OWOW logo and continues to update the fact sheets. Last year, BASMAA dissolved as a non-profit and has reformed as an ad hoc group, the Bay Area Municipal Stormwater Collaborative (BAMSC). The California Association of Stormwater Quality Agencies (CASQA) has taken over as host of the OWOW program.

The District-sponsored IPM Advocate visited the Vallejo Home Depot several times during this reporting period to refresh shelf talkers, replenish fact sheet racks, educate store employees on the program, provide invasive pest updates, and schedule training and outreach events. She interacts with customers in the aisle with questions they have about pest problems and guides them to less-toxic solutions whenever possible. Our IPM Advocate led a store training for 13 employees, conducted seven mentoring and maintenance visits to staff and spoke with customers on such topics as cockroaches, pest prevention in food gardens, rats, flies, fruit flies, fungus gnats, mosquitos, and general garden health with compost and organic fertilizers. While tabling events were not scheduled due to the COVID-19 pandemic, two educational webinars were presented:

- *March 23 Bring in the Pollinators*: 38 people registered and 23 attended. A post-program survey was sent to all attendees; this webinar received an overall 8.7 star rating.
- *April 20 Grow Your Own Salad*: 37 people registered and 24 attended. A post-program survey was sent to all attendees; this webinar received an overall 9.6 star rating.

Native Plant Nursery

The District sponsors the California Native Plant Society (CNPS) by providing space and water for their nursery at the wastewater treatment plant. The District also provides educational materials for CNPS outreach efforts, and shares District-sponsored table space on Earth Day. Plants grown in the District nursery are sold to Solano County residents at native plant sales in the fall and spring. Revenue from plant sales are used to fund native plant conservation activities in Solano County. The nursery at the District continues to be upgraded to improve sanitation methods that will reduce the spreading of plant diseases through a new irrigation system, getting all plant materials off the ground onto tables, and improved practices.

Boater Outreach

Launched during this reporting period, the District partnered with the Solano Resource Conservation District's Boater Outreach program to educate boaters at the two marinas in Vallejo about oil pollution and proper disposal and replacement of oil-containing materials to reduce unwanted discharges. 90 boaters were contacted and educated during the pilot program.

E. Environmental Education

The District implements several programs to educate school children about reducing pollution in wastewater and stormwater and inspiring responsible stewardship of our watersheds.

Watershed Explorers

Watershed Explorers brings 3rd grade students from Vallejo elementary schools to Glen Cove Waterfront Park to answer a guiding question: What environmental solutions might help living things affected by drought and/or pollution? Due to the COVID-19 pandemic, classes were unable to attend in person. However, because virtual instruction was allowed, the program was able to reach and engage more students than ever before (530 students). Teachers encouraged students to complete two video activities prior to engaging with staff, and nearly all classes participated in an additional water lesson. Students then joined a live-streamed 75-minute field trip. During the virtual activities, students engaged with educators by typing in the chat, using reaction keys, responding with hand signals, taking turns speaking, and responding to polls.

Wastewater Treatment Plant Tours

The District offers free wastewater plant field trips to fourth and fifth grade classes in all Vallejo elementary schools; we cover transportation costs and provide pre-tour packets to teachers. During the treatment plant tour, children and adults learn how wastewater is treated, and are encouraged to use less toxic products in and around the home to control pests, properly dispose of household hazardous materials, and recycle. After learning about wastewater treatment, students view a stormwater model to learn about the impacts of pollution as it moves through the community to local waterways and the Bay. The Vallejo Area Watershed Map provides a tangible link for the children between the idea of runoff and the specific creeks affected by littering in local schools. No treatment plant tours were possible due to the COVID-19 pandemic during this reporting period. The District's new tour video was provided via email to all 4th and 5th grade teachers, and 5 teachers requested supporting curriculum materials which were delivered to their schools.

In-Class Visits

As part of an effort to improve educational outreach to Vallejo students, the District provides in-class visits to educate students about the consequences of urban runoff and improper disposal of household hazardous wastes when they are unable to tour due to weather or other circumstances. Using an Enviroscope model, students learn that when the water from rain, watering the lawn, or washing the car hits the ground, it carries pesticides, herbicides, fertilizers, dirt, pet waste, paint, used motor oil, trash and other types of pollutants into the storm drain system and ends up untreated in local waterways. No in-class visits occurred during this report period due to the COVID-19 pandemic.

Additional School Outreach: Typically, we visit two kindergarten classes in April or May. These visits were unable to occur due to pandemic restrictions.

School Tour Partnership

The District partners with VALCORE Recycling to provide on-site demonstrations. A hands-on lesson teaches attendees the importance of reducing, reusing, recycling and composting. In a typical year, approximately half of the classes touring the wastewater plant take advantage of the opportunity to visit VALCORE. Due to the COVID-19 pandemic, no tours visited the recycling center.

High School Biomonitoring Program

In a typical program year, students participate in classroom lessons and field studies at a local creek. All events emphasize a hands-on approach to researching, collecting, and interpreting stream ecology data by 1) measuring stream habitat; 2) collecting water chemistry data; and 3) sampling, identifying, and counting benthic macroinvertebrates. After the second field study, students calculate the stream's Index of Biological Integrity (IBI score) and use the chemical and physical data to help identify environmental stressors influencing creek health. In response to the COVID-19 pandemic, all Solano County K-12 public school students were required to participate in virtual, online instruction for the 2021-2022 school year. To accommodate this new instruction style and continue offering the Solano County Biomonitoring Program, the program was offered virtually through lesson activities and a live-streamed educator in the field who interacted with the students and teachers. In this program year, 327 students participated, drawn from Vallejo High School, Jesse Bethel High School, and MIT Academy.

Effectiveness Evaluations

Grade 3/Watershed Explorers: In the pre-assessment quiz, 50% of students provided correct or partially correct answers; in the post-assessment, 79% provided correct or partially correct answers.

Grades 4-5/Wastewater Treatment: After the tour or in-class visit, students take a quiz to determine how much information was understood and retained. Typically, students score 90% or higher on the quiz.

High School/Biomonitoring: In the pre-lesson assessment, 78% of students provided correct or partially correct answers. Only 25% of students came into the program able to correctly or partially correctly identify factors that impact creek health. In the post-lesson assessment, 94% of students provided correct or partially correct responses to the questions, and 6% provided incorrect or no answer to the questions.

F. Community Outreach

Coastal Cleanup Day

The District is the lead sponsor for Coastal Cleanup Day in Vallejo. We co-organize the event, recruit, train and delegate site captains and volunteers, and coordinate with private partners and other sponsors. In Vallejo, 569 volunteers (more than any other city in Solano County) collected garbage and recyclables. In total, approximately 11,00 pounds (122.4 cubic yards) of trash and recyclables were collected. Partners and sponsors included VALCORE Recycling, Recology Vallejo, City of Vallejo, Solano County, and the Greater Vallejo Recreation District. Outreach included newspaper, radio and web advertising, emails to prior participants and other interested residents, and NextDoor announcements.

Coastal Cleanup Day Participants By Year	
2021	569
2020	113
2019	802
2018	706
2017	935
2016	590
2015	796
2014	732
2013	611

Earth Day

The District sponsors the annual Earth Day festival at the downtown Vallejo Farmers Market, as well as a litter cleanup along a waterway in April. The festival is an important venue for the District to provide information about less-toxic home and garden products, host a mercury thermometer exchange, and share sponsored tables with our California Native Plant Society and Vallejo Watershed Alliance partners. Approximately 30 vendors participate. Unfortunately, due to the COVID-19 pandemic, the event was cancelled this year. The community cleanup on Blue Rock Springs Park was successful; 27 participants removed 3 cubic yards of trash.

Environmental/Community Events

The District shares P2 messages at community events throughout the year, at both District and Vallejo Watershed Alliance booths. These events include Vallejo's Earth Day, San Francisco Bay Flyway Festival, Visions of the Wild, Vallejo Naval & Historical Museum Garden Festival, Florence Douglas Senior Center Health Fair, Kaiser Permanente Health & Safety Fair, and the District's Health & Safety Fair. These were modified or cancelled due to the COVID-19 pandemic.

Used Cooking Oil Recycling Program

The District works with Recology Vallejo to promote the residential Used Cooking Oil Recycling Program. The District pays for the cost of the grease disposal bin and distributes information during public outreach events. The District ran print ads in the *Vallejo Times-Herald* that directed readers who deep fry how to properly dispose of their used cooking oil. In calendar year 2021, 2,511 gallons of cooking oil were collected as drop-offs or curbside and disposed of properly, bringing the numbers back to pre-pandemic levels.

Used Oil in Gallons	
2021	2,511
2020	1,195
2019	2,886
2018	2,706
2017	2,146
2016	1,446

Vallejo Watershed Alliance

The District is the lead agency in the Vallejo Watershed Alliance (Alliance), a community-based group formed in 2005 to improve the quality of local waterways throughout the Vallejo watershed, providing support and resources for citizen and group involvement. Establishing and supporting this group helps the District fulfill its mission and adhere to regulations, and provides a forum for dealing with long-standing urban water quality problems. The Alliance is made up of public agencies, non-profits and interested individuals. In this report period, the Alliance has:

- Partnered with key local agencies and groups including the Greater Vallejo Recreation District (GVRD), Solano Resource Conservation District (RCD), City of Vallejo, and more;
- Normal outreach activities were cancelled due to the COVID-19 pandemic, including Visions of the Wild, the SF Bay Flyway Festival, Earth Day, and our annual planning meeting.
- Held monthly planning meetings open to the public, minutes are distributed to interested local officials;
- Hosted cleanups and/or restoration efforts at Rindler Creek, Blue Rock Springs Creek and Lake Chabot, participated in and promoted Coastal Cleanup Day;
- Worked with District and RCD staff to support high school creek biomonitoring assessments.
- Under the auspices of a Coastal Conservancy grant, and in partnership with the RCD and GVRD, continued work on the habitat restoration project at Lake Dalwigk.

Watershed Area Maps

The Vallejo Area Watershed Map, created by the District with Green Info Network, is used to enhance community, school, and political outreach. In digital and print form, the maps are provided free by request to members of the community. Each teacher on our wastewater tours is given a printed copy of the map for their classroom. A second map, comparing historical and developed/restored areas in the Blue Rock Springs Creek/Lake Chabot sub-watershed is also available.

Pet Waste

Annually, the District pays half the cost of the pet waste disposal bags at Wardlaw Dog Park, a cost shared with the Greater Vallejo Recreation District.

Media Outreach

During this report period, the District worked with local media to promote pollution reduction and habitat restoration efforts. Articles and ads in the *Vallejo Times-Herald* covered District topics such as Coastal Cleanup Day, billing changes, free sandbags, creek cleanups, habitat improvement projects, Watershed Explorers, proper disposal of used cooking oil, Earth Day, and more.

Website

The District's website, VallejoWastewater.org provides clear and helpful information about our services, pollution prevention messages, job listings, and other information.

Currents Newsletter

The District published and mailed 4 double-sized issues of our *Currents* newsletter during the reporting period, which promoted P2 messages to approximately 32,000 residential, business, and property owners in our service area, as well as our employees. A sample issue is included in the Appendix.

G. Employee Outreach

The District hosts an annual health and safety fair, where employees learn about less-toxic alternatives to pesticide use, proper disposal of cooking oil and used motor oil, the Vallejo Watershed Alliance, and other District programs. The 2021 event was cancelled due to the COVID-19 pandemic. Employees have access to the District website, which carries information on reducing pollution in wastewater and stormwater as well as current and past issues of the newsletter.

Treatment plant operators, maintenance mechanics, electricians, laboratory technicians, and environmental compliance inspectors regularly participate in school tours of the wastewater treatment plant and the high school biomonitoring classes. With greater understanding of treatment processes and watershed issues, these employees are better equipped to educate community members on how the District and the public work together to prevent pollution. During this reporting period, no treatment plant tours were held due to the COVID-19 pandemic.

H. Resourceful Collaborations

Coordination with other agencies and associations is an important element of the District's Outreach Program. This promotes messages to a larger audience than individual agencies can achieve, while the sharing of resources results in cost savings for the participating agencies.

Bay Area Pollution Prevention Group (BAPPG): The District contributes funding support, and our Public Information Officer (PIO) attends BAPPG meetings and served as the Our Water, Our World project liaison. In addition to providing a meaningful avenue for sharing information, exchanging ideas and coordinating regional projects among wastewater agencies, BAPPG implements the Bay Area Clean Water Agencies' (BACWA) Pollution Prevention/Public Information Programs.

Bay Area Stormwater Management Collaborative (BASMC): The District provides financial support; our Environmental Services Director serves on the BASMC Board, and our PIO serves on the Public Information subcommittee. Other regional outreach activities are detailed in the Bay Area Municipal Stormwater Collaborative's FY 2022 Regional Supplement for Training and Outreach.

California Stormwater Quality Association (CASQA): The District is a member, and our PIO serves on the Outreach committee and the annual CASQA conference committee, focusing on supporting and moderating the outreach track.

California Water Education Association (CWEA): Most of the District staff are members, our PIO serves on the Community Engagement Committee, and our Environmental Services Director is on the Board of CWEA's Redwood Empire Section.

Solano Public Information Network: The District's PIO helped found this group of public outreach professionals from agencies throughout Solano County that meets quarterly to work together on disseminating information about public health, environmental issues, and safety. She continues to serve on the planning committee.

City of Vallejo: District management and staff participate in Interagency Collaboration meetings with the City, Solano County Library, Vallejo City Unified School District, Solano Community College, Greater Vallejo Recreation District, SolTrans, and other local agencies to find ways to pool resources and reduce costs. Representatives from the City attend VWA meetings and activities when possible; City Water Division staff share resources and occasional table activities to promote water conservation as a co-message with pollution prevention.

Solano Resource Conservation District (RCD):

- The District contracts with the RCD to provide Watershed Explorers and High School Creek Biomonitoring curriculum and instruction.
- The Vallejo Watershed Alliance values RCD expertise when planning habitat restoration activities.
- The District contracts with the RCD to manage the Rindler Creek and Wetlands project. This unique area, which lies near San Pablo Bay, was set aside to preserve habitat for the endangered red-legged frog. In the past, the RCD constructed a fence to keep cattle out of the 10-acre wetland and planted native shrubs and oak trees. Current efforts include improved fencing and a watering trough to keep cattle healthy and out of the creek drainage area.
- The RCD provides support for the trash surveys required by the regional stormwater permit.

Lake Chabot Stakeholders Group

- The District, the RCD, the Greater Vallejo Recreation District, and the City of Vallejo are partnered with Six Flags Discovery Kingdom and Friends of Lake Chabot to understand issues that impact the lake. They are working on a project in Rindler Creek to help reduce fecal coliform levels due to cattle drinking from the creek that leads to the lake.

Appendix

Table 1:	Summary of Pollution Prevention Program Expansion
Table 2:	Watershed Education and Outreach
Table 3:	Participation in Region-Wide Activities
	Sample Materials / Video and Website Links

Table 1: Summary of Pollution Prevention Program Expansion

Fiscal Year	Actions
1992-1993	- Implemented waste minimization program to reduce or eliminate the discharge of pollutants known to impact San Francisco Bay, pursuant to the 1991 San Francisco Basin Plan; - Performed a metal limit attainability study that identified copper as the District's pollutant of concern; - Implement public awareness program, continued each year.
1993-1994	- Limit attainability analysis completed; - Identified pollutants of concern; - Increased inspection and sampling of significant industrial users.
1994-1995	- Increased enforcement to ensure compliance; - Incorporate pollution prevention requirements into wastewater discharge permits; - Require industrial users to perform pollution prevention audits; - Permit all hospitals and medical clinics, photo developers.
1995-1996	Study performed indicated that the most significant source of copper is drinking water, due to corrosion of copper plumbing.
1996-1997	- District negotiated with City of Vallejo to increase the drinking water pH for a trial period; - Activities focused on monitoring pollutants in the treatment plant influent and effluent.
1997-1998	Improved sampling and equipment cleaning techniques reduced contamination and showed a reduced level of copper in the effluent.
1998-1999	- Enforced copper-based root killer ban; - Sampling and analytical techniques reviewed to reduce contamination of samples.
1999-2000	- Weekly monitoring of copper in treatment plant influent and effluent; - Modified plant diffuser to increase dilution ratio of wastewater discharged into the Mare Island Strait.
2001-2002	- Data clearly shows reduction of copper concentration and loading in the District's effluent; remaining copper load found to come primarily from alum sludge from water treatment plant. District gave City of Vallejo two years to stop discharging it and create their own solids handling facility; in the meantime alum sludge discharges to the District were highly limited and regulated; - Special study of selected constituents indicate that Diazinon is a pollutant of concern.

Fiscal Year	Actions
2002-2003	• Data shows reduction of copper concentration and loading in the District's effluent; • Diazinon reduction efforts continue with monitoring, public outreach and source control activities; • Continued participation in successful regional outreach campaigns, committees and partnerships.
2003-2004	• Diazinon reduction efforts continue with monitoring, public outreach and source control activities; • Continued participation in successful regional outreach campaigns, committees and partnerships.
2004-2005	• Finalized the use of EPA-approved Diazinon testing; • Hired a public outreach professional to implement and expand public awareness program; • Updated District website; • Educated retailers about Diazinon ban.
2006-2007	• Performed mercury amalgam survey of Vallejo dentists; • Hosted mercury fever thermometer exchange; • Forged new partnerships with local and regional organizations; • Broadened success and impact of Vallejo Watershed Alliance.
2007-2008	• Determined BMP and ordinance requirements for Vallejo dentists; • Expanded environmental education program to include high school bioassessment.
2008-2009	• Updated sewer ordinance language requires all dentists in Vallejo to install an ISO-certified amalgam separator; • District P2 programs honored as program coordinator receives CWEA's Public Education Person of the Year award; • Reviewed potential sources of cyanide and copper.
2009-2010	• Started inspecting all dental offices in Vallejo to make sure that proper amalgam separators have been installed and BMPs are followed; • Expanded environmental education program in partnership with the local Resource Conservation District's Watershed Explorers program for third graders; • Expanded pharmaceutical education by promoting new ongoing drop off location at Costco Pharmacy in Vallejo and HHW facility.
2010-2011	• 2010 CWEA Plant of the Year!
2011-2012	• Added PCB source identification and control to commercial/industrial inspections; • VSFCD partners with City of Vallejo to develop BMPs to investigate PCB removal efficiencies; • IPM Advocate program training resulted in much improved participation of local Home Depot store.

Fiscal Year	Actions
2012-2013	• New District website highlights pollution prevention messages in eye-catching, creative ways; • Pharmacies through Vallejo are provided with tear-off pads promoting proper disposal of unwanted medicine and directing the public to the Baywise.org website; • Celebrated VSFCD's 60th anniversary throughout the year, culminating in an Open House at the treatment plant in October that drew more than 200 visitors; • Expanded school programs to include all seventh graders in Vallejo.
2013-2014	• Instituted free pre-paid mailer give-away for proper pharmaceutical disposal. Distribution sites include the District's cashier window, senior center, recycling, garbage, and dialysis offices; • The 2013 Vallejo Watershed Map update included a new sub-watershed layer that shows more clearly where the water in each neighborhood flows; • The Our Water, Our World program was significantly expanded with participation in the Home Depot Pilot Project; • The first PCB pilot BMP was successfully installed.
2014-2015	• A new sub-watershed map was developed to show the comparisons between the historical and developed/restored areas along the Blue Rock Springs Creek Corridor/Lake Chabot Watershed; • Coastal Cleanup Day expanded to 20 sites.
2015-2016	• The District changed the site of its primary outfall, from the Carquinez Strait to the Mare Island Strait; • Staff started the Asset Management Program, a multi-year effort that will allow for better planning and funding of projects to ensure continued and safe operation of the wastewater and stormwater systems; • Vallejo residents voted to increase the District's stormwater rate to help protect Vallejo's waterways and flood capacity; • The Vallejo Watershed Alliance, founded by the District, celebrated their 10th Anniversary; • District PIO participated with the Bay Area Stormwater Management Agencies Association (BASMAA) to rewrite and revise all the fact sheets used in this retail outreach program.
2016-2017	• In order to clarify who we are and what we do for our community so that they can get the services they need from us more quickly and easily, we embarked on a year-long rebranding project that resulted in a new name, logo, slogan and elevator speech; • Our school education programs, which have been in place for more than twenty years, took a step forward this reporting period. We have always worked directly with teachers one-on-one to promote the program and enroll classes. The school district has not been part of that, by their choice. This year, however, they hired a STEAM manager at the District level, who has 13 part-time elementary/middle school coordinators. The manager and coordinators spent a morning at our treatment plant, learning about our extensive education programs. This involvement at the school district level will have positive repercussions for years to come; • Enhanced training for Coastal Cleanup Day site captains was useful and resulted in better communication between site captains and volunteers.

Fiscal Year	Actions
2017-2018	- The District successfully passed a significant 5-year series of rate increases, which will allow us to repair and replace aging infrastructure that is at or near the end of its useful life; - The California State Legislature approved adoption of our new name: Vallejo Flood & Wastewater District (see above); - The Environmental Compliance inspectors are re-evaluating the way we prioritize restaurant inspections in order to increase efficiency and effectiveness by inspecting restaurants that have a history of compliance less, and increasing visits to those that have demonstrated difficulty with achieving or maintaining compliance.
2018-2019	- In-depth review of food service establishments led to maximizing effectiveness of environmental compliance inspectors by reshaping the number of inspections per facility to focus most on those that struggled with compliance issues; - Expanded outreach to RV owners about our free RV dump due to increased numbers of unsheltered Vallejoans using RVs as housing. - Work began on a 3-year Coastal Commission-funded habitat rehabilitation project at Lake Dalwigk.
2019-2020	- Continued expanded outreach on RV dumping as well as joining the Vallejo Homeless Roundtable; - Outreach in general had a very different look and feel in response to the pandemic; while cleanups and festivals were cancelled, newspaper advertising was increased and DIY cleanups were created to continue to engage the community in water quality issues. - Three major in-ground trash capture devices are being installed at key points in Vallejo; this \$5 million project will be completed in the next fiscal year.
2020-2021	- Several new District-produced videos increased the ability to connect with the community in spite of COVID-19 restrictions, including a treatment plant tour video, safety video, working at the District, reduced rate program (English and Spanish), and upper lateral program (English, Spanish and Tagalog). - The District's website was completely redesigned to enhance the quality and availability of essential District information. It is modern and colorful, and its user-friendly nature provides site visitors with more access to the agency's resources. - The three large trash capture devices (<i>see above</i>) completed installation.
2021-2022	- We continue to balance the restrictions necessitated by the COVID-19 pandemic with creative ways to reach our community. - We are exploring expanding the education program to include 6th grade education in the next fiscal year. - More groups than ever participated in Vallejo Watershed Alliance habitat enhancement programs; including a tribal-sponsored native habitat restoration project at Glen Cove Waterfront Park and increased visibility at the Lake Dalwigk restoration project. - In partnership with local agencies, we secured \$4.8 million in funding to increase safety, decrease trash, and improve visitorship at Lake Dalwigk park. The improvements funded by this grant will form Phase 3 of the work at the lake. - Last summer, we initiated a new Boater Outreach program in partnership with the Solano Resource Conservation District, to educate boaters about oil pollution and reduce unwanted discharges.

Table 2: Watershed Education & Outreach

Message/Program	Implementation Plan	Evaluation/Results
Vallejo Watershed Alliance (VWA)	VWA meets monthly (except December) to organize workdays and address watershed-related issues. The District provides staff support and outreach to increase membership, as well as a post office box, email and web hosting, etc.	6 members of the VWA Steering Committee attend meetings. The District uses Constant Contact to send emails to list of approx. 900 interested people.
VWA	Workdays: Continued habitat improvements in the Blue Rock Springs Creek Corridor, Lake Chabot, and other sites.	Participation continues strongly, see volunteer numbers below.
SF Bay Flyway Festival and Visions of the Wild Festival	Sponsorship support from our District; VWA hosts information table at the events.	Hundreds attend the festivals. See below for email signups. No festivals this year due to the COVID-19 pandemic.
Environmental education	Environmental education for 3rd through 12th graders	See Environmental Education section for program description and numbers.
Watershed map	Include watershed information in school tours and classroom presentations.	No maps distributed this reporting period due to school closures.

Date	Vallejo Watershed Alliance Activities	Participants	Trash Removed
7/2021	Dan Foley Park and Blue Rock Springs Park	20	1.4 cubic yards
9/2021	Coastal Cleanup Day (20 sites)	569	122.4 cubic yards
10/2021	Hanns Park cleanup	10	4 cubic yards
11/2021	Glen Cove Waterfront Park (2 events)	47	5.5 cubic yards
1/2022	Lake Dalwigk	28	4 cubic yards
2/2022	Glen Cove Waterfront Park	33	2.6 cubic yards
3/2022	Lake Chabot	11	2.1 cubic yards
4/2022	Blue Rock Springs Creek	27	3 cubic yards
5/2022	Rindler Creek	18	6 cubic yards
6/2022	Hanns Park	8	1 cubic yard

Table 3: Participation in Region-Wide Activities

Pollutant/Issue	Project	Product	District Role
Copper	Copper outreach	Key messages developed for Baywise.org website including selecting water-flushable flux rather than petroleum-based flux; incorporating additional BMPS during design and later phases to reduce pipe corrosion rate; seek mitigation options for other copper products.	Funding support
Fats, Oils & Grease (FOG)	FOG outreach	Awareness campaign with two segments in fall 2021, key message: don't pour grease down the drain, collect and recycle used cooking oil.	Funding support
Mercury/Silver	Outreach to dental assistants	Continue regional training/outreach campaign to dental hygiene training programs.	Funding support
	Extended producer responsibility (EPR)	AB 707 Mercury Thermostats EPS law passed on October 5, 2021.	
Pesticides	Our Water Our World Campaign	Continue the statewide partnership which encourages the use of less toxic pesticides through the use of shelf talkers, fact sheets, product lists, regional events and trade shows, advertising, website. Coordinated program with Home Depot, Ace Hardware and other stores.	Funding support; active participation in promoting/sustaining the program in Vallejo; serve on OWOW committee and fact sheet rewrite committee.
	Regulatory Tracking and Communications	Identify pesticide regulatory actions at federal and state level. Communicate with regulators to ensure that wastewater issues are included in the analyses.	
	Fleas and tick outreach	Evaluate flea projects with regards to pathways to sewers. Develop and communicate recommendations for pet owners and veterinarians. Conduct trainings to veterinary students and professional associations.	
Pharmaceuticals	Dental assistant/hygienist outreach	Insights about proper pharmaceutical disposal included as part of dental waste discussion.	Funding support
Trash and Wipes	Dental assistant/hygienist outreach	As part of the dental waste and pharmaceutical disposal discussion, speaker includes insights about "flushable" wipes.	Funding support; this message is part of our ongoing communications with residents.
	Extended producer responsibility (EPR)	AB 818 Truth in Flushable Wipes Labeling; law signed on October 6, 2021.	

Final Biennial Budget for FY 2021-2022 and FY2022-2023

Vallejo Flood and Wastewater District

Vallejo, California



www.VallejoWastewater.org

Final Biennial Budget
For Fiscal Years
2021-2022 and 2022-2023

Budget Acknowledgements

Board of Trustees

Robert McConnell, President
Term expires January 2025

Rozzana Verder-Aliga, Vice President
Term expires January 2025

Tina Arriola, Trustee
Term expires January 2025

Hakeem Brown, Trustee
Term expires January 2023

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Term expires January 2023

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Term expires January 2023

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Director of Human Resources

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Director of Administration/Clerk of the Board

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Director of Environmental Services

Johnson Ho
Director of Operations

Justin Keating
Director of Field Operations

Keith Sorsdal
Director of Safety and Risk Management

Mark Tomko
Director of Engineering

Jeff Tucker
Director of Finance/Treasurer

Appointed Official

Melissa Morton
District Manager

Finance Department

Chas Fadrigo
Finance Supervisor

Anna Barnett
Accountant

Eileen White
Accounting Specialist

Giselle Relado
Accounting Technician

Jennifer Diniz
Accounting Technician

Ines Fulgencio
Finance Assistant



MISSION STATEMENT

Our mission is to provide quality wastewater and flood control services to the Vallejo community in order to protect the public's health, safety and the environment

VISION

The Vallejo Flood and Wastewater District will continue to be a model of customer service, environmental sensitivity, innovation and regional cooperation

VALUES

Honesty and Integrity
Responsible Stewardship of Public Facilities and Funds
Excellent Customer Service
Protection of the Environment
Innovation and Initiative
A Good Work Environment

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Transmittal Letter

DATE: June 8, 2021

TO: Honorable Board of Trustees and
Customers Served by the Vallejo Flood and Wastewater District

FROM: Melissa Morton, District Manager
Jeff Tucker, Director of Finance/Treasurer

On behalf of the entire Executive and Management Team, it is our pleasure to present to you the Vallejo Flood and Wastewater District ("District") Final Biennial Budget for Fiscal Years 2021-2022 and 2022-2023 and the Ten-Year Capital Improvement Plan for Fiscal Years 2021 – 2031. This budget serves as the foundation for the District's commitment to serving the Vallejo community in providing quality wastewater and flood control services aimed at protecting the public's health, safety and the environment.

Local Economic Conditions

Solano County and the City of Vallejo have seen impacts from the coronavirus and subsequent shelter-at-home policies that are commensurate with the rest of the state of California. The unemployment rate in Solano County was 7.8% in March 2021, with 10,000 fewer people employed than the prior year, with Leisure and Hospitality jobs most impacted¹. In the City of Vallejo, the unemployment rate was 8.8% in March 2021.² While the economic condition is expected to improve as vaccination rates for COVID-19 increase, it is unclear what the underlying long-term economic impact will be on the residents and businesses of Vallejo.

The majority of the District's revenues are based on a flat fee, such as sewer fees for residential customers and all stormwater rates. However, the reduced water consumption of some commercial and industrial customers (hotels, restaurants, office buildings, etc.) will result in reduced revenues to the District. It is anticipated that for the rest of 2021, those water flows will recover slightly, with activity increasing in 2022 and again in 2023.

Property values seem not to have been impacted by the pandemic, with Vallejo median housing values in March 2021 rising 10.5% higher than the prior year.³

¹ [https://www.labormarketinfo.edd.ca.gov/file/lfmonth/vall\\$pds.pdf](https://www.labormarketinfo.edd.ca.gov/file/lfmonth/vall$pds.pdf), access on 4/26/2021.

² <https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html>, preliminary data accessed on 4/26/2021.

³ <https://www.zillow.com/vallejo-ca/home-values/>, accessed on 4/26/2021.

The proposed biennial budget was developed with recognition of these local economic conditions, assuming that the most significant impacts of the pandemic will not continue. However, it is assumed that there will be some lingering impacts, especially with closed business that may never reopen and a potential for a long-term (multi-year) time horizon for a return to full employment.

Budget Priorities and Direction

The proposed biennial budget represents a continuation of priorities established by the Board in the Strategic Plan from 2018. The following priority direction can be traced to that Strategic Plan, and is incorporated into the revenue planning, operational budgets, long-term forecast and capital improvement plan.

Reduce Inflow & Infiltration and Overflows. As required under the District's NPDES permit, the Capital Improvement Plan includes projects under a program to reduce inflow and infiltration (I&I) in the sewer collection system. The proposed biennial budget includes adequate funding for these projects; however, when the new permit is negotiated, it may include additional requirements not currently planned. If required, the staff will present a reprioritized Capital Plan to meet any new regulatory requirements regarding I&I.

Plan for New Regulatory Requirements. In addition to potential changes to the I&I requirements under the NPDES permit when it is renegotiated and renewed in October 2022, there is the potential for additional studies, testing requirements, and discharge limitations such as nutrient removal or blending reduction. These new discharge limitations would most likely require new capital assets. The Collection System Master Plan and Treatment Plant Master Plan include elements to evaluate and make recommendations if regulation changes require additional capital investment.

It is also anticipated that the District's stormwater regulations will be increased in the near future. While the current regulations require 80% of storm drains to have trash capture devices upstream of impoundments and open drainages, this requirement will increase to 90% in 2022 and 100% in 2025.

Strengthen the IT Infrastructure. We learned from the coronavirus pandemic and resulting workplace restrictions that we need to be agile and mobile in our IT infrastructure to continue to serve the public. The biennial budget continues our investment in IT mobile capabilities, off-premises redundancy, and security to allow for multiple worksite contingencies, not just for pandemic response but for multiple potential disasters and emergencies. A significant component of that strategy is the replacement of our Enterprise Resources Planning software (financial and HR software integrated with other business systems).

Implement Capital Improvements. The Capital Improvement Plan has been significantly improved from the prior biennial budget, with significantly more attention provided to rehabilitation and replacement of existing assets. The Plan also includes

resources necessary to meet known regulatory changes, such as additional trash capture devices in the stormwater system, and incorporates potential discharge regulatory changes throughout its 10-year planning horizon. The intention of the plan is to forecast all known major capital projects while also providing placeholders for future projects where it is known that some investment in rehabilitation is needed, but the exact project scope has yet to be defined.

Secure Long-Term Financial Viability. In 2018, the District approved a 5-year sewer rate plan designed to provide financial stability to the wastewater fund activities, increase its liquidity position to maintain cash flows, and provide resources to finance the MIPS project. This Biennial Budget goes through the end of that 5-year cycle, with sewer fee increase of 4.5% in FY 2021-22 and 3% in FY 2022-23. The budget also includes resources necessary for the Board to engage rate payers in a new “Prop. 218 process” to develop a 5-year financial plan that will include financial resources for continued asset rehabilitation and implementation of any new regulatory requirements.

In Spring 2021, the Board began discussions about the long-term financial health of the stormwater fund, identifying resource requirements related to the operation and maintenance of flood control assets and meeting new regulatory requirements (discussed above) regarding trash capture. The direction provided to staff has been incorporated into the proposed biennial budget. The long-term viability of the stormwater fund depends on a successful approval of the Board’s recommended direction by property owners through the ballot in Spring 2022.

Maintain Assets for Future Generations. The bulk of the community’s sewer collection system and pump stations was built from the 1940s through 1970s, with the majority of the treatment plant built in the 1970s and 1980s. These assets, along with those already in service prior to the Second World War, are deteriorating and reaching the end of their useful lives. It is Vallejo Flood and Wastewater District’s responsibility to ensure that these assets are maintained appropriately to keep them in service as long as possible, and to replace those assets when necessary to avoid system failures.

The Biennial Budget continues the implementation of an Asset Management program to focus on the maintenance, rehabilitation, and replacement of existing assets – plant, collections pipeline and pump stations. This effort will help ensure that assets are maintained and replaced based on their risk profiles – the consequences and likelihood of failure – to ensure the most efficient use of available resources.

Vallejo Flood and Wastewater District continues to use predominantly “pay-as-you-go” financing for the renewal and replacement of its sewers, storm drains, treatment plant, and other capital assets. The Collection System portion of the capital plan includes the continuation of annual expenses dedicated to main line sewer repairs, and identifies specific sewer rehabilitation and replacement projects deemed most critical.

Financial Overview

Revenues. Service charges, the District's largest source of revenues, are collected annually as assessments on the property tax rolls. Vallejo Flood and Wastewater District is entering the fourth and fifth years of a five-year plan established under Proposition 218 for its sewer service charges, with rates to increase 4.5% in FY 2021-22 and 3.0% in FY 2022-23. The residential stormwater service charges have not increased since 1996, while the commercial stormwater service charges were last increased in 2015 by a vote of property owners. The District will ask property owners whether to increase the stormwater rates in Spring 2022, for the 2022-23 fiscal year, but the proposed budget for that year does not include the increased revenue from a rate increase. The Upper Lateral fee, which has not been increased since FY 2003-04, will also not increase in the next two years, and is currently set at \$16.56 per year per parcel.

Property tax revenues are approximately \$1.4 million. Because these resources are not restricted for their use that same way that service charges are, they have been designated by policy first to fund the Sewer Reduced Rate Program for those who qualify based on income, and then to support the Stormwater program.

Revenues were projected conservatively using economic indicators and trend analysis. More detailed information can be found in the "Sources of Funds/Revenues" section of the Budget Summary.

Total revenue for all three operating funds is expected to be \$45,406,450 in FY 2021-22 (a 9.1% increase over prior year) and \$44,007,360 in FY 2022-23 (a 3.1% decrease). Much of the increase is due to planned increases in the sewer service charge rate and a one-time \$2.7 million grant for the stormwater trash capture project. These increases are offset by anticipated decreased commercial sewer customer charges (due to decreased water usage) and lower interest earnings.

Expenditures. Vallejo Flood and Wastewater District operating expenditures in total for FY 2021-22 are expected to be \$35,103,550. This is an increase in budgeted operating expenditures of \$2,405,645, or 7%. In the following year, the budget is \$35,752,720, which represents a 2% increase.

Salary and benefit expenses are proposed to increase 4% this next year, compared to the adjusted FY 2020-21 budget (adjusted to remove 6 FTE that were frozen in response to the pandemic's anticipated fiscal impact). Salaries are set to increase 3%, accounting for an assumed 2% cost of living increase and increase in 1.6 FTE. Changes in benefit costs make up the difference. Retirement expenses in FY 2021-22 are to go up 10%, and 7% the following year. OPEB expenses are up 1% next year and 2% the following year, while health insurance premiums are assumed to increase 6% in calendar year 2022 and 6% in 2023.

For FY 2021-22 there is 1 new regular FTE in the Field Operations department, and 0.4 limited duration FTE in Finance and 0.2 limited duration FTE in Human Resources added

to the budget. The FY 2022-23 budget retains the 1 new regular FTE in Field Operations, but removes the 0.6 FTE limited duration positions.

The budget for the materials, services, utilities, major maintenance, insurance, and general and administrative expenses in total is proposed to increase 18% next year, and decrease by under 1% the year after. This is primarily due to the inclusion of significant Major Maintenance projects related to the rehabilitation of belt filter presses in the treatment plant and rehabilitation of pump stations in the collection and stormwater systems.

Significant one-time budgeted operating expenses include the following:

FY 2021-22

- Ballot, outreach, and legal expenses for stormwater fee vote
- NPDES Permit renegotiation – required studies and negotiation services
- Belt Filter Press rehabilitation
- Pump station rehabilitations
- 0.6 FTE limited duration positions

FY 2022-23

- Rate Study, outreach, and protest vote process expenses for sewer rates
- Districtwide Classification/Compensation study in advance of MOU negotiation
- Legal review of MOU in advance of MOU negotiation
- Pump station rehabilitations

Capital Outlay. Vallejo Flood and Wastewater District maintains a 10-Year Capital Improvement Plan (CIP) and includes the acquisition and construction of new facilities and assets as well as the renewal and rehabilitation of existing assets, when that rehabilitation extends the useful life of those assets. The District plan incorporates anticipated recommendations from the Collection System Master Plan and Treatment Plant Master Plan.

The CIP budget for FY 2021-22, the first year of the 10-year plan is \$12,736,000, while the second year is \$29,635,000. The plan includes a significant portion of the MIPS replacement costs, continued I&I projects in the collection system, installation of new trash capture devices in the stormwater system, pump station rehabilitation, Tubbs Island levee maintenance, and the replacement of equipment and vehicles at the end of their useful lives.

Debt Management. Vallejo Flood and Wastewater District has four distinct external debts for which it pays annual debt service. All of the District's debt is for wastewater improvements and have fixed interest rates. Total external debt service for FY 2021-22 will be \$3,863,190, with a comparable amount the following year.

The District has applied for a State Revolving Fund loan for the MIPS project (CIP #POF016). It is expected that the project will score enough points to be included in the

state's funded list (the "Intended Use Plan") for FY 2021-22, with a loan agreement finalized prior to December 2021. Approval of this loan is necessary to commence this CIP project. If this loan is not secured, the District may need to issue bonds to finance the project.

There are also two loans internal to the District. The first is a loan from the stormwater fund to the wastewater fund which was initially used to pay down the District's CalPERS retirement side fund, with the final annual payments of \$379,630 expected in the next two years. The second loan is from the stormwater connection fees to the stormwater operating fund to pay for the trash capture capital projects. Up to \$2.7 million of that loan is expected to be paid off from a Caltrans grant in FY 2021-22. The remaining \$2.3 million of that loan will be paid off over five years starting in FY 2022-23.

Financial Forecast. The budget document contains for the first time a 10-year cash flow financial forecast for each of the three District's major programs – sewer, stormwater operations, and upper lateral program. This section of the budget includes the assumptions used in the forecast and describes strategies necessary to balance the forecast over the next ten years.

Acknowledgments

We hope this budget provides useful information on the District's operations to readers. We would like to thank the District's Leadership Team for their diligence in preparing and managing their budgets. We would also like to thank the Board of Trustees for their continued policy direction and support of the important services that the District provides.

Respectfully submitted,



Melissa Morton
District Manager



Jeff Tucker
Director of Finance/Treasurer

Budget Resolution

RESOLUTION NUMBER 2021 - 6016

A RESOLUTION TO APPROVE THE FINAL BIENNIAL BUDGET FOR FISCAL YEARS 2021-22 AND 2022-23

BE IT RESOLVED, by the Board of Trustees of the Vallejo Flood and Wastewater District of Solano County, California as follows:

WHEREAS, District staff has presented for Board review and comment the Preliminary Budget for the Fiscal Years 2021-22 and 2022-23; and

WHEREAS, the Board has reviewed, commented and provided direction to staff for preparation of the final budget.

IT IS, THEREFORE, RESOLVED, by the Board of Trustees of the Vallejo Flood and Wastewater District that the Board approves the Final Biennial Budget for the Fiscal Years 2021-22 and 2022-23 as submitted.

BE IT FURTHER RESOLVED, that the District Manager may authorize and make minor administrative changes to the document.

ADOPTED by the Board of Trustees of the Vallejo Flood and Wastewater District on the 8th day of June, 2021 by the following vote:

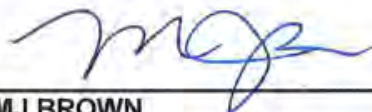
AYES: McConnell, Arriola, Brown, Dew, Diaz, Miessner, Verder-Aliga

NOES: None

ABSENT: Hannigan

ABSTAIN: None

WITNESS my hand and the Seal of said District this 8th day of June, 2021.



MJ BROWN
Clerk of the Board

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District Overview



Vallejo Flood and Wastewater District treatment plant, highlighting biotower and secondary clarifier.

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Mission

The mission of the Vallejo Flood and Wastewater District is to provide quality wastewater and flood control services to the Vallejo community in order to protect the public's health, safety and the environment.

History

Located in southern-most Solano County along the northeast interior of the San Pablo Bay, the Vallejo Flood and Wastewater District is a special district created by an Act of the California State Legislature May 19, 1952. The District was created to provide wastewater collection, treatment, and disposal services, along with flood control services. The wastewater treatment plant began operation in 1959.

Public Services

The Vallejo Flood and Wastewater District serves an area slightly larger than the City of Vallejo, including some unincorporated County areas. VFWD's net overall service area covers approximately thirty-six square miles.

The District provides uninterrupted wastewater collection, treatment and disposal, along with storm water transmission and pollution control services, on a 24-hour basis to all residential and commercial properties within its boundary. The District operates and maintains 395 miles of gravity sewer mains, almost 12 miles of pressure sewer mains, 217 miles of storm water mains and channels, 39 wastewater and stormwater pump stations, a secondary treatment wastewater treatment plant, and manages biosolids disposal through District owned land on Tubbs Island in Sonoma County. The District makes beneficial use of its biosolids by providing farming fertilizer for crops used as silage. The District also protects land and inhabitants from flood damage through the operation and maintenance of its storm drainage system. Several of the storm drainage basins drain into Lake Dalwigk, a District owned storage facility that appeals aesthetically with its park setting and provides marsh habitat for salamanders, frogs, grasses, birds and other ecologically compatible wildlife.

The District services approximately 38,200 accounts that equate to approximately 48,600 dwelling units. Dwelling units exceed accounts due to multi-residential apartments and mobile home parks. Vallejo Flood and Wastewater District's service area is predominantly residential with only 1,600 commercial accounts attributed to low strength commercial establishments and professional offices. The District does not have any categorical industrial users discharging to its system; however, there are several significant dischargers such as Six Flags Discovery Kingdom and certain high strength industrial users (breweries, distilleries, etc.) in the system.

The District is governed by an eight-member Board of Trustees, composed of the seven members of the Vallejo City Council and one member from the Solano County Board of Supervisors. Accordingly, the District is a component unit of the City of Vallejo under accounting rules but is a separate legal entity. The Board sets policy for the District and appoints the District Manager and Treasurer who serve at the pleasure of the Board. The District Manager is the chief administrative officer responsible for the District's day-to-day operations in accordance with Board policies, approved budget and legal and regulatory compliance. The Treasurer is charged with cash and investment management in accordance with California law, policy, and general direction.

Performance Measurement

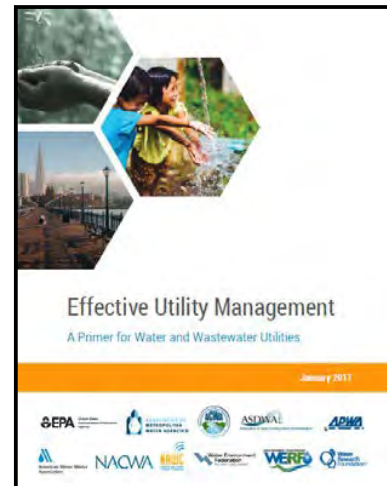
Vallejo Flood and Wastewater District created and issued its first Performance Measurement Report for Calendar Year 2020 in Spring 2021. The report identifies 29 performance measures that, when taken as a whole, should give the reader a sense of how well the utility is performing and being managed.

The report uses the Effective Utility Management (EUM) framework for presenting the performance information. EUM was developed in 2009 by six major water and wastewater associations and the United States Environmental Protection Agency to help utility managers make practical, systematic changes to achieve excellence in utility performance.

This framework is specific to water and wastewater utilities and provides for the possibility of comparing Vallejo Flood and Wastewater District to other wastewater utilities once more providers begin using EUM for measuring and reporting on performance.

The performance measures are organized into EUM's Ten Attributes of Effectively Managed Water Sector Utilities:

1. Product Quality
2. Customer Service
3. Employee and Leadership Development
4. Operational Optimization
5. Financial Viability
6. Infrastructure Strategy and Performance
7. Enterprise Resiliency
8. Community Sustainability
9. Water Resource Sustainability
10. Stakeholder Understanding & Support



For the 2020 calendar year, Vallejo Flood and Wastewater District rated "satisfactory" in 6 of the attributes, with 2 attributes rated "watch" (Operational Optimization and Community Sustainability) and 1 attribute rated "Unsatisfactory" (Financial Viability). One additional attribute is not applicable to the District (Water Resource Sustainability). Several Key Performance Indicators determine the rating for each of the attribute categories.

The complete Performance Measurement report can be found in Appendix H of this document and on the District's website:

www.vallejowastewater.org/187/Financial-Information

Strategic Planning Goals and Objectives

The District held a Strategic Planning Session in October 2018 and developed an Action Plan with goals. It includes progress toward goals as well as updates that have occurred since that planning session. The complete Strategic Plan is in Appendix D of this Biennial Budget document. A summary list of the most significant goals that have implications for the FY 2021-22 and 2022-23 budgets are presented here:

- Complete the Collection System Master Plan
- Complete the Treatment Plant Master Plan
- Comply with MRP 3.0 for stormwater discharge compliance, including meeting new 90% trash capture requirement by 2022 and 100% by 2025
- Complete necessary analysis and renegotiate NPDES permit with Regional Water Quality Control Board
- Continue to upgrade and implement Asset Management system with assistance of CMMS systems
- Complete Sanitary Sewer Management Plan update and audit, and recertify with regulatory agency
- Complete and implement an IT Master Plan
- Develop long-term financial plans for sewer and stormwater that incorporate Master Plans
- Complete installation of new Enterprise Resource Planning software
- Complete studies for stormwater rates and sewer rates, and implement under Proposition 218 requirements
- Design and implement supervisor/leadership training program
- Complete renegotiation of MOUs with labor associations
- Conduct comprehensive review of safety and wellness incentive program

Financial Policies Summary

During FY 2020-21, the Board of Trustees approved updates to several of its Financial Policies:

- Investment Policies
- Revenues and Accounts Receivable Policies
- Budget and Capital Outlay Policies
- Reserve Policies
- Debt Policies

The District has taken the following actions to ensure compliance with Financial Policies:

- The annual operational expenditures for Vallejo Flood and Wastewater District, including debt service, are less than the annual operating revenue forecasted to be received, meeting the requirement for a balanced budget.

Financial Policy Compliance		
VFWD Policy	Target	Comply?
Property Tax Allocation	Per policy requirements	Yes
Balanced Budget	Operating revenues minus operating expenditures & debt service $\geq$ \$0	Yes
Operating Reserve	$\geq$ 15% of Operating Budget	Yes
Cash Flow Reserve	$\geq$ 50% of Operating Budget	No
Debt Coverage Ratio	$\geq$ 1.25x coverage	Yes
Pension Funding	$\geq$ CalPERS required minimum	Yes
OPEB Contribution	$\geq$ 100% of ADC	Yes

- The District has designated an Operating Reserve of at least 15% of budgeted operating revenues for each fund, which the District meets. The Cash Flow/Liquidity Reserve of 50% is met in the Stormwater and Upper Lateral Funds, but not in the Wastewater Fund. The Board is aware of this policy non-compliance, and approved a plan during the 2018 sewer rate setting process to bring the fund into compliance by the end of FY 2025-26.
- Vallejo Flood and Wastewater District has estimated revenues conservatively for the current fiscal year. Additionally, one-time revenue sources have not been used to balance the operating budget, and there are no “unpredictable” revenues forecast in the budget or used to balance the budget.
- Vallejo Flood and Wastewater District has adequately budgeted to meet all of its debt service requirements, and has maintained its debt service coverage ratio at a level higher than is required by all current bond covenants and anticipated future covenants.
- There are adequate revenues available to meet the near-term needs in the Capital Improvement Plan. A plan for financing the long-term financial needs of the Plan has also been developed.
- Pension contributions include the minimum required payment to CalPERS for Unfunded Actuarial Liability payments and Normal Cost payments for both Classic and PEPR members.
- Contribution to Other Post-Employment Benefits (OPEB), including current retiree medical and contributions of the normal cost for current employees to an OPEB trust, include a \$500,000 payment by the District and a 2% of salary contribution from employees. These payments exceed the Actuarially Determined Contribution (ADC).

The complete financial policies are included in Appendix E.

Organization

Board of Trustees. Leadership of the Board is a shared role of its eight members. Seven of the members consist of the members of the Vallejo City Council. There is one member-at-large representing the unincorporated areas of Vallejo that is part of the District’s service area. This trustee is typically a Solano County Board of Supervisors member whose district includes the city of Vallejo. Although there is both City of Vallejo and Solano County representation on the Board, the District is an independent governmental agency with no direct operational, administrative, or financial ties to either agency.

Legal and Audit Services. The Financial Auditor and the Legal Counsel for the Vallejo Flood and Wastewater District are contracted services. These functions report directly to the Board of Trustees. All other functions report to the District Manager.

District Manager. The District Manager is appointed by the Board of Trustees to advise them on policy matters, carry out Board policy decisions, and to administer the day-to-day affairs of the District in accordance with all applicable laws, rules, regulations, and the District's Mission Statement. The District Manager represents the District in negotiations and conferences with the public, governmental bodies, contractors, and consultants, trade or professional associates, technical groups, etc. as necessary. The District Manager directs District staff, providing services that adhere to the District's approved policies, legal responsibilities, and the economic resources available.

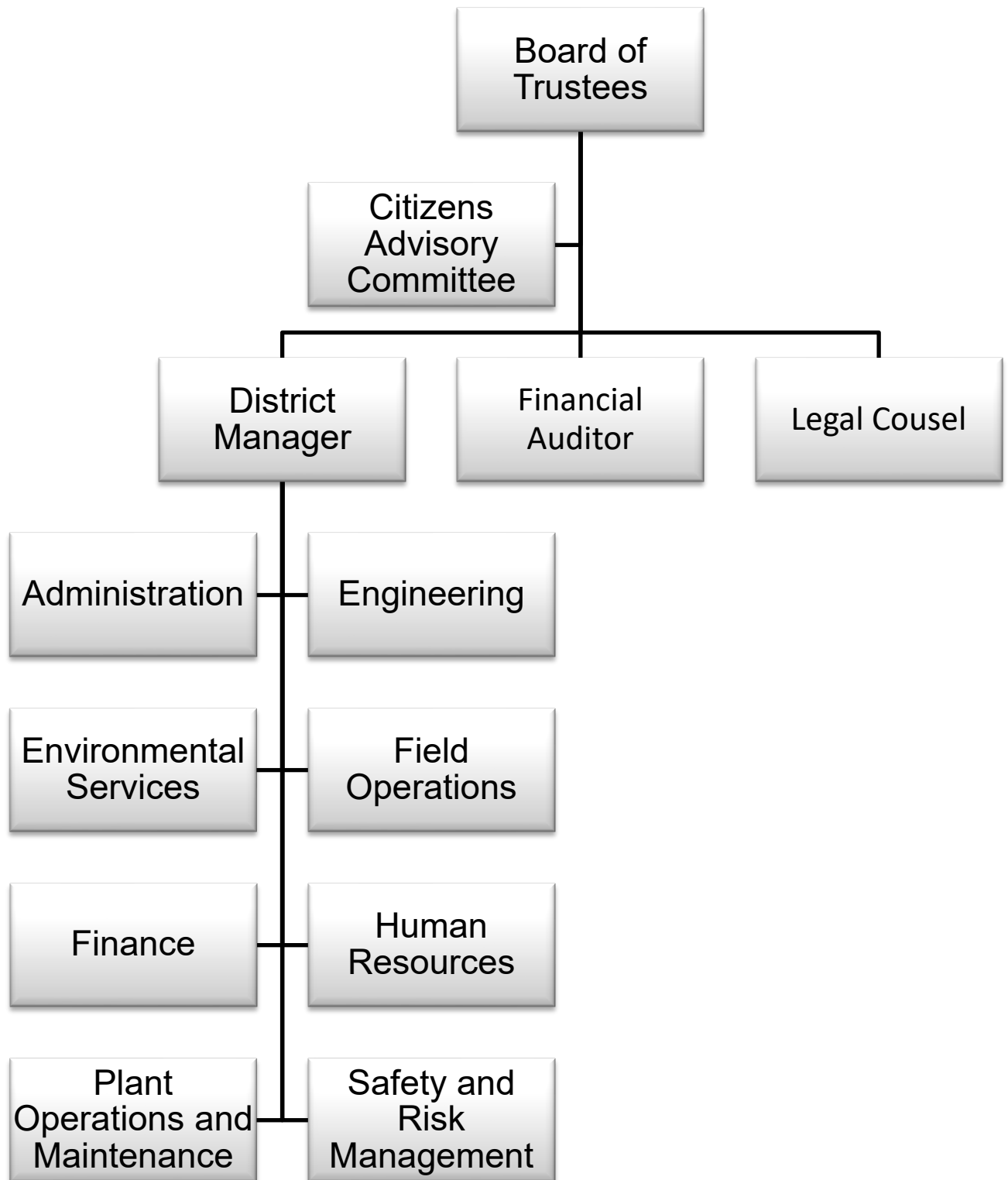
Departments. The District is comprised of eight departments, with some departments further separated into functional divisions. These departments include Administration, Engineering, Environmental Services, Field Operations, Finance, Human Resources, Plant Operations and Maintenance, and Safety and Risk Management. Each department is led by a Director. Additional information about each Department can be found in the Expenditure Budgets by Department section of this document.

Citizen's Advisory Committee. The Citizen's Advisory Committee (CAC) was formed by the Board in 1999 for the purpose of reviewing programs and issues on which the Board seeks public input. The CAC can make reports and recommendations to the Board, and discuss issues and programs that the Board has authorized. The CAC does not pursue issues without Board authorization, nor does it direct District staff. This is an *ad hoc* committee, formed at the direction of the Board as necessary.

Financing Corporation. The District's Board of Trustees also serves as the Board of the Vallejo Flood and Wastewater District Financing Corporation (Financing Corporation). The Financing Corporation typically only holds one meeting a year, to review the financing activities of the District. The Articles of Incorporation and Bylaws specify the formation, purpose, and facilitation of the Financing Corporation meetings.

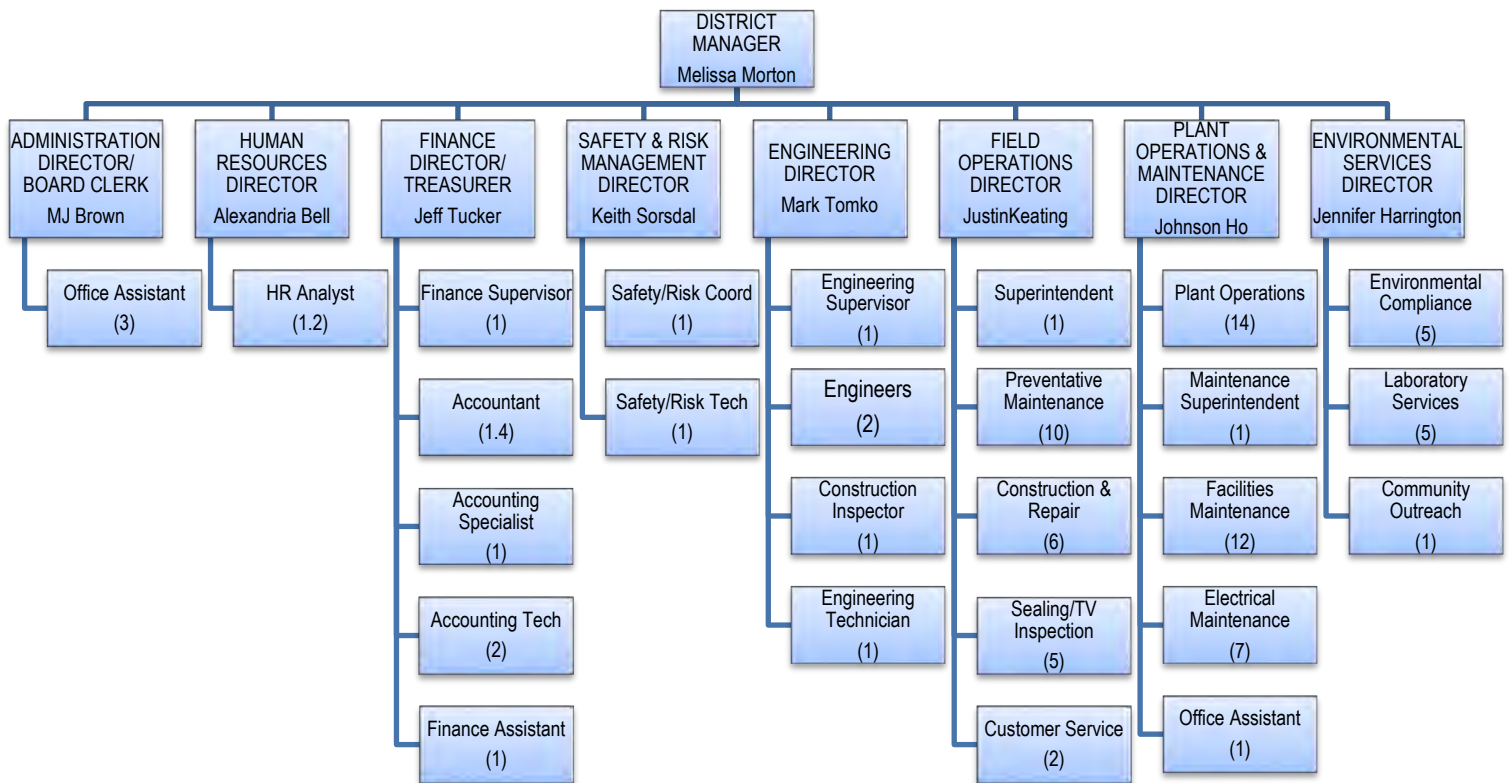
The Corporation is a non-profit, public benefit corporation organized under the Nonprofit Public Benefit Corporation Law of the State of California to assist the District with issuing and administering tax-exempt municipal debt to finance capital projects for the benefit of the public the District serves. Debt is paid by the District with monies collected through rates and charges. Currently, there is no outstanding debt issued by the Financing Corporation.

Organization Chart by Functional Area



Organization Chart by Position Title

As of Fiscal Year 2021-2022

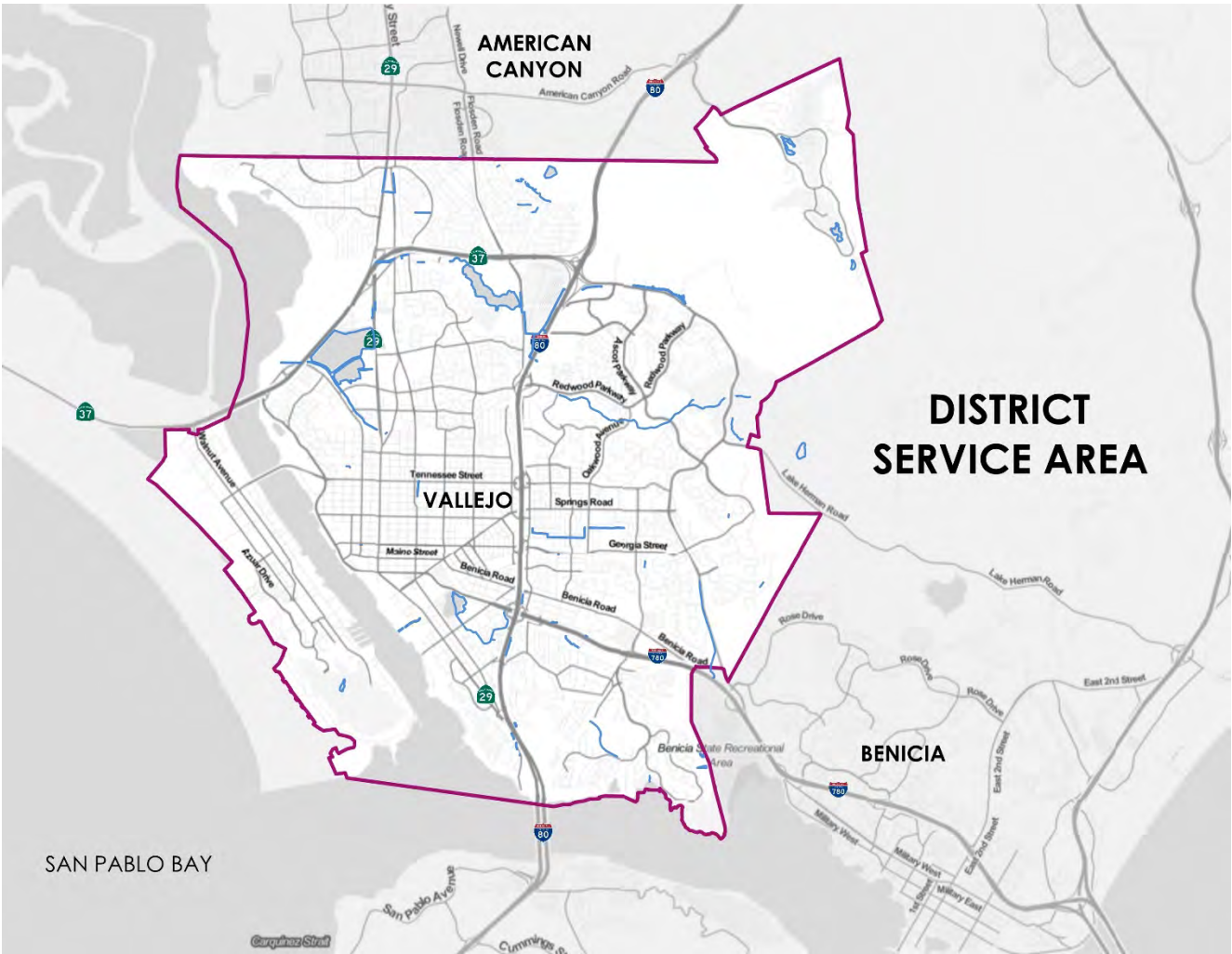


Position Control Roster

Area / Classification	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Administration				
District Manager	1.0	1.0	1.0	1.0
Director of Admin/Clerk of the Board	1.0	1.0	1.0	1.0
Senior Office Assistant	3.0	3.0	3.0	3.0
Total Administration	5.0	5.0	5.0	5.0
Electrical / IT				
Electrical/Instrumentation Supervisor	1.0	1.0	1.0	1.0
Electrical/Instrumentation Technician	4.0	4.0	4.0	4.0
Information Systems Spec	2.0	2.0	2.0	2.0
Senior Office Assistant	0.3	0.3	0.3	0.3
Total Electrical / IT	7.3	7.3	7.3	7.3
Engineering				
Director of Engineering	1.0	1.0	1.0	1.0
Engineering Supervisor	1.0	1.0	1.0	1.0
Associate Engineer	2.0	2.0	2.0	2.0
Sr. Engineer Tech/Inspector	1.0	1.0	1.0	1.0
Engineering Technician	1.0	1.0	1.0	1.0
Total Engineering	6.0	6.0	6.0	6.0
Environmental Services				
Director of Environmental Svcs	1.0	1.0	1.0	1.0
Community Outreach Coordinator	1.0	1.0	1.0	1.0
Environmental Services Superintendent		1.0	1.0	1.0
Environmental Specialist	1.0			
Environmental Compliance Supervisor	1.0	1.0	1.0	1.0
Environmental Compliance Inspector	3.0	3.0	3.0	3.0
Lab Tech Supervisor	1.0	1.0	1.0	1.0
Lab Tech II	2.0	2.0	2.0	2.0
Lab Tech I	1.0	1.0	1.0	1.0
Laboratory Aide	1.0	1.0	1.0	1.0
Total Environmental Services	12.0	12.0	12.0	12.0
Facilities Maintenance				
Maintenance Superintendent	1.0	1.0	1.0	1.0
Maint Mech Supervisor	1.0	1.0	1.0	1.0
Mechanic Lead	1.0	1.0	1.0	1.0
Maint Mech II	8.0	8.0	8.0	8.0
Truck Driver	1.0	2.0	2.0	2.0
Senior Office Assistant	0.3	0.3	0.3	0.3
Total Facilities Maintenance	12.3	13.3	13.3	13.3

Area / Classification	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Field Operations				
Director of Field Ops		1.0	1.0	1.0
Field Ops Superintendent	1.0	1.0	1.0	1.0
Asst Field Ops Superintendent	1.0			
Collection Sys Supervisor	3.0	2.0	3.0	3.0
Collection Sys Tech/Eq Oper	2.0	1.0	1.0	1.0
Collection Sys Tech I / II	20.0	18.0	18.0	18.0
Senior Office Assistant	1.0	1.0	1.0	1.0
Total Field Operations	28.0	24.0	25.0	25.0
Finance				
Director of Finance/Treasurer	1.0	1.0	1.0	1.0
Finance Supervisor	1.0	1.0	1.0	1.0
Accountant	1.0	1.0	1.4	1.0
Accounting Specialist	1.0	1.0	1.0	1.0
Accounting Tech I/II	2.0	2.0	2.0	2.0
Finance Asistant		1.0	1.0	1.0
Cashier Cust Serv Tech	1.0			
Total Finance	7.0	7.0	7.4	7.0
Human Resources				
Director of Human Resources	1.0	1.0	1.0	1.0
Human Resources Analyst	1.0	1.0	1.2	1.0
Total Human Resources	2.0	2.0	2.2	2.0
Operations				
Director of Plant Ops & Maint	1.0	1.0	1.0	1.0
Operations Superintendent		1.0	1.0	1.0
Operations Supervisor	1.0			
Shift Supervisor	6.0	6.0	6.0	6.0
Operator I-IV	7.0	7.0	7.0	7.0
Truck Driver	1.0			
Senior Office Assistant	0.4	0.4	0.4	0.4
Total Operations	16.4	15.4	15.4	15.4
Safety & Risk Management				
Director of Safety & Risk Mgt	1.0	1.0	1.0	1.0
Safety & Risk Mgt Analyst		1.0	1.0	1.0
Safety & Risk Mgt Coordinator	1.0			
Safety & Risk Mgt Technician	1.0	1.0	1.0	1.0
Total Safety & Risk Management	3.0	3.0	3.0	3.0
Total Funded Positions	99.0	95.0	96.6	96.0

Map of Service Area



Budget Summary

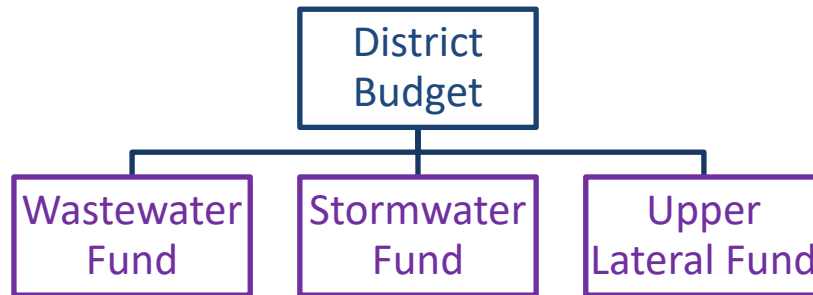


Vallejo Flood and Wastewater District treatment plant, highlighting four primary clarifiers.

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Fund Structure

The Vallejo Flood and Wastewater District has three funds: Wastewater, Stormwater and Upper Lateral. Each includes revenues restricted to each of these areas, along with capital and operating expenditures. Under this structure restricted revenues (including associated interest earnings) are still accounted for separately and discretely, as required by law.



The Wastewater Fund includes all revenue, operating expenses and capital expenses related to the operation, maintenance, rehabilitation and expansion of the District's sewer collection system, pump stations, and wastewater treatment plant.

The Stormwater Fund includes all revenues, operating expenses and capital expenses related to the operation, maintenance, rehabilitation and expansion of the District's stormwater conveyance system, including storm water drainage pipes, channels, pump stations, and debris/trash capture and removal devices.

The Upper Lateral fund includes all revenues and expenses related to a grant program that reimburses property owners for a portion of the costs associated with rehabilitation or replacement of upper sewer laterals.

Basis of Accounting

The Basis of Accounting refers to the specific time and method at which revenues and expenses are recognized in the accounts and reported in the financial statements. The Basis of Accounting for the Vallejo Flood and Wastewater District in its financial statements is full accrual. However, the budget is adopted on a modified accrual basis of accounting. Under the modified accrual basis, revenues are recognized when they are susceptible to accrual, i.e., when they become both measurable and available. "Measurable" means the amount can be determined and "available" means collectible within the current period or soon enough thereafter to be used to pay liabilities of the current period.

Expenditures are recorded when the related liability is incurred. Capital expenditures and debt principal payments are included in the annual adopted budget and used as a limit on expenditures, but these expenditures are removed when recorded in the financial statements to conform to GAAP.

Basis of Budgeting

Vallejo Flood and Wastewater District's budgetary procedures conform to state regulations and Generally Accepted Accounting Principles. While the District uses full accrual accounting in its annual financial statements, it uses a modified accrual basis of accounting for budgeting and reporting on budgeted versus actual expenditures in its monthly and quarterly reports. The

following are some of the differences between the way the District budgets and the way it accounts for revenues and expenses in its financial statements:

- Grant revenues are budgeted on a modified cash basis rather than an accrual basis.
- Fixed assets are depreciated for audited financial reporting, but depreciation expense is not budgeted.
- Capital expenditures and debt principal payments are budgeted as expenditures for budget authority and compliance purposes, but not expensed in annual financial reporting.

Vallejo Flood and Wastewater District budgets this way so that it is easier for rate payers and stakeholders to see and track different types of expenses within the budget.

Cost Allocations

The Vallejo Flood and Wastewater District has three main program areas: wastewater services, stormwater services, and an upper later program. While sharing some resources, the revenues and expenses are recorded in a separate fund for each for financial accounting and reporting purposes. Cash is maintained in pooled accounts in order to maximize interest and investment earnings opportunities while separately accounted for with respect to each component of cash reserves.

Due to the size and nature of the District and its operations, the established allocation method to the funds is relatively simple, lacking the complexity that would require additional staff time to maintain. Allocations are updated as changes occur in the bases or operating factors. Costs are allocated using several methods:

- direct – for those costs that are specifically identifiable to apply to either;
- proportionate – for those costs that benefit several funds based upon the appropriate base, such as the number of employees, building occupancy, number of connections, service fee revenues, estimates of time, etc.

The following are the allocation percentages for those costs not directly attributable to a specific fund (the numbers in the table are rounded to the nearest whole number, but in practice may be more specific):

	<u>Fund</u>		
	<u>Sewer</u>	<u>Stormwater</u>	<u>Upper Lateral</u>
Administration	97%	1%	2%
Engineering	74%	12%	14%
Environmental Services	84%	16%	0%
Field Operations	89%	11%	0%
Finance	92%	6%	2%
Human Resources	92%	6%	2%
Operations – Plant Operations	100%	0%	0%
Operations – Facilities Maintenance	97%	3%	0%
Operations – Electrical/IT	97%	3%	0%
Safety & Risk Management	96%	4%	0%

Budget Appropriation

Budgets are adopted for all expenditures. Total operating expenses and total capital expenses are adopted, by fund, as separate appropriations. The District Manager is authorized to transfer an unlimited amount of appropriation between operating departments within a fund, so long as the total operating expense appropriation in each fund does not increase. The District Manager is also authorized to transfer appropriation between capital projects within a fund, as long as the total capital appropriation in each fund does not increase.

Only the Board of Trustees can increase the total allowable operating and capital appropriations. The District Manager is authorized to hire regular employees up to the number approved by the Board of Trustees, in accordance with the Position Control Roster.

Budget appropriations lapse at the end of the fiscal year. Unspent amounts on specific capital and operations projects may be carried forward to the following fiscal year only with the authorization of the Board of Trustees.

Budget Development Process

The District's official budget process begins each other year with a kick-off meeting to establish the overall District goals and provide a basic timeline. Any guidelines from the Board are discussed at this time to set the parameters. In January the Finance Department provides departments with their respective projected personnel budgets and the current fiscal year's adopted budget compared to the projected actual expenses. The departments then prepare draft budgets and submit them within approximately three to four weeks for compilation.

The proposed budget is then reviewed to determine whether:

- ✓ District goals will be met within the budget;
- ✓ All necessary items have been included;
- ✓ Revenues will be sufficient to cover expenses; and
- ✓ Long-term trends remain positive.

Next, the District Manager meets with departments in March and April to review and discuss. The proposed budget is then prepared and presented to the Board in May for discussion and to provide staff direction for the final budget. Adoption of the budget is completed in June. Budget amendments may be taken to the Board for consideration as needed.

Budget Calendar

Month	Responsibility	Budget Function
January	Finance Departments Finance	Prepare year-to-date calculations Provide year-end estimates Produce quarterly report for October – December
February	Finance Finance Departments	Provide quarterly report to Board of Trustees Project revenues and personnel costs Prepare operating budget and CIP
March	Finance/Departments Finance District Manager	Complete department budget request Conduct budget request review Review department budget requests

April	Finance Finance/Board of Trustees	Develop proposed biennial budget Review/Update Financial Policies
May	Finance/District Manager Finance Board of Trustees	Preview proposed budget and CIP to Board of Trustees Produce quarterly reports for January – March Adopt Rate Schedule for new fiscal year
June	Board of Trustees	Consider and adopt budget
July	Finance Board of Trustees	Complete Tax Roll Report Public Hearing on Tax Roll Report
August	Finance	Produce preliminary year-end report
September	Finance/Engineering	Capital Carryforward Budget Amendment

Sources of Funds/Revenues

Vallejo Flood and Wastewater District has a stable revenue foundation, with 79% of total revenues coming from service charges collected as assessments on property tax bills. Excluding grants and loan proceeds, that percentage in FY 2021-22 increases to over 95%. Other significant revenue sources include property taxes, connection fees, leases and deferred fees, and interest earnings.

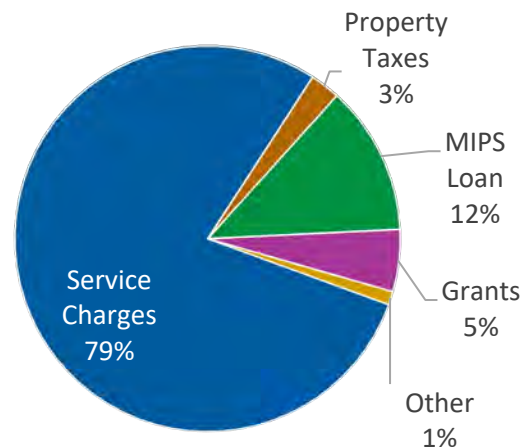
Sewer service charges are the fees charged to residences and businesses for sewer use. For most residences and businesses, these fees are paid annually as assessments on property tax bills. Some industrial and commercial customers are charged monthly, rather than annually, based on water usage and strength factors.

Sewer service charges are a highly distributed revenue source for the District. The top ten sewer service customers represent only 4.4% of revenue from this category. This lack of concentration equates to a more stable revenue stream and is less susceptible to fluctuations in the economy or local business climate.

Sewer service charges are subject to California's Proposition 218, which requires that increases to the fee be noticed to all property owners, with the opportunity to protest the increase through letters and statements at a public hearing. If there is a majority of the property owners in protest of the fee increase, the increase cannot proceed.

Vallejo Flood and Wastewater District followed the Proposition 218 process in 2018, providing the necessary notices and holding public hearings. At that time, the fee was set to increase annually. The rate is set to increase in FY 2021-22 from \$714.72 to \$747.00 (4.5% increase) per Equivalent Dwelling Unit (EDU). For FY 2022-23, the rate is set to increase to \$769.44 (3.0% increase). During the FY 2022-23 year, it will be necessary for the Board to again conduct a Proposition 218 hearing and notification process if it intends to increase rates in future years.

Sources of Funds
FY 2021-22 = \$51,906,450



Stormwater service charges are the fees charged to residences and businesses for flood control activities. For all residences and businesses, these fees are paid annually as assessments on property tax bills.

Stormwater service charges are subject to California's Proposition 218, but a slightly different process than for sewer. Stormwater charges have the additional requirement of needing voter or property owner approval through a ballot process. The last time residential charges for stormwater were increased was prior to the enactment of Proposition 218 (in 1996), while commercial rates were reconfigured in 2015 to better align system costs and fees paid.

At the time of budget development, the Board of Trustees was considering whether to pursue a stormwater rate increase. As this decision has not yet been made, the budget assumes no fee increase, and maintains future revenues based on the current rates.

Upper lateral service charges are fees charged to residences and businesses to fund the District's grant program for the replacement of upper laterals. This is a voluntary program designed to cover most, but not all, of the costs for a property owner to rehabilitate their sewer lateral. This fee was first established in FY 1996-97 at \$0.69 per month (\$8.28 per year), and increased to \$1.38 per month (\$16.56 per year) in FY 2003-04. The fee has not increased since then and remains at \$1.38 per month.

Property taxes come to the District by virtue of there being an approved tax in place when Proposition 13 was approved by voters in 1978. This revenue is unrestricted and can be used to support any legitimate District expense. The District has established by policy that the tax will be used first the pay for the sewer reduced rate program, second for stormwater expenses related to water quality and the removal of trash and other pollutants, and third for sewer system capital projects that reduce inflow and infiltration. In the current biennial budget, the tax is used for the first two of these priorities. Property tax is assumed to increase 2% annually, as this is the property assessed value limit established under Proposition 13.

Connection fees are fees paid by developers to pay for their relative impact to the sewer collection and treatment system, or to the stormwater system. Connection fee revenue was significantly impacted by the COVID-19 economic impacts. It is expected that as the economy improves and more development occurs, this fee revenue will also increase.

Leases and deferred fees refers to revenue collected by the District from three sources:

- Revenue from farming operations at Tubbs Island
- Revenue from a radio signal repeater lease
- Revenue from a long-term connection fee deferral agreement for the Sereno Village project.

Interest earnings is the revenue Vallejo Flood and Wastewater District receives on idle cash and reserves that it maintains in its accounts. Cash is invested in accordance with the District's Investment Policies, with the assistance of professional investment advisors. With the Federal Funds rate held at or near zero since March 2020 and into the foreseeable future, it is unlikely that the interest earnings will exceed 0.5% in the next two fiscal years.

Other financing sources represents the receipt of proceeds from loans, the sale of bonds, or other sources of cash that are not revenue. In FY 2021-22, the District is anticipating \$6.5 million in State Revolving Fund loan resources from the State Water Resources Control Board for the Mare Island Pump Station (MIPS) capital project, and an additional \$20 million in FY 2022-23 to finance that same project.

Revenues – All Funds

	Actuals FY20	Budget FY21	Budget FY22	Budget FY23
All Funds				
Service charges	36,086,562	39,339,452	40,807,060	41,957,510
Property taxes	1,260,685	1,000,000	1,311,620	1,337,850
Connection fees	111,334	449,500	167,000	302,000
Interest earnings	734,500	535,032	160,410	149,640
Grants and contributions	-	-	2,700,000	-
Other financing sources	66,417		6,500,000	20,000,000
Other	256,123	272,840	260,360	260,360
Total All Funds	38,515,621	41,596,824	51,906,450	64,007,360

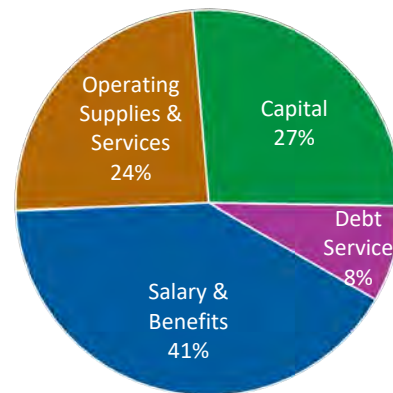
Uses of Funds/Expenditures

Vallejo Flood and Wastewater District expenses can be described in several major expense categories – salaries & benefits, services & supplies, utilities, general & administrative, insurance, capital outlay, and debt service – along with internal transfers.

Salaries and benefits are those expenses related to payroll and staffing. They include salary and wages of employees, overtime, payroll taxes such as Medicare, health insurance premiums, and retirement benefits. This category also includes expenses for funding the District's OPEB ("Other Post-Employment Benefits") liability and trust fund.

Labor agreements went into effect in 2013 and are set to expire on June 30, 2023, at the end of the second year of the biennial budget. Per the MOU, salaries increase according to an inflation factor, with a minimum 2% and a modified formula if over 4%. The Biennial Budget assumes a 2% increase for FY 2021-22 and a 3% increase for FY 2022-23.

There is one new regular position in the FY 2021-22 Field Operations budget and two limited duration positions – 0.4 FTE in Finance and 0.2 FTE in Human Resources. The one new FTE in Field Operations continues into the FY 2022-23 budget.

Uses of Funds
FY 2021-22 = \$47,839,550


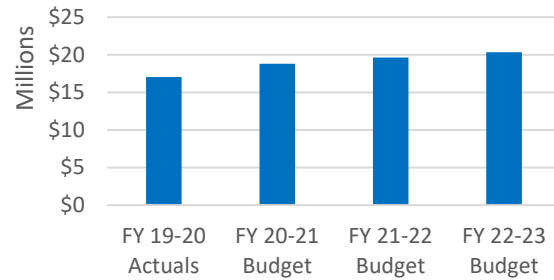
Health benefits are known for the first two quarters of FY 2021-22. The budget assumes a 6% increase in employer costs for calendar year 2022 and another 6% increase for calendar year 2023. With some recognized savings from prior year, the FY 2021-22 budget for health insurance premiums is only 1% higher than prior year.

Retirement benefits have two components. The first component, the Normal Cost, is budgeted as a percentage of salary. That percentage is determined by CalPERS based on actuarial assumptions regarding retirement rates and investment earnings. The second component, the Unfunded Actuarial Liability (UAL) payment is an amortized payment against that outstanding liability. CalPERS estimates this payment in a lump sum amount. The District allocates that UAL payment against employees within the same benefit plan (Classic or PEPPA), based on the Normal Cost distribution, and thus allocates this cost to the three different funds. For FY 2021-22, the overall CalPERS retirement payment (Normal Cost and UAL, for both Classic and PERPA plans) is expected to increase 10% over the prior year, with the following year increasing an additional 7%.

In prior fiscal years, workers compensation insurance premiums were budgeted under the Insurance category. Starting in FY 2021-22, these premium expenses are included as an employee benefit expense.

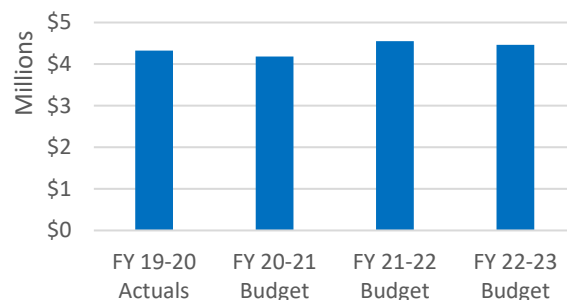
In total, the salaries and benefits budget increases 4.4% in FY 2021-22 over the prior fiscal year's adjusted budget. About 1.7% of the annual increase in the salaries and benefits budget in FY 2021-22 is due to shifting workers compensation insurance premium expenses into this category. The budget increases 3.5% in FY 2022-23.

Salaries & Benefits



Materials, supplies and services include the purchase of supplies and equipment to maintain and operate the various systems in the District, such as general supplies, uniforms, chemicals for water treatment, lab supplies, information technology equipment, and equipment to repair equipment. It also includes a number of operations-focused service contracts, including equipment repair services, outsourced laboratory services, weed control in the stormwater system, information technology services, and security services.

Materials, Supplies & Services

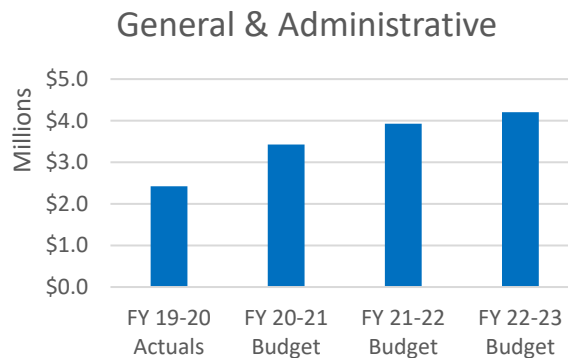
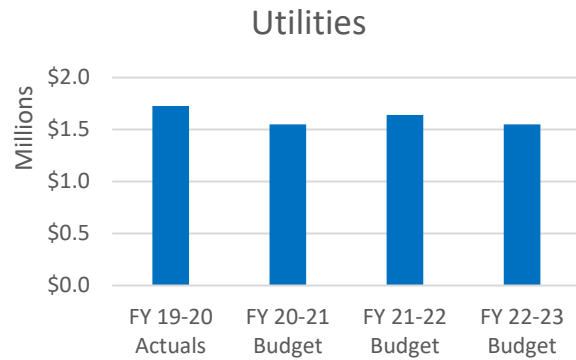


Total services and supplies for FY 2021-22 are budgeted to be 8.3% above the prior fiscal year, with FY 2022-23 decreasing 2.1%. The first year of the biennial budget includes some one-time projects (such as printing and mailing for a stormwater rate ballot) that result in the larger first year budget, and the reduced second year budget when these one-time items are removed.

Utilities includes expenses related to electricity, natural gas, water, waste and recycling services, and telephone and other communications. Total utilities for FY 2021-22 increased 5.9% (\$91,720) from prior year budget, due primarily to increased electricity costs (\$50,000) and increases in waste disposal costs (\$70,000), but were offset by savings in telephone/

communications expenses and potable water expenses. In FY 2022-23, total utility costs are expected to decrease \$91,610 primarily due to energy cost savings from the new Bloom Energy generation system.

General & administrative expenses include professional services expenses and other costs that are more general in nature and not attributed directly to the maintenance or operation of the District's facilities. These include legal and audit services, consulting services, computer maintenance, travel and training, fees associated with revenue collection, and banking fees. These expenses in FY 2021-22 are anticipated to increase 14.5% (\$500,065) over prior year, with the biggest increases coming in the area of computer maintenance (\$297,995), licenses and permits (\$54,560), and various professional services (\$100,360). In FY 2022-23, the budget for these expenses will increase an additional 7%, with much of this increase a one-time expense related to new Enterprise Resources Planning software implementation.



Insurance includes insurance premiums related to general liability and property coverage, as well as costs paid for claims and deductibles. The FY 2021-22 budget shows a 25% reduction because in prior years, workers compensation insurance was also included in this section but is now included as a benefit expense. The FY 2021-22 budget includes a 15% increase in insurance premiums and another 15% increase in FY 2022-23, due to insurance cost increases caused by various natural disasters throughout the state.

Major maintenance includes extraordinary, one-time projects that are significant enough to track on the Capital Improvement Plan, but fail to meet the definition of a capital outlay. This includes significant projects such as conducting large-scale condition assessments, or the demolition of abandoned assets. For FY 2021-22, this includes the replacement of many pieces of significant equipment in pump stations where the equipment is less than the capital threshold, the rebuilding of the belt filter presses, and switchgear and breaker testing in the treatment plant.

Capital outlay includes expenses to build or acquire any capital asset, or to rehabilitate and extend the useful life of existing assets. Details of these expenses can be found in the Capital Improvement Plan (CIP), later in this budget document. Significant projects in the FY 2021-22 and FY 2022-23 capital plan include the implementation of a new Enterprise Resources Planning software package (financial and HR software), beginning of the construction phase of the Mare Island Pump Station (MIPS) project, design and construction of stormwater trash capture devices, and the continuation of I&I projects in the sewer collection system and the grants program for upper lateral rehabilitation.

Debt service includes the principal and interest payments for all of the District's outstanding loans. Debt service is approximately \$2.5 million, lower than prior fiscal years because of the

defeasance of the 1993 Certificates of Participation in FY 2019-20. Debt service is anticipated to increase in the future when the debt service for the Mare Island Pump Station project (SRF loan) financing begins. More details on this new debt issuance can be found in the Debt and Other Long-Term Liabilities section of this budget document.

Expenditures – All Funds				
	<u>Actuals FY20</u>	<u>Amended Budget FY21</u>	<u>Proposed Budget FY22</u>	<u>Proposed Budget FY23</u>
All Funds				
Salaries & Benefits	17,036,598	\$18,803,986	\$19,641,610	\$20,338,570
Materials, Supplies & Services	4,325,364	4,181,521	4,551,370	4,464,570
Major Maintenance	-	-	950,000	750,000
Utilities	1,727,045	1,549,000	1,640,720	1,549,110
General & Administrative	2,422,807	3,426,595	3,926,660	4,204,270
Insurance	610,285	665,200	530,000	590,000
Capital Outlay	10,407,541	16,376,978	12,736,000	29,635,000
Debt Service	6,372,007	4,071,604	3,863,190	3,856,200
Total All Funds	42,901,646	49,074,883	47,839,550	65,387,720
Percentage Increase			-3%	37%

Fund Equity and Reserves

Fund equity, for the basis of Vallejo Flood and Wastewater District's budgeting and financial planning purposes, is defined as current assets including restricted assets, less current liabilities excluding capital-related liabilities. This number is meant to represent the amount of cash that the District has available to commit to operating or capital expenses now or in the future, and is comparable to Fund Balance in governmental-type funds.

Wastewater Fund estimated Ending Fund Equity for FY 2022-23 is approximately \$14.5 million, \$4.8 million higher than the estimated Beginning Fund Equity for FY 2021-22, with the ending equity available to fund reserves and future capital projects. The change in Fund Equity (50% increase) is consistent with plans developed in 2018 when the sewer rates were set during the Proposition 218 process. It is expected that Ending Fund Equity will increase over the next several years, as part of its reserves funding plan.

Stormwater Fund estimated Ending Fund Equity for FY 2022-23 is \$22.2 million, \$2.1 million higher than the estimated Beginning Fund Equity for FY 2021-22. Fund equity is increasing because of the addition of \$2.7 million in grant funds. Of the \$22.2 million in estimated Ending Fund Equity, \$19.0 million is restricted to capacity expansion capital projects, leaving \$3.2 million in unrestricted available cash (a decrease from \$5.2 million in unrestricted cash at the beginning of FY 2021-22). As the budget was being developed, the Board was developing policy options for addressing the structural deficit in this fund.

Upper Lateral Fund estimated Ending Fund Equity for FY 2022-23 is \$947,000, a decrease of \$233,000 from estimated Beginning Fund Equity for FY 2021-22. As this program is a grants program for the voluntary replacement of upper sewer laterals, the staff and Board can properly manage the outflows of the program to ensure that Ending Fund Equity remains positive in future years.

Reserves are established by District policy. Vallejo Flood and Wastewater District manages four distinct reserves. Some are fund specific, and some are agencywide.

The first reserve is an **emergency reserve** designed to assist the District during emergencies and natural disasters. This reserve is calculated as 15% of annual operating expenses, excluding debt service, for each fund. The District is in compliance with this reserve policy.

The second reserve is an operating **cash flow reserve**. This reserve is the amount of cash necessary for each fund to have on hand on July 1 to cover its anticipated expenses through the summer and fall until the District receives the bulk of its operating revenues (services charges and property taxes) in December. The Stormwater and Upper Lateral Funds comply with this reserve policy; however, the Wastewater Fund does not. The Wastewater Fund borrows cash from the Stormwater Fund in the months of October, November and December to maintain cashflow requirements. The Board has established a plan, through sewer rate setting, to steadily increase the amount of cash on hand in this fund to meet this reserve requirement by FY 2025-26.

The third reserve is a **debt service reserve**. With the defeasance of the 1993 Certificates of Participation, there are now only three outstanding loans with a reserve requirement (2011 Refunding Revenue Bonds, 2004 SRF Loan, and 2008 SRF Loan) It is assumed that a future SRF loan for the MIPS Replacement Project will require an increased reserve amount. The District is in full compliance with this reserve policy.

The fourth reserve is an **Other Post-Employment Benefits (OPEB) reserve**. Policy requires that the District contribute at least the Actuarially Determined Contribution (ADC) through a combination of pay-as-you-go health care premiums for retirees and in contributions to an IRC Section 115 Trust Fund. The District has budgeted to make \$500,000 annual contributions to the Trust Fund, in addition to the retiree health contributions. This, in combination with a contribution to the Trust Fund by employees (a 2% of salary contribution established through the MOUs), exceeds the ADC.

GFOA Budget Award

The Government Finance Officers Association of the United States and Canada (GFOA) presented the Distinguished Budget Presentation Award to Vallejo Flood and Wastewater District, California for its biannual budget for the biennium beginning July 1, 2019. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communications device.

District staff believes that this current biannual budget continues to conform to program requirements and will be submitting it to GFOA to determine its eligibility for another award.



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District-Wide Budget Summaries



Vallejo Flood and Wastewater District treatment plant (foreground) with City of Vallejo and Mare Island Strait.

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District-Wide Budget

	FY 2019/20	FY 2020/21	FY 2021/22	Increase/(Decrease)		FY 2022/23	Increase/(Decrease)	
	Actuals	Amended Budget	Proposed Budget	\$	%	Proposed Budget	\$	%
Funding Requirements:								
Operating:								
Salaries & Benefits	\$ 17,036,598	\$ 18,803,986	\$ 19,641,610	\$837,625	4%	\$ 20,338,570	\$696,960	4%
Materials, Supplies & Services	4,325,364	4,181,521	4,551,370	369,850	9%	4,464,570	(86,800)	-2%
Major Maintenance	0	0	950,000	950,000		750,000	(200,000)	-21%
Utilities	1,727,045	1,549,000	1,640,720	91,720	6%	1,549,110	(91,610)	-6%
General & Administrative	2,422,807	3,426,595	3,926,660	500,065	15%	4,204,270	277,610	7%
Insurance	610,285	665,200	530,000	(135,200)	-20%	590,000	60,000	11%
Debt Service Principal	4,957,106	2,404,258	2,492,080	87,822	4%	2,580,600	88,520	4%
Debt Service Interest	1,414,901	1,667,346	1,371,110	(296,236)	-18%	1,275,600	(95,510)	-7%
Subtotal, operating	\$32,494,106	\$32,697,905	\$35,103,550	\$2,405,645	7%	\$35,752,720	\$649,170	2%
Capital Improvement	10,407,541	16,376,978	12,736,000	(3,640,978)	-22%	29,635,000	16,899,000	133%
Total, requirements	<u>\$42,901,646</u>	<u>\$49,074,883</u>	<u>\$47,839,550</u>	<u>(\$1,235,333)</u>	-3%	<u>\$65,387,720</u>	<u>\$17,548,170</u>	37%
Funding Sources:								
Service Charges	\$ 36,086,562	\$ 39,339,452	\$ 40,807,060	\$1,467,608	4%	\$ 41,957,510	\$1,150,450	3%
Connection Fees	111,334	449,500	167,000	(282,500)	-63%	302,000	135,000	81%
Other Revenues	256,123	272,840	260,360	(12,480)	-5%	260,360	0	0%
Property Taxes	1,260,685	1,000,000	1,311,620	311,620	31%	1,337,850	26,230	2%
Interest	734,500	535,032	160,410	(374,622)	-70%	149,640	(10,770)	-7%
Grants	0	0	2,700,000	2,700,000		0	(2,700,000)	-100%
Other Financing sources	66,417	0	6,500,000	6,500,000		20,000,000	13,500,000	208%
Total, funding sources	<u>\$38,515,621</u>	<u>\$41,596,824</u>	<u>\$51,906,450</u>	<u>\$10,309,626</u>	25%	<u>\$64,007,360</u>	<u>\$12,100,910</u>	23%
Increase (Decrease) to Fund Balance	<u>(\$4,386,026)</u>	<u>(\$7,478,059)</u>	<u>\$4,066,900</u>	<u>\$11,544,959</u>	-154%	<u>(\$1,380,360)</u>	<u>(\$5,447,260)</u>	-134%

Wastewater Fund Budget

	Fiscal Year 2019-20	Fiscal Year 2020-21	Fiscal Year 2021-22			Fiscal Year 2022-23		
			Increase/(Decrease)			Increase/(Decrease)		
		Amended	Proposed			Proposed		
	Actuals	Budget	Budget	Amount	Percent	Budget	Amount	Percent
Funding Requirements								
Operating:								
Salaries & Benefits	\$ 14,662,813	\$ 16,395,261	\$ 17,895,750	\$ 1,500,489	9%	\$ 18,516,600	\$ 620,850	3%
Materials, Supplies & Services	3,688,594	3,451,150	3,805,300	354,150	10%	3,812,300	7,000	0%
Major Maintenance	-	-	800,000	800,000		600,000	(200,000)	-25%
Utilities	1,659,330	1,440,300	1,623,000	182,700	13%	1,531,140	(91,860)	-6%
General & Administrative	2,110,155	2,936,732	3,416,910	480,178	16%	3,717,260	300,350	9%
Insurance	572,122	625,288	508,800	(116,488)	-19%	566,400	57,600	11%
Debt Service Principal	4,957,106	2,404,258	2,492,080	87,822	4%	2,580,600	88,520	4%
Debt Service Interest	1,414,901	1,667,346	1,371,110	(296,236)	-18%	1,275,600	(95,510)	-7%
Subtotal, operating	29,065,020	28,920,334	31,912,950	2,992,616	10%	32,599,900	686,950	2%
Capital Improvement	7,130,433	12,216,322	11,183,600	(1,032,722)	-8%	26,982,500	15,798,900	141%
Total, requirements	<u>\$36,195,453</u>	<u>\$41,136,656</u>	<u>\$43,096,550</u>	<u>\$1,959,894</u>	5%	<u>\$59,582,400</u>	<u>\$16,485,850</u>	38%
Funding Sources								
Service Charges	\$33,045,340	\$36,762,359	\$37,920,150	\$ 1,157,791	3%	39,070,600	1,150,450	3%
Connection Fees	91,741	299,500	92,000	(207,500)	-69%	182,000	90,000	98%
Other Revenues	256,123	272,840	260,360	(12,480)	-5%	260,360	-	0%
Property Taxes	652,382	1,000,000	115,000	(885,000)	-89%	67,700	(47,300)	-41%
Interest	295,477	252,257	49,500	(202,757)	-80%	53,930	4,430	9%
Other Financing Sources	36,417	-	6,500,000	6,500,000		20,000,000	13,500,000	208%
Total, funding sources	<u>\$34,377,480</u>	<u>\$38,586,956</u>	<u>\$44,937,010</u>	<u>\$ 6,350,054</u>	16%	<u>\$ 59,634,590</u>	<u>\$ 14,697,580</u>	33%
Increase (Decrease) to								
Fund Balance	\$ (1,817,972)	\$ (2,549,700)	\$ 1,840,460	\$ 4,390,160		\$ 52,190	\$ (1,788,270)	

Stormwater Fund Budget

	Fiscal Year 2019-20	Fiscal Year 2020-21	Fiscal Year 2021-22			Fiscal Year 2022-23		
			Increase/(Decrease)			Increase/(Decrease)		
		Amended	Proposed			Proposed		
	Actuals	Budget	Budget	Amount	Percent	Budget	Amount	Percent
Funding Requirements								
Operating:								
Salaries & Benefits	\$ 1,980,306	\$ 2,023,019	\$ 1,477,360	\$ (545,659)	-27%	\$ 1,538,200	\$ 60,840	4%
Materials, Supplies & Services	630,104	718,702	740,600	21,898	3%	647,040	(93,560)	-13%
Major Maintenance	-	-	150,000	150,000		150,000	-	0%
Utilities	67,078	107,950	17,450	(90,500)	-84%	17,700	250	1%
General & Administrative	279,721	417,174	474,330	57,156	14%	447,330	(27,000)	-6%
Insurance	31,802	33,260	21,200	(12,060)	-36%	23,600	2,400	11%
Subtotal, operating	2,989,012	3,300,105	2,880,940	(419,165)	-13%	2,823,870	(57,070)	-2%
Capital Improvement	2,909,511	3,699,656	1,099,000	(2,600,656)	-70%	2,202,500	1,103,500	100%
Total, requirements	<u>\$ 5,898,523</u>	<u>\$ 6,999,761</u>	<u>\$ 3,979,940</u>	<u>(\$3,019,821)</u>	-43%	<u>\$ 5,026,370</u>	<u>\$ 1,046,430</u>	26%
Funding Sources								
Service Charges	\$ 2,348,879	\$ 1,952,980	\$ 2,261,440	\$ 308,460	16%	2,261,440	-	0%
Connection Fees	19,592	150,000	75,000	(75,000)	-50%	120,000	45,000	60%
Property Taxes	595,723	-	1,196,620	1,196,620		1,270,150	73,530	6%
Interest	408,071	278,606	105,570	(173,036)	-62%	90,950	(14,620)	-14%
Grants	-	-	2,700,000	2,700,000		-	(2,700,000)	-100%
Other Financing Sources	30,000	-	-	-		-	-	
Total, funding sources	<u>\$ 3,402,265</u>	<u>\$ 2,381,586</u>	<u>\$ 6,338,630</u>	<u>\$ 3,957,044</u>	166%	<u>\$ 3,742,540</u>	<u>\$(2,596,090)</u>	-41%
Increase (Decrease) to								
Fund Balance	\$ (2,496,259)	\$ (4,618,175)	\$ 2,358,690	\$ 6,976,865		\$ (1,283,830)	\$ (3,642,520)	

Upper Lateral Fund Budget

	Fiscal Year	Fiscal Year	Fiscal Year 2021-22			Fiscal Year 2022-23		
	2019-20	2020-21	Increase/(Decrease)			Increase/(Decrease)		
	Actuals	Amended Budget	Proposed Budget	Amount	Percent	Proposed Budget	Amount	Percent
Funding Requirements								
Operating:								
Salaries & Benefits	\$ 393,479	\$ 385,706	\$ 268,500	\$ (117,206)	-30%	\$ 283,770	\$ 15,270	6%
Materials, Supplies & Services	6,666	11,669	5,470	(6,199)	-53%	5,230	(240)	-4%
Utilities	637	750	270	(480)	-64%	270	-	0%
General & Administrative	32,931	72,689	35,420	(37,269)	-51%	39,680	4,260	12%
Insurance	6,360	6,652	-	(6,652)	-100%	-	-	
Subtotal, operating	440,074	477,466	309,660	(167,806)	-35%	328,950	19,290	6%
Capital Improvement	367,596	461,000	453,400	(7,600)	-2%	450,000	(3,400)	-1%
Total, requirements	<u>\$ 807,670</u>	<u>\$ 938,466</u>	<u>\$763,060</u>	<u>(\$175,406)</u>	-19%	<u>\$778,950</u>	<u>\$15,890</u>	2%
Funding Sources								
Service Charges	\$ 692,343	\$ 624,113	\$ 625,470	\$ 1,357	0%	625,470	-	0%
Property Taxes	12,580	-	-	-		-	-	
Interest	30,952	4,169	5,340	1,171	28%	4,760	(580)	-11%
Total, funding sources	<u>\$ 735,876</u>	<u>\$ 628,282</u>	<u>\$ 630,810</u>	<u>\$ 2,528</u>	0%	<u>\$ 630,230</u>	<u>\$ (580)</u>	0%
Increase (Decrease) to Fund Balance								
	\$ (71,795)	\$ (310,184)	\$ (132,250)	\$ 177,934		\$ (148,720)	\$ (16,470)	

Revenue Detail

	FY21-22 Proposed Budget				FY22-23 Proposed Budget			
	WW 481	SW 486	UL 483	Total	WW 481	SW 486	UL 483	Total
FUNDING SOURCES:								
Service Charges								
41 01 UB Service Charges	\$37,149,630	\$2,261,440	\$625,390	\$40,036,460	\$38,275,890	\$2,261,440	\$625,390	\$41,162,720
42 01 Service Charges	452,970	-	80	453,050	467,910	-	80	467,990
42 08 Septic Dumping Fees	308,550	-	-	308,550	317,800	-	-	317,800
84 03 Bad Debt Recovery	1,500	-	-	1,500	1,500	-	-	1,500
88 12 Refunds	7,500	-	-	7,500	7,500	-	-	7,500
	37,920,150	2,261,440	625,470	40,807,060	39,070,600	2,261,440	625,470	41,957,510
Connection Fees								
36 10 Connection Permit	2,000	-	-	2,000	2,000	-	-	2,000
42 02 Res Cnx - Connection	90,000	75,000	-	165,000	180,000	120,000	-	300,000
	92,000	75,000	-	167,000	182,000	120,000	-	302,000
Other Revenues								
30 07 Plan Check Fee	4,000	-	-	4,000	4,000	-	-	4,000
30 13 Field Inspection	11,000	-	-	11,000	11,000	-	-	11,000
36 01 Septic Dumping Permits	5,360	-	-	5,360	5,360	-	-	5,360
69 18 Misc Leases & Rentals	240,000	-	-	240,000	240,000	-	-	240,000
	260,360	-	-	260,360	260,360	-	-	260,360
Taxes								
01 01 Property Taxes	115,000	1,196,620	0	1,311,620	67,700	1,270,150	0	1,337,850
Interest Revenue								
75 01 Interest Income - Int & Div	48,300	105,570	5,340	159,210	52,730	90,950	4,760	148,440
76 01 Interest on Loan	200	-	-	200	200	-	-	200
88 05 Misc Revenues	1,000	-	-	1,000	1,000	-	-	1,000
	49,500	105,570	5,340	160,410	53,930	90,950	4,760	149,640
Grants	-	2,700,000	-	2,700,000	-	-	-	-
Other Financing Sources	6,500,000	-	-	6,500,000	20,000,000	-	-	20,000,000
TOTAL FUNDING SOURCES	\$44,937,010	\$6,338,630	\$630,810	\$51,906,450	\$59,634,590	\$3,742,540	\$630,230	\$64,007,360

Expenditure Budget Detail

Wastewater Fund Budget Detail

FY19-20 Actuals Fund 481	FY20-21 Budget Fund 481	FY21-22 Proposed Fund 481	FY22-23 Proposed Fund 481
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FUNDING REQUIREMENTS:

Salaries and Benefits

01 01	Salaries & Wages	8,334,517	9,312,010	10,094,260	10,334,400
02 01	Overtime	161,212	175,945	265,540	259,140
03 01	Premium Pay	70,703	50,000	66,800	68,130
03 02	Acting Pay	22,271	13,171	21,710	22,650
03 03	Standby Pay	197,716	183,185	207,240	210,150
03 04	Other Pay	17,557	14,770	27,260	27,260
03 05	Pays Suggestions	-	1,880	1,920	1,920
03 06	Fatigue Pay	702	2,250	7,060	7,160
03 08	Auto Allowance	2,119	2,100	2,790	2,790
03 09	Non Cash Benefits	68	-	80	80
03 15	Medical Flex	193,710	161,810	249,600	264,560
04 04	Leave Payout	160,122	311,410	55,660	108,740
04 06	Workers Comp Benefit	169,630	-	286,460	294,970
05 01	Medicare Benefits	132,483	135,025	155,280	159,030
05 02	Pers Benefit	2,320,577	2,674,188	3,064,330	3,290,730
05 04	Health Insurance Benefit	1,335,058	1,590,792	1,656,910	1,701,290
05 05	Dental Insurance Benefit	154,495	166,142	188,040	188,680
05 06	Retired Medical Expense	1,306,498	1,492,968	1,444,780	1,475,040
05 07	Employee Assistance	4,353	5,076	5,790	5,850
05 09	Vision	33,207	40,239	36,900	37,240
05 11	Life, AD&D, & Indemnity	12,842	20,389	18,680	18,260
05 12	FICA Benefits	369	525	790	820
05 14	Unemployment Benefits	24,947	41,385	26,760	26,270
05 17	Deferred Compensation	7,657	-	11,110	11,440
		14,662,813	16,395,261	17,895,750	18,516,600

Operations Materials, Services & Supplies

07 02	Postage & Mailing	5,634	11,550	11,480	34,260
07 03	Printing & Binding	1,014	4,870	5,940	17,590
08 04	Education Reimbursement	2,247	13,925	22,150	22,150
10 01	Adv & Legal Notice	12,052	12,093	19,410	20,380
10 02	Public Information	60,613	86,087	95,070	92,670
12 02	Land/Equip Rents & Leases	41,664	68,110	94,220	79,400
13 02	EE-Wellness Program Reimb	23,472	14,555	14,400	14,860
14 01	General Supplies	751,283	418,800	264,800	274,570
14 02	General Supplies-Pump Stn	67,956	68,800	63,050	65,480
14 04	Uniforms & Meals	43,894	46,853	51,330	52,310
14 05	Safety Clothes & Supplies	64,857	59,512	80,240	80,300
14 09	Fuel & Lube Supplies	86,483	108,900	139,130	139,130
14 10	Lab Supplies	-	-	42,840	42,840

Final Budget for Fiscal Years 2021-22 and 2022-23

		FY19-20 Actuals Fund 481	FY20-21 Budget Fund 481	FY21-22 Proposed Fund 481	FY22-23 Proposed Fund 481
14 11	Chemical Supplies	821,732	776,600	817,800	817,800
14 15	TV Maint Supplies	-	-	35,400	35,400
14 16	Underground Maint Supplies	89,027	94,500	110,630	110,630
14 18	Small Tools & Instruments	41,058	38,300	34,820	35,010
14 19	ECD Supplies	-	-	4,200	4,200
14 21	Publications	4,406	9,220	6,330	6,410
14 22	Safety And Recognition	11,202	30,180	28,980	28,980
14 23	Pump Station Maint Supplies	2,095	-	2,430	2,430
14 24	Meeting Facilitation/Meals	5,118	9,590	7,530	8,690
14 25	Office Equipment Supplies	8,685	20,585	14,930	14,930
15 03	R&M - Building Services	145,031	160,800	150,700	154,640
15 04	R&M - Heavy Equipment	74,388	81,000	82,080	82,080
15 05	R&M - General Equipment	318,827	33,950	377,840	389,480
15 06	R&M - General Services	280,900	313,000	313,530	255,660
15 07	R&M - Vehicles	99,220	98,000	72,590	72,590
15 08	R&M - Construction	-	45,000	44,250	44,250
15 09	R&M - Gen Svcs Pump Stn	46,611	88,000	58,200	58,200
15 12	R&M - TV Equipment	-	-	26,550	26,550
15 13	Laboratory Services	72,292	157,000	67,200	71,400
15 19	Weed Control	73,901	108,000	29,100	29,100
15 20	Tubbs Island	215,629	300,000	201,600	210,000
15 21	Pretreatment Testing	20,300	20,000	16,800	16,800
15 22	Pollution Reduction	41	-	-	-
15 24	Other Services	5,644	-	-	-
24 02	Operating Leases/Rents	-	26,605	26,610	26,610
36 01	Small Equipment	111,138	78,765	230,190	229,690
36 06	Computer Hardware	80,181	48,000	121,550	125,430
36 08	Security Equipment	-	-	19,400	19,400
		3,688,594	3,451,150	3,805,300	3,812,300
Major Maintenance 05-51		-	-	800,000	600,000
Utilities					
16 01	Gas & Electricity	1,375,866	1,144,000	1,226,100	1,130,950
16 02	Telephone And Radio Comm	102,685	104,650	100,850	103,170
16 03	Waste Disposal	94,951	75,000	179,950	179,950
16 04	Water	85,828	116,650	116,100	117,070
		1,659,330	1,440,300	1,623,000	1,531,140
General & Administrative					
06 01	Other Professional Services	11,994	14,350	148,120	152,000
06 04	Legal Fees	115,294	153,125	245,100	254,800
06 05	Audit Fees	28,574	20,020	22,450	22,450
06 07	Consulting Services	307,401	971,450	800,230	850,130
06 14	Computer Maintenance	412,477	179,833	504,330	667,210
06 18	Trustee Other And Cac	-	4,410	3,400	3,400
06 19	Medical Services	10,606	14,100	14,400	14,400

Final Budget for Fiscal Years 2021-22 and 2022-23

		FY19-20 Actuals Fund 481	FY20-21 Budget Fund 481	FY21-22 Proposed Fund 481	FY22-23 Proposed Fund 481
08 01	Training & Travel	101,647	161,474	176,610	216,190
08 02	Training Programs	39,791	54,700	58,120	58,120
09 01	Dues & Memberships	49,636	65,285	84,340	86,550
11 01	Administration	14	-	-	-
11 05	Bank Service Charges	15,038	22,750	23,000	23,000
11 15	County Assessor Admin Fee	336,600	321,230	362,200	380,300
11 30	Health Insurance Refunds	(274)	-	-	-
15 02	Temporary Help	219,993	224,665	234,250	240,150
15 30	Internship Program	-	2,240	3,100	3,100
32 03	General Contingency	37,099	275,100	292,300	292,300
32 04	Permits, Licenses	424,265	452,000	444,960	453,160
		<u>2,110,155</u>	<u>2,936,732</u>	<u>3,416,910</u>	<u>3,717,260</u>
Insurance					
11 07	Insurance Premiums	493,496	503,088	384,000	441,600
15 17	Claims And Deductibles	78,626	122,200	124,800	124,800
		<u>572,122</u>	<u>625,288</u>	<u>508,800</u>	<u>566,400</u>
TOTAL OPERATING BUDGET		<u>22,693,013</u>	<u>24,848,730</u>	<u>28,049,760</u>	<u>28,743,700</u>
	Debt Service Principal	4,957,106	2,404,258	2,492,080	2,580,600
	Debt Service Interest	1,414,901	1,667,346	1,371,110	1,275,600
	Capital Improvement	7,130,433	12,216,322	11,183,600	26,982,500
TOTAL CAPITAL AND DEBT SERVICE		<u>20,632,873</u>	<u>28,504,248</u>	<u>26,230,390</u>	<u>57,821,200</u>
TOTAL FUNDING REQUIREMENTS		<u>36,195,453</u>	<u>41,136,656</u>	<u>43,096,550</u>	<u>59,582,400</u>

Stormwater Fund Budget Detail

FY19-20 Actuals Fund 486	FY20-21 Budget Fund 486	FY21-22 Proposed Fund 486	FY22-23 Proposed Fund 486
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FUNDING REQUIREMENTS:

Salaries and Benefits

01 01	Salaries & Wages	1,172,256	1,250,875	837,970	859,110
02 01	Overtime	12,714	24,412	14,270	14,100
03 01	Premium Pay	757	-	20	20
03 02	Acting Pay	862	1,896	2,640	2,800
03 03	Standby Pay	15,454	28,411	17,490	17,580
03 04	Other Pay	3,194	3,510	1,140	1,140
03 05	Pays Suggestions	-	100	80	80
03 06	Fatigue Pay	58	250	430	430
03 08	Auto Allowance	757	750	150	150
03 09	Non Cash Benefits	16	-	-	-
03 15	Medical Flex	12,660	18,490	10,760	11,400
04 04	Leave Payout	19,326	48,030	3,630	11,370
04 06	Workers Comp Benefit	18,284	-	23,930	24,640
05 01	Medicare Benefits	17,887	18,137	12,780	13,100
05 02	Pers Benefit	292,339	336,984	261,970	283,150
05 04	Health Insurance Benefit	172,167	199,780	159,350	165,560
05 05	Dental Insurance Benefit	18,143	21,097	15,920	16,090
05 06	Retired Medical Expense	210,812	56,550	107,290	109,940
05 07	Employee Assistance	536	646	440	450
05 09	Vision	3,842	5,013	2,990	3,020
05 11	Life, AD&D, & Indemnity	2,498	2,646	1,520	1,490
05 12	FICA Benefits	132	188	-	-
05 14	Unemployment Benefits	2,877	5,255	1,990	1,960
05 17	Deferred Compensation	2,734	-	600	620
		1,980,306	2,023,019	1,477,360	1,538,200

Operations Materials, Services & Supplies

07 02	Postage & Mailing	1,638	2,850	60,290	310
07 03	Printing & Binding	229	610	40,420	470
08 04	Education Reimbursement	-	4,710	1,280	1,280
10 01	Adv & Legal Notice	4,301	4,191	680	690
10 02	Public Information	35,117	70,049	65,060	65,060
12 02	Land/Equip Rents & Leases	7,073	11,945	5,450	3,330
13 02	EE-Wellness Program Reimb	952	785	600	630
14 01	General Supplies	72,242	73,960	12,360	12,540
14 02	General Supplies-Pump Stn	49,175	17,200	1,950	2,030
14 04	Uniforms & Meals	7,065	5,070	4,220	4,260
14 05	Safety Clothes & Supplies	9,560	7,222	5,130	5,080
14 09	Fuel & Lube Supplies	19,549	20,100	10,650	10,650

Final Budget for Fiscal Years 2021-22 and 2022-23

		FY19-20 Actuals Fund 486	FY20-21 Budget Fund 486	FY21-22 Proposed Fund 486	FY22-23 Proposed Fund 486
14 10	Lab Supplies	-	-	8,160	8,160
14 11	Chemical Supplies	45,345	25,400	11,960	11,960
14 15	TV Maint Supplies	-	-	4,480	4,480
14 16	Underground Maint Supplies	6,330	10,500	14,000	14,000
14 18	Small Tools & Instruments	8,242	7,200	1,670	1,670
14 19	ECD Supplies	-	-	800	800
14 21	Publications	807	1,995	420	430
14 22	Safety And Recognition	1,495	7,350	660	660
14 23	Pump Station Maint Supplies	524	-	80	80
14 24	Meeting Facilitation/Meals	1,364	4,175	520	540
14 25	Office Equipment Supplies	719	2,440	890	890
15 03	R&M - Building Services	24,154	41,400	5,710	5,840
15 04	R&M - Heavy Equipment	5,821	9,000	10,160	10,160
15 05	R&M - General Equipment	29,211	12,125	12,250	12,610
15 06	R&M - General Services	34,249	67,000	10,380	10,450
15 07	R&M - Vehicles	14,168	13,000	6,720	6,720
15 08	R&M - Construction	3,092	5,000	5,600	5,600
15 09	R&M - Gen Svcs Pump Stn	6,625	22,000	1,800	1,800
15 12	R&M - TV Equipment	-	-	3,360	3,360
15 13	Laboratory Services	-	-	12,800	13,600
15 19	Weed Control	8,282	12,000	120,900	120,900
15 20	Tubbs Island	-	-	38,400	40,000
15 21	Pretreatment Testing	-	-	3,200	3,200
15 22	Pollution Reduction	217,600	235,000	240,000	245,000
15 24	Other Services	1,411	-	-	-
36 01	Small Equipment	6,710	12,425	13,240	13,330
36 06	Computer Hardware	7,054	12,000	3,750	3,870
36 08	Security Equipment	-	-	600	600
		630,104	718,702	740,600	647,040
Major Maintenance 05-51		-	-	150,000	150,000
Utilities					
16 01	Gas & Electricity	32,568	36,000	3,900	4,050
16 02	Telephone And Radio Comm	21,428	25,100	4,810	4,880
16 03	Waste Disposal	9,848	40,000	4,930	4,930
16 04	Water	3,235	6,850	3,810	3,840
		67,078	107,950	17,450	17,700

Final Budget for Fiscal Years 2021-22 and 2022-23

		FY19-20 Actuals Fund 486	FY20-21 Budget Fund 486	FY21-22 Proposed Fund 486	FY22-23 Proposed Fund 486
General & Administrative					
06 01	Other Professional Services	3,497	2,575	5,530	5,570
06 04	Legal Fees	41,189	54,688	4,800	4,900
06 05	Audit Fees	2,198	1,540	1,460	1,460
06 07	Consulting Services	72,806	145,300	261,990	222,440
06 14	Computer Maintenance	40,500	42,982	16,290	21,330
06 18	Trustee Other And Cac	-	1,575	40	40
06 19	Medical Services	541	750	600	600
08 01	Training & Travel	15,112	30,210	13,810	18,410
08 02	Training Programs	1,536	5,250	2,660	2,660
09 01	Dues & Memberships	25,317	15,220	5,120	5,280
11 01	Administration	5	-	-	-
11 05	Bank Service Charges	7,083	1,750	1,500	1,500
11 15	County Assessor Admin Fee	18,326	24,710	33,820	34,100
11 30	Health Insurance Refunds	(16)	-	-	-
15 02	Temporary Help	20,023	41,075	17,110	17,880
15 30	Internship Program	-	800	30	30
32 03	General Contingency	-	33,750	33,500	33,500
32 04	Permits, Licenses	31,603	15,000	76,070	77,630
		279,721	417,174	474,330	447,330
Insurance					
11 07	Insurance Premiums	27,787	26,760	16,000	18,400
15 17	Claims And Deductibles	4,015	6,500	5,200	5,200
		31,802	33,260	21,200	23,600
TOTAL OPERATING BUDGET		1,058,756	1,188,491	1,162,650	1,082,700
Capital Improvement		2,909,511	3,699,656	1,099,000	2,202,500
TOTAL FUNDING REQUIREMENTS		5,898,523	6,999,761	3,979,940	5,026,370

Upper Later Fund Budget Detail

FY19-20 Actuals Fund 483	FY20-21 Budget Fund 483	FY21-22 Proposed Fund 483	FY22-23 Proposed Fund 483
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FUNDING REQUIREMENTS:

Salaries and Benefits

01 01	Salaries & Wages	250,023	247,374	158,740	161,400
02 01	Overtime	4,832	4,325	2,800	3,190
03 01	Premium Pay	218	-	-	-
03 02	Acting Pay	274	-	160	160
03 03	Standby Pay	1,323	10	270	270
03 04	Other Pay	735	820	450	450
03 05	Pays Suggestions	-	20	-	-
03 06	Fatigue Pay	20	-	10	10
03 08	Auto Allowance	151	150	60	60
03 09	Non Cash Benefits	3	-	-	-
03 15	Medical Flex	2,693	1,882	1,500	1,580
04 04	Leave Payout	3,871	14,560	1,210	12,390
04 06	Workers Comp Benefit	1,806	-	930	950
05 01	Medicare Benefits	3,816	3,587	2,360	2,400
05 02	Pers Benefit	53,412	66,025	45,850	47,500
05 04	Health Insurance Benefit	36,941	32,592	28,980	28,610
05 05	Dental Insurance Benefit	3,733	3,453	2,430	2,290
05 06	Retired Medical Expense	27,014	8,600	21,220	21,010
05 07	Employee Assistance	104	106	90	80
05 09	Vision	819	841	520	520
05 11	Life, AD&D, & Indemnity	510	464	270	250
05 12	FICA Benefits	26	38	20	20
05 14	Unemployment Benefits	608	860	390	380
05 17	Deferred Compensation	547	-	240	250
		393,479	385,706	268,500	283,770

Operations Materials, Services & Supplies

07 02	Postage & Mailing	295	600	220	180
07 03	Printing & Binding	72	120	80	20
08 04	Education Reimbursement	-	2,115	320	320
10 01	Adv & Legal Notice	850	841	410	430
10 02	Public Information	16	64	20	20
12 02	Land/Equip Rents & Leases	1,224	2,145	330	270
13 02	EE-Wellness Program Reimb	190	160	-	10
14 01	General Supplies	1,279	740	590	590
14 04	Uniforms & Meals	69	17	100	100
14 05	Safety Clothes & Supplies	179	417	250	170
14 09	Fuel & Lube Supplies	15	-	230	230
14 11	Chemical Supplies	-	-	240	240
14 15	TV Maint Supplies	-	-	120	120
14 16	Underground Maint Supplies	-	-	380	380
14 18	Small Tools & Instruments	-	-	20	20

Final Budget for Fiscal Years 2021-22 and 2022-23

		FY19-20 Actuals Fund 483	FY20-21 Budget Fund 483	FY21-22 Proposed Fund 483	FY22-23 Proposed Fund 483
14 21	Publications	284	385	170	190
14 22	Safety And Recognition	299	1,470	360	360
14 24	Meeting Facilitation/Meals	128	435	160	180
14 25	Office Equipment Supplies	105	525	200	200
15 03	R&M - Building Services	660	800	30	30
15 04	R&M - Heavy Equipment	-	-	270	270
15 05	R&M - General Equipment	654	25	100	100
15 06	R&M - General Services	-	-	90	90
15 07	R&M - Vehicles	54	-	270	270
15 08	R&M - Construction	-	-	150	150
15 12	R&M - TV Equipment	-	-	90	90
36 01	Small Equipment	292	810	270	200
		6,666	11,669	5,470	5,230
Utilities					
16 02	Telephone And Radio Comm	637	750	60	60
16 03	Waste Disposal	-	-	120	120
16 04	Water	-	-	90	90
		637	750	270	270
General & Administrative					
06 01	Other Professional Services	679	575	1,060	1,140
06 04	Legal Fees	8,235	10,938	5,100	5,300
06 05	Audit Fees	628	440	490	490
06 07	Consulting Services	7,119	28,250	7,280	7,430
06 14	Computer Maintenance	1,559	220	410	410
06 18	Trustee Other And Cac	-	315	70	70
06 19	Medical Services	132	150	-	-
08 01	Training & Travel	3,075	6,866	2,650	5,630
08 02	Training Programs	343	1,050	220	220
09 01	Dues & Memberships	1,920	2,906	1,800	1,850
11 01	Administration	1	-	-	-
11 05	Bank Service Charges	365	500	500	500
11 15	County Assessor Admin Fee	7,239	7,060	6,400	6,400
11 30	Health Insurance Refunds	(5)	-	-	-
15 02	Temporary Help	1,618	7,110	4,650	5,490
15 30	Internship Program	-	160	60	60
32 03	General Contingency	-	6,150	4,200	4,200
32 04	Permits, Licenses	23	-	530	490
		32,931	72,689	35,420	39,680
Insurance					
11 07	Insurance Premiums	5,557	5,352		
15 17	Claims And Deductibles	803	1,300		
		6,360	6,652	-	-
TOTAL OPERATING BUDGET		59,773	72,677	45,850	47,500
Capital Improvement		367,596	461,000	453,400	450,000
TOTAL FUNDING REQUIREMENTS		807,670	938,466	763,060	778,950

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Expenditure Budgets by Department



Vallejo Flood and Wastewater District administration building.

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Administration

Administration's role is to provide support to the Board of Trustees, as well as District staff. Administration's primary function is providing excellent customer service through direct interface with the general public (external customers) and other departments (internal customers). The department is responsible for the facilitation of the Board of Trustee trainings, meetings, and agenda materials. Administration is responsible for maintaining and facilitating the District's Records Program, and ensures that District's regulatory compliance with transparent government best practices.

Summary of Department Responsibilities

- Prepare, notice, and disseminate Board of Trustees meeting materials including agendas, resolutions, ordinances and minutes.
- Provide direction and assistance to departments in complying with the District's records retention policies and procedures.
- Provide clerical support to District staff such as mail, correspondence, copies, scanning etc.
- Interface with customers via email, the website, telephone, over-the-counter, and through direct mailings.
- Ensure Brown Act compliance, Public Records Act compliance, and compliance with regulatory statement requirements.
- Assist with facilitation of the District's Upper Lateral Program.
- Assist with District requests for information, Requests for Proposals, and bidding for construction projects.
- Process and track District travel and registration arrangements for seminars, conferences, and trainings for Trustees and District personnel.
- Manage and facilitate the District's employee recognition programs and events.

Changes in Service Levels or Significant Budget Changes

- \$16,000 decrease in Building Services, with Administration Building maintenance expenses moved to Facilities Maintenance division, and utility costs moved to Operations.
- \$15,000 increase to base budget for new website maintenance and new scanning/digital storage services.
- \$47,250 increase in legal fees budget to match the level of service currently received.
- \$60,000 decrease in consulting services, partially offset by new website maintenance costs.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
3101 ADMINISTRATION			
Salaries and Benefits	1,071,880	1,139,520 6%	1,182,640 4%
Operations Materials, Services & Supplies	120,400	82,280 -32%	79,280 -4%
Utilities	15,000	- -100%	-
General & Administrative	335,250	310,820 -7%	334,210 8%
	1,542,530	1,532,620 -1%	1,596,130 4%

Engineering

The Engineering Department is responsible for establishing and managing the capital improvement program. The program consists of capital projects and expenditures for the stormwater and flood protection system, wastewater treatment plant, and collection system. Elements of the Capital Improvement Program include program management, planning, project design and construction management, project management, inspection, and assistance with the initial operation and maintenance.

Engineering also completes development project reviews in the District's service area, processes permits, performs fee calculations for existing and new connections to the system, and performs related inspections. Engineering manages the Geographic Information System (GIS) that contains the sanitary and stormwater sewer systems. Engineering is an integral part of the Asset Management System. Outside engineers and consultants may be used to supplement staff.

Summary of Department Responsibilities

- Manage the Capital Improvement Program and individual capital projects; coordinate project work with City of Vallejo and other Local, State and Federal entities as applicable.
- Develop plans and specifications in accordance with engineering standards, and contract procurement in accordance with the public contract code and District policy.
- Project management and inspection that ensures project compliance with plans and specifications.
- Review of development projects that impact District facilities with a larger role with Mare Island development; ensure projects affecting District facilities comply with District Standards.
- Maintain sanitary sewer and storm drain hydraulic models and master plans.
- Filing and maintenance of engineering drawings, maps, plans, and plats.
- Processing of permits for existing or new connections and calculation/assessment of applicable fees.
- Support the development and ongoing maintenance of Asset Management.

Changes in Service Levels or Significant Budget Changes

- \$50,000 increase in consulting services, relates to increased hydraulic modeling, surveying and asset management.
- \$5,000 (25%) reduction in planned over time in FY 2021-22, based on anticipated project activity.
- \$7,250 reduction in education reimbursement, based on staff development plan.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
3104 ENGINEERING			
Salaries and Benefits	1,470,021	1,394,720 -5%	1,545,320 11%
Operations Materials, Services & Supplies	19,700	7,970 -60%	7,000 -12%
General & Administrative	177,500	198,250 12%	223,230 13%
	1,667,221	1,600,940 -4%	1,775,550 11%

Environmental Services

The Environmental Services Department has three main areas of focus: Laboratory, Environmental Compliance, and Outreach. The department works in coordination with a large number of regulating or affiliated environmental agencies throughout the region to accomplish the District's goals and demonstrate compliance with permits and applicable regulations. Environmental Services is also responsible for managing the District's Beneficial Biosolids Reuse Program on District owned lands in Sonoma County.

Laboratory

Staff performs tests to ensure that the water coming into the treatment plant (influent) and the treated wastewater leaving the plant (effluent) are in compliance with federal, state and local laws and regulations. Staff also performs testing to help with the operation of the treatment facilities. The District is subject to National Pollutant Discharge Elimination System (NPDES) permit requirements for treatment plant performance and stormwater discharges. The lab conducts research, compiles information, and prepares reports.

Environmental Compliance

Staff work with local businesses, agencies, and residents on both wastewater and stormwater issues. On the wastewater side, we work with businesses to ensure that the water they send us will not harm District workers, damage the collection system or treatment plant or cause us to exceed limits set by our permits for a variety of constituents including fats, oils and greases (FOG), mercury, automotive fluids, and the like. We monitor local waterways for trash, oil spills, or other hazards to the environment. We are also responsible for implementing a program to reduce the amount of trash discharges to the storm drain by implementing physical trash capture devices as well as cleanup of trash in District facilities and public right of ways.

Outreach

Outreach programs are designed to inform residents about the District's mission and our role in the community, the services we provide, and engage them in environmental stewardship. Environmental education programs span third grade through community college level. We lead Vallejo in major events such as Coastal Cleanup Day; we also founded and coordinate the Vallejo Watershed Alliance, a community-based volunteer group. Outreach and education efforts are performed in a variety of ways, including our newsletter, media relations, website, speaker's bureau, public presentations, etc.

Summary of Department Responsibilities

- Laboratory, industrial waste and pollution control sampling and testing for compliance with wastewater and stormwater laws, rules and regulations.
- Maintenance of an audited certified environmental laboratory.
- Managing the land application of biosolids.
- Conduct field inspections of commercial and industrial customers, and other locations as necessary, to monitor and control discharges, issue permits and initiate enforcement.
- Coordinate and implement a variety of community outreach, public education and customer relations programs utilizing various community and media forums.
- Independence from Plant Operations through direct reporting to the District Manager.

Changes in Service Levels or Significant Budget Changes

- Addition of \$6,000 in Overtime and \$10,000 in Acting Pay, which were not budgeted in prior years, to match anticipated expenses based on historical trend.
- Reduction of \$34,000 in various equipment line items to match historical spending.

- \$60,000 reduction in FY 2021-22 and \$50,000 reduction in FY 2022-23 for expenses related to Tubbs Island and biosolids management.
- \$77,000 reduction in Laboratory Services to better match historical spending.
- \$223,000 increase in consulting services for NPDES permit negotiation support (split between both years), sensitive species screening report (FY 2021-22), and related support.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
3108 ENVIRONMENTAL SERVICES			
Salaries and Benefits	2,318,851	2,355,270 2%	2,461,430 5%
Operations Materials, Services & Supplies	937,900	801,590 -15%	819,810 2%
General & Administrative	576,900	769,330 33%	744,240 -3%
	3,833,651	3,926,190 2%	4,025,480 3%

Field Operations

Field Operations' primary focus is on meeting regulatory requirements spelled out by the State Water Resources Control Board in the Waste Discharge Requirements. These Waste Discharge Requirements have recommendations for maintaining the sanitary sewer system with the goal being the reduction of Sanitary Sewer Overflows. Field Operations maintains over 400 miles of Sanitary Sewer main ranging in sizes from 4 inch to 60 inches in diameter with over 33,000 customer service connections. Field Operations' flood control responsibilities involve maintaining a Storm System of over 250 miles of storm drain pipes ranging from 12 inch to 108 inch with over 11,000 structures to keep clear. The department interacts extensively with customers in responses to requests for service with sewer and storm drain issues, averaging almost 1,300 calls per year.

Summary of Department Responsibilities

- Preventative maintenance of sewage and storm drainage collection systems through use of pressurized jet cleaning, mechanical power rodding and root control agents, catch basin cleaning and channel - creek cleaning.
- Installation and repair of sewers, manholes, catch basins and related structures.
- Emergency response for sewer backups and street flooding, and sandbagging for additional runoff control during storm events.
- Database management of service call-outs, recurring maintenance and information collection.
- Fleet maintenance management to maintain District's heavy equipment and extend service life.

Changes in Service Levels or Significant Budget Changes

- \$20,000 increase in underground maintenance supplies based on anticipated price increase for materials.
- \$10,000 increased for COVID-related disinfection services.
- \$18,000 increase in fuel costs, as costs previously allocated to Operations were moved to this department.
- \$50,000 increase for expenses related to maintaining new stormwater trash capture devices.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
3105 FIELD OPERATIONS			
Salaries and Benefits	4,492,847	4,832,190 8%	5,063,570 5%
Operations Materials, Services & Supplies	832,050	911,020 9%	891,020 -2%
Utilities	86,000	90,000 5%	90,000 0%
General & Administrative	549,900	473,410 -14%	489,110 3%
	5,960,797	6,306,620 6%	6,533,700 4%

Human Resources

The purpose of Human Resources is to assist the District Manager in the administration of District personnel, employee development, recruitment, classification, and employee relations.

Summary of Department Responsibilities

- Analysis, interpretation and application of complex human resources laws, regulations, and rules as they relate to policies, procedures, agreements, labor relations and investigations. Update and maintain human resources documents, manuals, materials, information, and files.
- Manage, direct and conduct position classification and compensation studies; maintain and update job descriptions; conduct salary surveys and recommend appropriate salary ranges; conduct recruitments including testing, background checks and new hire orientations, oversee performance management, and assist as applicable for coaching and corrective action plans.
- Advise, assist and investigate, where applicable, personnel and employee relations issues, concerns, and problems, including grievances and disciplinary actions. Assist in representing the District in matters of concern to bargaining units, negotiations, and meet and confer.
- Procures and administers employee benefit programs, and monitors benefit program rates, coverage levels, industry trends, cost, and quality. Administers leave management programs, sick leave and other types of time tracking, and processes transactions for changes in leave management and benefit programs.

Changes in Service Levels or Significant Budget Changes

- 0.2 FTE Limited Duration position in FY 2021-22, as the HR Analyst retires and a new analyst is hired two months prior to that retirement for training.
- \$25,000 in legal fees in FY 2022-23 in additional legal fees related to review of the labor Memorandum of Understanding (MOU).
- \$30,000 in consulting services in FY 2022-23 to conduct a districtwide classification/compensation study in advance of MOU negotiations.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
3111 HUMAN RESOURCES			
Salaries and Benefits	424,684	565,920 33%	433,250 -23%
Operations Materials, Services & Supplies	10,616	11,990 13%	11,940 0%
General & Administrative	124,026	128,800 4%	138,800 8%
	559,325	706,710 26%	583,990 -17%

Finance

Finance serves a critical role in fiscal transparency and accountability through development, implementation and monitoring of: policies and procedures, long-term financial plans and budgets, and financial accounting and reporting systems in support of District goals and objectives. As the fiduciary for safekeeping and custody of assets, Finance must adhere to a variety of standards and regulatory requirements set forth by law, financial and accounting principles/standards, ordinance, regulatory agencies and covenants. The department is committed to exceptional customer service in billing and collection of revenues and expenditure of public funds.

Summary of Department Responsibilities

- Develop, implement and monitor financial planning, accounting, and reporting in accordance with applicable laws, rules and regulatory requirements.
- Ensure District resilience through long-term financial planning for funding of operations, capital improvement program and reserves.
- Effective and efficient management of financial information that provides accurate, relevant and timely data for evaluating alternatives, making decisions and formulating public policy.
- Protection of assets from loss or misuse through a system of internal control.

Changes in Service Levels or Significant Budget Changes

- 0.4 FTE Limited Duration position in FY 2021-22, as the Accountant retires and a new analyst is hired four months prior to that retirement for training during the year-end and audit process.
- \$140,000 in FY 2021-22 related to Stormwater Service Charge rates (printing and postage for noticing and balloting, plus legal review).
- \$120,000 in FY 2022-23 related to Sewer Service Charge rates, including a rate study consultant, and printing and postage for noticing.
- \$12,000 for computer maintenance costs for new labor costing, pension and OPEB modeling.

	FY20-21 Budget	FY21-22 Proposed		FY22-23 Proposed	
3103 FINANCE					
Salaries and Benefits	1,340,335	1,502,510	12%	1,398,790	-7%
Operations Materials, Services & Supplies	24,900	126,320	407%	65,610	-48%
General & Administrative	563,510	584,360	4%	644,960	10%
	1,928,745	2,213,190	15%	2,109,360	-5%

Operations

Plant Operations Division

As a heavily regulated industry, this division operates sanitary sewer and storm drainage facilities, including treatment and pumping stations, in compliance with applicable laws, rules and regulations. Wastewater operations begin upstream with pretreatment of certain commercial customers and chemical injection for odor control. Raw influent continues to the plant for processing, resulting in stabilized biosolids trucked for farming land application and the discharge of treated wastewater. Stormwater operations similarly consist of natural pretreatment and trash capture filtration at the source before discharge to water bodies. The division continuously monitors operating data and plant performance, and makes process control adjustments as necessary.

Summary of Division Responsibilities

- Operate, monitor, report-on and regulate substantial automated equipment to meet discharge permit standards and minimize power and chemical usage. Take equipment in and out of service for maintenance, and sometimes assist with equipment maintenance.
- Sample treated wastewater and dewatered biosolids at consistent intervals for testing process control and NPDES permit compliance purposes during nights and weekends for laboratory analysis.
- Test all process critical equipment as well as emergency generators to ensure proper operation in the event of power failure.
- Manage the trucking of biosolids to Tubbs Island.
- Close coordination with other departments such as safety, laboratory, field operations, engineering and maintenance.

Changes in Service Levels or Significant Budget Changes

- \$56,700 increase in overtime and \$16,200 increase in Premium Pay related to converting plant operations to 12-hour shifts.
- \$50,000 increase in chemical supplies due to commodity price increases.
- \$220,000 increase in FY 2021-22 in electricity costs due to the expiration of a demand response incentive program, with a \$200,000 reduction the following year to recognize savings from the Bloom Energy generation project.
- \$55,000 increase in waste disposal services budget due to a process change to haul scum offsite, rather than sending it through thickening and dewatering processes. This process change will significantly decrease maintenance activity in these associated processes.
- \$75,000 decrease in consulting services, as a one-time SCADA programming project is completed.

	FY20-21 Budget	FY21-22 Proposed		FY22-23 Proposed	
3107 OPERATIONS					
Salaries and Benefits	3,170,107	3,195,440	1%	3,353,120	5%
Operations Materials, Services & Supplies	730,755	780,410	7%	720,410	-8%
Utilities	1,150,000	1,305,000	13%	1,205,000	-8%
General & Administrative	224,500	99,050	-56%	99,050	0%
	5,275,362	5,379,900	2%	5,377,580	0%

Facilities Maintenance Division

The Facilities Maintenance division is charged with the upkeep of treatment plant and pump station mechanical systems and equipment. Pro-active maintenance is essential to prevent system failure and the resulting potential for permit compliance violations. The department outsources servicing where economically feasible, such as for vehicle maintenance, building maintenance and landscaping. Emergency response is vital to level of service to keep equipment running and minimize spills or overflows due to equipment malfunction or failure.

Summary of Division Responsibilities

- Scheduled recurring maintenance on a priority basis of treatment plant and pump station machinery, equipment and subsystems.
- Major overhaul or replacement of heavy machinery and equipment, disassembly, reassembly, alignment and adjustment to restore to design operation.
- Track equipment performance history, interruptions and difficulties, and maintain supply of critical parts and supplier accounts through facilities maintenance program.

Changes in Service Levels or Significant Budget Changes

- \$12,044 (43%) increase in overtime related to planned telemetry upgrade project that requires after hours implementation.
- \$22,000 (44%) increase in standby pay.
- \$202,190 (17%) increase in materials, services and supplies related to various planned maintenance projects and activities.
- \$50,000 reduction in fuel, part of which is a transfer of costs to Field Operations department.
- \$100,000 increase in security services, which were inadvertently left out of prior biennial budget.
- \$175,000 reduction in consulting services, to match anticipated project needs.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
3109 FACILITY MAINTENANCE			
Salaries and Benefits	2,563,313	2,566,660 0%	2,715,030 6%
Operations Materials, Services & Supplies	1,175,400	1,377,620 17%	1,405,400 2%
Utilities	200,000	160,000 -20%	166,000 4%
General & Administrative	320,000	244,020 -24%	245,530 1%
Insurance	-	-	-
	4,258,713	4,348,300 2%	4,531,960 4%

Electrical/IT Division

The Electrical/IT division is charged with the upkeep of treatment plant and pump station electrical and instrumentation systems and equipment. The division also provides information technology support for hardware and software systems and applications utilized by the District.

Summary of Division Responsibilities

- Performs preventative maintenance, repairs, makes adjustments, overhauls, calibrates, replaces and installs new electrical, instrumentation, computerized control systems, and computer network equipment in the wastewater treatment plant, sanitary and storm pumping stations.
- Program and calibrate flow meters, controllers, sensors and other automated process control system components. Test circuit breakers and switch gear for emergency generators startup.
- Maintain, monitor and support entire district's computer network

Changes in Service Levels or Significant Budget Changes

- \$7,742 reduction in overtime and \$11,500 reduction in standby pay to match historical trends.
- \$9,000 reduction in pump station general supplies to match historical spending.
- \$40,000 increase in small equipment to match historical spending trends.
- \$65,000 increase in computer hardware and \$20,000 in security equipment, based on analysis of all existing hardware and expected life of hardware assets.
- \$279,000 increase in computer maintenance services in FY 2021-22, based on an inventory of all known software subscriptions and maintenance contracts. The amount in FY 2022-23 increases another \$163,000 based on the procurement of new ERP software, while still maintaining the existing software through FY 2022-23.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
3110 ELECTRICAL/IT			
Salaries and Benefits	1,389,884	1,491,850 7%	1,558,560 4%
Operations Materials, Services & Supplies	261,800	350,670 34%	362,900 3%
Utilities	98,000	85,720 -13%	88,110 3%
General & Administrative	409,460	640,520 56%	806,640 26%
Insurance	-	-	-
	2,159,144	2,568,760 19%	2,816,210 10%

Safety and Risk Management

The purpose of Safety and Risk Management is to reduce actual liability as well as exposure to liability through utilizing safe workplace practices and loss control techniques. The department administers various training programs, both district-wide and regional, and ensures compliance with applicable health and safety laws, rules and regulations. The department also manages property, liability and workers' compensation insurance program coverage and claims.

Insurance

The District is a founding member of the California Sanitation and Risk Management Authority (CSRMA), participating in both the Pooled Liability Program as well as the Pooled Workers' Compensation Program. Both programs have returned dividend payments and retrospective rating adjustments in the past several years due to lower claim amounts than estimated. These dividend payments off-set the District's Safety and Risk Management Budget.

Summary of Department Responsibilities

- The development, implementation, monitoring and reporting of health, safety and occupational training programs in compliance with all applicable laws, rules and regulations.
- Risk identification, probability of occurrence, and development of corrective measures.
- Adequate and cost-effective risk transfer strategies through insurance programs considering coverage levels, the premium-to-deductible relationship and the extent of dividends returned.
- Timely and pro-active claims management that reduces overall costs and improves customer satisfaction.

Changes in Service Levels or Significant Budget Changes

- \$6,000 increase for the leasing of Gas Monitors, converting from charging stations to docking stations, and adding auto gas replenishment feature.
- \$10,000 increase for COVID-related disinfection services.
- \$7,000 one-time increase for multi-department storage to resolve housekeeping safety issue.
- \$5,000 increase in consulting services for various assessment efforts, including noise assessment, employee hazards and other risk assessments.
- Insurance Premiums – Workers Comp expenses were removed from this department's expenses and allocated as a labor/benefit expenses throughout the District departments, resulting in a decrease in FY 2021-22 (\$135,200 reduction), while the District's General Liability and Property Insurance premiums through CSRMA will increase 15% (\$60,000) in FY 2022-23 due to cost increases in the 3rd party insurance market.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
3102 SAFETY & RISK MANAGEMENT			
Salaries and Benefits	562,064	597,530 6%	626,860 5%
Operations Materials, Services & Supplies	68,000	101,500 49%	101,200 0%
General & Administrative	145,550	148,100 2%	148,500 0%
Insurance	665,200	530,000 -20%	590,000 11%
	1,440,814	1,377,130 -4%	1,466,560 6%

Non-Departmental

The Finance Department manages these responsibilities. Debt principal payments and interest expenses are not allocated to any specific department, but are included in this “non-departmental” account. Major maintenance items tracked in the Capital Improvement Plan area also included here.

Summary of Responsibilities

- Timely payment of debt principal and interest.
- Issuance of Continuing Disclosure Reports and other necessary reporting.
- Reporting to the Vallejo Flood and Wastewater District Finance Corporation.
- Compliance with debt covenants.

Changes in Service Levels or Significant Budget Changes

- There are no changes anticipated in the number of debt issuances for the next two years.
- Major maintenance expenses included in the Capital Improvement Plan are included here, so that they can be accounted for separately from the departmental operating budgets.

	FY20-21 Budget	FY21-22 Proposed	FY22-23 Proposed
NON DEPARTMENTAL			
Contingency (removed from Departments)	-	330,000	330,000
Major Maintenance	-	950,000	750,000
Interest Expense	1,667,346	1,371,110 -18%	1,275,600 -7%
Debt Principal	2,404,258	2,492,080 4%	2,580,600 4%
	4,071,604	5,143,190 26%	4,936,200 -4%

Capital Improvement Program



Construction of a stormwater trash capture device.

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Program Description

The Capital Improvement Plan (CIP) is designed to identify capital expenditures for the next ten years and to plan appropriately for how to complete those projects within projected revenues and staffing capacity. The plan includes the replacement and rehabilitation of existing capital assets as well as the acquisition or construction of new capital assets. The first two years of the CIP are included as capital outlay in the biennial budget.

Definition of Capital Expenditures

An expense shall be considered a capital expenditure when the initial cost of the project is \$10,000 or more and has a useful life of more than two years, unless required to be different based on funding source. The initial cost shall include any costs necessary to put the asset into its intended use, including costs such as staff time, shipping, and sales tax.

The Capital Improvement Plan contains all capital outlay projects with an estimated cost of \$50,000 or more. Smaller capital projects can be combined into a single CIP project for inclusion in the plan.

Sources of Capital Expenditure Funding

There are several sources of funding for capital projects. Vallejo Flood and Wastewater District collects connection fees on new development to pay for its share of expanding the storm drain, sewer collection, and wastewater treatment systems. The District also collects service charges revenue in excess of operational needs to pay for replacement and rehabilitation projects. The District also seeks out grants and intergovernmental revenue, and well as uses loans and other financings, as appropriate.

To the extent that the CIP cannot be financed through pay-as-you-go resources, the source of that new revenue, such as increased service charges or debt financing, will be discussed in the “Ten-Year Financial Plan” and “Debt and Other Long-Term Liabilities” sections of this budget document.

Summary of FY 2021-22 and FY 2022-23 Projects

The following is a summary of FY 2021-22 and FY 2022-23 capital projects. **Dollar amounts noted are the amount budgeted for the fiscal year, and not the entire amount of the project.** For more complete financial information, see the “10-Year Capital Improvement Plan – Schedule of Projects.”

Stormwater Projects – This section includes new capital projects or capital rehabilitation and replacement projects related to stormwater quality (such as trash capture devices) or stormwater quantity (flood protection and stormwater conveyance). Stormwater projects for Year 1 total \$1,042,000 and for Year 2 total \$2,175,000.

Collection System – Collection system projects represent significant and routine replacement or rehabilitation of existing pipeline or equipment. These projects are designed to replace or improve assets to extend their useful lives or to improve their function by reducing how rainwater and groundwater can enter the collection system. Major projects in the next two years include I&I and lower lateral rehabilitation projects. Collection system projects for Year 1 total \$2,300,000 and for Year 2 total \$2,300,000.

Pump Station Projects – There are 39 pump stations in the sewer and stormwater systems, all of varying size, age and condition. This category includes projects to replace, rehabilitate or expand these pump stations. Pump Station projects for Year 1 total \$2,185,000 and for Year 2 total \$1,700,000.

Plant Projects – This category includes any new, replaced or rehabilitated capital equipment at the Wastewater Treatment Plant. Plant projects for Year 1 total \$6,085,000 and for Year 2 total \$22,435,000.

Tubbs Island Projects – Tubbs Island is where the District incorporates biosolids from the wastewater treatment process into soil and beneficially reuses the biosolids through growing crops. Projects here are typically to rehabilitate or improve the levee system or to build and rehabilitate buildings for equipment. Tubbs Island projects for Year 1 total \$300,000 and for Year 2 total \$800,000.

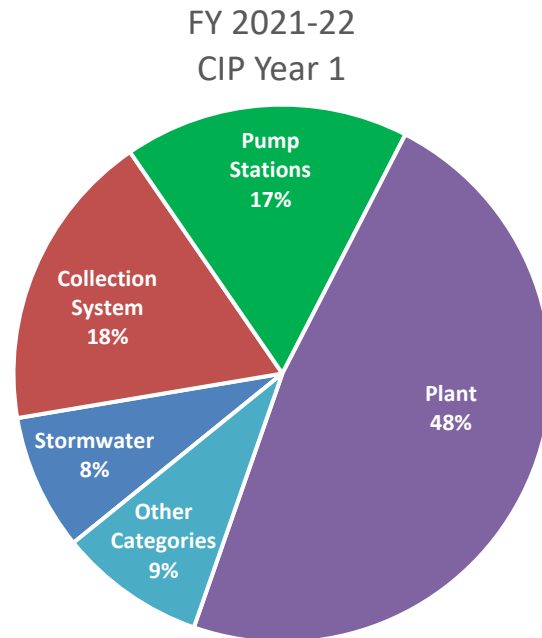
Equipment and Vehicle Projects – This category includes equipment and vehicles used by the District. Vehicles and equipment used for both sewer system maintenance and stormwater maintenance are included, with costs allocated to the appropriate funds. Equipment and vehicle projects for Year 1 total \$475,000 and for Year 2 total \$225,000.

Other Projects – This category is for those capital projects that do not fit any other category. The only project here is the replacement of the District's Enterprise Resource Planning (financial and HR) software. Other projects for Year 1 total \$349,000 and no budget for Year 2.

Major Maintenance Projects – Major maintenance projects are those projects that do not meet the definition of being capital improvements or capital outlay, but are significant enough to track as major projects on the Capital Improvement Plan, so that they are adequately planned for in future fiscal years. This includes projects such as major equipment testing or inspections, significant replacement or rehabilitation of smaller equipment, major cleaning projects, and demolitions of assets no longer in use. Budgets for these expenses are included as one-time expenses in the Non-Departmental portion of the operating budget.

Unfunded or Delayed Projects

The Capital Improvement Plan includes projects that have been clearly identified and programmed. It also includes some "placeholder" projects, where the specific project has not been identified but there is money allocated nonetheless. These placeholders are included in the plan to recognize that there is the need to plan for future replacement and rehabilitation



projects, even though the specific projects have not yet been scoped and planned. Providing a placeholder for these future projects will ensure that there are adequate resources to pay for these projects once they are known. As the District further develops its Asset Management Program, these placeholders will be replaced with actual projects.

Net Impacts of Capital Projects on Operating Budget

<u>CIP #</u>	<u>2021-22</u>	<u>2022-23</u>	<u>2023-24</u>
CDD001	0	0	204,150
PAB001	0	163,000	63,000

The Capital Improvement Plan for the first two fiscal years presented in this Biennial Budget are fully financed from existing resource, current revenues, or debt financing. In Years 3 to 10, the Capital Improvement Plan includes more projects than there is known or anticipated ongoing revenue to support. The next section of the budget (“10-Year Financial Forecast”) discusses options for balancing the 10-Year forecast, including the 10-Year Capital Improvement Plan, that may include deferral of projects or removing projects to an “unfunded” list.

Impact of CIP Projects on Operating Budget

Most of the capital projects planned for the next two fiscal years are replacements and rehabilitations of existing capital assets, so it is not expected that these capital projects will have an impact on future operating budgets. In some cases, they may decrease operating expenses, such as through reduced electricity consumption.

However, there are a few capital projects in the first two years of the CIP that could have a significant impact on the current and future District operations and maintenance budgets. These increased costs, described here, have been included in the second year of the operating budget (if appropriate), and in the ten-year financial forecast:

The Stormwater Trash Capture project (CIP #CDD001) will install a number of new devices within the stormwater system to capture trash and other debris. It will be necessary to service these new facilities and replace trash nets on a regular, recurring bases. It is estimated that, when completed, the new facilities will cost \$204,150 per year to maintain.

The Enterprise Resources Planning software project (CIP#PAB001) will have an increased annual operating expense after implementation. The second year of the biennial budget includes an additional \$163,000 in operating expenses for the new software, while maintaining the expenses for the existing software. In the ten-year forecast, the annual costs for the existing software have been removed.

None of the other projects identified in the next two years of the Capital Improvement Plan are anticipated to have an impact on future operating budgets.

Allocation of Connection Fees

Connection fees are restricted only to those projects that expand capacity in the system. The following capital projects are expected to use restricted connection fee revenue over the next two years.

#	CIP Project Name	FY 2021-22	FY 2022-23
<i>Sewer Connection Fees</i>			
	No projects	\$ 0	\$ 0
<i>Stormwater Connection Fees</i>			
CDM003	Storm Drain Master Plan Project Update	\$ 0	\$ 150,000

10-Year Capital Improvement Plan – Schedule of Projects

Following is the schedule of projects in the 10-year Capital Improvement Plan. The information is divided based on restricted funding source. More details about the specific projects in the first two years of the plan can be found in Appendix G of this budget document.

10-Year CIP - Wastewater Fund

Final Budget for Fiscal Years 2021-22 and 2022-23

PROJECT	1 21/22 Sewer	2 22/23 Sewer	3 23/24 Sewer	4 24/25 Sewer	5 25/26 Sewer	6 26/27 Sewer	7 27/28 Sewer	8 28/29 Sewer	9 29/30 Sewer	10 30/31 Sewer
WASTEWATER PROJECTS										
COLLECTION SYSTEM										
	Upper Lateral Rehab Program									
CWL003	LOWER LATERAL REHAB PRG	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000
CWM014	I/I REDUCTION PROJECTS	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
CWM901	Collection System Master Plan R&R Projects			\$ 1,500,000	\$ 1,750,000	\$ 2,000,000	\$ 2,250,000	\$ 2,500,000	\$ 2,750,000	\$ 3,000,000
CWM902	Collection System Master Plan Capacity Projects					\$ 2,500,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000
POF901	Carquinez Outfall Inspect/Cleaning/Rehab			\$ 150,000		\$ 225,000	\$ 500,000	\$ 500,000		
CWF901	Mare Island Causeway FM Demo			\$ 100,000	\$ 300,000					
CWM903	Large Diameter SS Condition Assessment				\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000		
CWM904	Large Diameter SS Cleaning					\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	
NEW	SS Force Main Condition Assessment				\$ 330,000					
NEW	SS Force Main Rehabilitation & Replacement					\$ 1,484,600	\$ 1,536,600	\$ 1,590,300	\$ 1,646,000	\$ 1,703,600
									\$ 1,703,600	\$ 1,763,200
PUMP STATIONS										
CWP002	SKY VALLEY 2 - SSPS			\$ 300,000	\$ 1,113,600	\$ 1,113,600				
CWP003	REGATTA SSPS	\$ -	\$ 500,000	\$ 830,300	\$ 830,300					
CWP004	NEW BEDFORD SSPS	\$ 835,000								
PMB003	SEARS POINT PS/MECH REHAB	\$ 950,000	\$ 1,200,000							
PMB006	SEARS POINT PRIORITY 1 ELECTRICAL	\$ 400,000								
	SKY VALLEY 1 - SSPS				\$ 1,136,400	\$ 1,136,400				
CWP901	STATE PARK PUMP STATION				\$ 300,000	\$ 983,400	\$ 983,400			
CWP902	MARINA STREET PUMP STATION					\$ 300,000	\$ 1,017,800	\$ 1,053,400		
CWP903	LEMON STREET PUMP STATION						\$ 325,000	\$ 1,017,800	\$ 1,017,800	
CWP904	SANDY BEACH PUMP STATION							\$ 325,000	\$ 1,053,400	\$ 1,053,400
CWP905	SHADY LANE PUMP STATION								\$ 350,000	\$ 1,090,300
PLANT										
PGR002	PLANT/PS SECURITY UPGRADE		\$ 75,000							
PGR003	RYDER BASIN REHAB	\$ -	\$ 120,000	\$ 450,000	\$ 450,000					
PHW002	HEADWORKS REHABILITATION	\$ 100,000	\$ 500,000	\$ 875,200						
PMB001	RELOCATE MECH/ELEC SHOP	\$ 100,000	\$ 50,000							
POF016	MIPS	\$ 4,000,000	\$ 20,000,000	\$ 13,500,000						
POF017	MIPS RESILIENCY	\$ 350,000	\$ 500,000							
PSC016	SECONDARY BLOWER REPLACEMENT	\$ 60,000								
PSC015	SOUTH BIOTOWER DOME REMOVAL		\$ 120,000							
PSC901	NORTH SECONDARY CLARIFIER REHAB			\$ 870,000	\$ 670,000					
PGR016	PLANT FACILT/GROUND REHAB - PRIMARY CLARIFIER CONDUCTORS	\$ 800,000	\$ 200,000							
POC001	PLANT ODOR CONTROL REHAB	\$ 100,000	\$ 170,000							
POC002	DISTRICT DATA/NETWK REHAB	\$ 90,000	\$ 90,000	\$ 93,200	\$ 96,400	\$ 99,800	\$ 103,300	\$ 106,900	\$ 110,600	\$ 114,500
PSC005	SECONDARY: RAS/WAS MECH-ELECT	\$ -	\$ 500,000	\$ 670,900	\$ 670,900					
PSH005	SOLIDS BUILDING FIRE ALARM SYSTEM	\$ 125,000								
PPR001	PRIMARY R&R: CVL, MCH, ST	\$ 350,000	\$ 100,000			\$ 952,900				
NEW	NEXT SECONDARY BLOWER REPLACEMENT		\$ 65,000							
NEW	SECOND BIOTOWER MEDIA REPLACEMENT				\$ 125,000	\$ 4,000,000				
NEW	WWTP CONCRETE STRUCTURES									
NEW	CONFINED SPACE ENTRY TRAINING STRUCTURE		\$ 75,000	\$ 400,000						
OLD	CARQUINEZ & 3W PUMP STATION REHABILITATION		\$ 50,000	\$ 1,355,100	\$ 1,355,100					
OLD	SECONDARY EFFLUENT BYPASS AND METERING		\$ 50,000	\$ 788,400	\$ 788,400	\$ 150,000	\$ 1,000,000			
NEW	WWTP PAVING PROJECT				\$ 500,000					
NEW	WET WEATHER PRIMARY REHAB			\$ 200,000	\$ 522,600	\$ 522,600				
NEW	SEPTAGE RECEIVING STATION				\$ 500,000					
NEW	FIELD OPERATIONS ADMINISTRATIVE OFFICE REMODEL		\$ 100,000	\$ 500,000						
NEW	ADMINISTRATIVE BUILDING SECURITY/ACCESS IMPROVEMENTS			\$ 100,000	\$ 250,000					
NEW	REPLACE LIME SYSTEM				\$ 300,000	\$ 2,449,100	\$ 2,449,100			
NEW	Biotower 1 Distributor Arm Replacement			\$ 1,129,900						
NEW	Biotower 2 Distributor Arm Replacement						\$ 1,169,500			
NEW	PLANT ODOR CONTROL REPLACEMENT				\$ 1,095,600					
OLD	SOLIDS DEWATERING EQUIPMENT REPLACEMENT								\$ 500,000	\$ 20,474,400
NEW	WWTP MP Regulatory Driven WWTP Improvements Phase 1						\$ 4,000,000	\$ 49,508,000	\$ 49,508,000	
NEW	WWTP Power Reliability Improvements									\$ 1,967,100
NEW	NEW SECONDARY TREATMENT OUTFALL									\$ 10,704,400

10-Year CIP - Wastewater Fund

Final Budget for Fiscal Years 2021-22 and 2022-23

PROJECT		1 21/22 Sewer	2 22/23 Sewer	3 23/24 Sewer	4 24/25 Sewer	5 25/26 Sewer	6 26/27 Sewer	7 27/28 Sewer	8 28/29 Sewer	9 29/30 Sewer	10 30/31 Sewer
TUBBS ISLAND											
PSH001	TUBBS ISL LEVEE IMP PROG		\$ 350,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000
PSH004	TUBBS ISLAND FARM BUILDINGS	\$ 300,000	\$ 450,000								
NEW	TUBBS ISLAND FARM BUILDINGS PHASE 2			\$ 500,000							
EQUIPMENT/VEHICLES											
CJE009	FOPS NEW VACUUM TRUCK			\$ -							\$ 360,000
CJE026	FOPS PAC VAC SAW CUTTER TRAILER	\$ 54,000									
CJE027	FOPS EASEMENT CCTV CAMERA		\$ 57,000								
CJE028	FOPS UPGRADE MAINLINE CCTV CAMERA	\$ 12,000									
CJE017	FOPS UPGRADE CCTV MINICAMS	\$ 20,000									
CJE029	FOPS/MAINT CRANE TRUCK	\$ 190,000									
CJE043	FOPS FORD F350 CHASSIS CAB W/12' FLATBED & SVC BODY (V174)										
PJE004	MAINT FORD F350 PICKUP WITH SPECIAL SVC BODY (V187)		\$ 40,500						\$ 49,800		
PJE005	MAINT FORD F350 TRUCK (V228)	\$ 36,000						\$ 42,800			
PJE006	MAINT FORD F150 SUPERCAB 4X2 TRUCK (V235)	\$ 27,000						\$ 32,100			
CJE044	FOPS RAM 1500 4WD QUAD CAB TRUCK (V238)							\$ 32,100			
PJE007	MAINT FORD F150 2DR SUPERCAB 2WD TRUCK (V239)		\$ 27,000						\$ 33,200		
PJE008	MAINT FORD F-250 4x2 Supercab (V246)	\$ 31,500						\$ 37,400			
CJE045	FOPS FORD EXPLORER FWD 4DR (V245)		\$ 31,500						\$ 38,700		
CJE025	ENV SERV DODGE GRAND CARAVAN (V247)		\$ 31,500						\$ 38,700		
CJE901	REPLACE FOPS 2018 VACTOR (8 YEAR LIFE)					\$ 675,000					
CJE902	REPLACE FOPS 2020 VACTOR (8 YEAR LIFE)							\$ 675,000			
CJE903	REPLACE FOPS 2016 CCTV TRUCK 1					\$ 270,000					
CJE904	REPLACE FOPS 2016 CCTV TRUCK 2					\$ 270,000					
CJE905	REPLACE FOPS 2014 PIPE HUNTER FREIGHT LINER V241 (CAMERA)				\$ 294,300						
CJE906	REPLACE FOPS 2018 CHEVY 3500 HD V259			\$ 120,000					\$ 140,000		
CJE907	REPLACE FOPS 2019 F350 CHASE TRUCK V263 (not in Ent) 10 year									\$ 63,000	
CJE908	REPLACE FOPS 2019 F350 CHASE TRUCK V265 (not in Ent)									\$ 63,000	
CJE909	REPLACE FOPS 2020 PIPE HUNTER V268										\$ 360,000
	REPLACE FOPS 2020 NISSAN ROGUE (#202)					\$ 29,000					\$ 34,000
	REPLACE ENG 2020 NISSAN ROGUE (#225)					\$ 29,000					\$ 34,000
	REPLACE ENV SERV 2021 CHEVROLET COLORADO (#227)						\$ 36,000				
	REPLACE ENV SERV 2020 FORD TRANSIT 350 CARGO (#207)					\$ 48,000					\$ 55,000
	REPLACE FOPS 2020 FORD F550 (#277) Not Ent 10 year										\$ 203,000
	REPLACE FOPS 2021 CHEVROLET SILVERADO 1500 (#278)						\$ 32,400				
	REPLACE FOPS 2021 CHEVROLET SILVERADO 1500 (#279)						\$ 32,400				
CJE910	REPLACE FOPS 2020 FORD F550 DIESEL (#280) Not Ent 10 year										\$ 215,000
	REPLACE ENV SERV 2021 FORD F150 (#281)						\$ 43,000				
	REPLACE ENG 2021 FORD F150 (#282)						\$ 48,000				
	REPLACE FOPS 2020 FORD F350 (#283) not Ent 10 year										\$ 67,000
	REPLACE FOPS 2021 FORD F150 (#284)					\$ 30,600					\$ 39,000
	REPLACE FOPS 2021 CHEVY 3500 HD (#231)										\$ 81,000
	REPLACE FOPS CAMERA EQUIPMENT							\$ 50,000			
	REPLACE FOPS PLUGS					\$ 12,500			\$ 30,000		
	REPLACE FOPS LOCATORS					\$ 22,500					
	REPLACE EQUIPMENT TRAILER (#141)			\$ 45,000							
CJE049	REPLACE PIPE BURST EQUIPMENT	\$ 75,000									
	REPLACE FOPS PUMP (T204)				\$ 60,000						
	REPLACE FOPS ARROWBOARDS			\$ 12,000							
	REPLACE FOPS MINI EXC (V205)			\$ 40,000							
	REPLACE FOPS BOBCAT (V166)						\$ 60,000				
	REPLACE FOPS BACKHOE (V132)			\$ 200,000							
NEW	WWTP PORTABLE GENERATOR					\$ 61,500					
PLB005	LABORATORY AUTOCLAVE #1		\$ 20,000								
OTHER CAPITAL PROJECTS											
PAB001	ERP SYSTEM	\$ 328,100									
TOTAL CAPITAL OUTLAY		\$ 11,183,600	\$ 26,982,500	\$ 23,196,600	\$ 14,138,900	\$ 18,344,200	\$ 24,236,100	\$ 25,111,400	\$ 64,841,200	\$ 65,473,300	\$ 49,469,300

10-Year CIP - Wastewater Fund

Final Budget for Fiscal Years 2021-22 and 2022-23

		1	2	3	4	5	6	7	8	9	10
		21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
		Sewer	Sewer	Sewer	Sewer	Sewer	Sewer	Sewer	Sewer	Sewer	Sewer
PROJECT											
MAJOR MAINTENANCE PROJECTS (included in Operating Budget)											
PEE002	WWTP SWITCHGEAR AND BREAKER TESTING	\$ 150,000			\$ 166,300			\$ 184,400			\$ 204,400
PGN001	WWTP FACILITIES/STRUCTURES	\$ 75,000	\$ 75,000	\$ 100,000	\$ 100,000	\$ 125,000	\$ 125,000	\$ 150,000	\$ 150,000	\$ 175,000	\$ 175,000
PGN002	WWTP EQUIPMENT	\$ 75,000	\$ 75,000	\$ 100,000	\$ 100,000	\$ 125,000	\$ 125,000	\$ 150,000	\$ 150,000	\$ 175,000	\$ 175,000
CPS001	SEWER PUMP STATION FACILITIES/STRUCTURE	\$ 75,000	\$ 75,000	\$ 100,000	\$ 100,000	\$ 125,000	\$ 125,000	\$ 150,000	\$ 150,000	\$ 175,000	\$ 175,000
CPS002	SEWER PUMP STATION EQUIPMENT	\$ 75,000	\$ 75,000	\$ 100,000	\$ 100,000	\$ 125,000	\$ 125,000	\$ 150,000	\$ 150,000	\$ 175,000	\$ 175,000
POF901	Carquinez Outfall Inspect/Cleaning/Rehab			\$ 150,000		\$ 225,000	\$ 500,000	\$ 500,000			
CWF901	Mare Island Causeway FM Demo			\$ 100,000	\$ 300,000						
CWM903	Large Diameter SS Condition Assessment				\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000			
CWM904	Large Diameter SS Cleaning					\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	
NEW	SS Force Main Condition Assessment				\$ 330,000						
PSH003	BELT FILTER PRESS REHAB	\$ 350,000									
NEW	WWTP CONCRETE ASSESSMENT & REHAB		\$ 300,000								
TOTAL MAJOR MAINTENANCE PROJECTS		\$ 800,000	\$ 600,000	\$ 650,000	\$ 1,696,300	\$ 1,225,000	\$ 2,000,000	\$ 2,284,400	\$ 1,100,000	\$ 1,200,000	\$ 904,400

10-Year CIP - Stormwater Fund (Non-Capacity Related)

Final Budget for Fiscal Years 2021-22 and 2022-23

PROJECT		1	2	3	4	5	6	7	8	9	10
		21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
		Storm (WQ)	Storm (WQ)	Storm (WQ)	Storm (WQ)	Storm (WQ)	Storm (WQ)	Storm (WQ)	Storm (WQ)	Storm (WQ)	Storm (WQ)
STORMWATER PROJECTS											
CDD001	STORMWATER TRASH CAPTURE	\$ 592,000	\$ 1,290,000								
CDM002	SEDIMENT REMOVAL-AUSTIN CK REACH 3	\$ 450,000	\$ 535,000								
	SEDIMENT REMOVAL-AUSTIN CK REACH 4		\$ 85,000		\$ 200,000	\$ 200,000					
	PUMP STATION EVALUATION		\$ 115,000	\$ 115,000		\$ 125,000					
	PUMP STATION REHABILITATION				\$ 1,194,000	\$ 1,194,000					
	CMP REPLACEMENT PROJECT		\$ -	\$ 464,000	\$ 479,000	\$ 495,000	\$ 510,000	\$ 527,000	\$ 544,000	\$ 561,000	\$ 579,000
WASTEWATER PROJECTS											
PLANT											
POC002	DISTRICT DATA/NETWK REHAB	\$ 10,000	\$ 10,000	\$ 10,400	\$ 10,700	\$ 11,100	\$ 11,500	\$ 11,900	\$ 12,300	\$ 12,700	\$ 13,200
EQUIPMENT/VEHICLES											
CJE009	FOPS NEW VACUUM TRUCK			\$ -							\$ 240,000
CJE026	FOPS PAC VAC SAW CUTTER TRAILER	\$ 6,000									
CJE027	FOPS EASEMENT CCTV CAMERA		\$ 3,000								
CJE028	FOPS UPGRADE MAINLINE CCTV CAMERA	\$ 3,000									
CJE029	FOPS/MAINT CRANE TRUCK	\$ 10,000									
PJE004	MAINT FORD F350 PICKUP WITH SPECIAL SVC BODY (V187)		\$ 4,500						\$ 5,500		
PJE005	MAINT FORD F350 TRUCK (V228)	\$ 4,000						\$ 4,800			
PJE006	MAINT FORD F150 SUPERCAB 4X2 TRUCK (V235)	\$ 3,000						\$ 3,600			
CJE044	FOPS RAM 1500 4WD QUADCAB TRUCK (V238)							\$ 3,600			
PJE007	MAINT FORD F150 2DR SUPERCAB 2WD TRUCK (V239)		\$ 3,000						\$ 3,700		
PJE008	MAINT FORD F-250 4x2 Supercab (V246)	\$ 3,500						\$ 4,200			
CJE045	FOPS FORD EXPLORER FWD 4DR (V245)		\$ 3,500						\$ 4,300		
CJE025	ENV SERV DODGE GRAND CARAVAN (V247)		\$ 3,500						\$ 4,300		
CJE901	REPLACE FOPS 2018 VACTOR (8 YEAR LIFE)					\$ 75,000					
CJE902	REPLACE FOPS 2020 VACTOR (8 YEAR LIFE)						\$ 75,000				
CJE903	REPLACE FOPS 2016 CCTV TRUCK 1					\$ 30,000					
CJE904	REPLACE FOPS 2016 CCTV TRUCK 2					\$ 30,000					
CJE905	REPLACE FOPS 2014 PIPE HUNTER FREIGHT LINER V241 (CAMERA)				\$ 32,700						
	REPLACE FOPS 2021 CHEVROLET SILVERADO 1500 (#278)						\$ 3,600				
	REPLACE FOPS 2021 CHEVROLET SILVERADO 1500 (#279)						\$ 3,600				
	REPLACE FOPS 2021 FORD F150 (#284)					\$ 3,400					
	REPLACE FOPS CAMERA EQUIPMENT							\$ 50,000			
	REPLACE FOPS PLUGS					\$ 12,500					
	REPLACE FOPS LOCATORS					\$ 2,500					
	REPLACE EQUIPMENT TRAILER (#141)			\$ 5,000							
	REPLACE FOPS PUMP (T204)				\$ 40,000						
	REPLACE FOPS ARROWBOARDS			\$ 3,000							
	REPLACE FOPS BACKHOE (V132)			\$ 50,000							
OTHER CAPITAL PROJECTS											
PAB001	ERP SYSTEM	\$ 17,500									
TOTAL CAPITAL OUTLAY		\$ 1,099,000	\$ 2,052,500	\$ 647,400	\$ 1,956,400	\$ 2,178,500	\$ 528,700	\$ 680,100	\$ 574,100	\$ 573,700	\$ 832,200
MAJOR MAINTENANCE PROJECTS (included in Operating Budget)											
CPS003	STORM PUMP STATION FACILITIES/STRUCTURES	\$ 75,000	\$ 75,000								
CPS004	STORM PUMP STATION EQUIPMENT	\$ 75,000	\$ 75,000								
TOTAL MAJOR MAINTENANCE PROJECTS		\$ 150,000	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

10-Year CIP - Stormwater Fund (Capacity Related)

Final Budget for Fiscal Years 2021-22 and 2022-23

PROJECT		1	2	3	4	5	6	7	8	9	10
		21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
		Storm (Cap)	Storm (Cap)	Storm (Cap)	Storm (Cap)	Storm (Cap)	Storm (Cap)	Storm (Cap)	Storm (Cap)	Storm (Cap)	Storm (Cap)
STORMWATER PROJECTS											
CDM003	STORM DRAIN MASTER PLAN PROJECT UPDATE		\$ 150,000	\$ 150,000							
CDM018	AUSTIN CREEK PROJECT						\$ 450,000	\$ 450,000	\$ 4,000,000	\$ 4,000,000	
CDM901	LEMON-SOLANO PROJECT					\$ 350,000	\$ 350,000	\$ 3,000,000	\$ 3,000,000		
CDM902	SANDPIPER			\$ 200,000	\$ 200,000	\$ 1,500,000	\$ 1,500,000				
TOTAL CAPITAL OUTLAY		\$ -	\$ 150,000	\$ 350,000	\$ 200,000	\$ 1,850,000	\$ 2,300,000	\$ 3,450,000	\$ 7,000,000	\$ 4,000,000	

10-Year CIP - Upper Lateral Program Fund

Final Budget for Fiscal Years 2021-22 and 2022-23

PROJECT		1 21/22 UL	2 22/23 UL	3 23/24 UL	4 24/25 UL	5 25/26 UL	6 26/27 UL	7 27/28 UL	8 28/29 UL	9 29/30 UL	10 30/31 UL
WASTEWATER PROJECTS											
COLLECTION SYSTEM											
	Upper Lateral Rehab Program	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 425,000	\$ 400,000	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000
OTHER CAPITAL PROJECTS											
PAB001	ERP SYSTEM	\$ 3,400									
TOTAL CAPITAL OUTLAY		\$ 453,400	\$ 450,000	\$ 450,000	\$ 450,000	\$ 425,000	\$ 400,000	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000

Ten-Year Financial Plan



Citizen-based biodiversity monitoring.

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Plan Description

Also called a Financial Master Plan or a Ten-Year Cash Flow Forecast, the Ten-Year Financial Plan is a projection of operating and capital expenditures, along with projections of rates and the revenues they are anticipated to generate over that time. The Ten-Year Financial Plan evaluates whether the revenues are adequate to cover the projected costs/outflows within each of the three operating funds.

This Plan addresses the following questions. Over the next 10 years...

- What are the District's projected revenues, and what assumptions are used?
- What are the District's projected operating costs, and what assumptions are used?
- What are the projected capital costs for the District?
- Will the District use pay-as-you-go financing or debt financing for its capital projects?
- Are service charge rates sufficient, or are increases necessary?

Link to Other Plans

The Ten-Year Financial Plan incorporates all of the long-term operation and capital planning conducted by the District to date. It incorporates the Capital Improvement Plan, the preliminary findings from the currently ongoing treatment plant master plan, the preliminary findings from the currently ongoing collection system master plan, anticipated regulatory requirements for wastewater discharge and stormwater management permits, as well as long-term IT and stormwater capacity planning efforts. The Ten-Year Financial Forecast assumes that all of the objectives in the plan are completed on time and at the budget assumed in the plans.

Revenue Forecast

Sewer service rates are known through the end of FY 2022-23. The forecast assumes that in Spring 2023 there is another rate study and Proposition 218 process conducted, and that sewer service charges will be increased to meet the operational and capital needs identified in the forecast. There are two ten-year forecasts shown for the wastewater fund. The first includes a 3% annual increase for COLA in years 3 through 10 of the forecast. The second includes a 7% annual increase for COLA and to cover increased capital spending.

Current **stormwater service charges** are insufficient to meet the ongoing operation and capital needs of the stormwater program. The Board is currently evaluating options for increasing revenues or decreasing expenditures. There are two ten-year forecasts shown for the stormwater fund (excluding stormwater connection fees, which are restricted). The first forecast shows a 0% increase for all 10 years of the forecast. The second forecast includes fee increases being considered by the Board, which result in a 128% increase of the fees phased in over years 2 through 6 of the forecast.

Upper lateral service charges are set at \$16.56 per year per parcel through the end of Fiscal Year 2022-23. The forecast assumes that when the sewer service rates are evaluated in Spring 2023, that this rate will be included in the analysis. The ten-year forecast assumes that this charge increases by 3% per year starting in FY 2023-24.

Sewer connection fees are assumed to return to their pre-coronavirus levels in FY 2023-24 (\$300,000 per year) and remain at that level through the forecast. **Stormwater**

connection fees are assumed to be \$150,000 per year (pre-coronavirus levels) for the same time period.

Lease and rental revenue is assumed to continue through the forecast, increasing by a 3% inflation factor annually.

Interest earnings are based on the forecasted cash balances in each of the funds. Earnings rates are assumed to be 0.5% through FY 2022-23, then increasing 0.25% per year until they reach 2.0% in FY 2028-29.

There are a number of **other revenues** collected by the District. They have been forecast based on historical collection and any anticipated increases in rates due to inflation or other factors.

Operating Cost Forecast

Operating expenses for the District include salaries and benefits, maintenance and operations of the sewer and stormwater systems, and the purchase of materials and supplies. The District must also budget for its annual debt service.

Salaries are controlled by two Memoranda of Understanding (MOU) with employees – one with the Management Association and one with Teamsters. The MOUs were renegotiated in 2013 and are set to expire in June 2023. Salaries have been projected based on 2% in FY 2021-22 and at 3.0% annually thereafter. There are no new employees assumed after FY 2022-23.

Some benefits, such as Medicare and retirement normal cost expenses, are calculated as a percentage of salary, while other benefits, such as health care, increase based on joint purchase agreements. Health care costs are assumed to increase at a 6% rate annually, and retirement expenses as a percentage of salary are expected to increase an additional 5% over the next seven years. Medical in lieu payments are projected to continue per the current MOU. Workers compensation insurance is projected to increase with inflation for future years.

The \$500,000 annual payment to the OPEB trust fund is subject to negotiation in early 2023. For purposes of the forecast, it is assumed that the District will stop making these payments and will only make payments necessary to fund the Actuarially Determined Contribution.

Services and supplies are forecasted to increase 3.0% annually to account for increases in inflation. It is assumed that there is no change in current service levels, except those anticipated as part of capital project implementations. The anticipated operating expenditure impact of planned capital projects has been included in the forecast.

The forecasts assume FY 2022-23 budget as the base year, with adjustments made for one-time expenses in that year. For all ten years, there is an assumption that the salaries and benefits budget will be only 97% spent because of vacancies that create salary savings. It is also assumed that there is a spending rate of only 90% of materials, services and supplies, as this is the historical underspending rate. In this way, the forecast can more accurately predict long-term ending fund equity.

Pay-Go vs. Debt Financing

Debt financing means that the District would either sell bonds or enter into a loan (such as a State Revolving Fund loan) to get money to pay for capital projects, then pay back that money

over time with interest. Pay-as-you-go financing, also called “pay-go” means that the District needs to accumulate the money for the project and already have it prior to the work being completed.

Vallejo Flood and Wastewater District Debt Policy states that the District shall have a preference to finance capital improvements using pay-go financing and shall issue long-term debt only to finance capital improvements that cannot be readily financed from current revenues. Debt financed projects must be major, non-recurring improvements with a minimum of ten years of useful life.

The Ten-Year Financial plan assumes that debt would be issued for specific projects, with all other projects in the CIP being financed as pay-go.

The Ten-Year Financial Plan includes two new debt issuances over the planning period for capital projects – a \$40 million SRF loan for the MIPS Replacement Project (CIP#POF016) and a Certificate of Participation or other instrument for the WWTP MP Regulatory Driven WWTP Improvements Phase 1 project and New Secondary Treatment Outfall project (CIP Years 7 through 10). Details about these planned debts can be found in the “Debt and Other Long-Term Liabilities” section in this budget document. The loan proceeds and the associated debt service for these issuances have been included in the Ten-Year Financial Plan. While the District will actively seek state and federal grants in support of its CIP, the forecast does not assume any external funding beyond debt issuance.

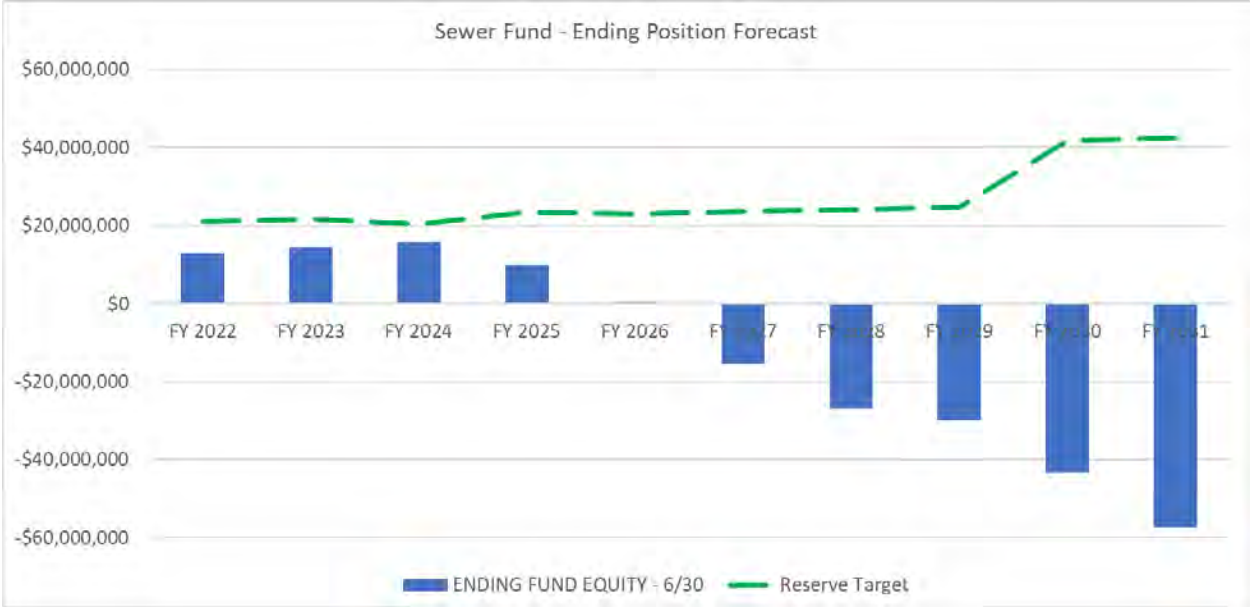
Ten-Year Forecasts

The charts that follow show the Ten-Year Financial/Cash Flow Forecast for the Wastewater Fund, the Stormwater Fund (excluding stormwater connection fees), the Stormwater Connection Fees, and the Upper Lateral Fund. The charts include ending fund equity on an annual basis, forecasts for operating and non-operating revenue and operating expenses. Because it is a cash flow model, the forecast includes expenses for capital outlay for the year it is expensed, as well as proceeds from issuing debt. The amounts of ending fund equity needed in each fund to meet the reserve policy targets is also included.

Wastewater Fund

There are two charts shown for the Wastewater Fund. The first chart shows the forecast Ending Fund Equity position for the fund assuming that there is a 3% annual increase in sewer service charges in years three through ten of the forecast, and the Capital Improvement Plan is funded as presented.

Wastewater Fund - Chart 1



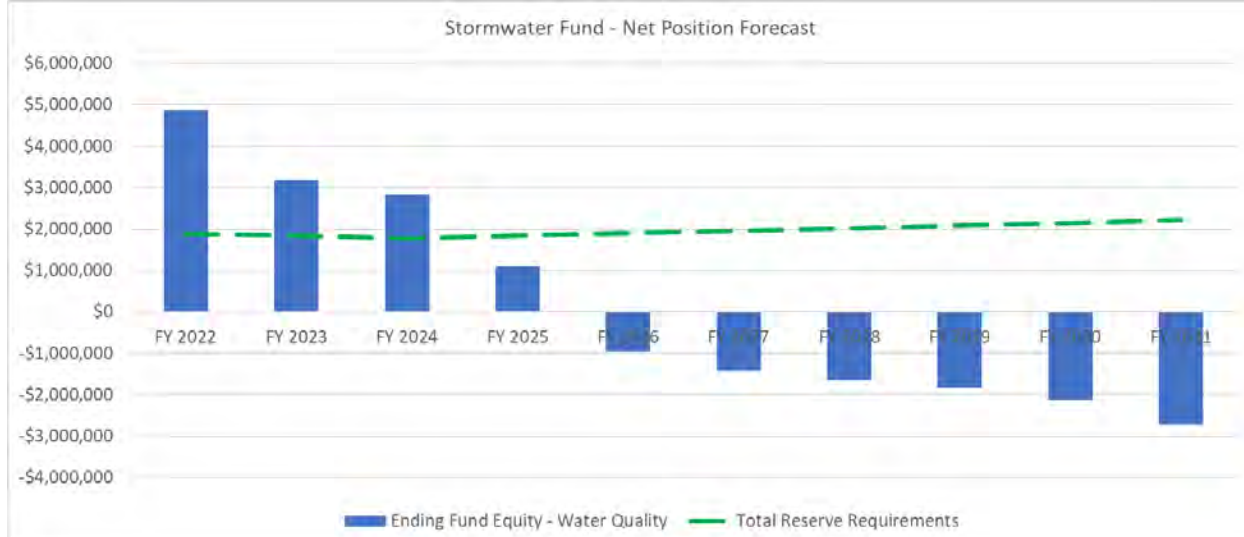
The second chart shows the forecast Ending Fund Equity position for the fund assuming that there is a 7% annual increase in sewer service charges in years three through ten of the forecast. It also assumes that there are some cost deferrals that can be accomplished after more thorough review of asset management rehabilitation recommendations and analysis of the Collection System Master Plan's recommendations regarding capacity projects.

Wastewater Fund - Chart 2

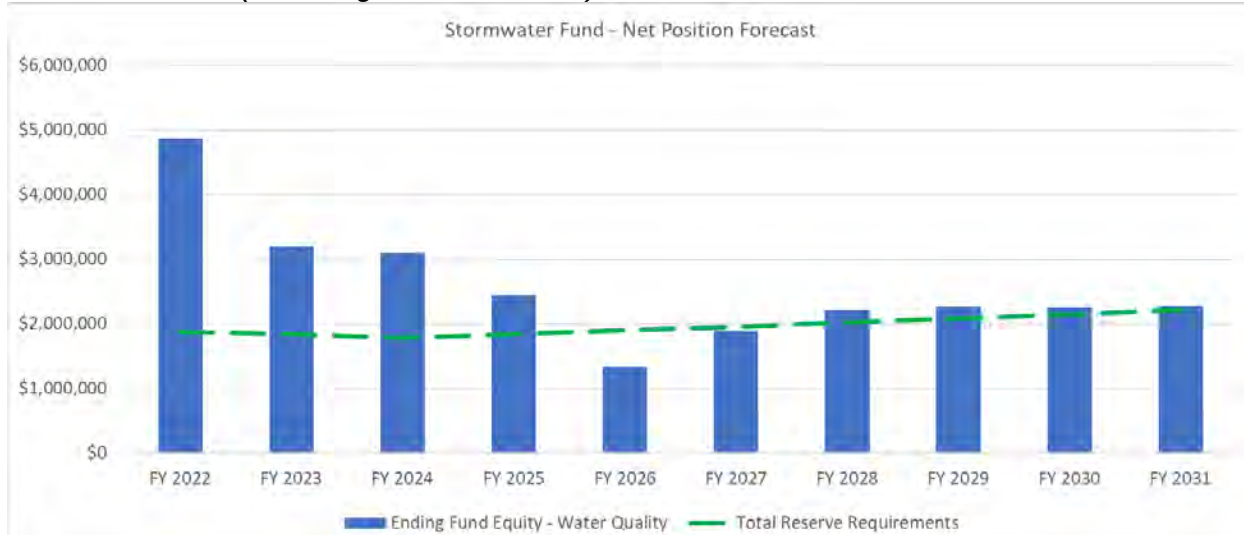


Stormwater Fund (excluding connection fees)

Because the stormwater connection fees are restricted in their use, they have been excluded from this forecast and shown separately. There are two charts shown for the Stormwater Fund. The first chart shows the forecast Ending Fund Equity position for the fund assuming that there is a 0% annual increase in stormwater service charges throughout the forecast. This is the assumption that either the Board does not approve moving forward with a stormwater service charge rate increase, or if voters do not approve the fee increase.

Stormwater Fund (excluding connection fees) – Chart 1

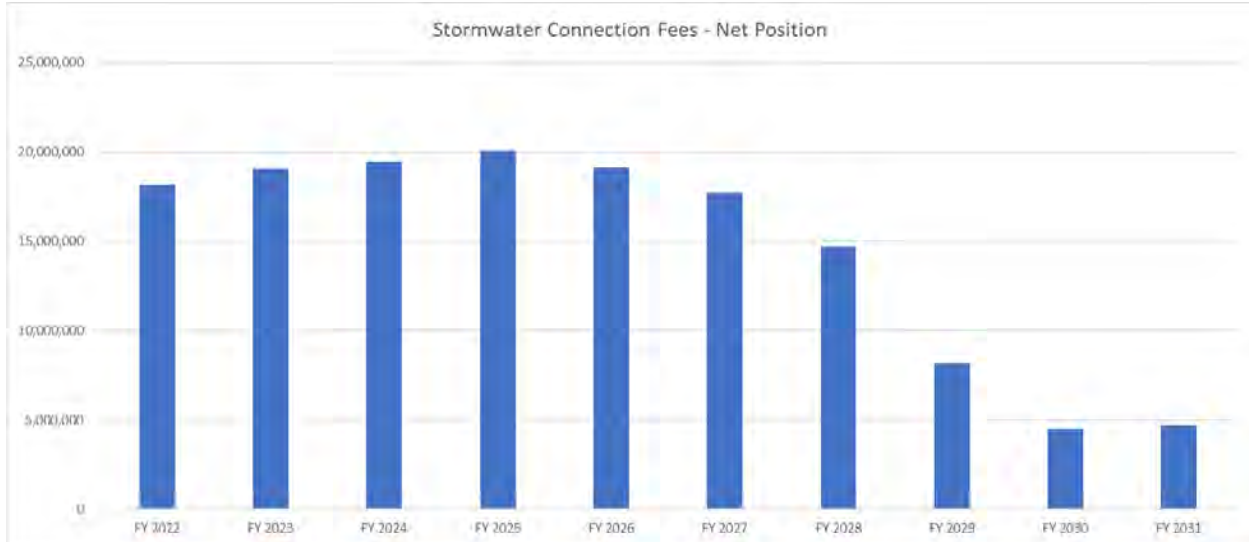
The second chart shows the forecast Ending Fund Equity position for the stormwater fund assuming that there is voter approval of the stormwater service charge rate increase currently being considered by the Board of Trustees. It also includes additional capital projects that would be completed with new revenues.

Stormwater Fund (excluding connection fees) – Chart 2

Stormwater Connection Fees

The stormwater Connection Fees chart is the forecast of restricted connection fee revenues only, both anticipated revenues and capital projects in the current 10-year Capital Improvement Plan.

Stormwater Connection Fees - Chart



Upper Lateral Fund

The following chart shows for ten-year forecast for the Upper Lateral Fund. The chart assumes historic spending patterns, along with a 3% annual increase in the upper lateral service charges in years three through ten of the forecast.

Upper Lateral Fund - Chart



Debt and Other Long-Term Liabilities



Vallejo Flood and Wastewater District treatment plant, highlighting one of two biotowers.

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Debt

The Vallejo Flood and Wastewater District issues long term debt for the construction of significant capital assets. Debt service is the annual or semi-annual payments the District makes to repay the principal and interest on its debt.

Currently, there is only debt in the wastewater fund. There is no current or planned external financing for the stormwater or upper lateral funds.

Debt Policy

As a matter of policy, the District has a preference to use pay-as-you-go financing for its capital program and only use debt financing for improvements that it cannot readily finance from current revenues. Exceptions can be made on a case-by-case basis for no-interest and extremely-low-interest loan programs to pay for capital projects.

Debt can only be used for major, non-recurring capital items, and the debt repayment timeline cannot exceed the expected useful life of the asset being financed.

Debt can only be issued when it has been shown that the District has the ability to pay all of its current obligations from current revenues and still have 125% of the expected debt service amount to pay the debt service. This exceeds the current bond covenants of 110%.

For passenger vehicles and light trucks, the District Board has approved the use of financing as part of an overall management strategy designed to decrease the age of the fleet, improve safety and fuel efficiency, enhance cash flow, and reduce overall cost of ownership by reducing the years of ownership and selling vehicles in the used vehicle market, rather than the public auction market.

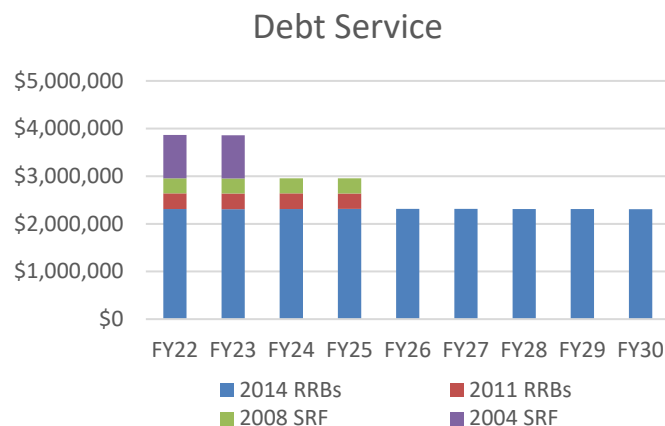
The District's complete debt policy can be found in Appendix E.

Current Debt Obligations

2004 State Revolving Fund Loan – In 2004, the District entered into a 20-year loan agreement with the State Water Resources Control Board's Division of Financial Assistance. The original loan amount was for \$13,798,201. The interest rate is 2.5%, with annual debt service payments of \$907,072. Outstanding principal on this debt obligation is \$1,748,312 as of July 1, 2021. The final debt service payment for this obligation is in the second year of this Biennial Budget.

2008 State Revolving Fund Loan – In 2008, the District entered into a 20-year loan agreement with the State Water Resources Control Board's Division of Financial Assistance. The original loan amount was for \$4,406,072. The interest rate is 2.4%, with annual debt service payments of \$317,450. Outstanding principal on this debt obligation is \$1,197,121 as of July 1, 2021.

2011 Refunding Revenue Bonds – The District and the WaterReuse Finance Authority issued Refunding Revenue Bonds in the principal amount of \$3,345,000 to repay the outstanding



principal on the 2001 Certificates of Participation. Annual debt service for this bond in FY 2021-22 is \$327,750 and in FY 2022-23 is \$324,250. Outstanding principal on this debt is \$1,165,456 as of July 1, 2021. The bonds are currently subject to optional redemption, with the current schedule showing the last bond payment in 2025.

2014 Refunding Revenue Bonds – The District and the WaterReuse Finance Authority issued Refunding Revenue Bonds in the principal amount of \$29,825,000 to repay the outstanding principal on the 2006 Certificates of Participation. Annual debt service for this bond in FY 2021-22 is \$2,310,926 and in FY 2022-23 is \$2,307,426. Outstanding principal on this debt is \$26,380,300 as of July 1, 2021. The bonds maturing after May 1, 2025 are subject to optional redemption after May 1, 2024.

Debt Covenants and Debt Coverage Ratio

A debt covenant is a requirement imposed on the District by a debt holder. These requirements range from requirements to pay the principal and interest payments on particular days of the year, to preparing and filing annually audited financial statements, to very specific financial performance requirements.

One of the District's debt obligations includes a minimum debt coverage ratio requirement. Debt service coverage is the ratio of net revenues (revenues minus operating expenses) to annual debt service requirements.

To comply with the SRF loans, the District must maintain a debt service coverage ratio of 1.1 or greater. For the 2011 and 2014 Refunding Revenue Bonds, the minimum is 1.15. By District debt policy, the minimum ratio is 1.25.

For FY 2021-22 the ratio is estimated to be 3.16, and for FY 2022-23 the ratio is estimated to be 3.32. Both years are well within the policy and debt covenant requirement of 1.25.

Debt Capacity & Debt Limitations

Debt Capacity is the difference between the amount of debt Vallejo Flood and Wastewater District has outstanding (sold and authorized) and the maximum amount of debt the District can incur within its legal, public policy and financial limitations.

The District generally does not issue general obligation debt, and as such, there is no legal limitation on the amount of debt it can issue. The District is limited by the debt policies that it sets for itself (described above and in Appendix E) and by financial limitations. Financial limitations include two factors:

- 1) willingness of the bond market to loan the District money
- 2) limitations on future debt placed on the District by current debt

First, the amount of debt Vallejo Flood and Wastewater District can issue is limited by whether there are financial institutions and other buyers in the market willing to purchase the bonds that the District wants to issue. In tight capital markets, or if the financial health of the District is in question, the amount of debt Vallejo Flood and Wastewater District can issue under favorable terms can be limited.

Second, the debt coverage ratio imposed by existing debt holders and by policy also applies to any future debt Vallejo Flood and Wastewater District may want to issue. By forecasting

operating revenues and expenditures (see Ten-Year Financial Forecast section) and applying the 1.25 minimum debt coverage ratio, a debt capacity can be calculated.

Currently, Vallejo Flood and Wastewater District has the capacity to issue approximately \$150 million in additional debt (4.0% annual interest, 30-year term) in FY26 or \$180 million in FY28, assuming that there was a buyer for that debt in the bond market, the District could pay the debt service, and other financial policies are maintained. If service charges were increased beyond the forecast assumption of 3% annual increase, the amount of debt could be greater.

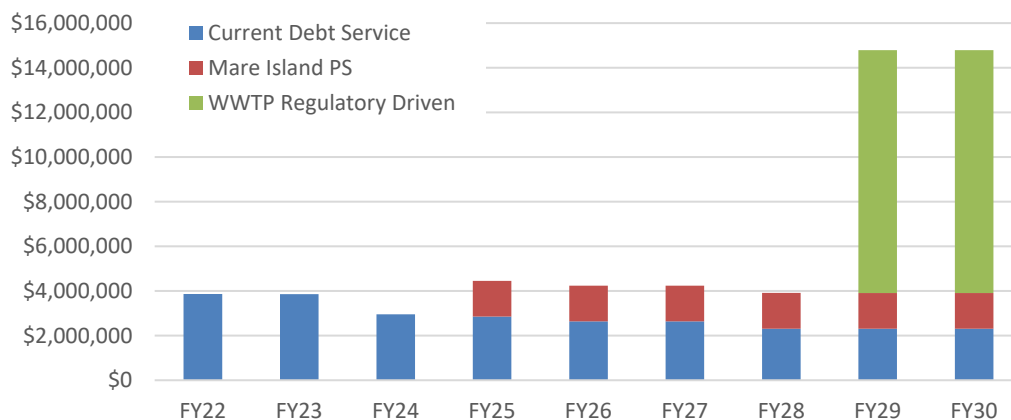
Future Debt Issues

The Ten-Year Capital Improvement Plan and the Ten-Year Financial Plan includes debt financing for two capital projects:

- 1) Mare Island Pump Station Replacement – This is to finance Capital Improvement Plan project #POF106. Total project cost is currently estimated at \$40 million, including design, engineering and project management costs. The district has applied for a Clean Water State Revolving Fund (CWSRF) loan to cover the entire project cost. This loan assumes a 1.2% interest loan (the current rate as of April 2021) paid back over 30 years, with the first year of annual debt service (estimated at \$1.6 million) beginning after construction is complete in FY 2024-25.
- 2) WWTP Regulatory Driven Improvements – This is to finance Capital Improvement Plan project “WWTP MP Regulatory Driven WWTP Improvement Phase 1.” Total project cost is currently estimated at \$180 million, including design, engineering and project management costs, with costs extending beyond the last year of the current Capital Improvement Plan. The district has not yet determined whether to apply for a CWSRF loan or issue debt in the capital market. This loan assumes a 4.0% interest loan paid back over 30 years, with the first year of annual debt service (estimated at \$10.88 million) beginning in FY 2029-30.

Projected Debt Service Summary

Including the future debt issues identified above, the projected ten-year debt service presented in the following chart:



Pensions

Vallejo Flood and Wastewater District contributes to the California Public Employees' Retirement System (CalPERS), a cost-sharing multi-employer public employees' retirement system that acts as a common investment and administrative agency for participating public entities.

The District has two different benefits plans, based on the date of initial employment with Vallejo Flood and Wastewater District and enrollment in the CalPERS system. The Classic Plan is open to new employees who have previously been enrolled in CalPERS prior to January 1, 2013 (and meet other requirements). The PEPRA Plan is open to all other new employees:

Classic	Hired prior to January 1, 2013
PEPRA	Hired on or after January 1, 2013

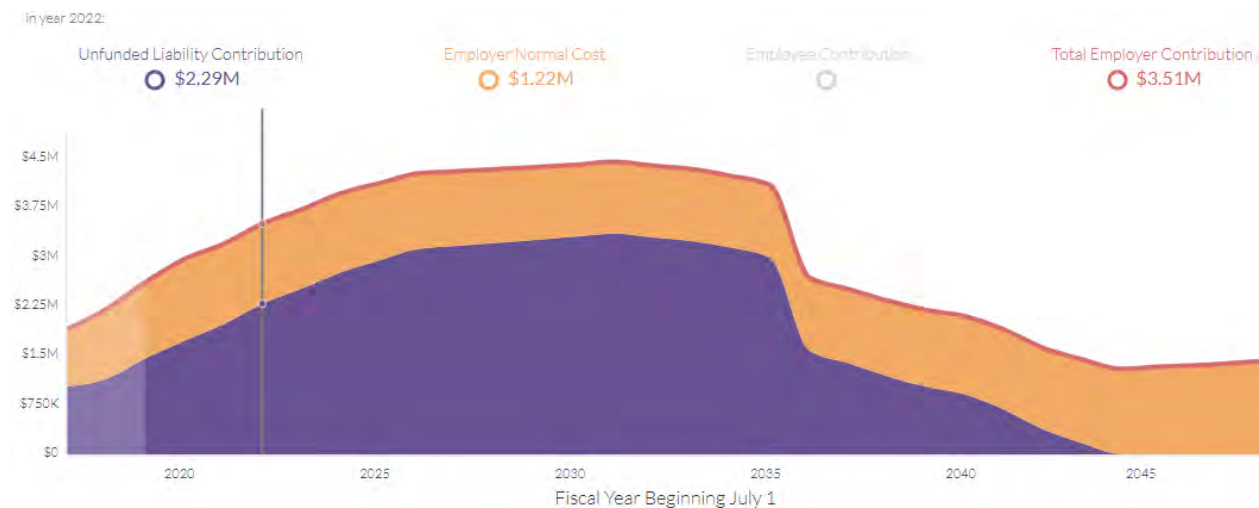
As of June 30, 2019 (last available date), Vallejo Flood and Wastewater District had unfunded accrued liabilities and funded ratios as follows:

	<u>Unfunded Accrued Liability</u>	<u>Funded Ratio</u>
Classic	\$ 26,097,532	71.3%
PEPRA	49,205	92.5%

For FY 2021-22, The District will pay 14.02% of Classic employees' salaries and 7.59% of PEPRA employees' salaries to CalPERS for the Normal Cost. In addition, the District will pay \$2,007,772 toward the Classic Unfunded Accrued Liability (UAL) and \$7,816 toward the PEPRA UAL.

These payments toward the UAL are the minimum required contribution to CalPERS. The District has the option to make additional voluntary contributions, but is not budgeting to do so.

The following graph illustrates the estimated Normal Cost and UAL payments for the District over the next 30 years (excluding employee contributions). Because of changes in actuarial assumptions, such as a lowered discount rate, and the results of past investment returns, it is expected that the total employer contribution will increase from approximately \$3.51 million in FY 2021-22 to \$4.46 million in FY 2030-31, before starting to reduce.

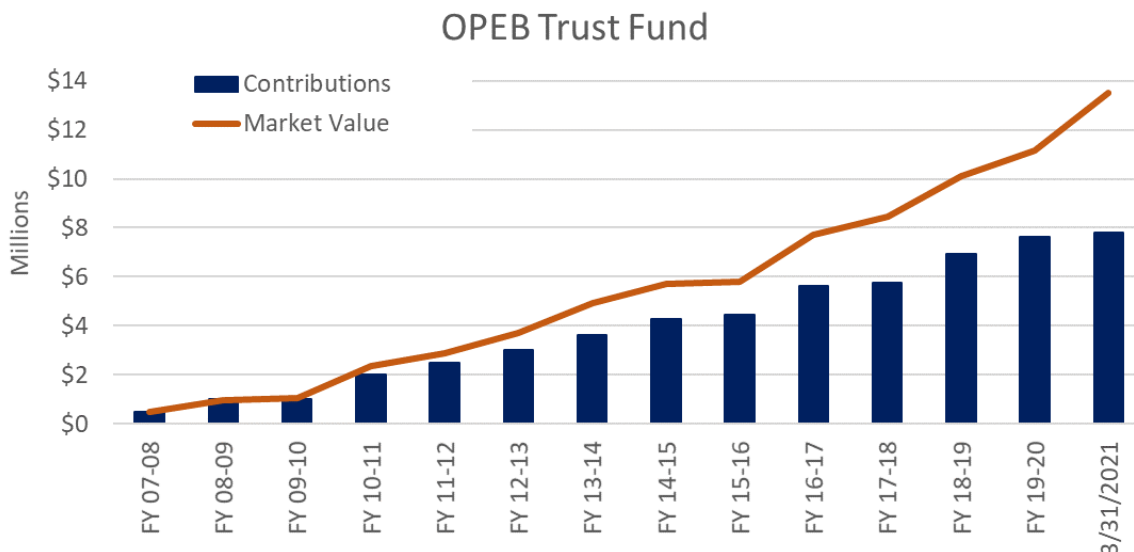


OPEB

Other Post-Employment Benefits (OPEB) are benefits, other than retirement pensions, that are provided to retirees of Vallejo Flood and Wastewater District. These include health care, life insurance and vision insurance. Beginning in 2013, the District started to contribute \$500,000 and the employees started contributing 2% of their salary to a trust fund. That fund is currently invested and administered by CalPERS. Assets in this trust account can be used to net against the District's total OPEB liability.

The FY 2021-22 and FY 2022-23 budgets includes the annual payment to the OPEB trust of \$500,000. The budgets also include direct benefit payments for current retirees.

Assets in the District's OPEB Trust were greater than the actual contributions (as of March 31, 2021) because of investment earnings.



Based on the most recent actuarial report for the OPEB benefits, the plan is 55% funded. The Actuarially Determined Contribution (ADC) is calculated assuming that the plan should be fully fund by 2037; however, the District and employees combined have been contributing amounts greater than the ADC, and full fund funding should be achieved prior to 2037.

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Appendix A – Glossary of Terms

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Glossary

Account – A record of a business transaction; a reckoning of money received or paid.

Accounting System – The total structure of records and procedures that discover, record, classify, summarize, and report information on the financial position and results of operations of a government entity.

Accounts Payable – Purchase of services and supplies as of or prior to June 30 but not yet paid at June 30.

Accounts Receivable – General bills due from customers.

Accrual – The recognition of a revenue or expense in a budget year even though the actual cash may not be received or paid until the following budget year.

Adoption – Formal action by the Board of Trustees.

Amortization – Gradual reduction, redemption, or liquidation of the balance of an account; according to a specified schedule of times and amounts.

Assets – Resources owned or held by the enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise.

Audit – Performed by the District's independent certified public accountant (CPA), with the objective to determine if the District's financial statements present fairly the District's financial position and results of operations in conformity with generally accepted accounting principles (GAAP).

Budget – The District's financial plan balancing proposed expenditures for a certain period of time to the expected income or revenue for that same period.

Connection Fee – Fee imposed when a customer requests a new service connection. Connection fee funds are used by the District to plan, design and construct new facilities to support the additional demand placed by on the water and sanitation systems by the new service connections.

Capital Assets – Assets of a long-term nature such as land, buildings, machinery, furniture, plants and transmission and distribution infrastructure, and other equipment. Generally, the District has defined such assets as those with an expected life in excess of two years and an acquisition cost in excess of \$10,000.

Capital Improvement Program (CIP) – A plan to provide for the maintenance or replacement of existing assets, infrastructure, and equipment and for the construction or acquisition of new facilities and equipment.

Capital Improvement Project Funds – Funds used to account for financial resources used for the acquisition or construction of major capital facilities, as approved in the ten-year Capital Improvement Plan.

Certificates of Participation (COP) – Form of lease-purchase financing used to construct or acquire capital facilities and equipment.

Coverage – A margin of safety for payment of debt service, reflecting the number of times by which earnings for a period of time exceed debt service payable in such a period.

Debt – An obligation resulting from the borrowing of money or from the purchase of goods and services. These include bonds and accounts payable.

Debt Service – Interest and principal payments on bond issues and Certificates of Participation. Also included are the issuance costs related to bond funding.

Depreciation – An element of cost resulting from the service of long-lived assets in an economic organization and represents the loss in asset value because of wear, deterioration, obsolescence or action of the physical elements.

Effluent – Treated wastewater discharged from wastewater treatment plants.

Emergency Response Plan (ERP) – Emergency Response Plan as required by the Environmental Protection Agency (EPA) as it applies to water treatment and distribution with high or moderate hazard potential to life and property. The ERP consists typically of notification procedures to alert the appropriate authorities in the event of a hazardous condition developing and also includes continuous monitoring of the facility to provide an early warning to the operator.

Enterprise Fund – A fund established to account for the financing of self-supporting enterprises, such as a utility fund, which render services primarily to the public.

Entity – The basic unit upon which accounting and/or financial reporting activities focus.

Expenses – Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or incurrences of liabilities that result in decreases in equity.

Fiscal Year – The beginning and ending period for recording financial transactions. The District has specified July 1 to June 30 as its fiscal year.

Full Time Equivalent (FTE) – An FTE equates to one full-time employee working 2,080 hours per year.

Fund – An accounting entity that records all financial transactions for specific activities or government functions.

Fund Equity – Net assets which are comprised of: Invested in Capital Assets, Net of Related Debt; Restricted; and Unrestricted.

Geographic Information System (GIS) – A system combining computer hardware, software, and geographic data for collecting, storing, analyzing and displaying geographically referenced information.

Generally Accepted Accounting Principles (GAAP) – Accounting standards and financial reporting practices promulgated by several national committees and boards. Primary sources for governmental accounting are the National Council on Governmental Accounting, producing governmental accounting, auditing and financial reporting (GAAFR), the Governmental Accounting Standards Board (GASB), and the Government Finance Officers Association (GFOA).

Governmental Accounting Standards Board (GASB) – National advisory board of accounting standards for public agencies. Identifies procedures, methods and standards for presenting the financial condition of public agencies.

Infrastructure – The accumulated pipelines, treatment plants and storage facilities of the District, including all meters, valves, pumps, filters and other appurtenances, whether constructed by the District or dedicated by private entities.

Line Item – Expenditure classifications established to account for and budget the appropriations approved.

Local Agency Investment Funds (LAIF) – An investment fund established by the California State Treasurer for the benefit for public agencies. The District, per its investment policy may invest up to the maximum permitted under State law (California Government Code Section 16429.1).

Maintenance – The upkeep of physical properties in condition for use or occupancy. Examples are the inspection of equipment to detect defects and the making of repairs.

Net Assets – The excess of assets over liabilities, represents the cumulative effect of revenues and other financing sources over expenses and other financing uses.

Obligations – Amounts that a government may be legally required to meet out of its resources. They include not only actual liabilities, but also encumbrances not yet paid.

Operating Expenses – All costs associated with the day-to-day business of the District, which are not considered capital improvements or debt repayments.

Projected – An estimate of revenues and expenditures based on past trends, the present economic situation and future financial forecasts.

Public Employees Retirement System (PERS) – A cost-sharing, multiple-employer, public employees' retirement system to which the District contributes that acts as a common investment and administrative agent for participating public entities within the State of California.

Pump Station – Mechanical devices installed in sewer or water systems or other liquid-carrying pipelines that move the liquids to a higher level.

Reserves – An amount set aside in an account for future use.

Resolution – A special or temporary order of a legislative body; an order to a legislative body requiring less legal formality than an ordinance or statute.

Revenue – An inflow of assets, not necessarily in cash, in exchange for services rendered.

Wastewater Treatment Plant (WTP) – A facility that monitors and controls the quality of wastewater, to include purity and turbidity as required by state and federal guidelines.

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Appendix B – Statistical Section

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Vallejo Flood and Wastewater District
Revenue Capacity Information

Table 1 - Service Charge Base Rates

FYE June 30	Base Monthly WW Rate	Increase/ (Decrease)	Base Monthly SW Rate	Increase/ (Decrease)	Base Monthly UL Rate	Increase/ (Decrease)	Combined Monthly Rate
2021	\$59.56	9.0%	\$1.97	0.0%	\$1.38	0.0%	\$62.91
2020	\$54.64	12.0%	\$1.97	0.0%	\$1.38	0.0%	\$57.99
2019	\$48.78	12.5%	\$1.97	0.0%	\$1.38	0.0%	\$52.13
2018	\$43.35	0.0%	\$1.97	0.0%	\$1.38	0.0%	\$46.70
2017	\$43.35	0.0%	\$1.97	0.0%	\$1.38	0.0%	\$46.70
2016	\$43.35	0.0%	\$1.97	0.0%	\$1.38	0.0%	\$46.70
2015	\$43.35	2.5%	\$1.97	0.0%	\$1.38	0.0%	\$46.70
2014	\$42.29	2.5%	\$1.97	0.0%	\$1.38	0.0%	\$45.64
2013	\$41.26	2.5%	\$1.97	0.0%	\$1.38	0.0%	\$44.61
2012	\$40.26	4.0%	\$1.97	0.0%	\$1.38	0.0%	\$43.61
2011	\$38.71	4.0%	\$1.97	0.0%	\$1.38	0.0%	\$42.06

Source: District Rate Ordinances

Table 2 - Sewer Service Accounts by Type

FYE June 30	Single Family	Multi Family	Commercial	Govt	Total Billable Accounts	Total Billable Units (1)
2020	34,402	2,106	1,638	50	38,196	48,629
2019	34,402	2,119	2,024	50	38,595	48,629
2018	34,361	2,106	1,638	50	38,155	48,525
2017	34,361	2,106	1,638	50	38,155	48,525
2016	34,361	2,106	1,638	50	38,155	48,525
2015	34,270	2,106	1,630	50	37,995	48,360
2014	34,056	2,106	1,624	50	37,836	48,201
2013	34,021	2,100	1,630	50	37,801	48,163
2012	33,917	2,096	1,629	50	37,692	48,033
2011	33,873	2,105	1,631	50	37,659	48,000

Source: District Finance staff and billing data

(1) Certain accounts contain multiple units. Residential rates are flat-rate per unit. Commercial rates are based upon a combination of wintertime water consumption and strength.

Final Budget for Fiscal Years 2021-22 and 2022-23

Vallejo Flood and Wastewater District Revenue Capacity Information

Table 3 - Service Area Ten Largest Users and Percentage of Annual Service Charges

Ten Largest Users	Fiscal Year Ended									
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Six Flags Discovery Kingdom	\$ 222,864	\$ 325,658	\$ 359,913	\$ 341,613	\$ 313,609	\$ -	\$ 195,449	\$ 286,112	\$ 221,284	\$ 242,532
Prime Ascot DBA Blue Rock Village	187,101	339,456	303,503	298,332	291,312	291,312	296,289	276,853	271,037	294,435
Fairgrounds Mobile Estates	185,918	164,439	147,290	146,774	146,774		142,789	150,452	119,702	130,498
WRPV XIII BV Vallejo LLC	173,738									
Vallejo Mobile Estates	170,397	152,192	135,850	135,850	132,651	132,648	134,918	131,453	128,410	123,699
Vallejo Mobile Home Community	135,653	121,160								
Solano Vista II Housing Inv LP	129,640	115,789	103,356	103,356	100,918	100,920	102,648			
Carzuinez Highlands LTD	129,181	115,789								
MG (Broadstone) Sterling Village Apts	124,294		99,095	99,095	96,757	96,756	-	95,888	102,228	98,478
Seabreeze Apartments	122,958		98,030	98,030	95,716					
Glen Cove Landing		157,011	140,605	136,436	133,205	133,176	135,461	132,040	129,017	134,656
H&W Enterprises Bay Village		155,176								
C S Marine Construction		120,285								
Hillcrest Park HOA			175,762	171,870	171,906	164,388	162,971	162,971	159,187	153,371
Riley Bow er Apartments II			98,030	98,030		95,712				
Seafood City Supermarket					121,762	108,180	116,957	100,338	105,304	114,677
Larissa Lane Partners						95,712				
Waterstone Ow ners Association						93,636				
Sundance - Vallejo							154,493	150,525	147,039	141,645
KW/WDC Vallejo LLC							149,073	134,030	130,928	126,125
Totals	\$ 1,581,744	\$ 1,766,955	\$ 1,661,434	\$ 1,629,386	\$ 1,604,610	\$ 1,312,440	\$ 1,591,048	\$ 1,620,662	\$ 1,514,136	\$ 1,560,116
Annual Service Charges	\$36,086,680	\$31,229,741	\$32,134,713	\$27,369,291	\$30,855,988	\$26,436,670	\$25,599,090	\$25,917,040	\$25,192,643	\$24,122,220
Percentage of Annual Service Charges:	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Six Flags Discovery Kingdom	0.62%	1.04%	1.12%	1.25%	1.02%		0.76%	1.10%	0.88%	1.01%
Prime Ascot DBA Blue Rock Village	0.52%	1.09%	0.94%	1.09%	0.94%	1.10%	1.16%	1.07%	1.08%	1.22%
Fairgrounds Mobile Estates	0.52%	0.53%	0.46%	0.54%	0.48%		0.56%	0.58%	0.48%	0.54%
WRPV XIII BV Vallejo LLC	0.48%									
Vallejo Mobile Estates	0.47%	0.49%	0.42%	0.50%	0.43%	0.50%	0.53%	0.51%	0.51%	0.51%
Vallejo Mobile Home Community	0.38%	0.39%								
Solano Vista II Housing Inv LP	0.36%	0.37%	0.32%	0.38%	0.33%	0.38%	0.40%			
Carzuinez Highlands LTD	0.36%	0.37%								
MG (Broadstone) Sterling Village Apts	0.34%		0.31%	0.36%	0.31%	0.37%		0.37%	0.41%	0.41%
Seabreeze Apartments	0.34%		0.31%	0.36%	0.31%					
Glen Cove Landing		0.50%	0.44%	0.50%	0.43%	0.50%	0.53%	0.51%	0.51%	0.56%
H&W Enterprises Bay Village		0.50%								
C S Marine Construction		0.39%								
Hillcrest Park HOA			0.55%	0.63%	0.56%	0.62%	0.64%	0.63%	0.63%	0.64%
Riley Bow er Apartments II			0.31%	0.36%		0.36%				
Seafood City Supermarket					0.39%	0.41%	0.46%	0.39%	0.42%	0.48%
Larissa Lane Partners						0.36%				
Waterstone Ow ners Association						0.35%				
Sundance - Vallejo							0.60%	0.58%	0.58%	0.59%
KW/WDC Vallejo LLC							0.58%	0.52%	0.52%	0.52%
Totals	4.38%	5.66%	5.17%	5.95%	5.20%	4.95%	6.22%	6.25%	6.01%	6.47%

Source: Audited District Financial Statements

Vallejo Flood and Wastewater District
Connection Fee Report
Per Government Code Section 66013(d) and (e)
Fiscal Year Ended June 30, 2020

	Wastewater	Stormwater	Total
Connection Fees, beginning balance as of July 1, 2019	\$ 862,762	\$ 21,137,466	\$ 22,000,228
Connection Fees Collected	136,897	62,025	198,922
FY2019 Correction (Permit #28410)	(19,592)	19,592	0
Interest Earned	9,024	440,123	449,147
Fiscal Year Fees Available	\$ 126,329	\$ 521,740	\$ 648,069
Applied to:			
Capital Costs Funded (see details below)	530,288	1,047,335	1,577,623
Refunds	20,707	-	20,707
Intrafund Loan to Stormwater Fund ¹	-	1,436,660	1,436,660
Total Funds Applied	550,995	\$ 2,483,995	\$ 3,034,990
Net Changes for Fiscal Year 2020	\$ (424,666)	(1,962,255)	(2,386,921)
Connection Fees, ending balance as of June 30, 2020	\$ 438,096	\$ 19,175,211	\$ 19,613,307
Capital Costs Funded FY2020	Wastewater	Stormwater	Total
CWM016 Sereno Drive Sanitary Sewer Replacement	530,288		
CDM002 Sediment Removal Austin Creek		1,014,558	
CDM003 Storm Drain Master Plan		32,777	
	530,288	1,047,335	1,577,623

California Government Code (CGC) Section 66013 (c) requires the District to place capital facilities connection fees received and any interest income earned from the investment of these monies in a separate capital facilities fund. These monies are to be used solely for the purposes for which they were collected and not commingled with other District funds.

CGC Section 66013(d) requires the District to make certain information available to the public within 180 days after the close of each fiscal year. CGC Section 66013(e) allows the required information to be included in the District's annual financial report. The Connection Fee Report meets this requirement.

Capacity fees are imposed for initiating sewer connection service by the District at the request of the customer. No fees are imposed upon real property or upon person as an incident of property ownership, but rather as a condition of service.

Note 1: Intrafund loan is to finance the CDD001 Stormwater Trash Capture Program. Repayment is in accordance with Board Resolution 2020-5949 and shall be repaid prior to June 30, 2025 and shall accrue interest compounded monthly at the rate of investment returns on District's pooled investments.

There are no projects identified in the FY 2020-21 Capital Improvement Plan that anticipate using either wastewater or stormwater connection fee revenue.

Source: Audited District Financial Statements and Engineering staff

Final Budget for Fiscal Years 2021-22 and 2022-23

Vallejo Flood and Wastewater District A Component Unit of the City of Valejo Debt Capacity Information

Description: These tables present information that help the reader assess the affordability of the District's current levels of outstanding debt and the ability to pay debt.

Ratios of Outstanding Debt by Type

Fiscal Year Ended June 30	2014 Revenue Bonds	2011 Revenue Bonds	2008 State Revolving Fund Loan	2006 Certificates of Participation	2004 State Revolving Fund Loan	2001 Certificates of Participation	1993 Certificates of Participation	Total Outstanding Debt	Total Debt Per Capita (1)	Total Debt Per Billing Unit (1)	Wastewater Debt Service Coverage
2020	\$ 27,604,253	\$ 1,428,183	\$ 1,479,073	\$ -	\$ 2,590,618	\$ -	\$ -	\$ 33,102,127	\$ 278	\$ 681	301%
2019	28,778,206	1,680,910	1,754,417	-	3,412,380	-	2,640,000	38,265,913	320	787	174%
2018	29,907,159	1,923,637	2,023,307	-	4,214,099	-	5,084,656	43,152,858	362	889	176%
2017	29,942,159	1,933,637	2,029,461	-	4,233,176	-	5,199,656	43,338,089	369	893	187%
2016	32,060,065	2,379,091	2,542,329	-	5,759,352	-	9,618,968	52,359,805	446	1,079	194%
2015	33,089,018	2,591,818	2,792,753	-	6,503,828	-	11,718,624	56,696,041	465	1,176	156%
2014	33,000,128	2,758,432	3,037,308	-	7,230,146	-	13,718,280	59,744,294	504	1,239	156%
2013		2,957,364	3,276,131	35,065,855	7,938,749	-	15,617,934	64,856,033	554	1,347	155%
2012		3,151,297	3,509,356	35,925,211	8,630,069	-	17,422,590	68,638,523	592	1,430	159%
2011		3,330,229	3,737,115	36,749,568	9,304,528	-	19,137,246	72,258,686	620	1,505	143%

Pledged Revenue Coverage

Fiscal Year Ended June 30	Utility Service Charges	Less Operating Expenses	Net Revenues Available	2014 Revenue Bonds	2011 Revenue Bonds	2008 State Revolving Fund Loan	2006 Certificates of Participation	2004 State Revolving Fund Loan	2001 Certificates of Participation	1993 Certificates of Participation	Total Annual Debt Service
2020	\$ 33,045,459	\$ 21,427,700	\$ 11,617,759	\$ 2,310,425	\$ 328,475	\$ 317,450	\$ -	\$ 907,072	\$ -	\$ -	\$ 3,863,422
2019	29,733,781	16,986,474	12,747,307	2,311,675	328,075	317,450	-	907,072	-	2,709,875	6,574,147
2018	27,482,287	16,006,016	11,476,271	2,312,275	327,275	317,449	-	907,072	-	2,652,750	6,516,221
2017	28,526,894	16,308,018	12,218,876	2,311,475	326,075	317,450	-	907,072	-	2,657,500	6,519,571
2016	29,530,993	16,901,393	12,629,600	2,314,475	324,475	317,450	-	907,072	-	2,661,500	6,524,971
2015	28,270,621	17,989,148	10,281,473	2,318,519	331,626	317,449	-	907,072	-	2,721,750	6,596,416
2014	28,628,926	18,297,585	10,331,341	82,728	327,693	315,062	2,231,956	904,119	-	2,743,844	6,605,402
2013	27,385,589	16,833,300	10,552,289		325,943	315,118	2,507,309	904,191	-	2,747,344	6,799,905
2012	26,639,300	15,838,616	10,800,684		313,742	315,172	2,490,967	904,261	664	2,767,704	6,792,510
2011	25,853,201	16,209,375	9,643,826		33,160	315,226	2,499,531	904,330	236,769	2,755,344	6,744,360

(1) Denominators per population and billing unit tables

Source: Audited District Financial Statements

Final Budget for Fiscal Years 2021-22 and 2022-23

Vallejo Flood and Wastewater District A Component Unit of the City of Valejo

Operating Information

	Fiscal Year Ended									
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Table 1 - Employees by Department										
Administration	5	6	6	6	6	5	5	5	5	5
Safety and Risk Management	3	3	3	3	3	2	2	2	2	2
Finance	7	9	9	9	9	8	8	8	8	7
Engineering	6	6	5	5	6	5	6	6	6	6
Field Operations	28	28	25	25	25	24	24	24	28	28
Plant Operations	17	18	17	15	14	14	14	14	14	16
Environmental Services	12	11	11	11	11	11	11	11	11	11
Facilities Maintenance	12	16	14	16	17	15	15	15	15	14
Electrical/Information Technology	7									
Human Resources	2									
Total district employees	99	97	90	90	91	84	85	85	89	89
Table 2 - Operating Indicators										
New connections	53	109	51	52	43	23	6	0	33	16
Number of upper laterals replaced	131	162	153	174	170	169	165	142	136	146
Number of service calls - w astew ater	717	800	808	1,083	1,187	1,066	1,066	1,094	1,176	1,091
Number of service calls - storm drain	46	63	50	160	63	55	55	192	69	100
Blockages in mains - w astew ater	7	3	7	2	23	27	27	23	41	56
Blockages in laterals - w astew ater	92	90	104	126	204	241	241	241	216	208
Blockages in mains - storm drain	3	1	3	1	3	3	3	14	1	4
Amounts of w astew ater treated (MG)	3,055	3,652	3,372	4,549	3,541	3,657	3,413	3,632	3,717	4,341
Operating costs net of depreciation per MG	8,682	6,137	5,393	4,745	5,396	5,590	6,153	5,435	5,176	4,536
Dry tons of sludge produced	3,757	3,799	3,559	3,702	3,718	3,748	3,616	3,780	3,654	3,696
Number of effluent violations	0	0	0	2	0	0	1	0	0	0
Table 3 - Capital Assets Data										
Area served (square miles)	36	36	36	36	36	36	36	36	36	36
Number of treatment plants	1	1	1	1	1	1	1	1	1	1
Permitted treatment capacity - dry (mgd)	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
Permitted treatment capacity - w et (mgd)	60	60	60	60	60	60	60	60	60	60
Number of pump stations - w astew ater	30	30	36	36	36	36	36	36	35	35
Number of pump stations - storm w ater	9	9	9	9	9	9	9	9	9	9
Miles of main - w astew ater	407	395	436	436	436	436	436	436	436	436
Miles of main - storm w ater	211	211	220	220	220	220	220	220	220	220
Miles of channel - storm w ater	6	6	6	6	6	6	6	6	6	6
Main line rep/rplc - w astew ater (feet)	5,776	2,035	4,061	7,757	4,332	410	115	474	2,000	8,169
Main line rep/rplc - storm w ater (feet)	0	100	50	120	369	0	586	232	0	0
Service line rep/rplc - w astew ater (feet)	3,289	4,839	2,534	2,075	2,140	1,290	1,290	1,024	281	883
Open channel cleaned - storm w ater (feet)	17,581	15,255	17,175	15,778	10,560	16,640	16,640	12,608	13,968	7,915

Source: District Field Operations, Finance and Engineering staff

Vallejo Flood and Wastewater District
A Component Unit of the City of Vallejo
Economic and Demographic Information

City of Vallejo **Comprehensive Annual Financial Report**
Demographic and Economic Statistics
Last Ten Calendar Years

Calendar Year	Population (1)	Personal Income (in thousands) (2)	Per Capita Personal Income (2)	Unemployment Rate * (3)
2011	116,508	4,543,695	38,999	14.0%
2012	115,928	4,414,306	38,078	12.5%
2013	117,112	3,094,450	26,423	10.2%
2014	118,470	3,130,333	26,423	8.9%
2015	119,683	3,111,279	25,996	8.3%
2016	117,322	3,043,919	25,945	5.6%
2017	118,280	3,421,840	28,930	5.1%
2018	119,252	3,199,293	26,828	4.4%
2019	119,544	3,391,224	28,368	4.4%
2020	119,063	3,558,198	29,885	11.3%*

Note: * Starting in 2018, the unemployment rate reported is the average of the Vallejo City unemployment rate for the first 9 months of the calendar year. In previous years, the unemployment rate in this table was determined by averaging the Vallejo-Fairfield MSA monthly figures.

Sources : (1) State Department of Finance (revised)

(2) U.S. Bureau of Economic Analysis (2007 to 2012);
U.S. Census Bureau (2013 and forward)

(3) State of California Employment Development Department (data shown is for the City)

Vallejo Flood and Wastewater District
A Component Unit of the City of Vallejo
Economic and Demographic Information

City of Vallejo **Comprehensive Annual Financial Report**
Top 10 Principal Employers
Current Year and Nine Years Ago

Employer	2020		2011	
	Number of Employees	Percent of Total Employment	Number of Employees	Percent of Total Employment
Kaiser Permanente Medical Center *	4,102	7.44%	3,906	6.88%
Six Flags Discovery Kingdom	1,500	2.72%	1,600	2.82%
Vallejo Unified School District	1,200	2.18%	1,600	2.82%
Kaiser Permanente Call Center	N/A	N/A	950	1.67%
Sutter Solano Medical Center	635	1.15%	690	1.21%
Touro University California	579	1.05%	385	0.68%
City of Vallejo	542	0.98%	574	1.01%
U.S.D.A. Forest Service	500	0.91%	300	0.53%
California Maritime Academy	358	0.65%	N/A	N/A
Safeway (3 Locations)	318	0.58%	N/A	N/A
Costco	286	0.52%	N/A	N/A
Petrochem Corporate Headquarters	-	N/A	225	0.40%
California Highway Patrol, Regional Office	-	N/A	400	0.70%

"Total Employment" as used above represents the total employment of all employers located within City limits.

Source: City of Vallejo Finance Department (MuniServices LLC/an Avenu Insights & Analytics Company)

* Includes call center. Physicians data is unavailable and not included in the count.

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Appendix C – Salary Schedule by Position Classification

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Department Classification	Annual Salary Step		
	1	2	3
Administration			
District Manager			\$304,573
Director of Administration/Clerk of the Board			\$156,272
Senior Office Assistant	\$69,617	\$73,098	\$76,752
Office Assistant	\$63,288	\$66,452	\$69,775
Electrical / IT			
Electrical/Instrumentation Supervisor			\$131,802
Electrical/Instrumentation Technician			\$119,820
Information Systems Specialist			\$119,820
Engineering			
Director of Engineering	\$196,334	\$206,151	\$216,459
Engineering Supervisor	\$170,896	\$179,441	\$188,413
Associate Engineer	\$147,626	\$155,007	\$162,758
Senior Engineering Technician/Inspector	\$109,042	\$114,495	\$120,219
Engineering Technician II	\$94,195	\$98,905	\$103,850
Engineering Technician I	\$78,908	\$82,847	\$88,202
Environmental Services			
Director of Environmental Services			\$175,740
Environmental Services Superintendent	\$133,101	\$139,756	\$146,743
Environmental Compliance Supervisor			\$121,001
Laboratory Supervisor			\$121,001
Community Outreach Coordinator			\$121,001
Environmental Compliance Inspector			\$110,000
Laboratory Technician II			\$110,000
Laboratory Technician I	\$95,022	\$99,774	\$104,763
Laboratory Aide	\$57,459	\$60,332	\$63,348
Facilities Maintenance			
Facilities Maintenance Superintendent			\$156,272
Maintenance Mechanic Supervisor			\$130,178
Maintenance Mechanic III (Lead)			\$118,245
Maintenance Mechanic II			\$108,482
Maintenance Mechanic I			\$103,316
Maintenance Mechanic Entry Level	\$89,249	\$93,711	\$98,396
Utility Person/Truck Driver			\$99,826
Field Operations			
Director of Field Operations			\$175,740
Field Operations Superintendent	\$130,766	\$137,304	\$144,169
Collection System Supervisor			\$108,295
Collection System Technician/Equipment Operator			\$98,450
Collection System Technician II			\$96,048
Collection System Technician I	\$87,119	\$91,475	
Collection System Technician Entry Level	\$79,019	\$82,970	

Department Classification (continued)	Annual Salary Step		
	1	2	3
Finance			
Director of Finance/Treasurer	\$198,112	\$208,018	\$218,419
Finance Supervisor	\$153,780	\$161,469	\$169,542
Accountant	\$117,231	\$123,092	\$129,247
Accounting Specialist	\$105,634	\$110,916	\$116,462
Accounting Technician II	\$88,305	\$92,720	\$97,356
Accounting Technician I	\$76,281	\$80,096	\$84,101
Finance Assistant	\$63,288	\$66,452	\$69,775
Human Resources			
Director of Human Resources	\$159,945	\$167,942	\$176,339
Human Resources Analyst	\$110,172	\$115,681	\$121,465
Operations			
Director of Plant Operations and Maintenance			\$203,874
Operations Superintendent			\$152,635
Shift Supervisor			\$121,064
Operator III			\$110,058
Operator II			\$104,816
Operator I			\$99,826
Operator Entry Level	\$86,233	\$90,545	\$95,072
Safety and Risk Management			
Director of Safety and Risk Management	\$149,971	\$157,470	\$165,343
Safety and Risk Management Analyst	\$95,802	\$100,592	\$105,622
Safety and Risk Management Technician	\$69,617	\$73,098	\$76,752

Appendix D – Strategic Plan

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Strategic Planning Goals and Objectives

The District held a Strategic Planning Session in October 2018 and developed an Action Plan with goals listed below including progress as well as updates that have occurred since that planning session.

ACTION PLAN			
Goal (What)		Action Steps (How)	Due Date (When)
Engineering	YEAR ONE	Update standard plans and specifications.	June 2020
		Align the Capital Improvement Program with the Asset Management Program, and prioritize projects appropriately.	May 2020
		Seek third party insight to develop appropriate mitigation and negotiate a new maintenance contract with regulatory agencies.	June 2020
	YEAR TWO	Develop a funding strategy for capital infrastructure projects that includes grant financing and loans.	December 2020
		Conduct flow monitoring to identify and prioritize inflow and infiltration projects.	June 2021
	YEAR THREE	Develop a Collection System Master Plan	June 2022
		Amend the CIP to reflect changes in priority and funding availability.	May 2022
	YEAR FOUR	Develop a Treatment Plant Master Plan	May 2023
Environmental Services	YEAR ONE	Develop and Implement new staff training for two new inspectors. Includes minimum performance standards and standard operating procedures.	12/31/2019
		Develop laboratory standards and procedures for TNI compliance.	December 2019
		Develop succession plan for retirement of lab supervisor	8/31/2019
		Hire levee maintenance consultant, and negotiate new contract with farmer.	8/31/2019
		Complete improvements to the access road from Highway 37 to the biosolids pad.	Before wet season 2020
		Complete security improvements at Tubbs Island.	December 2019
	YEAR TWO	Develop sub Significant Industrial User (sub SIU) standards for small intensive uses i.e. breweries, distilleries and wineries.	12/2020
		Finalize laboratory standards and procedures for TNI compliance. Recertify lab under ELAP.	lab re-cert due 12/31/2019
		Develop levee maintenance master plan and refine levee costs in the 10-year CIP.	
		Finalize soil profile and policy paper for consideration of outside biosolid acceptance.	12/31/2020
	YEAR THREE	SIU Master Plan that serves as an overarching standard operating procedure for the program.	12/31/2021

Final Budget for Fiscal Years 2021-22 and 2022-23

ACTION PLAN			
Goal (What)		Action Steps (How)	Due Date (When)
		MRP 3.0 for stormwater discharge compliance	TBD on MRP reissuance
		Complete No Feasible Alternative Analysis (NFAA) in advance of permit negotiation with the Regional Water Quality Control Board (RWQCB)	Due 270 days before permit expires
		Levee capital project.	
	YEAR FOUR	Study of emerging pollutants of concern and potential impacts to local business.	12/31/2022
		Recertify lab under ELAP.	Due 12/31/2021
		Negotiate next discharge permit for plant wastewater discharge	TBD
Field Operations	YEAR ONE	Develop performance standards for staff in the television, periodic maintenance, construction and customer service divisions.	12/15/2019
		Integrate Infor (CMMS) with the geographical information system (GIS)	Ongoing
		Develop F+W Permit compliance improvement program.	9/1/2019
		Extend the Fish and Wildlife Permit for creek and waterbody maintenance	9/1/2019
	YEAR TWO	Audit the Sanitary Sewer Management Plan (SSMP) for effectiveness	9/1/2020
		Train supervisory staff on data entry and certification for SWRCB permit compliance in CIWCS	12/15/2020
		Continue Integration of Infor (CMMS) with the geographical information system (GIS)	Ongoing
	YEAR THREE	Complete Integration of Infor (CMMS) with the geographical information system (GIS)	12/15/2021
		Audit SSMP for effectiveness	9/1/2021
	YEAR FOUR	Audit SSMP for effectiveness	9/1/2022
		Update SSMP and Recertify the SSMP With Governing Body	11/2022
Finance	YEAR ONE	Develop performance indicators that measure progress toward achieving objectives to include in budget and quarterly reporting.	5/31/2019
		Develop and distribute a Popular Annual Financial Report to all District ratepayers for enhanced transparency.	3/31/2019
		Develop an RFP for the selection and purchase of new enterprise management software that provides greater financial transparency through regular reporting and District-wide usability.	3/31/2019
	YEAR TWO	Complete a stormwater rate study/long-term financial plan which includes the ongoing maintenance and construction costs that meet stormwater regulations promulgated by the RWQCB.	3/31/2020
		Evaluate the stormwater capacity and user fees against master plan estimates for improvement and maintenance to ensure sustainability.	6/30/2020

Final Budget for Fiscal Years 2021-22 and 2022-23

ACTION PLAN			
Goal (What)		Action Steps (How)	Due Date (When)
	YEAR THREE	Complete a wastewater rate study/long-term financial plan for adoption in year four which includes the updated ten-year CIP.	6/30/2021
		Develop a plan for, pursue and secure project financing for the CIP.	9/30/2021
	YEAR FOUR	Adopt new wastewater rate study, implement resulting rates.	7/1/2022
		Develop a project financing and grant administration program for infrastructure stability.	9/30/2022
Workforce Development and Succession Planning	YEAR ONE	Complete all job description amendments.	06/2020
		Review and confirm all position connectivity as prescribed in the Memorandum of Understanding (MOU)	06/2020
		Provide a mentor program	06/2020
		Complete development of a supervisor training program and implement same.	06/2020
		Update Employee Handbook	06/2020
		Electronic Selection Panel Process	
	YEAR TWO	Develop college level internships in the Environmental and Engineering Departments.	06/2021
		Work with Solano Community College to develop a technology program for Maintenance Mechanics.	06/2021
		Work with guild and technical schools to develop a technology training program for electricians.	06/2021
	YEAR THREE	Conduct a salary survey in advance of negotiations.	06/2022
		Evaluate personnel structure and connectivity in advance of negotiations.	06/2022
	YEAR FOUR	Negotiate new Teamsters contract.	06/2023
Operations and Maintenance	YEAR ONE	Convert the Asset Management Plan (AMP) to a Maintenance Master Plan (MMP) with short/long term maintenance plan and replacement schedules for all major parts.	June 2020
		Develop electrical training program to develop high/medium voltage competency in all electrical staff.	June 2020
		Enter into a consulting contract to develop an IT Master Plan.	June 2020
		Complete Computer Maintenance Management System (CMMS) asset registry with asset classification, life cycle ranking and supply chain	June 2020
		Develop Nutrient Treatment technology roadmap	June 2020
	YEAR TWO	Align AMP with MMP and assign dollar figures and replacement schedules for major parts identified in the CMMS	June 2021
		Develop maintenance mechanic/Electrical competency standards	June 2021
		Use the IT Master plan to optimize hardware and software applications to minimize costs.	June 2021

Final Budget for Fiscal Years 2021-22 and 2022-23

ACTION PLAN			
Goal (What)		Action Steps (How)	Due Date (When)
		Convert the Asset Management Plan (AMP) to a Maintenance Master Plan (MMP) with short/long term maintenance plan and replacement schedules for all major parts.	June 2021
		Align AMP with MMP and assign dollar figures and replacement schedules for major parts identified in the CMMS	June 2021
		Finalized Blending/Nutrient Treatment technology roadmap: Pilot technologies	June 2021
	YEAR THREE	Develop timelines, standard operating procedures and Job Plans, safety procedures	June 2022
		Convert the Asset Management Plan (AMP) to a Maintenance Master Plan (MMP) with short/long term maintenance plan and replacement schedules for all major parts.	June 2022
		Reassess and develop Maintenance Key Performance Indicators (KPI)	June 2022
		Finalized Blending/Nutrient Treatment technology roadmap: Pilot technologies	June 2022
	YEAR FOUR	Reassess AMP assumptions and amend the CMMS and CIP appropriately	June 2023
		Finalize pilot Blending/Nutrient Treatment technologies roadmap with cost	June 2023
Safety and Risk Management	YEAR ONE	Complete security vulnerabilities study on Tubbs Island to evaluate potential security risks that results in the development and implementation of a site specific security plan.	2 nd Qtr
		Revise employee on-boarding program so that it meets the intent of required regulatory compliance that results in new hires adjusting to the social and performance aspects of the District, and in doing so quickly becoming productive, contributing members of the organization. - Safety orientation - District immersion brief - Performance expectations	4 th Qtr
		In coordination with affected departments, develop and grow the programmatic and tactical capabilities of the Districts Rescue Response Team that results in regulatory compliance and safe employment of this high risk competency. - Program administration - Robust training - Equipment maintenance	3 rd Qtr
		In coordination with lead staff, complete LHMP audit to evaluate and update the Districts mitigation plan that results in assessing the Districts overall progress utilizing qualitative and quantitative performance data.	1 st Qtr
		Develop and implement computer based training for the District's contractor safety program that results in	3 rd Qtr

ACTION PLAN			
Goal (What)		Action Steps (How)	Due Date (When)
		standardized training for outside contractors ensuring that regulatory compliance with multi-employer worksites is achieved.	
	YEAR TWO	Develop and implement a competency based training program specific to classifications and skill sets that results in standardized training and known capabilities to achieve desired performance metrics. - Collection System Worker I, II, III, IV - Operator I, II, III, IV, V - Mechanical Technician I, II, III - Etc.	4 th Qtr
		In coordination with Human Resources develop and implement a comprehensive employee professional development program that results in effective succession planning, knowledge sharing, and depth of capability within the District.	3 rd Qtr
		Coordinate with the required outside resources on the Districts LHMP mitigation strategy to begin the comprehensive process to create the 2022 plan update that results in a revision capturing the changes in development, progress, efforts, and priorities.	2 nd Qtr
		Leverage technology in the operations of the Districts enterprise safety, security and loss prevention programs resulting in a more efficient execution, and employment of resources in reaching the programs desired objectives. - SOPS, Claims, Inspections, Record Keeping, etc.	3 rd Qtr
	YEAR THREE	Establish and implement a comprehensive emergency management program to include operational and business continuity that results in effectively meeting the four phases of emergency management. - Mitigation - Preparedness - Response - Recovery	4 th Qtr
		Conduct LHMP five year review and revision requirement that results in a revised five year plan with established priorities. - Consult with scientists, hazard experts - Solicit input from stakeholders - Incorporate lessons learned from disasters that have occurred since last plan	2 nd Qtr
		Continue to leverage technology in the operations of the Districts enterprise safety, security and loss prevention programs that results in an integrated compliance tool within the computerized maintenance management system. - Inspections	3 rd Qtr

ACTION PLAN			
Goal (What)		Action Steps (How)	Due Date (When)
		- Job hazard analysis - Standard operating procedures	
	YEAR FOUR	Perform comprehensive review of the Districts safety and wellness incentive program that results in ensuring the program is meeting the desired objectives. - Reduction in injuries - Reduction in incidents - Changes in unsafe behavior	3 rd Qtr
		Submit revised LHMP through regulatory approval channels (CAL/OES, FEMA, etc.) that results in an updated published five year plan.	1 st Qtr

Accomplishments and Goals

Administration

Accomplishments:

- Facilitated a successful Proposition 218 Protest hearing.
- Achieved the Special District Leadership Foundation (SDLF) District Transparency Certificate of Excellence
- Facilitated a Goal Setting Session with the Board of Trustees
- Updated the District's Records Disclosure and Retention Policy
- Began the process of reviewing, cleaning up and centralizing physical records
- Updated and consolidated departmental SOPs to increase accuracy and consistency throughout Administrative Services
- Monitored and maintained regulatory compliance with the Brown Act and the Public Records Act
- Supported the administration of the District's Upper Lateral Program
- Managed and facilitated Districtwide move of records to SharePoint-based Intranet, which meets regulatory requirements of record-keeping in a "Trusted System."

Goals:

- Comprehensive review of the District Code
- Complete review and cleanup of District's physical records
- Move of archive records offsite to secure for disaster recovery
- Continue to increase participation in the Employee Awards and Recognition Program
- Continued expansion and centralization of administrative support to District departments.

Environmental Services

Accomplishments:

- Maintained compliance with Wastewater NPDES permit
- Administered the biosolids beneficial reuse program at Tubbs Island
- Renewed the Wastewater NPDES permit
- Active participation in regional groups (BACWA, BASMAA and BABC)

Goals:

- Continued compliance with Stormwater and Wastewater NPDES permits
- Explore possible expansions to the Tubbs Island beneficial reuse program
- Phased implementation of TNI for District laboratory, as required by ELAP
- Partner with the City of Vallejo to coordinate stormwater compliance activities
- Implement LIMS to modernize District laboratory operations
- Develop methods for nutrients testing to support wastewater operations

Engineering

Accomplishments:

- Completed projects in the 10-year Capital Improvement Program
- Bid and award of the Mare Island Sewer and Water Main Replacement Project
- Created a competitive bid environment through online plan room and remaining Engineering constructed projects in 2018 maintained a change order percentage of less than 1%
- Streamline and improve development process by working cooperatively with the City of Vallejo
- Coordinated with Lennar Mare Island to develop a storm drain master assessment for three stormwater basins on Mare Island
- Effectively managed several urgent projects including: Sereno Drive Sewer Rehabilitation, Headworks Deck Replacement, Bio Tower Cover Removal and Drive Rehabilitation, and Sodium Hypochlorite Tank Replacement
- Managed Upper Lateral/Lower Lateral programs

Goals:

- Update of Engineering Standards
- Update of bidding documents and practices
- Complete projects in 10-year Capital Improvement Program
- Completion of Mare Island Sewer and Water Main Replacement Project
- Support Asset Management
- Complete Pump Station and Force Main Master Plan
- Reduce Inflow/Infiltration and blending

Finance

Accomplishments:

- Developed the Wastewater Rate Study/Long-Term Financial Plan (first since 2000) designed to fund operations, maintenance, capital improvement program and reserves; successfully navigated customer outreach and communication; and implemented first year of rates from the five-year rate plan.
- Refined the Property Tax Billing process with assistance from a consultant (Raftelis) enhancing revenue through better parcel identification.
- Developed and implemented ExecuTime Advanced Scheduler to facilitate electronic staff resource planning and workflow.

- Completed recruitments of two positions to significantly elevate the professionalism and proficiency of the Finance team.
- Implemented name change on a variety of legal documents including financial accounts and employee benefit plans.
- Continued to serve as a member of the State Controller's Office Local Government Advisory on Financial Reporting and appointed as member of the California Special District's Association Fiscal Committee to represent special district interests.

Goals:

- Update of Wastewater Long-Term Financial Plan including new capital project funding assessment and options
- Identify, evaluate and recommend award of a new Enterprise Resource Planning (ERP) system to include finance, payroll, capital assets, inventory and human resources
- Complete Stormwater Rate Study and Long-Term Financial Plan
- Provide monthly budget versus actual reports to departments
- Submit the biennial budget for the GFOA's Distinguished Budget Presentation Award Program
- Support Asset Management

Field Operations

Accomplishments:

- SSMP Update – Phase 2 – SOP Development and Flow Charting.
- Infor Development (CMMS)
- Backflow prevention device program development
- SRM Overflow Tracking Implementation
- Asset Management – Collection System - phase 1
- Scheduled Periodic Maintenance Cleaning – 257 Miles of Sanitary Sewer System
- CCTV / Jet Inspect – 120 Miles of Sanitary Sewer Main
- Kept Overflows at a low rate of 16 overflows for the year
- 857 Service Calls resolved.
- 4900+ Underground Service Alerts Marked
- Inspected and/or Clean 1800 Catch Basins

Goals:

- Sanitary Sewer Maintenance Plan (SSMP) Update – Phase 1
- SOP/Training program development
- Infor – Computerized Maintenance Management System (CMMS) upgrade/development
- Performance standards development
- RBPMS Phase 2 implementation
- Asset management development – Phase 2 and 3

Operations and Maintenance

Accomplishments:

- District Asset Management (75%)
- Plant Process Optimization (50%)
 - o Benchmark
 - o Plant capacity
- DCS Upgrade (90%)
- Mare Island Pump Station (MIPS)& Plant #3water Preliminary Design
- Sears Point Pump Station Mechanical/Electrical Upgrade
- Plant Flow Splitter 4 Valve Actuator replacement
- Plant Lighting Project (Energy Efficiency/Conservation)
- District Network Reliability
 - o Security
 - o Storage
 - o WiFi
 - o Mobility
- District CMMS (Avantis) upgrade
- District Phone System Upgrade
- Secondary Clarifiers Cathodic Protection System Replacement
- Facilities Maintenance Fabrication Shop relocation/Upgrade
- District Co-Gen and Switch Gear Controls Upgrade
- PCD/SRM office relocation and Upgrade
- District Facilities Maintenance program
- HVAC Maintenance Program
- Various HVAC replacement
- Various Facilities Roof maintenance/Replacement
- Various Facilities exterior coating/ weather protection

Goals:

- District Asset Management
- CIP-Renew /Replacement program
- Maintenance Master Plan
- Plant Process Optimization
 - o Plant process calibration & capacity
 - o Nutrient Removal Roadmap
- Odor System assessment
- Headworks Assessment/Improvement
 - o Mechanical/Electrical
 - o Grounds
- Primary Treatment Mechanical & Electrical system reliability
- Mare Island Pump Station (MIPS)& Plant #3water/Secondary Flow Bypass Design
- Secondary Treatment System reliability
 - o Recycle Pumps rehab (mechanical/electrical)
 - o Intermediate Pumps rehab (mechanical/electrical)

- Solids Dewatering Facilities Rehab
 - o Interior coating/corrosion
 - o Polymer system replacement
 - o Equipment renew & replacement
- Plant Emergency System Upgrade
 - o LNG Control upgrade
 - o Alternative Energy roadmap
- District Network Reliability
- DCS Upgrade
- Pump stations and Force Main assessment and upgrade
- Sears Point Pump Station ground and system assessment and Improvement

Safety and Risk Management

Accomplishments:

- Standardized department oversight of vendor insurance through automated reports
- Transitioned District to a more robust training software; ensuring quality training along with compliance.
- Developed and implemented a comprehensive wellness program that promotes health and safety as a lifestyle practice through gym reimbursement, trainings, awareness, and participation, with the overarching goal of preventing workplace injuries

Goals:

- Continue to establish an effective on-line safety training and documentation program to better conduct, track, and schedule training and certifications
- Implement a more comprehensive commercial drivers program to ensure compliance with Federal regulations and provide the proper employer program oversight
- Add value to employee awareness through trainings and standard operating techniques of soft tissue and accumulative injury prevention and maintenance
- Develop and implement an effective and comprehensive facilities security program that protects assets and personnel.

Appendix E – Financial Policies

Investment Policies

Revenue and Accounts Receivable Policies

Budget and Capital Outlay Policies

Reserve Policies

Debt Policies

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Investment Policy Guidelines of the Vallejo Flood and Wastewater District



Approved by the Board of Trustees on June 9, 2020

Prepared by the Finance Department

[June 2021 update will be included after Board of Trustees approval.]

Investment Policy Guidelines Vallejo Flood and Wastewater District

A. Policy

It is the policy of the Vallejo Sanitation & Flood Control District to invest public funds in a prudent manner which will preserve principal, maintain liquidity to meet the daily cash flow demands of the District and achieve a reasonable rate of return while conforming to all state and local statutes governing the investment of public funds.

B. Scope

This investment policy applies to all moneys (surplus financial assets) and investment activities of the District. These moneys are accounted in the monthly financial reports and the comprehensive annual financial report of District which are under the Treasurer's scope of control unless specifically exempted by statute or resolution. The investment of bond proceeds in the custody of a Trustee shall be governed in accordance with the investment guidelines contained in the bond indenture.

C. Prudence

The standard of prudence to be used by investment officials in the management of District moneys shall be the Prudent Investor Standard as authorized under Section 53600.3 of the California Government Code which shall be applied in the context of managing all aspects of the overall portfolio. Pursuant to California Government Code, all persons authorized to make investment decisions on behalf of the District are trustees and therefore fiduciaries subject to the Prudent Investor Standard:

"...all governing bodies of local agencies or persons authorized to make investment decisions on behalf of those local agencies investing public funds pursuant to this chapter are trustees and therefore fiduciaries subject to the prudent investor standard. When investing, reinvesting, purchasing, acquiring, exchanging, selling, or managing public funds, a trustee shall act with care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the Agency, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the Agency. Within the limitations of this section and considering individual investments as part of an overall strategy, investments may be acquired as authorized by law."

D. Objective

The objective of this policy is to provide guidance to invest District funds in accordance with California Government Code Section 53600.5 which states that when investing, reinvesting, purchasing, acquiring, exchanging, selling, or managing public funds, the primary objective of a trustee shall be to safeguard the principal of the funds under its control. The secondary objective shall be to meet liquidity needs of the depositor. The third objective shall be to achieve a return on the funds under its control. Using sound treasury management principles, this policy seeks to

achieve, in order of priority:

1. Safety: Safety of principal is the foremost objective of the investment program. Investments of the District shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio.
2. Liquidity: The District's investment portfolio will maintain sufficient liquidity to enable the District to meet all operating requirements which might be reasonably anticipated.
3. Return on Investments: The District's investment portfolio shall be designed with the objective of attaining a rate of return commensurate with the District's investment risk constraints and the cash flow characteristics of the portfolio.

E. Delegation of Authority

Pursuant to California Government Code Section 53607, management responsibility for the investment program is hereby delegated to the District Treasurer, who shall establish written procedures for the operation of the investment program consistent with this investment policy. This responsibility includes authority to select brokers, establish safekeeping accounts, enter into wire transfer agreements, banking service contracts, and collateral/depository agreements. The Treasurer shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the activities of subordinate officials. This delegation shall be for no greater than one year and may be revoked at any time, or, upon review, renewed each year.

The District may engage the services of one or more external investment advisers, who are registered under the Investment Advisers Act of 1940, to assist in the management of the District's investment portfolio in a manner consistent with the District's objectives. External investment advisers may be granted discretion to purchase and sell investment securities in accordance with this investment policy.

The District's overall investment program shall be designed and managed with a degree of professionalism that is worthy of the public trust. The District recognizes that in a diversified portfolio, occasional measured losses may be inevitable and must be considered within the context of the overall portfolio's return and the cash flow requirements of the District.

F. Ethics and Conflicts of Interest

Officers and employees involved in the investment process shall refrain from any personal business activity that could conflict with the proper execution and management of the investment program or which could impair their ability to make impartial investment decisions for the District. Additionally, the Treasurer is required to annually file applicable financial disclosures as required by the Fair Political Practices Commission (FPPC) and/or the District's Conflict of Interest Code.

G. Authorized Financial Dealers and Institutions

The District shall transact business only with banks, associations, and with broker/dealers licensed by the State of California.

In accordance with Section 53601.5, institutions eligible to transact investment business with the District include:

- Primary government dealers as designated by the Federal Reserve Bank and non-

primary government dealers.

- Nationally or state-chartered banks.
- The Federal Reserve Bank.
- Direct issuers of securities eligible for purchase.

Investment staff shall investigate dealers who wish to do business with the District to determine if they are adequately capitalized, have pending legal action against the firm or the individual broker and make markets in the securities appropriate to the District's needs.

The District Treasurer shall annually send a copy of the current Investment Policy to all broker/dealers approved to do business with the District. Confirmation of receipt of this policy shall be considered evidence that the dealer understands the District's Investment Policy and intends to sell the District only appropriate investments authorized by this Investment Policy.

Selection of financial institutions and broker/dealers authorized to engage in transactions will be at the sole discretion of the District, except where the District utilizes an external investment adviser in which case the District may rely on the adviser for selection.

Public deposits will be made only in qualified public depositories as established by State law. Deposits will be insured by the Federal Deposit Insurance Corporation, or, to the extent the amount exceeds the insured maximum, will be collateralized in accordance with State law.

Selection of broker/dealers used by an external investment adviser retained by the District will be at the sole discretion of the adviser. Where possible, transactions with broker/dealers shall be selected on a competitive basis and their bid or offering prices shall be recorded. If there is no other readily available competitive offering, best efforts will be made to document quotations for comparable or alternative securities. When purchasing original issue instrumentality securities, no competitive offerings will be required as all dealers in the selling group offer those securities at the same original issue price.

H. Use of External Professional Investment Manager

The District may employ the services of a professional investment manager to assist in the management of the District's investment portfolio. Such manager may be granted the discretion to purchase and sell investment securities in accordance with this Investment Policy. A professional investment manager shall only be retained by written agreement with the District, and approved by the Board of Trustees, and must contractually agree to conform to the District's Investment Policy and all provisions of governing law and collateralization and other requirements contained herein.

I. Authorized Investments

The District's investments are governed by California Government Code, Sections 53600 et seq. Within the investments permitted by the Code, the District seeks to further restrict eligible investments to the guidelines listed below. In the event a discrepancy is found between this policy and the Code, the more restrictive parameters will take precedence. Percentage holding limits and credit quality minimums listed in this section apply at the time the security is purchased.

Any investment currently held at the time the policy is adopted which does not meet the new policy guidelines can be held until maturity, and shall be exempt from the current policy. At the time of the

investment's maturity or liquidation, such funds shall be reinvested only as provided in the current policy.

An appropriate risk level shall be maintained by primarily purchasing securities that are of high quality, liquid, and marketable. The portfolio shall be diversified by security type and institution to avoid incurring unreasonable and avoidable risks regarding specific security types or individual issuers.

MUNICIPAL SECURITIES include obligations of the District, the State of California and any local agency within the State of California, provided that the securities are rated in a rating category of "A" or its equivalent or better by at least one nationally recognized statistical rating organization ("NRSRO"). No more than 5% of the portfolio may be invested in any single issuer. No more than 30% of the portfolio may be in Municipal Securities. The maximum maturity does not exceed five (5) years.

MUNICIPAL SECURITIES (REGISTERED TREASURY NOTES OR BONDS) of any of the other 49 states in addition to California, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by a state or by a department, board, agency, or authority of any of the other 49 states, in addition to California. The securities are rated in a rating category of "A" or its equivalent or better by at least one "NRSRO". No more than 5% of the portfolio may be invested in any single issuer. No more than 30% of the portfolio may be in Municipal Securities. The maximum maturity does not exceed five (5) years.

U.S. TREASURIES and other government obligations for which the full faith and credit of the United States are pledged for the payment of principal and interest. There are no limits on the dollar amount or percentage that the District may invest in U.S. Treasuries, provided that the maximum maturity is five (5) years.

FEDERAL AGENCIES or United States Government-Sponsored Enterprise obligations, participations, or other instruments, including those issued by or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises. There are no limits on the dollar amount or percentage that the District may invest in Federal Agency or Government-Sponsored Enterprises (GSEs), provided that no more than 25% of the portfolio may be invested in any single Agency/GSE issuer. The maximum maturity does not exceed five (5) years. The maximum percent of federal agency callable securities in the portfolio will be 20%.

BANKERS' ACCEPTANCES: As provided in Government Code Section 53601 (g), up to 40% of the District's moneys may be invested in Bankers Acceptances (that are eligible for purchase by the Federal Reserve System), although no more than 5% of the moneys may be invested in Bankers Acceptances of any one commercial bank. Additionally, the maturity period of any Bankers Acceptance shall not exceed 180 days. Eligible bankers' acceptances must be issued by institutions which have short-term debt obligations rated "A-1" or its equivalent or better by at least one NRSRO; or long-term debt obligations which are rated in a rating category of "A" or its equivalent or better by at least one NRSRO.

COMMERCIAL PAPER: As authorized in Government Code Section 53601 (h), up to 25% of the

District's moneys may be invested in "prime" commercial paper of quality of the highest ranking or of the highest letter and number rating provided by a NRSRO. The issuing corporation must meet all of the following conditions in either paragraph (1) or paragraph (2):

(1) The entity meets the following criteria:

- a. Is organized and operating in the United States as a general corporation.
- b. Has total assets in excess of five hundred million dollars (\$500,000,000).
- c. Has debt other than commercial paper, if any, that is rated "A" or its equivalent or higher by an NRSRO.

(2) The entity meets the following criteria:

- a. Is organized within the United States as a special purpose corporation, trust, or limited liability company.
- b. Has program-wide credit enhancements including, but not limited to, overcollateralization, letters of credit, or a bond.
- c. Has commercial paper that is rated "A-1" or higher, or the equivalent, by an NRSRO.

The District shall not purchase more than 10% of the outstanding commercial paper of any one issuer. No more than 5% of the portfolio may be invested in a single commercial paper issuer. Maturities may not exceed 270 days.

NEGOTIABLE CERTIFICATES OF DEPOSIT OR BONDS (NCD): As authorized in Government Code Section 53601 (i), up to 30% of District's moneys may be invested in negotiable certificates of deposit issued by a nationally or state-chartered bank, or a savings or federal association, a state or federal credit union, or by a federally-licensed or state-licensed branch of a foreign bank. The maturity period for this investment vehicle may not exceed five years unless approved by the Board of Trustees. The amount of the NCD insured up to the FDIC limit does not require any credit ratings. Any amount above the FDIC insured limit must be issued by institutions which have short-term debt obligations rated "A-1" or its equivalent or better by at least one NRSRO; or long-term obligations rated in a rating category of "A" or its equivalent or better by at least one NRSRO. No more than 5% of the portfolio may be invested in any single issuer.

MEDIUM-TERM CORPORATE NOTES: As authorized in Government Code Section 53601 (k), up to 30% of District's moneys may be invested in medium term corporate notes. Maturities may not exceed five years. The issuing corporation must be organized and operating within the U.S. or be a depository institution licensed by the United States or any state and operating within the United States, and must be rated in a rating category of "A" or its equivalent or better by an NRSRO. No more than 5% of the portfolio may be invested in any single issuer.

MUTUAL FUNDS and MONEY MARKET MUTUAL FUNDS. Mutual Funds are referred to in California Government Code Section 53601(l), as "shares of beneficial interest issued by diversified management companies." Mutual Funds and Money Market Mutual Funds that are registered with the Securities and Exchange Commission under the Investment Company Act of 1940 are authorized investments for funds subject to the following provisions:

- (1) **Mutual Funds** that invest in the securities and obligations as authorized under California Government Code Section 53601(a) to (k) and (m) to (q) inclusive and that

meet either of the following criteria:

- a. Attained the highest ranking or the highest letter and numerical rating provided by not less than two (2) NRSROs; or
- b. Have retained an investment advisor registered or exempt from registration with the Securities and Exchange Commission with not less than five years' experience investing in the securities and obligations authorized by California Government Code Section 53601 and with assets under management in excess of \$500 million.
- c. No more than 10% of the total portfolio may be invested in Mutual Funds.

(2) **Money Market Mutual Funds** registered with the Securities and Exchange Commission under the Investment Company Act of 1940 and issued by diversified management companies and meet either of the following criteria:

- a. Have attained the highest ranking or the highest letter and numerical rating provided by not less than two (2) NRSROs; or
- b. Have retained an investment advisor registered or exempt from registration with the Securities and Exchange Commission with not less than five years' experience managing money market mutual funds with assets under management in excess of \$500 million.
- c. No more than 20% of the total portfolio may be invested in Money Market Mutual Funds.

All Money Market Mutual Funds must be compliant with Rule 2a-7 of the Investment Company Act of 1940.

- No more than 20% of the total portfolio may be invested in these securities.

TIME CERTIFICATES OF DEPOSIT: As authorized in Government Code Section 53630 and following, the District may invest moneys in non-negotiable, fixed-term Certificates of Deposit collateralized in accordance with the Government Code requirements. In order to secure such deposits, an institution shall maintain in the collateral pool securities having a market value of at least 10% in excess of the total amount deposited (50% in excess of the total amount of deposits secured by promissory notes secured by first mortgages and first trust deeds). The District is permitted to waive the first \$250,000 of collateral security for such deposits if the institution is insured pursuant to federal law. There are no special portfolio limits on the amount or maturity for this investment vehicle. Time Certificates of Deposit may be purchased from banks, associations, federally insured credit unions, and federally insured industrial loan companies which meet the requirements set forth in the Government Code.

COLLATERALIZED BANK DEPOSITS. District's deposits with financial institutions will be collateralized with pledged securities per California Government Code, Section 53651. There are no limits on the dollar amount or percentage that the District may invest in collateralized bank deposits.

REPURCHASE AGREEMENTS collateralized with securities authorized under California Government Code, maintained at a level of at least 102% of the market value of the Repurchase Agreement. There are no limits on the dollar amount or percentage that the District may invest, provided that securities used as collateral for Repurchase Agreements will be delivered to an acceptable third party custodian. Repurchase Agreements are subject to a Master Repurchase Agreement between the District and the provider of the repurchase agreement. The Master

Repurchase Agreement will be substantially in the form developed by the Securities Industry and Financial Markets Association (SIFMA). The maximum maturity does not exceed one (1) year.

ASSET-BACKED, MORTGAGE-BACKED, MORTGAGE PASS-THROUGH SECURITIES, AND COLLATERALIZED MORTGAGE OBLIGATIONS FROM ISSUERS NOT ISSUED BY THE U.S. GOVERNMENT AND ITS FEDERAL AGENCIES, provided that the securities are rated in a rating category of “AA” or its equivalent or better by a NRSRO. No more than 20% of the total portfolio may be invested in these securities. No more than 5% of the portfolio may be invested in any single Asset-Backed or Commercial Mortgage security issuer. The maximum legal final maturity does not exceed five (5) years.

SUPRANATIONALS, provided that issues are US dollar denominated senior unsecured unsubordinated obligations issued or unconditionally guaranteed by the International Bank for Reconstruction and Development, International Finance Corporation, or Inter-American Development Bank. The securities must be rated in a rating category of “AA” or its equivalent or better by a NRSRO. No more than 30% of the total portfolio may be invested in these securities. No more than 10% of the portfolio may be invested in any single issuer. The maximum maturity does not exceed five (5) years.

Local Agency Investment Fund (LAIF): As authorized by Government Code Section 16429.1, the District may invest in the Local Agency Investment Fund, a pooled investment money market fund established by the State of California and managed by the California State Treasurer’s Office. The District is a current participant in this fund.

J. Prohibited Investments

The District shall not invest any moneys, pursuant to Government Code 53601.6 or pursuant to Article 2 (commencing with Section 53630), in inverse floaters, range notes, mortgage- derived, or interest-only strips that are derived from a pool of mortgages. In addition, the District shall not invest in any security that could result in zero interest accrual if held to maturity. Trading securities for the sole purpose of speculating on the future direction of interest rates is prohibited. Purchasing or selling securities on margin is prohibited. The use of reverse repurchase agreements, securities lending or any other form of borrowing or leverage is prohibited. The purchase of foreign currency denominated securities is prohibited.

K. Social Responsibility

Investment of funds should be guided by the following socially responsible investment goals when investing in corporate securities and depository institutions. Investments should be made in compliance with these goals to the extent that such investments achieve substantially equivalent safety, liquidity and yield compared to investments permitted by California state law.

The District shall seek opportunities for investing in companies that have a positive impact on the environment and fair workplace practices. Investments are encouraged in entities that support equality of rights, regardless of sex, race, religion, age, disability or sexual orientation. No investment is to be made in a company that receives more than 51 percent of its gross revenues from the production or manufacture of fossil fuels, weapons manufacturing, cigarettes, alcohol or gaming products

L. Investment Pools

The Treasurer shall have a thorough understanding of the operational areas listed below for each pool and/or fund prior to investing, and on a continual basis.

- A description of eligible investment securities, and a written statement of investment policy and objectives.
- A description of interest calculations and how interest is distributed, and how gains and losses are treated.
- A description of how the securities are safeguarded (including the settlement processes), and how often the securities are priced and the program is audited.
- A description of who may invest in the program, how often, and the permissible size of deposit and withdrawal.
- A schedule for receiving statements and portfolio listings.
- Whether reserves, retained earnings, etc. are utilized by the pool/fund.
- A fee schedule, and when and how it is assessed.
- Whether the pool/fund is eligible for bond proceeds and/or whether it will accept such proceeds.

M. Collateral Requirements

Collateral is required for investments in certificates of deposit. In order to reduce market risk, the collateral level will be at least 102% of market value of principal and accrued interest.

The only securities acceptable as collateral shall be direct obligations which are fully guaranteed as to principal and interest by the United States Government or any agency or government sponsored enterprise of the United States.

Collateral must be held in the District's name by an independent third party with whom the District has a current custodial agreement. A clearly marked evidence of ownership (safekeeping receipt) must be supplied to the District.

N. Safekeeping and Custody

To protect against fraud or embezzlement or losses caused by collapse of an individual securities dealer, all securities owned by the District shall be held in safekeeping by a third party custodian, acting as agent for the District under the terms of a custody agreement executed by the Treasurer. All security transactions will settle delivery vs. payment (DVP) through the District's safekeeping agent. Securities purchased from brokers/dealers shall be held in third party safekeeping by the trust department of the District's main bank, or by another third party trustee designated by the Treasurer.

Securities held in custody for the District shall be independently audited annually to verify investment holdings.

O. Delivery

The purchase of an eligible security shall require delivery of the securities to the District, including those purchased for the District by financial advisors, consultants, or managers using the District's moneys, by book entry, physical delivery, or by third party custodial agreement. The transfer of securities to the counter party bank's customer book entry account may be used for book entry

delivery. A counter party bank's trust department or separate safekeeping department may be used for the physical delivery of the security if it is held in the District's name.

P. Risk Management and Diversification

Mitigating Credit Risk in the Portfolio

Credit risk is the risk that a security or a portfolio will lose some or all its value due to a real or perceived change in the ability of the issuer to repay its debt. The District will mitigate credit risk by adopting the following strategies:

- The diversification requirements included in the "Authorized Investments" section of this policy are designed to mitigate credit risk in the portfolio.
- No more than 5% of the total portfolio may be deposited with or invested in securities issued by any single issuer with the exception of US Treasuries, Federal Agencies, LAIF, mutual funds, money market funds, or supranational securities, or unless otherwise specified in this policy.
- The District may elect to sell a security prior to its maturity and record a capital gain or loss in order to manage the quality, liquidity or yield of the portfolio in response to market conditions or District's risk preferences.
- If the credit ratings of any security owned by the District are downgraded to a level below the quality required by this investment policy, it will be the District's policy to review the credit situation and make a determination as to whether to sell or retain such securities in the portfolio.
 - If a security is downgraded, the Treasurer will use discretion in determining whether to sell or hold the security based on its current maturity, the economic outlook for the issuer, and other relevant factors.
 - If a decision is made to retain a downgraded security in the portfolio, its presence in the portfolio will be monitored and reported monthly to the District Board.

MITIGATING MARKET RISK IN THE PORTFOLIO

Market risk is the risk that the portfolio value will fluctuate due to changes in the general level of interest rates. The District recognizes that, over time, longer-term portfolios have the potential to achieve higher returns. On the other hand, longer-term portfolios have higher volatility of return. The District will mitigate market risk by providing adequate liquidity for short-term cash needs, and by making longer-term investments only with funds that are not needed for current cash flow purposes.

The District further recognizes that certain types of securities, including variable rate securities, securities with principal paydowns prior to maturity, and securities with embedded options, will affect the market risk profile of the portfolio differently in different interest rate environments. The Agency, therefore, adopts the following strategies to control and mitigate its exposure to market risk:

- The District will maintain a minimum of six months of budgeted operating expenditures in short term investments to provide sufficient liquidity for expected disbursements.
- The maximum stated final maturity of individual securities in the portfolio will be five (5)

years, except as otherwise stated in this policy.

- The duration of the portfolio will generally be approximately equal to the duration (typically, plus or minus 20%) of a Market Benchmark, an index selected by the District based on the District's investment objectives, constraints and risk tolerances.

Q. Maximum Maturity

The District will attempt to match its investments with anticipated cash flow requirements whenever possible. Pursuant to California Government Code Section 53601, the District will not invest in any security with a final maturity of more than five years from the date of purchase, unless the Board of Trustees has granted express authority to make that investment at least three months before the investment is made.

R. Internal Control

Separation of functions between the receipt and transfer of funds is designed to provide an ongoing internal review to prevent the potential for converting assets or concealing transactions. Existing procedures require all wire transfers to be approved by the Finance Director/Treasurer or District Manager. Proper documentation obtained from confirmation and cash disbursement wire transfers is required for each investment transaction. Timely bank reconciliation is conducted to ensure proper handling of all transactions. The investment portfolio and all related transactions are reviewed and balanced to appropriate general ledger accounts by the Finance Department on a monthly basis. All employees involved in the investment of District moneys must be properly bonded. District shall receive confirmations from the financial institutions. All investment confirmations received from financial institutions shall be reviewed for accuracy and filed. The District investment accounting software package shall meet all legal reporting requirements. An independent confirmation by an external auditor shall be conducted annually to review internal control, account activity and compliance with policies and procedures.

S. Other Guidelines

1. **Pooled Cash:** Cash for all District enterprise funds are consolidated into one general bank account and one payroll account (except bond proceeds, retirement portfolios, and deferred compensation moneys) and invested on a pooled concept basis.
2. **Liquidity:** Liquidity refers to the ability to convert investment holdings to cash immediately with minimal loss of principal or accrued interest. This quality is important when the need for unexpected moneys suddenly occurs. The secondary duty of the Treasurer is to ensure that the liquidity needs of the District are met.
3. **Selling Securities Prior to Maturity:** It is the District's intent, at the time of purchase, to hold all investments until maturity. However, investments may be sold prior to maturity for cash flow purposes or to take advantage of principal appreciation. Generally, losses are acceptable on a sale before maturity if the earnings from the reinvested proceeds will exceed the income that would have been generated by the old investment considering any capital loss or foregone interest on the original investment.
4. **Time Deposit Placement:** Time deposits (insured and collateralized certificates of deposit) are not placed with banks, credit unions and/or associations unless an office is maintained in the State of California.

5. **TCD Evaluation:** Time Certificates of Deposit (TCD) are evaluated in terms of FDIC coverage. For deposits in excess of the insured maximum of \$250,000 approved levels of collateral at full market value are required, as prescribed in the California Government Code.
6. **Security Marketability:** The marketability (salability) of a security is considered at the time of purchase, as the security may have to be sold prior to maturity in order to meet unanticipated cash demands.
7. **Cash Flow Requirements Used to Establish Maturity:** Projected cash flow requirements and the overall weighted average maturity of the District's investment portfolio are the primary factors to be used in determining investment maturity terms.

T. Strategy

Strategy refers to the ability to manage the District's financial resources in the most advantageous manner.

1. **Economic Forecasts:** The Treasurer obtains economic forecasts periodically from investment professionals to assist with the formulation of an investment strategy for the District.
2. **Developing the Investment Plan:** The Treasurer should anticipate changes in interest rates, inflation, monetary and/or fiscal policy, and other economic indicators and evaluate their impact on the District's portfolio.

U. Performance Standards

The investment portfolio shall be designed to attain a market-average rate of return throughout budgetary and economic cycles, taking into account the District's risk constraints, the cash flow characteristics of the portfolio, and state and local laws, ordinances or resolutions that restrict investments.

The Treasurer shall monitor and evaluate the portfolio's performance relative to the chosen market benchmark(s), which will be included in the Treasurer's monthly report. The Treasurer shall select an appropriate, readily available index to use as a market benchmark.

V. Reporting

Monthly Report

Monthly transaction reports will be submitted by the Treasurer to the Board of Trustees in accordance with California Government Code Section 53607.

Annual Policy Approval

The Treasurer shall submit the investment policy annually to the Board, disclose the sources of market value information, confirm compliance with the guidelines or explain the differences, and affirm the agency's ability to meet its obligations over the next six months.

W. Investment Policy Adoption

The District's investment policy guidelines shall be adopted by resolution as modifications are required due to changing economic conditions and legislative changes affecting public agency investment practices.

GLOSSARY OF INVESTMENT TERMS

AGENCIES. Shorthand market terminology for any obligation issued by a *government-sponsored entity (GSE)*, or a *federally related institution*. Most obligations of GSEs are not guaranteed by the full faith and credit of the US government. Examples are:

FFCB. The Federal Farm Credit Bank System provides credit and liquidity in the agricultural industry. FFCB issues discount notes and bonds.

FHLB. The Federal Home Loan Bank provides credit and liquidity in the housing market. FHLB issues discount notes and bonds.

FHLMC. Like FHLB, the Federal Home Loan Mortgage Corporation provides credit and liquidity in the housing market. FHLMC, also called “FreddieMac” issues discount notes, bonds and mortgage pass-through securities.

FNMA. Like FHLB and FreddieMac, the Federal National Mortgage Association was established to provide credit and liquidity in the housing market. FNMA, also known as “FannieMae,” issues discount notes, bonds and mortgage pass-through securities.

GNMA. The Government National Mortgage Association, known as “GinnieMae,” issues mortgage pass-through securities, which are guaranteed by the full faith and credit of the US Government.

PEFCO. The Private Export Funding Corporation assists exporters. Obligations of PEFCO are not guaranteed by the full faith and credit of the US government.

TVA. The Tennessee Valley Authority provides flood control and power and promotes development in portions of the Tennessee, Ohio, and Mississippi River valleys. TVA currently issues discount notes and bonds.

ASSET BACKED SECURITIES. Securities supported by pools of installment loans or leases or by pools of revolving lines of credit.

AVERAGE LIFE. In mortgage-related investments, including CMOs, the average time to expected receipt of principal payments, weighted by the amount of principal expected.

BANKER’S ACCEPTANCE. A money market instrument created to facilitate international trade transactions. It is highly liquid and safe because the risk of the trade transaction is transferred to the bank which “accepts” the obligation to pay the investor.

BENCHMARK. A comparison security or portfolio. A performance benchmark is a partial market index, which reflects the mix of securities allowed under a specific investment policy.

BROKER. A broker brings buyers and sellers together for a transaction for which the broker receives a commission. A broker does not sell securities from his own position.

CALLABLE. A callable security gives the issuer the option to call it from the investor prior to its maturity. The main cause of a call is a decline in interest rates. If interest rates decline, the issuer will likely call its current securities and reissue them at a lower rate of interest.

CERTIFICATE OF DEPOSIT (CD). A time deposit with a specific maturity evidenced by a certificate.

CERTIFICATE OF DEPOSIT ACCOUNT REGISTRY SYSTEM (CDARS). A private placement service that allows local agencies to purchase more than \$250,000 in CDs from a single financial institution (must be a participating institution of CDARS) while still maintaining FDIC insurance coverage. CDARS is currently the only entity providing this service. CDARS facilitates the trading of deposits between the California institution and other participating institutions in amounts that are less than \$250,000 each, so that FDIC coverage is maintained.

COLLATERAL. Securities or cash pledged by a borrower to secure repayment of a loan or repurchase agreement. Also, securities pledged by a financial institution to secure deposits of public monies.

COLLATERALIZED BANK DEPOSIT. A bank deposit that is collateralized at least 100% (principal plus interest to maturity). The deposit is collateralized using assets set aside by the issuer such as Treasury securities or other qualified collateral to secure the deposit in excess of the limit covered by the Federal Deposit Insurance Corporation.

COLLATERALIZED MORTGAGE OBLIGATIONS (CMO). Classes of bonds that redistribute the cash flows of mortgage securities (and whole loans) to create securities that have different levels of prepayment risk, as compared to the underlying mortgage securities.

COLLATERALIZED TIME DEPOSIT. Time deposits that are collateralized at least 100% (principal plus interest to maturity). These instruments are collateralized using assets set aside by the issuer such as Treasury securities or other qualified collateral to secure the deposit in excess of the limit covered by the Federal Deposit Insurance Corporation.

COMMERCIAL PAPER. The short-term unsecured debt of corporations.

COUPON. The rate of return at which interest is paid on a bond.

CREDIT RISK. The risk that principal and/or interest on an investment will not be paid in a timely manner due to changes in the condition of the issuer.

DEALER. A dealer acts as a principal in security transactions, selling securities from and buying securities for his own position.

DEBENTURE. A bond secured only by the general credit of the issuer.

DELIVERY VS. PAYMENT (DVP). A securities industry procedure whereby payment for a security must be made at the time the security is delivered to the purchaser's agent.

DERIVATIVE. Any security that has principal and/or interest payments which are subject to uncertainty (but not for reasons of default or credit risk) as to timing and/or amount, or any security which represents a component of another security which has been separated from other components ("Stripped" coupons and principal). A derivative is also defined as a financial instrument the value of which is totally or partially derived from the value of another instrument, interest rate, or index.

DISCOUNT. The difference between the par value of a bond and the cost of the bond, when the cost is below par. Some short-term securities, such as T-bills and banker's acceptances, are known as discount securities. They sell at a discount from par and return the par value to the investor at maturity without additional interest. Other securities, which have fixed coupons, trade at a discount when the coupon rate is lower than the current market rate for securities of that maturity and/or quality.

DIVERSIFICATION. Dividing investment funds among a variety of investments to avoid excessive exposure to any one source of risk.

DURATION. The weighted average time to maturity of a bond where the weights are the present values of the future cash flows. Duration measures the price sensitivity of a security to changes interest rates.

FEDERAL DEPOSIT INSURANCE CORPORATION (FDIC). The Federal Deposit Insurance Corporation (FDIC) is an independent federal agency insuring deposits in U.S. banks and thrifts in the event of bank failures. The FDIC was created in 1933 to maintain public confidence and encourage stability in the financial system through the promotion of sound banking practices.

FEDERALLY INSURED TIME DEPOSIT. A time deposit is an interest-bearing bank deposit account that has a specified date of maturity, such as a certificate of deposit (CD). These deposits are limited to funds insured in accordance with FDIC insurance deposit limits.

LEVERAGE. Borrowing funds in order to invest in securities that have the potential to pay earnings at a rate higher than the cost of borrowing.

LIQUIDITY. The speed and ease with which an asset can be converted to cash.

LOCAL AGENCY INVESTMENT FUND (LAIF). A voluntary investment fund open to government entities and certain non-profit organizations in California that is managed by the State Treasurer's Office.

LOCAL GOVERNMENT INVESTMENT POOL. Investment pools that range from the State Treasurer's Office Local Agency Investment Fund (LAIF) to county pools, to Joint Powers Authorities (JPAs). These funds are not subject to the same SEC rules applicable to money market mutual funds.

MAKE WHOLE CALL. A type of call provision on a bond that allows the issuer to pay off the remaining debt early. Unlike a call option, with a make whole call provision, the issuer makes a

lump sum payment that equals the net present value (NPV) of future coupon payments that will not be paid because of the call. With this type of call, an investor is compensated, or "made whole."

MARGIN. The difference between the market value of a security and the loan a broker makes using that security as collateral.

MARKET RISK. The risk that the value of securities will fluctuate with changes in overall market conditions or interest rates.

MARKET VALUE. The price at which a security can be traded.

MATURITY. The final date upon which the principal of a security becomes due and payable.

MEDIUM TERM NOTES. Unsecured, investment-grade senior debt securities of major corporations which are sold in relatively small amounts on either a continuous or an intermittent basis. MTNs are highly flexible debt instruments that can be structured to respond to market opportunities or to investor preferences.

MODIFIED DURATION. The percent change in price for a 100-basis point change in yields. Modified duration is the best single measure of a portfolio's or security's exposure to market risk.

MONEY MARKET. The market in which short-term debt instruments (T-bills, discount notes, commercial paper, and banker's acceptances) are issued and traded.

MONEY MARKET MUTUAL FUND. A mutual fund that invests exclusively in short-term securities. Examples of investments in money market funds are certificates of deposit and U.S. Treasury securities. Money market funds attempt to keep their net asset values at \$1 per share.

MORTGAGE PASS-THROUGH SECURITIES. A securitized participation in the interest and principal cash flows from a specified pool of mortgages. Principal and interest payments made on the mortgages are passed through to the holder of the security.

MUNICIPAL SECURITIES. Securities issued by state and local agencies to finance capital and operating expenses.

MUTUAL FUND. An entity which pools the funds of investors and invests those funds in a set of securities which is specifically defined in the fund's prospectus. Mutual funds can be invested in various types of domestic and/or international stocks, bonds, and money market instruments, as set forth in the individual fund's prospectus. For most large, institutional investors, the costs associated with investing in mutual funds are higher than the investor can obtain through an individually managed portfolio.

NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION (NRSRO).

A credit rating agency that the Securities and Exchange Commission in the United States uses for regulatory purposes. Credit rating agencies provide assessments of an investment's risk.

The issuers of investments, especially debt securities, pay credit rating agencies to provide them with ratings. The three most prominent NRSROs are Fitch, S&P, and Moody's.

NEGOTIABLE CERTIFICATE OF DEPOSIT (CD). A short-term debt instrument that pays interest and is issued by a bank, savings or federal association, state or federal credit union, or state-licensed branch of a foreign bank. Negotiable CDs are traded in a secondary market.

PRIMARY DEALER. A financial institution (1) that is a trading counterparty with the Federal Reserve in its execution of market operations to carry out U.S. monetary policy, and (2) that participates for statistical reporting purposes in compiling data on activity in the U.S. Government securities market.

PRUDENT PERSON (PRUDENT INVESTOR) RULE. A standard of responsibility which applies to fiduciaries. In California, the rule is stated as "Investments shall be managed with the care, skill, prudence and diligence, under the circumstances then prevailing, that a prudent person, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of like character and with like aims to accomplish similar purposes."

REPURCHASE AGREEMENT. Short-term purchases of securities with a simultaneous agreement to sell the securities back at a higher price. From the seller's point of view, the same transaction is a reverse repurchase agreement.

SAFEKEEPING. A service to bank customers whereby securities are held by the bank in the customer's name.

SECURITIES AND EXCHANGE COMMISSION (SEC). The U.S. Securities and Exchange Commission (SEC) is an independent federal government agency responsible for protecting investors, maintaining fair and orderly functioning of securities markets and facilitating capital formation. It was created by Congress in 1934 as the first federal regulator of securities markets. The SEC promotes full public disclosure, protects investors against fraudulent and manipulative practices in the market, and monitors corporate takeover actions in the United States.

SECURITIES AND EXCHANGE COMMISSION (SEC) RULE 15c3-1. An SEC rule setting capital requirements for brokers and dealers. Under Rule 15c3-1, a broker or dealer must have sufficient liquidity in order to cover the most pressing obligations. This is defined as having a certain amount of liquidity as a percentage of the broker/dealer's total obligations. If the percentage falls below a certain point, the broker or dealer may not be allowed to take on new clients and may have restrictions placed on dealings with current client.

STRUCTURED NOTE. A complex, fixed income instrument, which pays interest, based on a formula tied to other interest rates, commodities or indices. Examples include inverse floating rate notes which have coupons that increase when other interest rates are falling, and which fall when other interest rates are rising, and "dual index floaters," which pay interest based on the relationship between two other interest rates - for example, the yield on the ten-year Treasury note minus the Libor rate. Issuers of such notes lock in a reduced cost of borrowing by purchasing interest rate swap agreements.

SUPRANATIONAL. A Supranational is a multi-national organization whereby member states transcend national boundaries or interests to share in the decision making to promote economic development in the member countries.

TOTAL RATE OF RETURN. A measure of a portfolio's performance over time. It is the internal rate of return, which equates the beginning value of the portfolio with the ending value; it includes interest earnings, realized and unrealized gains, and losses in the portfolio.

U.S. TREASURY OBLIGATIONS. Securities issued by the U.S. Treasury and backed by the full faith and credit of the United States. Treasuries are considered to have no credit risk and are the benchmark for interest rates on all other securities in the US and overseas. The Treasury issues both discounted securities and fixed coupon notes and bonds.

TREASURY BILLS. All securities issued with initial maturities of one year or less are issued as discounted instruments and are called Treasury bills. The Treasury currently issues three- and six-month T-bills at regular weekly auctions. It also issues "cash management" bills as needed to smooth out cash flows.

TREASURY NOTES. All securities issued with initial maturities of two to ten years are called Treasury notes and pay interest semi-annually.

TREASURY BONDS. All securities issued with initial maturities greater than ten years are called Treasury bonds. Like Treasury notes, they pay interest semi-annually.

YIELD TO MATURITY. The annualized internal rate of return on an investment which equates the expected cash flows from the investment to its cost.

Revenue and Accounts Receivable Policies of the Vallejo Flood and Wastewater District



Approved by the Board of Trustees on April 14, 2020.

Prepared by the Finance Department

**Revenue and Accounts Receivable Policies
Vallejo Flood and Wastewater District**

A. Purpose of the policy

The purpose of this policy is to provide guidance to staff on the recognition, collection and allocation of District revenues.

B. Property tax revenue

Property tax revenue collected by the District may be used for any legitimate District purpose, at the discretion of the Board of Trustees.

The Board of Trustees hereby designates the following priority uses for property tax revenue:

First, property tax revenues shall be used to pay for any rate reduction programs established by the Board of Trustees.

Second, property tax revenues shall be used to pay for stormwater operating or capital expenses related to water quality and the collection and removal of trash and other pollutants of concern.

Third, property tax revenues shall be used to pay for inflow and infiltration reduction projects or other capital projects in the sewer collection system.

C. Fees and charges

Fees and charges shall be set to recover the current operational needs of the District, including the financing of capital improvements in accordance with the Capital Improvement Plan. Fees and charges shall be allocated to the funds from which the revenue was generated, and used for the stated purpose for which they were collected.

D. Fee studies and engineering reports

The District shall conduct fee studies and/or engineering reports, as appropriate, for sewer service charges, stormwater service charges, upper lateral program charges, sewer connection fees, stormwater connection fees, and other charges. The District shall conform the studies to comply with Proposition 218, Proposition 26 and other state law related to these revenues. The studies shall be performed periodically, when there is a major change in the customer base, when there is identified need for a significant increase in revenue, or as required by law.

E. Lease revenues

Revenue generated from lease income should be allocated to the fund that financed the underlying capital that is generating the income.

F. Fund structure and segregation of restricted revenues

The District shall establish and maintain three (3) funds for accounting purposes and in accordance with Generally Accepted Accounting Principles. Those funds shall be for (1) sewer related revenues, expenses, and assets, (2) stormwater related revenues, expenses and assets, and (3) upper lateral related revenues, expenses and assets.

The District shall also maintain sub-funds or other restricted accounts within the funds, to account for connection fees and other restricted revenues, in compliance with state law. Interest from investments associated with these restricted accounts shall accrue to those restricted sub-funds or accounts.

G. Revenue forecasting

The District shall estimate revenues conservatively, through an objective, analytical process. The District shall regularly report on forecasted vs. actual revenues, and provide explanations for significant variances.

H. Use of one-time and unpredictable revenues

One-time revenues shall be used to support one-time expenditures or increase fund equity. Unpredictable revenues shall not be used to support ongoing operational expenses for a period longer than the revenue can reasonably be expected to support them.

I. Accounts receivable

The District shall strive to collect all fees and charges imposed, and all receivables due to the District. The District shall actively pursue and settle delinquent accounts.

Accounts Receivable shall be due as Net 30. All unpaid accounts shall accrue interest at 1.5% per month, beginning when the account is 60 days due.

The District retains all rights and privileges under statute and case law to collect delinquent accounts.

Budget and Capital Outlay Policies of the Vallejo Flood and Wastewater District



Approved by the Board of Trustees on April 13, 2021

Prepared by the Finance Department

A. Purpose

The Budget and Capital Outlay Policies provides guidance to District staff on the development of budgets for Board consideration, delineates authorities that are exclusively the purview of the Board, and identifies authorities that are delegated to the District Manager in the areas of operating budgets, capital outlay, and capital improvement planning.

B. Basis of Budgeting

All budgetary procedures will conform to state regulations and generally accepted accounting principles. As such, the District shall use a modified accrual basis of accounting for reporting on budgeted versus actual expenditures, with the following exceptions:

- Grant revenues are budgeted on a modified cash basis rather than an accrual basis
- Fixed assets are depreciated for some financial reporting, but are fully expended in the year acquired for budgetary purposes
- Budget for debt service payments shall include both principal and interest elements

C. Biannual Budget Process

The District shall prepare two consecutive annual budgets every other year for consideration and adoption by the Board.

D. Balanced Budget

The District shall maintain a balanced budget, defined as total resources (operating revenue, non-operating revenue, inter and intrafund transfers, and beginning fund equity) shall equal total requirements (operating expenses, capital outlays, inter and intrafund transfers, and ending fund equity) including contingencies. Furthermore, the District considers the budget to be balanced whenever annual operating and non-operating revenues meet or exceed annual operational expenditures. The District is committed to maintaining a balanced budget under normal circumstances and will disclose deviations from a balanced operating budget when it occurs.

E. Budget Control

The Board of Trustees retains the exclusive authority to increase the annual budget authority for Operational Expenditures within each fund. In no case may total operating expenditures exceed that which is appropriated by the Board without a budget amendment duly approved by the Board.

The Board of Trustees also retains the exclusive authority to increase the annual budget authority for Capital Outlays within each fund. In no case may total capital outlays exceed that which is appropriated by the Board without a budget amendment duly approved by the Board.

Only the Board may authorize transfer of budget authority between Operational Expenditures and Capital Expenditures, or between funds. Only the Board may increase the number of authorized positions at the District.

The District Manager has the authority to approve operating expenditure budget transfers between line items and between departments within a fund. The District Manager has the authority to approve budget transfers between capital projects within a fund. The District Manager has the authority to hire employees up to the number authorized by the Board, and to modify the Position Control Roster as necessary to affect the efficient and effective management of the District.

F. Capital and Operating Budget Carryforward

Upon authorization by the Board of Trustees, the District may carry forward the unspent balances of approved capital projects and one-time expenses in the operating budget from the prior fiscal year into the current fiscal year. Carry forwards shall not be for routine or recurring operating costs, salary or benefit costs, or the unspent capital project budget for projects that have been completed in the prior year.

G. Maintenance of Capital Assets

The District shall budget for the adequate maintenance of capital equipment and facilities to protect the public investment and ensure achievement of their maximum useful life.

H. Use of Operational Fund Equity for Capital Outlay

Operational fund equity in excess of established reserves and liquidity requirements shall be used for the acquisition, development, rehabilitation or replacement of capital assets.

I. Capitalization Threshold

An asset shall be considered a capital asset when the initial cost of the asset is \$10,000 or more and has a useful life of more than two years, unless required to be different based on funding source. The initial cost shall include any costs necessary to put the asset into its intended use, including costs such as staff time, shipping, and sales tax. Interest in real property shall always be considered a capital asset, regardless of its initial cost.

J. Ten-Year Capital Improvement Plan

The District shall prepare, adopt and update biannually a ten-year Capital Improvement Plan that identifies and sets priorities for all major capital assets (defined as \$50,000 or more) to be acquired, constructed or replaced by the District. The first two years of the Capital Improvement Plan shall be included in the Biannual Adopted Budgets, along with capital items less than \$50,00, to constitute the Capital Budgets.

A group of capital projects that are programmatically related and in total cost less than \$50,000 annually may be combined into a single major capital project for Ten-year Capital Improvement Plan purposes, with the individual capital assets identified and recorded for fixed asset accounting purposes.

K. Capital Funding Requirements

The Capital Improvement Plan shall identify adequate funding to support the acquisition, construction and replacement of assets identified in the plan, and shall identify projects that the District believes beneficial to the system but funding has not yet been identified. The Capital Improvement Plan shall include and indicate when and for what projects the District intends to finance through the issuance of debt and/or through the use of connect fee revenue. Additionally, the District shall strive to develop a comprehensive strategy and funding plan for the renewal and replacement of existing capital assets.

Reserves Policies of the Vallejo Flood and Wastewater District



Approved by the Board of Trustees on April 13, 2021

Prepared by the Finance Department

A. Policy

It is the policy of the Vallejo Flood and Wastewater District to maintain adequate reserves in each of its operating funds to meet the legal, contractual, operational, cash flow, and emergency needs of the District.

Reserve targets shall be calculated to include the following considerations: operational cash flow, capital outlay cash flow, debt service and other large payments, anticipated grant or loan reimbursements, revenue cycles, rate revenue stability, and risk management considerations.

B. Periodic Review

Targeted reserve levels shall be established and reviewed every two-year budget adoption cycle. Targets shall be increased or decreased based on the anticipated cash flow needs identified during the budget process.

C. Liquidity Reserve

The District shall maintain cash and investments necessary to meet the liquidity needs for the District. Furthermore, the District shall maintain unrestricted cash and investments as required by any debt covenants. This policy shall apply separately for each operating fund.

Liquidity needs shall be calculated as follows: On June 30 of each year the District shall maintain a level of cash and investments, less those amounts held in reserve by a fiscal agent and/or reserved for capital, in an amount at least equal to anticipated operating costs, less depreciation, plus capital outlays anticipated between July 1 and December 15. This amount would be in addition to any amount held in the Emergency Operating Reserve.

The liquidity calculation shall consider regular and anticipated operating and capital expenditures, debt service payments, interfund loan repayments, CalPERS prepayments, and any significant one-time expenses.

D. Emergency Operating Reserve

The District shall maintain an Emergency Operating Reserve in each operating fund for use during operational or financial emergencies. Emergencies shall constitute significant, unforeseen events that have a dramatic and immediate impact on the operations, assets or financial condition of the District.

The amount of the reserve shall be based on a risk management analysis of potential emergency situations and the amount of cash reasonably necessary to recover from such emergency, on a short-term basis. The amount of the reserve shall be at least equal to 15% of the budgeted annual operating expenses in the fund, excluding debt service.

E. Debt Service Reserve

The District shall maintain a debt service reserve in compliance with bond and loan covenants. The amount shall be equal to the total of each of the largest annual debt service payments over the remaining life of the debt issuance, for those debts that require a reserve. The

amounts may be held by the District or by a fiscal agent, in accordance with loan or bond documents. The debt service reserve may be used to make the final debt service payment of its respective issuance.

If the District issues or carries variable rate debt, then the reserve should be increased to manage the risk associated with interest rate volatility.

F. Other Post-Employment Benefits Reserve

The District maintains an Other Post-Employment Benefits (OPEB) reserve to fund future payments of retiree post-employment health benefits. This is a restricted reserve and may not be utilized for any other purpose. The target balanced is exclusive of all other reserve targets. The funds in this reserve are held in trust with the CalPERS California Employers' Retiree Benefit Trust (CERBT) fund. Annual contributions to this reserve are based on the most recent actuarial analysis and contractual MOU obligations, with the policy goal of fully funding at least the Actuarially Determined Contribution (ADC) on an annual basis.

G. Funding and Replenishment of Reserves

As part of the budget adoption process, the District shall identify whether its reserves are anticipated to be fully funded as part of the adopted budget. If not, then the budget document shall include a plan that includes the timing and source of future funding to bring the District into compliance with its reserve targets.

In the event that the unplanned use of reserves becomes necessary, the Director of Finance/Treasurer and District Manager shall develop a plan to return the District to compliance with the reserve funding targets, and present the plan to the Board of Trustees for consideration.

Debt Issuance and Management Policies of the Vallejo Flood and Wastewater District



Approved by the Board of Trustees on April 14, 2020

Prepared by the Finance Department

**Debt Issuance and Management Policies
Vallejo Flood and Wastewater District**

A. Purpose of the policy

The purpose of this policy is to provide guidance to staff on debt issuance and management parameters and expectations, and to ensure that the District, as an issuer of bonds, complies with applicable requirements of federal tax law necessary to preserve the tax-exempt status of the interest on tax-exempt obligations issued by the District.

The primary objectives of the policy are to help the District:

- Maintain cost-effective access to the capital markets (e.g., sale of bonds, bank loans, government loans, etc.) through prudent fiscal management policies and practices
- Minimize debt service commitments through effective planning and cash management
- Ensure future financial flexibility
- Maintain full and complete financial disclosure and reporting
- Achieve full and timely repayment of debt
- Comply with Government Code Section 8855(i)
- Ensure the District is in compliance with all applicable federal and state securities laws
- Protect the District's creditworthiness and achieve the highest practical credit ratings

B. Approval

The issuance of all debt financings must be approved by the Board of Trustees, in conjunction with the project(s) to be financed.

C. Use of long-term debt

Long-term debt may be issued to finance the construction, acquisition, and rehabilitation of capital improvements and facilities, equipment and land to be owned and operated by the District, or to refinance existing District debt.

The District shall have a preference to finance capital improvements using pay-as-you-go financing and shall issue long-term debt only to finance capital improvements that cannot be readily paid for from current revenues. Some exceptions to this may be made on a case-by-case basis for no-interest and extremely-low-interest loan programs for capital projects.

Debt financing shall be used only for major, non-recurring items or improvements with a minimum of ten years of useful life; assets with a shorter useful life shall be financed using pay-as-you-go financing. The intended use of debt shall be described in and integrated into the District's Capital Improvement Plan, Budget and any long-range financial forecasts.

Long-term debt financings shall not be used for current operating expenses and routine maintenance expenses.

D. Use of short-term debt

Short-term debt may be issued to provide interim construction financing for projects that will ultimately be funded by cash, long-term debt or other sources. Short-term debt may also be issued to provide financing for an even cash flow balance. Short-term debt must be fully paid-off within a five-year period or restructured to long-term debt provided that conditions for long-term debt are satisfied.

E. Types of debt

The District, either on its own or through a public benefit corporation, may issue general obligation bonds, certificates of participation, revenue bonds, borrow from a bank, borrow from the State of California through the use of state revolving fund loans, borrow from the Federal Government, or issue any other long or short-term instrument approved by and deemed appropriate by the Board of Trustees to meet the capital financing needs of the District. Debt may be fixed rate or variable rate.

F. Length of debt obligations

The District shall repay all debt issued within a period not to exceed the expected useful life of the improvements financed by the debt. No long-term debt shall be issued with a final maturity exceeding 35 years.

G. Method of sale

The District shall seek advice from its independent registered municipal advisor regarding the method of debt issuance: competitive bid, negotiated price, or private placement. The District shall have a preference for conducting financings on a competitive basis. However, negotiated financings or private placements may be used due to market volatility or the use of an unusual or complex financing or security structure.

H. Interfund and intrafund loans

When obtaining external financing is undesirable due to anticipated term or costs of debt issuance, the District may loan money from one fund to another, or from restricted accounts within funds, to meet specifically identified needs, provided that the fund making the loan has sufficient forecast reserves and liquidity to make the loan. Interfund and intrafund loans should only be used for capital purchases or capital projects. All interfund and intrafund loans shall require Board of Trustee approval. The loan shall be paid back based on the terms, conditions and amortization schedule approved by the Board of Trustees. The loan shall accrue interest as determined upon the approval of the loan, based on either 1) the investment rate of return on the District's investment portfolio for the month prior to the date the loan is approved (fixed rate), or 2) the current rate of return on the District's investment portfolio monthly over the duration of the loan (variable rate).

I. Debt service limitation

The District shall not issue debt where the debt service amounts exceed its ability to pay current obligations from current revenues through its maturity. This shall be calculated as follows: current operating revenues, less current operating expenditures, shall be at least 125% of anticipated total annual debt service for all outstanding long-term debt.

Additional debt will not be considered if its issuance would adversely affect the District's cash flow position, reserve requirements, operating flexibility, or ability to finance future planned capital improvement projects.

J. Use of credit enhancements

Credit enhancements, such as bond insurance or letters of credit, are used to improve the credit rating or credit worthiness of an agency. When issuing long-term debt, the District may use credit enhancements only when net debt service on the debt is reduced by more than the cost of the enhancement (i.e., the savings is greater than the cost), or the enhancement is a requirement for the loan or debt issuance.

K. Bond rating

The District shall seek to maintain and, if possible, improve its current bond rating in order to minimize borrowing costs and preserve access to credit.

L. Use of professional services

The District may contract for the services of an independent registered municipal advisor (IRMA) to provide services and advice on matters pertaining to debt structuring, timing, marketing, credit ratings, methods of sale and terms. The IRMA may develop a financing plan, analyze comparative bond pricing, facilitate the debt issuance and bidding process. The IRMA shall be registered with the Municipal Securities Rulemaking Board (MSRB).

The District may contract for the services of professional bond counsel. Bond counsel provides services and offers opinion that the District has met all legal requirements necessary for bond issuance. Bond counsel may advise the District on authorizing resolutions and ordinances, trust indentures, tax certificates, official statements, validation proceedings, additional bonds test certification, and litigation.

The District may contract for the services of a Trustee, usually a bank with a separate Trust Division. The Trustee acts as the fiduciary agent with trust powers for the benefit of bondholders in enforcing the terms of the bond contract. The Trustee collects and distributes debt service payments, and maintains reserve funds and custody of investments. The Trustee may also serve as the Dissemination Agent for financial disclosure compliance.

The District may contract for the services of an arbitrage rebate consultant. The arbitrage rebate consultant performs rebate calculations with respect to any bond issue, as set forth in the Tax Certificate, at the frequency identified in the bond issuance documents.

In a negotiated sale, the District may contract for the services of an underwriter. The selection of an underwriter or consortium of underwriters shall be made based on a competitive selection process (i.e., Request for Proposals process). The underwriter shall not serve in the capacity of financial advisor or IRMA to the District.

M. Financial disclosure compliance

The District shall fully disclose financial and pertinent credit information as it relates to the District's outstanding securities, in compliance with any existing bond or loan covenants. This includes continuing disclosure obligations as required by bond documents, loan agreements, and state and federal law, as well as any disclosures based on any extraordinary events.

Pertaining to Government Code Section 8855(i), the District shall submit a Report of Proposed Debt to the California Debt and Investment Advisory Commission (CDIAC) no later than 30 days prior to the sale of any debt, and certify that the District has adopted debt policies concerning the use of debt and that the proposed debt is consistent with those policies.

N. Use of proceeds

Debt proceeds shall be used to fund capital improvements (including costs for design, engineering, construction, construction management, inspection, and associated permits and fees) approved by the Board of Trustees and described in loan or bond issuance documents, and may include the costs of issuance. The District shall comply with all applicable Federal, State, and contractual restrictions regarding the investment of debt proceeds that have not yet been spent. The restrictions include the allowable type, yield and investment period of securities.

At the time of issuance of any bond issue, the District shall reasonably expect to spend at least 85% of all proceeds expected to be used to finance improvements (excluding any required reserve fund) within three (3) years of issuance. In addition, the District shall have incurred or expect to incur within six (6) months after issuance expenditures of not less than 5% of such amount of proceeds, and shall expect to complete the project and allocate the proceeds to costs with due diligence.

O. Refinancing outstanding debt

The District will periodically evaluate outstanding bond issues for refunding opportunities and will bring to the attention of the Board of Trustees those opportunities that are in the District's interest. Reports to the Board on potential refunding shall describe anticipated savings and the structure of refunding and refunded debt, and any refunding transactions executed will be followed with a report on actual savings.

P. Internal controls

To ensure debt proceeds are used as intended, the District shall implement internal control procedures that include at least the following:

- Debt proceeds shall be deposited in an account separate from other District accounts, with only revenues and expenditures directly associated with the debt proceeds included in the account.
- At least two approvals from different reviewers will be required on all expenditures of debt proceeds, to review and ensure the expenditure is appropriate to be paid from debt proceeds.
- District accounting staff shall prepare periodic reports on the use of debt proceeds for management review.

Q. Reporting

The District shall submit an annual debt transparency report for debt issued or outstanding during the fiscal year, in compliance with Government Code Section 8855(k). The District shall also provide a report annually to any public benefit corporate associated with outstanding District debt, as appropriate.

District shall provide any ongoing reporting, as required, to any loan source, such as the State Water Resources Control Board Department of Financial Assistance for State Revolving Fund loans.

The District shall maintain all annual meeting, noticing and reporting requires, as appropriate, for its public benefit corporation.

R. Records retention

The District shall follow the United States Internal Revenue Service guideline for record retention. Records are to be retained for the life of the bond plus three (3) years. For refunding, the refunded bonds retention schedule is reset to match the life of the refunding bond plus three (3) years.

S. Debt issuance and management policy adoption

The District's debt issuance and management policy shall be adopted by resolution as modifications are required due to changing debt market conditions and legislative changes affecting public agency debt issuance and management practices.

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Appendix F – Fee Schedule for FY 2021-22

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**VALLEJO FLOOD AND WASTEWATER DISTRICT
SCHEDULE OF FEES AND CHARGES**

LAST ADOPTED: RESOLUTION 2018-5863

EFFECTIVE DATE: July 1, 2021

Pursuant to the District Code, the Board may adopt a Schedule of Fees and Charges (Schedule) by resolution, to specify amounts of fees and charges applicable to the District conducting business. The Schedule will be revised by the passage of a revised resolution, as necessary. The following fees and charges have been adopted by the Board, and are identified in conjunction with the corresponding ordinance.

SECTION 1. SANITARY SEWER AND UPPER LATERAL	2
SECTION 2. STORM DRAINAGE	6
SECTION 3. MISCELLANEOUS FEES	8

**VALLEJO FLOOD AND WASTEWATER DISTRICT
SCHEDULE OF FEES AND CHARGES
SANITARY SEWER AND UPPER LATERAL**

**ORDINANCE 64A – SANITARY SEWER AND UPPER LATERAL
SERVICE CHARGES AND FACILITIES ORDINANCE**

Page #	Description of Charge/Fee	Adopted Charge/Fee
SECTION 4 – SANITARY SEWER SERVICE CHARGE – RESIDENTIAL CUSTOMERS		
5	Residential fixed monthly charge (per dwelling unit)	\$62.25
SECTION 5 – SANITARY SEWER SERVICE CHARGE – COMMERCIAL AND INDUSTRIAL CUSTOMERS		
6	Group I, II & III Commercial fixed monthly charge	\$49.32
6	Group I Commercial rate (\$ per hcf Wintertime Water Usage)	\$3.16
7	Group II Commercial rate (\$ per hcf Wintertime Water Usage)	\$3.50
7	Group III Commercial rate (\$ per hcf Wintertime Water Usage)	\$5.66
7	Group IV Commercial/Industrial (Special) fixed monthly charge	\$49.32
7	Group IV Commercial/Industrial (Special) factor 1 - unit rate for Flow (\$/hcf)	\$2.52
7	Group IV Commercial/Industrial (Special) factor 2 - unit rate for BOD (\$/lbs.)	\$0.35
7	Group IV Commercial/Industrial (Special) factor 3 - unit rate for total S.S. (\$/lbs.)	\$0.38
7	Commercial/Industrial not within Group I – IV flow (\$/million gallons)	\$3,359.91
SECTION 6 – SANITARY SEWER SERVICE CHARGE - SCHOOLS		
8	School fixed monthly charge	\$49.32
8	School annual rate per average daily attendance	\$5.86
SECTION 8 – SANITARY SEWER SERVICE CHARGE – LOW INCOME		
8	Residential Low Income Rate Reduction for Sanitary Sewer Service Charges (percent reduction from residential fixed monthly charge)	17.5%
SECTION 9 – SANITARY SEWER SERVICE FEE – SEPTAGE HAULERS		
9	Septage Hauler annual registration fee	\$705
9	Septage Hauler per load rate (≤ 1000 gallons)	\$135
9	Septage Hauler per gallon surcharge (> 1000 gallons)	\$0.12
9	Septage Hauler gate key replacement or reactivation fee	\$15
10	Septage Hauler fine for violation of conduct requirements pursuant to District Code (1 st Violation)	\$250

VALLEJO FLOOD AND WASTEWATER DISTRICT
SCHEDULE OF FEES AND CHARGES
SANITARY SEWER AND UPPER LATERAL

10	Septage Hauler fine for violation of conduct requirements pursuant to District Code (2 nd Violation)	\$500
SECTION 10 – BASIS FOR UPPER LATERAL SERVICE CHARGE		
10	Upper Lateral service charge per month (per connection)	\$1.38
SECTION 19 – PAYMENT OF CHARGES; DELINQUENCIES		
14	Penalty charge for delinquencies	10%
14	Penalty interest charge for delinquencies (per month)	1.5%
14	Penalty fee for NSF returned check	\$25
SECTION 22 – COLLECTION OF DELINQUENT CHARGES ON TAX ROLL		
15	Processing fee for transfer of delinquencies to the property tax roll	\$50
SECTION 24 – COLLECTION OF PAYOFF DEMAND PROCESSING FEE		
16	Processing fee for payoff demand	\$50

**ORDINANCE 70A – ESTABLISHING FACILITIES AND ISSUANCE OF PERMITS TO
CONNECT TO THE SANITARY SEWER SYSTEM**

ORDINANCE 70A.1 – SANITARY SEWER CONNECTION FEES AND CAPACITY CHARGES

The following fees and charges are described in Ordinance 70A and such fees and charges were previously identified in Ordinance 70A.1 (section 5). References to the applicable sections in Ordinance 70A are listed below.

Connection fees and capacity charges shall be in the same amounts for a given new, changed or increased use. Connection fees are applicable when a new physical connection to the District's Sewage Facilities is necessary. Capacity charges are applicable when the new, changed or increased use does not require a new physical connection to the District's Sewage Facilities.

Page #	Description of Charge/Fee	Adopted Charge/Fee
SECTION 7 – SANITARY SEWER CONNECTION FEES AND CAPACITY CHARGES		
9	Attached and Detached Accessory Dwelling Unit fees per unit	
	501-599 square feet	\$2,015
	600-699 square feet	\$2,420
	700-799 square feet	\$2,825
	800-899 square feet	\$3,220
	900-999 square feet	\$3,625
	1000+ square feet	\$4,025
10	Bakery fee per 280 gpd / 1,000 square feet	\$3,175

VALLEJO FLOOD AND WASTEWATER DISTRICT
SCHEDULE OF FEES AND CHARGES
SANITARY SEWER AND UPPER LATERAL

10	Car Wash fee per 1,000 square feet (less than 20 cars/day use Commercial)	\$57,420
10	Church fee per 1,000 square feet	\$795
10	Commercial fee per 1,000 square feet	\$3,110
10	Historical Public Building fee per 1,000 square feet	\$3,110
10	Hospital, Convalescent Home, Residential Care Facility fee per bed	\$1,360
10	Hotel or Motel with Kitchen fee per equivalent single-family dwelling unit with kitchen facilities	\$4,025
10	Hotel or Motel without Kitchen fee per equivalent single-family dwelling unit without kitchen facilities	\$1,570
10	Industrial fee per gallon per calendar day of Flow.	\$25
10	Industrial fee per pound of Biochemical Oxygen Demand (BOD) per calendar day	\$455
10	Industrial fee per pound of Total Suspended Solids (TSS) per calendar day	\$355
10	Laundry fee per 1,000 square feet	\$45,500
10	Laundromat fee per machine	\$880
11	Multiple Family Dwelling with Kitchen fee per equivalent single-family dwelling unit with kitchen facilities	\$4,025
11	Multiple Family Dwelling without Kitchen fee per equivalent single-family dwelling unit without kitchen facilities	\$1,570
11	Recreational Facility fee per structure with toilet and per space with sewer facilities, a holding tank emptying facility, or other plumbing facility connected to the sanitary sewer system	\$1,570
11	Restaurant fee per 1,000 square feet	\$11,340
11	Restaurant (take-out) fee per 300 gpd / 1,000 square feet	\$3,400
11	School per student	\$215
11	Senior Living Center Unit with Kitchen fee per equivalent single-family dwelling unit with kitchen facilities	\$4,025
11	Senior Living Center Unit without Kitchen fee per equivalent single-family dwelling unit without kitchen facilities	\$1,570
11	Single-Family Dwelling fee per equivalent single-family dwelling unit	\$4,025
11	Supermarket/Shopping Center/Regional Mall fee per 1,000 square feet	\$1,705
11	Trailer or Mobile Home fee per space	\$4,025

**VALLEJO FLOOD AND WASTEWATER DISTRICT
SCHEDULE OF FEES AND CHARGES
SANITARY SEWER AND UPPER LATERAL**

12	Warehouse fee per 1,000 square feet for structures with toilet facilities	\$445
SECTION 12 - REDEVELOPMENT		
14	Redevelopment within VCRA discount percentage from applicable fee type	80%

ORDINANCE 69 – ESTABLISHING RULES AND PROCEDURES FOR EVALUATING, REPAIRING, REPLACING, AND MAINTAINING THE UPPER SEWER LATERAL.

The following fees and charges are described in Ordinance 69 References to the applicable sections in Ordinance 69 are listed below.

Page #	Description of Charge/Fee	Adopted Charge/Fee
SECTION 5 – EVALUATION AND REPAIR DURING ROUTINE MAINTENANCE OF THE UPPER SEWER LATERAL		
3	Property owner fine for failure to obtain an Encroachment permit for repairs to the Upper Sewer Lateral	\$200
SECTION 9 – RESTRICTIONS AND PENALTIES		
4	Monthly surcharge for violation of any rule or regulation in this Ordinance	\$200

RESOLUTION NO. 2015-5672

REIMBURSEMENT VALUES REGARDING OWNER INITIATED SEWER REPAIRS

Authorized by Ordinance No. 1994-69, the following reimbursement amounts were adopted by resolution pertaining to the District's Upper Lateral Reimbursement Program

LENGTH RANGE OF LATERAL (Center of two-way cleanout to center of District cleanout)	REIMBURSEMENT AMOUNT (per foot)
0 to 5 ft.	Lump sum of \$250
5 to 10 ft.	\$50
10 to 20 ft.	\$45
20 to 30 ft.	\$40
30 to 40 ft.	\$35
40 to 50 ft.	\$30
Greater than 50 ft.	\$25
Two-Way cleanout	Lump sum of \$400
District Cleanout	Lump sum of \$500

6" upper laterals shall be reimbursed at a rate of \$10 per foot in addition to the reimbursement amounts above.

Any part of the upper lateral that requires a trench 5 feet or deeper shall be reimbursed at a rate of \$10 per foot in addition to the reimbursement amounts above.

**VALLEJO FLOOD AND WASTEWATER DISTRICT
SCHEDULE OF FEES AND CHARGES
STORM DRAINAGE**

**ORDINANCE 64B - STORM DRAINAGE
SERVICES AND FACILITIES ORDINANCE**

Page #	Description of Charge/Fee	Adopted Charge/Fee
SECTION 4 – STORM DRAINAGE SERVICE CHARGE – RESIDENTIAL CUSTOMERS		
5	Residential Single Family Dwelling Standard (per dwelling) monthly service charge	\$1.97
5	Residential Single Family Large Lot (per lot) monthly service charge	\$3.06
5	Residential High Density (per dwelling) monthly service charge	\$1.04
SECTION 5 – STORM DRAINAGE SERVICE CHARGE – NON-RESIDENTIAL CUSTOMERS		
5	Non-Residential Group 1 (Light Runoff Loads) rate per thousand square feet, per year (minimum billable lot size 6,363 square feet)	\$0.79
6	Non-Residential Group 2 (Medium Runoff Loads) rate per thousand square feet, per year (minimum billable lot size 1,072 square feet)	\$4.66
6	Non-Residential Group 3 (Heavy Runoff Loads) rate per thousand square feet, per year (minimum billable lot size 488 square feet)	\$10.25
6	Non-Residential Group 4 (Special) two-part service charge. Part 1: Hydraulic loading fee runoff rate (multiplied by impervious thousand square feet)	\$3.84
	Part 2: Pollutant fee base rate (multiplied by total land area of parcel)	\$1.53
SECTION 6 – SERVICE CHARGE CREDITS		
7	Maximum service charge credit reduction	40%

**ORDINANCE 70B – ESTABLISHING FACILITIES AND ISSUANCE OF PERMITS TO
CONNECT TO THE STORM DRAIN SYSTEM**

ORDINANCE 70B.1 – STORM DRAIN CONNECTION FEES

The following fees and charges are described in Ordinance 70B and such fees and charges were previously identified in Ordinance 70B.1 (section 5). References to the applicable sections in Ordinance 70B are listed below.

Page #	Description of Charge/Fee	Adopted Charge/Fee
SECTION 7 – STORM DRAINAGE CONNECTION FEES		
6	Single-Family Dwelling fee per unit. Includes mobile homes.	\$6,850

VALLEJO FLOOD AND WASTEWATER DISTRICT
SCHEDULE OF FEES AND CHARGES
STORM DRAINAGE

7	Commercial fee per acre of impervious area. Includes churches, commercial or industrial buildings and subdivisions, and all other land uses not otherwise specified in the Ordinance.	\$54,750
7	Multiple-Dwelling fee per acre of impervious area. Includes numerous single living units (i.e. town house, duplex, triplex, quadruplex, apartment house, condominium), or more than one single-family dwellings on a single parcel; and schools.	\$41,135

Reference	Description of Charge/Fee	Adopted Charge/Fee
ORD 70A, 70B	Annexation fee per equivalent single-family dwelling unit	\$270
ORD 70A, 70B	Connection Permit Inspection fee for each group of five (5) units or less	\$275
ORD 70A, 70B	Connection Permit Inspection fee for non-residential (hourly rate of \$138, minimum 4 hours or \$552 for determining fee or estimating deposit)	Varies
ORD 70A, 70B	Connection Permit Extension Processing fee	\$90
ORD 70A, 70B	Connection Permit Processing fee	\$55
ORD 70A, 70B	Connection Permit Refund Processing fee	\$130
ORD 64A, 64B	Penalty charge for delinquencies	10%
ORD 64A, 64B	Penalty interest charge for delinquencies (per month)	1.5%
ORD 64A, 64B	Penalty fee for NSF returned check	\$25
ORD 64A, 64B	Processing fee for transfer of delinquencies to the property tax roll	\$50
ORD 64A, 64B	Processing fee for payoff demand	\$50
District Code, Section 2.12	Plan Review Fees	Varies (Based on size of development)

Appendix G – Capital Improvement Plan Project Details

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Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CDM003

Project Name

Storm Dra in Master Plan P roject Updat e

I/I Reduction Project

No

Project Manager

Mark Tomko

Department

Engineering

Contact

Mark Tomko

Type

Stormwater

Useful Life

10

Category

New Capital

Priority

N/A

Description

The Storm Drain Master Plan (SDMP) was completed in 2019. The total cost for all improvements was \$100 million and exceeds funds available. The projects in the SDMP will be updated and prioritized with different storm flows to better meet available fundin

Justification

The proposed projects in the SDMP exceed current funding and will need to adjusted.

	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Pri or												
230,000	Construction/Maintenance		150,000	150,000								300,000
Total	Total		150,000	150,000								300,000

	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Prior												
230,000	Stormwater Connection Fees		150,000	150,000								300,000
Total	Total		150,000	150,000								300,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	CDM018
Project Name	Austin Creek Project

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Stormwater
Useful Life
Category New Capital
Priority N/A

Description	Total Cost \$8,900,000
The Austin Creek Watershed is the most impacted area. 100 year flooding spreads from the Napa River and encompasses While Slough, Highway 29 and almost reaches Broadway. The Army Corps of Engineers designed a project to address flooding that was stopped a	
Justification	
The Austin Creek Watershed has the greatest potential to be the most impacted by flooding in terms of damage, disruption to roadways, and economic development.	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design						450,000					450,000
Construction/Maintenance							450,000	4,000,000	4,000,000		8,450,000
Total						450,000	450,000	4,000,000	4,000,000		8,900,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Connection Fees						450,000	450,000	4,000,000	4,000,000		8,900,000
Total						450,000	450,000	4,000,000	4,000,000		8,900,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CDM020

Project Name

Lemon-Solano P roject

I/I Reduction Project

Project Manager

Department

Engineering

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost

\$6,700,000

The Storm Drain Master Plan identified projects in Upper and Lower Miller Ditch, Lake Dalwigk, the Lemon Street Channel, Hargus Avenue, Orchard Avenue, and East Warren Avenue. The project will prioritize and value engineer the projects to match available

Justification

The Lemon Solano Watershed is a large watershed that is highly impacted by flooding due to the residential density. The projects detailed are at a similar cost as the Austin Creek Watershed. The projects in the two watersheds account for over 90% of the e

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design					350,000	350,000					700,000
Construction/Maintenance							3,000,000	3,000,000			6,000,000
Total					350,000	350,000	3,000,000	3,000,000			6,700,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Connection Fees					350,000	350,000	3,000,000	3,000,000			6,700,000
Total					350,000	350,000	3,000,000	3,000,000			6,700,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	CDM021
Project Name	Sandpiper

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description	Total Cost \$3,400,000
Projects include Jack London and Donner Pass Drive, Lassen Circle at Rosemary Drive, Catalina Ave. Gabion Box Outlets, and Jack London Drive Bubble ups.	
Justification	
The Sandpiper watershed is a small watershed that has flooding problems due to it's low elevation and proximity to the Napa River. Most of the flooding is contained in the street that is made worse by high tides and the inability for the storm system to d	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design			200,000	200,000							400,000
Construction/Maintenance					1,500,000	1,500,000					3,000,000
Total			200,000	200,000	1,500,000	1,500,000					3,400,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Connection Fees			200,000	200,000	1,500,000	1,500,000					3,400,000
Total			200,000	200,000	1,500,000	1,500,000					3,400,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	CDM022
Project Name	CMP Replacement Project

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description	Total Cost \$4,159,000
Replacing all of the District's corrugated metal pipe (CMP) in the storm drain system, There is approximately 2.3 miles of CMP that will be replaced 1500 feet per year.	
Justification	
Corrugated metal pipe (CMP) is a material commonly used in storm drain design, but has a lesser service life compared to other construction materials (RCP, others) due to its susceptibility to corrosion (rust).	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance			464,000	479,000	495,000	510,000	527,000	544,000	561,000	579,000	4,159,000
Total			464,000	479,000	495,000	510,000	527,000	544,000	561,000	579,000	4,159,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund			464,000	479,000	495,000	510,000	527,000	544,000	561,000	579,000	4,159,000
Total			464,000	479,000	495,000	510,000	527,000	544,000	561,000	579,000	4,159,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE031

Project Name

Replace ENG 2020 Nissan Rogue #225

I/I Reduction Project

Project Manager

Department Engineering

Contact

Type Unknown

Useful Life

Category Fleet

Priority N/A

Description

Total Cost

\$63,000

Enterprise 5 Yr Replacement
2020 Nissan Rogue: S 4dr All-wheel drive (repl #225)

Justification

Periodic replacement of fleet vehicle in the Enterprise system.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					29,000					34,000	63,000
Total					29,000					34,000	63,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					29,000					34,000	63,000
Total					29,000					34,000	63,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE041

Project Name

Replace ENG 2021 Ford F 150 #282

I/I Reduction Project

Project Manager

Department

Engineering

Contact

Type

Unknown

Useful Life

Category

Fleet

Priority

N/A

Description

Enterprise 5 Yr Replacement
2021 Ford F-150

Justification

Periodic replacement of vehicle in the Enterprise program.

Total Cost \$48,000

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital						48,000					48,000
Total						48,000					48,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund						48,000					48,000
Total						48,000					48,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CWF004

Project Name

Mare Island Causeway FM Demo

I/I Reduction Project

Project Manager

Department

Engineering

Contact

Type

Unknown

Useful Life

Category

Major Maintenance

Priority

N/A

Description

Total Cost \$400,000

Demolition of the abandoned Mare Island Force Main.

Justification

The Mare Island Force Main is attached to the Mare Island Causeway Bridge and was replaced in 2019. This project demolishes and properly abandons the old force main no longer in service.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance			100,000	300,000							400,000
Total			100,000	300,000							400,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			100,000	300,000							400,000
Total			100,000	300,000							400,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CWF005

Project Name

SS Force Main Cond ition Assessment

I/I Reduction Project

Project Manager

Department

Engineering

Contact

Type

Unknown

Useful Life

Category

Major Maintenance

Pr iority

N/A

Description

Total Cost \$330,000

Condition assessment of sewer force mains constructed from metallic pipe.

Justification

11 of the Districts sewer pump stations result in over 20,000 linear feet of related pipes ranging from 30-67 years in service. These metallic pipe materials are more susceptible to corrosion in comparison to newer plastic materials and are scheduled for

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Consulting Services				330,000							330,000
Total				330,000							330,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund				330,000							330,000
Total				330,000							330,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CWF006

Project Name

SS Force Main Rehab & Replacement

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$9,724,300

Condition assessment, rehabilitation and/or replacement of force mains for District's 36 sanitary sewer pump stations.

Justification

The District owns and operates 36 sanitary sewer pump stations varying in age. Their associated force mains require condition assessment and rehabilitation and/or replacement as part of the Asset Management Program.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance					1,484,600	1,536,600	1,590,300	1,646,000	1,703,600	1,763,200	9,724,300
Total					1,484,600	1,536,600	1,590,300	1,646,000	1,703,600	1,763,200	9,724,300

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					1,484,600	1,536,600	1,590,300	1,646,000	1,703,600	1,763,200	9,724,300
Total					1,484,600	1,536,600	1,590,300	1,646,000	1,703,600	1,763,200	9,724,300

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # CWL002
Project Name Upper Lateral Program

I/I Reduction Project Yes
Project Manager Gus Silva

Department Engineering
Contact Mark Tomko
Type Upper Lateral
Useful Life 25
Category New Capital
Priority

Total Cost \$5,925,000

Description

Upper Lateral Program, per NPDES permit (CA0037699), makes \$450,000 available each year for direct reimbursements to property owners for repair or replacement of upper laterals and conduct public outreach to promote program. Report number of upper lateral

Justification

NPDES Mandated

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
1,800,000	Construction/Maintenance	450,000	450,000	450,000	450,000	425,000	400,000	375,000	375,000	375,000	375,000	4,125,000
Total	Total	450,000	450,000	450,000	450,000	425,000	400,000	375,000	375,000	375,000	375,000	4,125,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
1,800,000	Upper Lateral Fund	450,000	450,000	450,000	450,000	425,000	400,000	375,000	375,000	375,000	375,000	4,125,000
Total	Total	450,000	450,000	450,000	450,000	425,000	400,000	375,000	375,000	375,000	375,000	4,125,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #CWL003

Project NameLower Lateral Rehabilitation Program

I/I Reduction Project Yes
Project Manager Gus Silva

Department Engineering
Contact Mark Tomko
Type Wastewater
Useful Life 50
Category New Capital
Priority

Description

Total Cost \$4,701,651

When replacing upper laterals within the Upper Lateral Program, the associated lower laterals are inspected. Often the associated lower lateral is in need of rehabilitation as well and it is cost effective to utilize the contractor onsite. These projects

Justification

Utilizing the contractor already onsite completing the upper lateral work has proven to be a timely and cost effective method to replace defective lower laterals.

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
1,201,651	Construction/Maintenance	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	3,500,000
Total	Total	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	3,500,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
1,201,651	Sewer Fund	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	3,500,000
Total	Total	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	3,500,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CWM014

Project Name

I/I Reduct ion Project

I/I Reduction Project

Yes

Project Manager

Unassigned

Department

Engineering

Contact

Type

Wastewater

Useful Life

50

Category

New Capital

Pr iority

Description

Total Cost

\$15,000,000

Annual placeholder I/I reduction project to achieve NPDES permit requirements and reduce blending. Specific project(s) are prioritized annually and associated budget reallocations made to them based on master planning and modeling results and coordinatio

Justification

NPDES permit requirements and to reduce blending.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	15,000,000
Total	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	15,000,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	15,000,000
Total	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	15,000,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CWM901

Project Name

Collection System Master P lan R & R Projects

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$19,000,000

Placeholder project for sewer main replacement and rehabilitation project(s) identified the Collection System Master Plan and via condition assessment as part of Asset Management.

Justification

The Collection System Master Plan identified 3.9 miles of sewer mains with low condition assessment scores and in need of rehabilitation and/or replacement. Condition assessment in the sewer collection system is continuous and identifies sewer main segme

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance			1,500,000	1,750,000	2,000,000	2,250,000	2,500,000	2,750,000	3,000,000	3,250,000	19,000,000
Total			1,500,000	1,750,000	2,000,000	2,250,000	2,500,000	2,750,000	3,000,000	3,250,000	19,000,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			1,500,000	1,750,000	2,000,000	2,250,000	2,500,000	2,750,000	3,000,000	3,250,000	19,000,000
Total			1,500,000	1,750,000	2,000,000	2,250,000	2,500,000	2,750,000	3,000,000	3,250,000	19,000,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #	CWM902
Project Name	Collection System Master Plan Capacity Projects

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description	Total Cost \$27,500,000
Projects to construct sewer collection system capacity increase projects including upsizing of existing sewer mains and/or construction of relief sewer mains.	
Justification	The Collection System Master Plan identified sewer mains which exceed their conveyance capacity during wet weather conditions during the design storm. Increasing capacity in these sewer mains will help prevent sanitary sewer overflows.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance					2,500,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	27,500,000
Total					2,500,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	27,500,000
Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					2,500,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	27,500,000
Total					2,500,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	27,500,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	CWP001
Project Name	Sky Valley 1 SSPS

I/I Reduction Project No
 Project Manager Kyle Broughton

Department Engineering
 Contact Mark Tomko
 Type Wastewater
 Useful Life 25
 Category New Capital
 Priority 2

Description	Total Cost \$2,335,286
Sky Valley No. 1 Pump Station components require replacement and/or rehabilitation. Electrical and mechanical systems will be upgraded to support new equipment. The project replaces the existing dry pit/wet well configuration with a submersible pump con	
Justification	
Based on asset management and the consequence of failure, this pump station was added to the CIP. The proposed submersible pump configuration will result in less staff time for routine maintenance and better worker safety by eliminating the need for conf	

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
62,486	Construction/Maintenance					1,136,400	1,136,400					2,272,800
Total	Total					1,136,400	1,136,400					2,272,800

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
62,486	Sewer Fund					1,136,400	1,136,400					2,272,800
Total	Total					1,136,400	1,136,400					2,272,800

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # CWP002
Project Name Sky Valley 2- SSPS

I/I Reduction Project No
Project Manager Kyle Broughton

Department Engineering
Contact
Type Wastewater
Useful Life 25
Category New Capital
Priority 4

Total Cost \$2,587,200

Description

Sky Valley No. 2 Pump Station components require replacement and/or rehabilitation. Electrical and mechanical systems will be upgraded to support new equipment. The project replaces the existing dry pit/wet well configuration with a submersible pump con

Justification

Based on asset management and the consequence of failure, this pump station was added to the CIP. The proposed submersible pump configuration will result in less staff time for routine maintenance and better worker safety by eliminating the need for conf

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
60,000	Planning/Design			300,000								300,000
Total	Construction/Maintenance				1,113,600	1,113,600						2,227,200
	Total			300,000	1,113,600	1,113,600						2,527,200

Pri or	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
60,000	Sewer Fund			300,000	1,113,600	1,113,600						2,527,200
Total	Total			300,000	1,113,600	1,113,600						2,527,200

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # CWP003
Project Name Regatta SSPS

I/I Reduction Project No
Project Manager Kyle Broughton

Department Engineering
Contact Mark Tomko
Type Wastewater
Useful Life 25
Category New Capital
Priority 3

Total Cost \$2,410,600

Description

Regatta Pump Station components require replacement and/or rehabilitation. Electrical and mechanical systems will be upgraded to support new equipment. The project replaces the existing dry pit/wet well configuration with a submersible pump configuratio

Justification

Based on asset management and the consequence of failure, this pump station was added to the CIP. The proposed submersible pump configuration will result in less staff time for routine maintenance and better worker safety by eliminating the need for conf

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Construction/Maintenance		500,000	830,300	830,300							2,160,600
Total	Total		500,000	830,300	830,300							2,160,600

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Sewer Fund		500,000	830,300	830,300							2,160,600
Total	Total		500,000	830,300	830,300							2,160,600

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	CWP004
Project Name	New Bedford SSP S

I/I Reduction Project No
 Project Manager Kyle Broughton

Department Engineering
 Contact Mark Tomko
 Type Wastewater
 Useful Life 25
 Category New Capital
 Priority 2

Description	Total Cost \$2,180,000
New Bedford Pump Station components require replacement and/or rehabilitation. Electrical and mechanical systems will be upgraded to support new equipment. The project replaces the existing dry pit/wet well configuration with a submersible pump configur	
Justification	
Based on asset management and the consequence of failure, this pump station was added to the CIP. The proposed submersible pump configuration will result in less staff time for routine maintenance and better worker safety by eliminating the need for conf	

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
1,345,000	Construction/Maintenance	835,000										835,000
Total	Total	835,000										835,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
1,345,000	Sewer Fund	835,000										835,000
Total	Total	835,000										835,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # PAB002
Project Name Admin. Bldg., Plant Sec., Parking, & Land Impr.

I/I Reduction Project No
Project Manager Mark Tomko

Department Engineering
Contact
Type Wastewater/Stormwater
Useful Life 50
Category New Capital
Priority N/A

Total Cost \$384,230

Description

This project has several elements:

1. Evaluate and improve security of Admin building and the plant - includes new bathroom, remodel of front, and other security improvements.
2. Fence off parking lot to provide area for employees to park inside the fen

Justification

1. There have been changes in the customer traffic at the Administration building and there are areas the District may be vulnerable.
2. The parking lot was going to be walled off in the Flood Wall project but that project has been put on hold. Employees

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
34,230	Planning/Design				100,000							100,000
Total	Construction/Maintenance					250,000						250,000
	Total				100,000	250,000						350,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
34,230	Sewer Fund				100,000	250,000						350,000
Total	Total				100,000	250,000						350,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PGR018

Project Name

WWTP Concrete Assessment & Rehab

I/I Reduction Project

Project Manager

Department

Engineering

Contact

Type

Unknown

Useful Life

Category

Major Maintenance

Priority

N/A

Description

Total Cost \$300,000

Condition assessment and rehabilitation of concrete treatment structures within the wastewater treatment plant.

Justification

Concrete corrosion has recently been observed in various treatment plant structures, including clarifiers and Chlorine Contact Tank C. This project assesses the extent of corrosion and provides for repairs to preserve the lifespan of these assets.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance		300,000									300,000
Total		300,000									300,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund		300,000									300,000
Total		300,000									300,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

POF018

Project Name

Carquin ez Out fall Inspect/Cleaning/Rehab

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category Major Maintenance
Priority N/A

Description

Total Cost \$1,375,000

Inspection of Carquinez Outfall as required by lease with State Lands. Project to clean accumulated sediment in outfall and rehabilitate the submerged portion of the outfall and diffusers.

Justification

District's lease with State Lands requires periodic inspection of the outfall. Previous inspections have yielded that sediment is accumulating in the lower portion of the outfall and that submerged components of the outfall require rehabilitation.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance			150,000		225,000	500,000	500,000				1,375,000
Total			150,000		225,000	500,000	500,000				1,375,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			150,000		225,000	500,000	500,000				1,375,000
Total			150,000		225,000	500,000	500,000				1,375,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PPL006

Project Name

Confined Space Entry Training Structure

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$475,000

Replacement of confined space entry training structure scheduled to be demolished as part of the MIPS replacement project.

Justification

The confined space entry training structure is utilized to train and update/renewal of District staff for confined space entry. The District allows other local first responders to utilize the facility for their training purposes.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design			75,000								75,000
Construction/Maintenance				400,000							400,000
Total			75,000	400,000							475,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			75,000	400,000							475,000
Total			75,000	400,000							475,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PPL007

Project Name

WWTP Paving Project

I/I Reduction Project

Project Manager

Department

Engineering

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$500,000

Repairs and replacement of wastewater treatment plant paved surfaces.

Justification

The treatment plant's paved surfaces were constructed over time and in need of replacement due to age and ground settlement impacts.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance					500,000						500,000
Total					500,000						500,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					500,000						500,000
Total					500,000						500,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PPL009

Project Name

Field Operations Administrative Office Remodel

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$600,000

Remodeling within the Field Operations Building and Administrative Building.

Justification

The Field Operations Department Building requires remodeling and other improvements including locker room improvements, meeting room, office space to accommodate the number of employees in the department. The Administrative Building requires remodeling a

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design			100,000								100,000
Construction/Maintenance				500,000							500,000
Total			100,000	500,000							600,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			100,000	500,000							600,000
Total			100,000	500,000							600,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PSH004

Project Name

Tubbs I sland F arm Buildings

I/I Reduction Project

No

Project Manager

Natalie Muradian

Department

Engineering

Contact

Mark Tomko

Type

Wastewater

Useful Life

25

Category

New Capital

Priority

N/A

Description

Total Cost \$1,000,000

Project to build farm buildings at Tubbs Island to support farming operations. Buildings will incllude shops, office, utility water and fuel storage.

Justification

Proposed building additions will assist in keeping the farming operation viable and continue the related uptake of biosolids nutrients.

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Construction/Maintenance	300,000	450,000									750,000
Total	Total	300,000	450,000									750,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Sewer Fund	300,000	450,000									750,000
Total	Total	300,000	450,000									750,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PSH006

Project Name

Tubbs I sland F arm Building Phase 2

I/I Reduction Project
Project Manager

Department Engineering
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$500,000

Continue to build farm buildings at Tubbs Island to support farming operations. Buildings will include shops, office, utility water and fuel storage.

Justification

Proposed building additions will assist in keeping the farming operation viable and continue the related uptake of biosolids nutrients.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance			500,000								500,000
Total			500,000								500,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			500,000								500,000
Total			500,000								500,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #CDD001

Project NameStormwater Tra sh Capture Program

I/I Reduction Project No

Project Manager Kyle Broughton

Department Environmental Services

Contact Jennifer Harrington

Type Stormwater

Useful Life 20

Category New Capital

Priority N/A

Description

Total Cost \$7,158,119

Construction and installation of trash capture devices within the public storm drain system in order to comply with storm water regulations.

Justification

Required by the District's Long-term Trash Management Plan to be in compliance with the District's NPDES permit for stormwater discharges (NPDES No. CAS6122008, Order No. R2-2015-0049). Per the District's NPDES for Stormwater Discharges, the District was

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
5,276,119	Construction/Maintenance	592,000	1,290,000									1,882,000
Total	Total	592,000	1,290,000									1,882,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
5,276,119	Stormwater Fund	592,000	1,290,000									1,882,000
Total	Total	592,000	1,290,000									1,882,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE025

Project Name

Env Svc Dodge Grand Ca ra van v247

I/I Reduction Project
Project Manager

Department Environmental Services
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$78,000

Replacement of Vehicle #247 (2016) through the Enterprise system. Environmental Services. Dodge Grand Caravan or equal. FY22/23.

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital		35,000						43,000			78,000
Total		35,000						43,000			78,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund		3,500						4,300			7,800
Sewer Fund		31,500						38,700			70,200
Total		35,000						43,000			78,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE032

Project Name

Replace EnvSvc 2020 Ford Trans it Car go #207

I/I Reduction Project

Project Manager

Department

Environmental Services

Contact

Type

Unknown

Useful Life

Category

Fleet

Priority

N/A

Description

Total Cost

\$103,000

Enterprise 5 Yr Replacement

2020 Ford Transit-350 Cargo: Base rear-wheel drive medium roof van (replacement #207)

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					48,000					55,000	103,000
Total					48,000					55,000	103,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					48,000					55,000	103,000
Total					48,000					55,000	103,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE036

Project Name

Replace EnvSvc 2021 Chevy Colorado #227

I/I Reduction Project
Project Manager

Department Environmental Services
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$36,000

Enterprise 5 Yr Replacement
2021 Chevrolet Colorado: WT 4x4 crew cab 5ft box 128.3 in WB (repl #227)

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital						36,000					36,000
Total						36,000					36,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund						36,000					36,000
Total						36,000					36,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	CJE040
Project Name	Replacement EnvSvc 2021 Ford F 150 #281

I/I Reduction Project
Project Manager

Department Environmental Services
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description	Total Cost \$43,000
Enterprise 5 Yr Replacement 2021 Ford F-150	
Justification	
Periodic replacement of fleet vehicle in the Enterprise program.	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital						43,000					43,000
Total						43,000					43,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund						43,000					43,000
Total						43,000					43,000

Capital Improvement Plan
 Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PLB005

Project Name

Laborat ory Autoclave #1

I/I Reduction Project
 Project Manager

Department

Environmental Services

Contact

Jennifer Harrington

Type

Wastewater

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$20,000

Replacement of Laboratory Autoclave #1 (2010). FY22/23.

Justification

Periodic replacement of capitalized laboratory equipment.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital		20,000									20,000
Total		20,000									20,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund		20,000									20,000
Total		20,000									20,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # PSH001
Project Name Tubbs I sland L evee Improv ement Program

I/I Reduction Project No
Project Manager Natalie Muradian

Department Environmental Services
Contact Jennifer Harrington
Type Wastewater
Useful Life 50
Category New Capital
Priority 4

Total Cost \$6,665,800

Description

This project assesses feasibility, scope, costs and schedule to evaluate and fortify or rebuild levees on Tubbs Island to prevent inundation from predicted sea-level rise. The approach to environmental permits and CEQA will also be determined.

Justification

Tubbs Island is the District's sole location for biosolids utilization and a valuable land asset. Tubbs Island is protected from the San Pablo bay by existing levees. Failing to provide proper protection from current and future rain and tidal conditions

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
315,800	Construction/Maintenance		350,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	6,350,000
Total	Total		350,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	6,350,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
315,800	Sewer Fund		350,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	6,350,000
Total	Total		350,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	6,350,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PJE004

Project Name

Ford F350 Pickup w/ Special Svc Body v187

I/I Reduction Project
Project Manager

Department Facility Maintenance
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$100,300

Replacement of Vehicle #187 (2002) through the Enterprise system. Facilities Maintenance. Ford F350 or equal with special service body. FY22/23.

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital		45,000						55,300			100,300
Total		45,000						55,300			100,300

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund		4,500						5,500			10,000
Sewer Fund		40,500						49,800			90,300
Total		45,000						55,300			100,300

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	PJE005
Project Name	Maint Ford F 350 Truck v228

I/I Reduction Project
Project Manager

Department Facility Maintenance
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description	Total Cost \$87,600
Replacement of Vehicle #228 (2009) through the Enterprise system. Facilities Maintenance. Ford F350 or equal. FY21/22.	
Justification	
Periodic replacement of fleet vehicle.	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	40,000						47,600				87,600
Total	40,000						47,600				87,600

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund	4,000						4,800				8,800
Sewer Fund	36,000						42,800				78,800
Total	40,000						47,600				87,600

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PJE006

Project Name

Ford F150 Supercab 4x2 Truck v235

I/I Reduction Project
Project Manager

Department Facility Maintenance
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$65,700

Replacement of Vehicle #235 (2012) through the Enterprise system. Facilities Maintenance. Ford F150 or equal supercab 4x2. FY21/22.

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	30,000						35,700				65,700
Total	30,000						35,700				65,700

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund	3,000						3,600				6,600
Sewer Fund	27,000						32,100				59,100
Total	30,000						35,700				65,700

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PJE007

Project Name

Ford F150 2DR Supercab 2WD Truck v239

I/I Reduction Project
Project Manager

Department Facility Maintenance
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$66,900

Replacement of Vehicle #239 (2014) through the Enterprise system. Facilities Maintenance. Ford F150 or equal 2DR supercab 2WD. FY22/23.

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital		30,000						36,900			66,900
Total		30,000						36,900			66,900

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund		3,000						3,700			6,700
Sewer Fund		27,000						33,200			60,200
Total		30,000						36,900			66,900

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PJE008

Project Name

Ford F250 4x2 Supercab v246

I/I Reduction Project

Project Manager

Department Facility Maintenance

Contact

Type Unknown

Useful Life

Category Fleet

Priority N/A

Description

Total Cost

\$76,600

Replacement of Vehicle #246 (2015) through the Enterprise system. Facilities Maintenance. Ford F250 or equal 4x2 with supercab. FY21/22.

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	35,000						41,600				76,600
Total	35,000						41,600				76,600

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund	3,500						4,200				7,700
Sewer Fund	31,500						37,400				68,900
Total	35,000						41,600				76,600

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	PSC015
Project Name	South Biotower Dome Removal

I/I Reduction Project
Project Manager

Department Facility Maintenance
Contact Johnson Ho
Type Wastewater
Useful Life
Category New Capital
Priority 4

Description	Total Cost \$120,000
Removal of cover from South Biotower.	
Justification	
The South Biotower dome restricts access for routine inspection and maintenance. Recent failures of North Biotower mechanical equipment has required that its dome be removed. Both Biotowers are the same age. Removal of South Biotower dome will allow cond	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance		120,000									120,000
Total		120,000									120,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund		120,000									120,000
Total		120,000									120,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PSH005

Project Name

Solids Building Fire Alarm System

I/I Reduction Project

Project Manager Frank Silveria

Department

Facility Maintenance

Contact

Johnson Ho

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$125,000

Replace fire alarm system in the Solids Handling Building.

Justification

The existing fire alarm system has failed and needs to be replaced to comply with Fire Code and poses issues to worker safety. The existing system was installed in the mid-1990s and is outdated, no longer supported for maintenance and repairs, and superi

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design	125,000										125,000
Total	125,000										125,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	125,000										125,000
Total	125,000										125,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CDM002

Project Name

Sediment Removal - Aust in Creek

I/I Reduction Project

No

Project Manager

Natalie Muradian

Department

Field Operations

Contact

Justin Keating

Type

Stormwater

Useful Life

10

Category

New Capital

Priority

Description

Total Cost

\$3,565,300

Continued removal of sediment and vegetation from Austin Creek to restore capacity and conveyance to Austin Creek Pump Station. Reach #3 FY21/22 to FY 22/23. Reach #4 FY22/23.

Justification

Reduce flooding potential in the Couch/Hampshire/Sacramento Street areas.

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
2,580,300	Construction/Maintenance	450,000	535,000									985,000
Total	Total	450,000	535,000									985,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
2,580,300	Stormwater Fund	450,000	535,000									985,000
Total	Total	450,000	535,000									985,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CDM019

Project Name

Sediment Removal - Austin Creek Reach 4

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Excavate accumulated tules/vegetation, root balls, and associated sediment deposits to restore flood conveyance capacity in Austin Creek, Reach 4, from Highway 37 to the Austin Creek Pump Station near the Napa River.

Justification

Vegetation density in the channel has increased such that flood flow conveyance is impeded to the downstream pump station, resulting in storm flows being attenuated in the storm drain system and increasing flooding risks upstream at Redwood Ave, Valle Vis

Total Cost \$485,000

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance		85,000		200,000	200,000						485,000
Total		85,000		200,000	200,000						485,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund		85,000		200,000	200,000						485,000
Total		85,000		200,000	200,000						485,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE007

Project Name

Service Call Truck Replacement EQ 231

I/I Reduction Project

No

Project Manager

Justin Keating

Department

Field Operations

Contact

Justin Keating

Type

Wastewater/Stormwater

Useful Life

10

Category

Fleet

Priority

3

Description

Total Cost

\$161,000

Replacement of EQ 231, a 2011 Chevy 3500HD.

Justification

One of two primary service call vehicles. This is the after-hours response vehicle. Primary reason for replacement is high mileage.

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
80,000	Capital										81,000	81,000
Total	Total										81,000	81,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
80,000	Sewer Fund										81,000	81,000
Total	Total										81,000	81,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE009

Project Name

FOPS New Vacuum Truck

I/I Reduction Project

No

Project Manager

Justin Keating

Department

Field Operations

Contact

Justin Keating

Type

Wastewater/Stormwater

Useful Life

7-8

Category

Fleet

Priority

N/A

Description

Total Cost

\$600,000

Add an additional Vacuum Truck to the Field Operations fleet in FY22/23. Larger capacity than existing units.

Justification

An additional and larger vacuum truck is needed in order to maintain recently added (and future proposed) large trash capture devices. The larger vacuum truck will also allow expanding routine maintenance and condition assessment activities to larger dia

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital										600,000	600,000
Total										600,000	600,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund										240,000	240,000
Sewer Fund										360,000	360,000
Total										600,000	600,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # CJE010
Project Name Backhoe Replacements

I/I Reduction Project No
Project Manager Justin Keating

Department Field Operations
Contact Justin Keating
Type Wastewater/Stormwater
Useful Life 12
Category Machinery/Equipment
Priority

Total Cost \$500,000

Description

Purchase new backhoe - new construction crew formed

EQ132, 1992 Backhoe - Yard Backhoe - Surplus 2019

EQ 150, 1996 Backhoe - Field Backhoe - Move to Yard Backhoe 2019 - Surplus 2021 - Replace 2019

EQ 213, 2006 Backhoe - Field Backhoe - move to Yard B

Justification

Current backhoe will be 20 years old and needs to be removed from front line status.

If a new construction crew is formed, equipment # 150 will not be able to stand up to the heavier workload.

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Capital			250,000								250,000
Total	Total			250,000								250,000

Pri or	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Stormwater Fund			50,000								50,000
Total	Sewer Fund			200,000								200,000
	Total			250,000								250,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE017

Project Name

Cues Mini Camera Systems

I/I Reduction Project

No

Project Manager

Justin Keating

Department

Field Operations

Contact

Justin Keating

Type

Wastewater

Useful Life

10

Category

New Capital

Priority

N/A

Description

Total Cost \$79,641

Upgrade Field Operations Department CCTV minicams. FY21/22.

Justification

Upgrade and/or replacement of CCTV minicams. Field Operations Department utilizes (9) minicams and they are high use items requiring periodic replacement, repairs and upgrades.

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
59,641	Capital	20,000										20,000
Total	Total	20,000										20,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
59,641	Sewer Fund	20,000										20,000
Total	Total	20,000										20,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #CJE026

Project NameFOPS Pac Vac Saw Cutter Trailer

I/I Reduction Project

Project ManagerJustin Keating

DepartmentField Operations

ContactJustin Keating

TypeUnknown

Useful Life

CategoryNew Capital

PriorityN/A

Description

Total Cost\$60,000

Replace existing Field Operations asphalt saw cutting trailer unit with improved unit in FY21/22.

Justification

The existing asphalt saw cut unit is scheduled for replacement. An improved unit with integral cleaning and vacuum capabilities will provide for more efficient work in the streets with improved dust and saw cutting slurry control and collection.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	60,000										60,000
Total	60,000										60,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund	6,000										6,000
Sewer Fund	54,000										54,000
Total	60,000										60,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE027

Project Name

FOPS Easement CCTV Camera

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Justin Keating

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$60,000

Acquisition of a closed-circuit television camera unit in FY21/22 for condition assessment in backyard and difficult to access easements.

Justification

Proposed CCTV unit will allow for improved ability to perform condition assessment activities in easement and difficult-to-access areas, and will increase efficiency.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital		60,000									60,000
Total		60,000									60,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund		3,000									3,000
Sewer Fund		57,000									57,000
Total		60,000									60,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE028

Project Name

FOPS Upgrade Mainline CC TV Camera

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$15,000

Upgrade to Field Operations Department mainline CCTV camera in FY21/22.

Justification

Improvements to the camera system including but not limited to a saw attachment and upgraded lights will improve condition assessment quality and efficiency.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	15,000										15,000
Total	15,000										15,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund	3,000										3,000
Sewer Fund	12,000										12,000
Total	15,000										15,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE029

Project Name

FOPS/MAINT Crane Truck

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$200,000

Acquisition of a new Crane Truck for use by Field Operations and Maintenance Departments in FY21/22.

Justification

A crane truck is the appropriate tool for safe maintenance of recently added (and future proposed) large trash capture facilities by Field Operations Department staff. The crane truck also be utilized by the Maintenance Department and provide ability to

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	200,000										200,000
Total	200,000										200,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund	10,000										10,000
Sewer Fund	190,000										190,000
Total	200,000										200,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE030

Project Name

Replace FOPS 2020 Nissan Rogue #202

I/I Reduction Project

No

Project Manager

Unassigned

Department

Field Operations

Contact

Type

Unknown

Useful Life

5

Category

Fleet

Priority

N/A

Description

Total Cost

\$63,000

Enterprise 5 Yr Replacement
2020 Nissan Rogue: S 4dr All-wheel drive (repl#202)

Justification

Periodic replacement of fleet vehicle in the Enterprise system.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					29,000					34,000	63,000
Total					29,000					34,000	63,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					29,000					34,000	63,000
Total					29,000					34,000	63,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE033

Project Name

Replace FOPS 2020 Ford F 550 #277

I/I Reduction Project

Project Manager

Department Field Operations

Contact

Type Unknown

Useful Life

Category Fleet

Priority N/A

Description

Total Cost

\$203,000

Replacement of Field Operations vehicle #277 F550.

Justification

Periodic replacement of fleet vehicle not in Enterprise program.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital										203,000	203,000
Total										203,000	203,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund										203,000	203,000
Total										203,000	203,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE034

Project Name

Replace FOPS Cam era Equipment

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$100,000

Replacement of Field Operations camera equipment.

Justification

Periodic replacement of high use fleet equipment to ensure reliability.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital							100,000				100,000
Total							100,000				100,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund							50,000				50,000
Sewer Fund							50,000				50,000
Total							100,000				100,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE035

Project Name

Replace FOPS 2020 Ford F 350 #283

I/I Reduction Project

Project Manager

Department Field Operations

Contact

Type Unknown

Useful Life

Category Fleet

Priority N/A

Description

Enterprise 5 Yr Replacement

2020 Ford F-350: 4x2 Reg cab pickup with utility box

Justification

Periodic replacement of fleet vehicle in the Enterprise program.

Total Cost \$67,000

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital										67,000	67,000
Total										67,000	67,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund										67,000	67,000
Total										67,000	67,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE037

Project Name

Replace Equipment Trailer #141

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$50,000

Replacement of Trailer #141.

Justification

Periodic replacement of fleet equipment. Trailer #141 is used to transport Field Operations backhoes and other equipment.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital			50,000								50,000
Total			50,000								50,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund			5,000								5,000
Sewer Fund			45,000								45,000
Total			50,000								50,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE038

Project Name

Replace FOPS 2021 Silverado 1500 #278

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Enterprise 5 Yr Replacement
2021 Chevrolet Silverado: 1500 V8 4x4. Standard body.

Justification

Periodic replacement of fleet vehicle.

Total Cost \$36,000

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital						36,000					36,000
Total						36,000					36,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund						3,600					3,600
Sewer Fund						32,400					32,400
Total						36,000					36,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE039

Project Name

Replace FOPS 2021 Silverado 1500 #279

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$36,000

Enterprise 5 Yr Replacement
2021 Chevrolet Silverado: 1500 V* 4x4. Standard body.

Justification

Periodic replacement of fleet vehicle in the Enterprise program.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital						36,000					36,000
Total						36,000					36,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund						3,600					3,600
Sewer Fund						32,400					32,400
Total						36,000					36,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE042

Project Name

Replace FOPS 2021 Ford F 150 #284

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

Fleet

Priority

N/A

Description

Enterprise 5 Yr Replacement
2021 Ford F-150: Regular bed pick up truck

Justification

Periodic replacement of fleet vehicle in the Enterprise program.

Total Cost \$73,000

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					34,000					39,000	73,000
Total					34,000					39,000	73,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund					3,400						3,400
Sewer Fund					30,600					39,000	69,600
Total					34,000					39,000	73,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE044

Project Name

Ram 1500 4WD Quadcab Truck v238

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$35,700

Replacement of Vehicle #238 (2013) through the Enterprise system. Field Operations. Dodge Ram 1500 or equal 4WD crew cab. FY21/22.

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital							35,700				35,700
Total							35,700				35,700

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund							3,600				3,600
Sewer Fund							32,100				32,100
Total							35,700				35,700

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE045

Project Name

Ford Explorer F WD 4DR v245

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

Fleet

Priority

N/A

Description

Total Cost \$78,000

Replacement of Vehicle #245 (2016) through the Enterprise system. Field Operations. Ford Explorer or equal 4WD 4DR. FY22/23.

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital		35,000						43,000			78,000
Total		35,000						43,000			78,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund		3,500						4,300			7,800
Sewer Fund		31,500						38,700			70,200
Total		35,000						43,000			78,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE049

Project Name

Replace Pipe Burst Equipment

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Purchase of pipe bursting equipment for lower lateral replacement.

Justification

Equipment will allow trenchless pipe burst replacement of lower laterals (versus open-cut) resulting in less excavation and restoration; adding to efficiency and saving costs for lower lateral replacements.

Total Cost \$75,000

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	75,000										75,000
Total	75,000										75,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	75,000										75,000
Total	75,000										75,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE050

Project Name

Replace FOPS 2018 Vactor (8 Year Life)

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

Fleet

Priority

N/A

Description

Total Cost \$750,000

Replacement of 1 of 2 Field Operations Vacuum Truck purchased in 2017.

Justification

Periodic replacement of high use equipment averaging a lifespan of 8 years before anticipated downtime due to major repairs.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					750,000						750,000
Total					750,000						750,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund					75,000						75,000
Sewer Fund					675,000						675,000
Total					750,000						750,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	CJE051
Project Name	Replace FOPS 2020 Vactor (8 Year Life)

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description	Total Cost \$750,000
Replacement of 1 of 2 Field Operations Vacuum Truck purchased in 2017.	
Justification	
Periodic replacement of high use equipment averaging a lifespan of 8 years before anticipated downtime due to major repairs.	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital							750,000				750,000
Total							750,000				750,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund							75,000				75,000
Sewer Fund							675,000				675,000
Total							750,000				750,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE052

Project Name

Replace FOPS 2016 CCTV Truck 1

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$300,000

Replacement of 1 of 2 CCTV trucks purchased in 2016.

Justification

Periodic replacement of fleet equipment. CCTV trucks have a 10-year lifespan.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					300,000						300,000
Total					300,000						300,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund					30,000						30,000
Sewer Fund					270,000						270,000
Total					300,000						300,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE053

Project Name

Replace FOPS 2016 CCTV Truck 2

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category Fleet
Priority N/A

Description

Total Cost \$300,000

Replacement of 1 of 2 CCTV trucks purchased in 2016.

Justification

Periodic replacement of fleet equipment. CCTV trucks have a 10-year lifespan.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					300,000						300,000
Total					300,000						300,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund					30,000						30,000
Sewer Fund					270,000						270,000
Total					300,000						300,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE054

Project Name

Replace FOPS 2014 Pipe Hunter Freight Liner V241

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

I/I Reduction Project

Project Manager

Description

Total Cost \$327,000

Replacement of Pipe Hunter Freight Liner purchased in 2014.

Justification

Periodic replacement of fleet equipment. The pipe hunter is necessary for cleaning and jetting sewer and storm drains in narrow easements areas and areas inaccessible to large vacuum trucks.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital				327,000							327,000
Total				327,000							327,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund				32,700							32,700
Sewer Fund				294,300							294,300
Total				327,000							327,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE055

Project Name

Replace FOPS 2018 Chevy 3500 HD V259

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

Fleet

Priority

N/A

Description

Total Cost \$260,000

Replace Field Operations vehicle purchased in 2018,

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital			120,000					140,000			260,000
Total			120,000					140,000			260,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			120,000					140,000			260,000
Total			120,000					140,000			260,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE056

Project Name

Replace FOPS 2019 F350 Chase Truck V263

I/I Reduction Project

Project Manager

Department Field Operations

Contact

Type Unknown

Useful Life

Category Fleet

Priority N/A

Description

Replace Field Operations vehicle purchased in 2019.

Justification

Periodic replacement of fleet vehicle.

Total Cost \$63,000

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital									63,000		63,000
Total									63,000		63,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund									63,000		63,000
Total									63,000		63,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE057

Project Name

Replace FOPS 2019 F350 Chase Truck V265

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

Fleet

Priority

N/A

Description

Total Cost \$63,000

Replace Field Operations vehicle purchased in 2019.

Justification

Periodic replacement of fleet vehicle.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital									63,000		63,000
Total									63,000		63,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund									63,000		63,000
Total									63,000		63,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE058

Project Name

Replace FOPS 2014 Pipe Hunter V268

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

Fleet

Priority

N/A

Description

Replacement of pipe hunter vehicle purchased in 2014.

Justification

Periodic replacement of fleet equipment. The pipe hunter is necessary for cleaning and jetting sewer and storm drains in narrow easements areas and areas inaccessible to large vacuum trucks.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital										360,000	360,000
Total										360,000	360,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund										360,000	360,000
Total										360,000	360,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE059

Project Name

Replace FOPS 2020 F550 Diesel v280

I/I Reduction Project

Project Manager

Department Field Operations

Contact

Type Unknown

Useful Life

Category Fleet

Priority N/A

Description

Total Cost

\$215,000

Replacement of Field Operations vehicle #277 F550.

Justification

Periodic replacement of fleet vehicle outside of Enterprise program.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital										215,000	215,000
Total										215,000	215,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund										215,000	215,000
Total										215,000	215,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE060

Project Name

Replace FOPS Plugs

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$55,000

Replacement of Field Operations Department sewer and storm drain plugs.

Justification

Sewer and storm drain main plugging equipment is frequently used equipment and requires periodic replacement to ensure reliability.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					25,000			30,000			55,000
Total					25,000			30,000			55,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund					12,500						12,500
Sewer Fund					12,500			30,000			42,500
Total					25,000			30,000			55,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE061

Project Name

Replace FOPS Locator s

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$25,000

Replacement of Field Operations Department utility locating equipment.

Justification

Field locating equipment are frequently used equipment items and require periodic replacement to ensure reliability.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					25,000						25,000
Total					25,000						25,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund					2,500						2,500
Sewer Fund					22,500						22,500
Total					25,000						25,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CJE062

Project Name

Replace FOPS Pump (T204)

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$100,000

Replacement of Field Operations mobile pump T204.

Justification

Periodic replacement of fleet equipment. Pump T204 is used for sewer and storm bypass pumping and dewatering.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital				100,000							100,000
Total				100,000							100,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund				40,000							40,000
Sewer Fund				60,000							60,000
Total				100,000							100,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE063

Project Name

Replace FOPS Arrow boards

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$15,000

Replacement of Field Operations arrow boards.

Justification

Periodic replacement of fleet equipment. The arrow boards are necessary for traffic control operations in the street.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital			15,000								15,000
Total			15,000								15,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund			3,000								3,000
Sewer Fund			12,000								12,000
Total			15,000								15,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE064

Project Name

Replace FOPS Mini Exc (V205)

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$40,000

Replacement of Field Operations Mini Excavator.

Justification

Periodic replacement of fleet equipment. The Mini Excavator allows for excavation in easement areas and areas not accessible to larger excavation equipment.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital			40,000								40,000
Total			40,000								40,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			40,000								40,000
Total			40,000								40,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE065

Project Name

Replace FOPS Bobcat (V166)

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$60,000

Replacement of Field Operations Bobcat.

Justification

Periodic replacement of fleet equipment.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital						60,000					60,000
Total						60,000					60,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund						60,000					60,000
Total						60,000					60,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CJE066

Project Name

WWTP Portable Generator

I/I Reduction Project

Project Manager

Department

Field Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$61,500

Replacement of portable generators at the wastewater treatment plant.

Justification

The District's fleet of portable generators exist for emergency response to flooding, power outages and equipment failures and requires periodic replacement to ensure emergency operational resiliency.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital					61,500						61,500
Total					61,500						61,500

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					61,500						61,500
Total					61,500						61,500

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CWM032

Project Name

Large Diameter SS Condition Assessment

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category Major Maintenance
Priority N/A

Description

Total Cost \$2,000,000

Closed-circuit television inspection and condition assessment of large diameter (greater than 18-inches) sewer mains.

Justification

Larger diameter sewer mains are not included in routine inspection cycle by District Field Operations staff due to flow volumes and infrequent maintenance needs. However, the larger diameter mains are aging and their consequence of failure adds to the D

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance				500,000	500,000	500,000	500,000				2,000,000
Total				500,000	500,000	500,000	500,000				2,000,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund				500,000	500,000	500,000	500,000				2,000,000
Total				500,000	500,000	500,000	500,000				2,000,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	CWM033
Project Name	Large Diameter SS Cleaning

I/I Reduction Project
Project Manager

Department Field Operations
Contact
Type Unknown
Useful Life
Category Major Maintenance
Priority N/A

Description	Total Cost \$2,000,000
Cleaning of accumulated sediment in large diameter (greater than 18-inch) sewer mains identified during condition assessment.	
Justification	
Larger diameter sewer mains are not included in routine cleaning cycle by District Field Operations staff due to flow volumes and infrequent maintenance needs. Unwanted sediment and debris in the collection system tends to settle in the larger diameter	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance						500,000	500,000	500,000	500,000		2,000,000
Total						500,000	500,000	500,000	500,000		2,000,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund						500,000	500,000	500,000	500,000		2,000,000
Total						500,000	500,000	500,000	500,000		2,000,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # PAB001
Project Name Enterprise Resource Planning System

I/I Reduction Project No
Project Manager Jeff Tucker

Department Finance
Contact Jeff Tucker
Type Wastewater/Stormwater
Useful Life 10
Category New Capital
Priority N/A

Total Cost \$699,000

Description

The new ERP System will replace Naviline and include the following processes: financial accounting and reporting; payroll (Integrated with Executime); human resources; purchasing; procurement card; inventory; fixed assets; and utility billing. Automated w

Justification

Current system is outdated and does not allow the District to take advantage of automation to the degree needed. It will enhance information availability to District staff, streamline functions, alleviate paper documents, provide user-friendly reports, al

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
350,000	Software	349,000										349,000
Total	Total	349,000										349,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
350,000	Stormwater Fund	17,500										17,500
Total	Upper Lateral Fund	3,400										3,400
	Sewer Fund	328,100										328,100
	Total	349,000										349,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CDP001

Project Name

Pump Station Evaluation

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$355,000

Condition assessment and evaluation of storm water pump stations.

Justification

The District's storm drain pump stations are aging and in need of evaluation and rehabilitation and/or replacement projects.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Consulting Services		115,000	115,000		125,000						355,000
Total		115,000	115,000		125,000						355,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund		115,000	115,000		125,000						355,000
Total		115,000	115,000		125,000						355,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CDP002

Project Name

Pump Station Rehabilitation

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost

\$2,388,000

Rehabilitation and/or replacement of storm water pump stations.

Justification

The District's storm drain pump stations are aging and in need of evaluation and rehabilitation and/or replacement projects.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance				1,194,000	1,194,000						2,388,000
Total				1,194,000	1,194,000						2,388,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund				1,194,000	1,194,000						2,388,000
Total				1,194,000	1,194,000						2,388,000

Capital Improvement Plan
Vallejo Flood & Wastewater District

FY 22 thru FY 31

Project # CLE200

Project Name Solids Dewatering Equipment Replacement

I/I Reduction Project No
Project Manager Kyle Broughton

Department Operations
Contact Johnson Ho
Type Wastewater
Useful Life 25
Category Machinery/Equipment
Priority 3

Description

Total Cost \$21,224,400

The VFWD WWTP co-settles WAS and primary sludge in the primary clarifiers prior to lime-stabilization and dewatering. The dewatered, Class B biosolids and then hauled to Tubbs Island for land application. The Solids Dewatering Equipment Replacement Projec

Justification

The Solids Handling Facility was constructed in 1994. Rehabilitation and/or replacement of Solids Dewatering process equipment. Per Asset Management Program recommendation of asset useful life and life cycle.
Pilot various options and technologies (i.e

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Construction/Maintenance									500,000	20,474,400	20,974,400
Total	Total									500,000	20,474,400	20,974,400

Pri or	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Sewer Fund									500,000	20,474,400	20,974,400
Total	Total									500,000	20,474,400	20,974,400

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CPS001

Project Name

Sewer PS Facilities/Struct ures

I/I Reduction Project

Project Manager

Department

Operations

Contact

Johnson Ho

Type

Wastewater

Useful Life

Category

Major Maintenance

Priority

N/A

Description

Total Cost \$1,250,000

Sewer Pump Station capital facility and structure improvements and rehabilitation.

Justification

District budget and capital outlay policy requires the capitalization of site and facility improvements and rehabilitation greater than \$10,000. This project will account for those expenses as they arise.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000
Total	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000
Total	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CPS002

Project Name

Sewer PS Equipment

I/I Reduction Project

Project Manager

Department

Operations

Contact

Johnson Ho

Type

Wastewater

Useful Life

Category

Major Maintenance

Priority

N/A

Description

Total Cost \$1,250,000

Sewer Pump Station capital equipment purchases.

Justification

District budget and capital outlay policy requires the capitalization of site and facility improvements and rehabilitation greater than \$10,000. This project will account for those expenses as they arise.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000
Total	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000
Total	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CPS003

Project Name

Storm PS Facilities/Struct ures

I/I Reduction Project

Project Manager

Department

Operations

Contact

Johnson Ho

Type

Stormwater

Useful Life

Category

Major Maintenance

Priority

N/A

Description

Total Cost \$150,000

Storm Water Pump Station capital facility and structure improvements and rehabilitation.

Justification

District budget and capital outlay policy requires the capitalization of site and facility improvements and rehabilitation greater than \$10,000. This project will account for those expenses as they arise.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance	75,000	75,000									150,000
Total	75,000	75,000									150,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund	75,000	75,000									150,000
Total	75,000	75,000									150,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CPS004

Project Name

Storm PS Equipment

I/I Reduction Project

Project Manager

Department

Operations

Contact

Johnson Ho

Type

Wastewater

Useful Life

Category

Major Maintenance

Priority

N/A

Description

Total Cost \$150,000

Storm Water Pump Station capital equipment purchases.

Justification

District budget and capital outlay policy requires the capitalization of equipment purchases greater than \$10,000. This project will capture those expenses as they arise.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	75,000	75,000									150,000
Total	75,000	75,000									150,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Stormwater Fund	75,000	75,000									150,000
Total	75,000	75,000									150,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CWP006

Project Name

State Park Pump Station

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$2,266,800

Rehabilitation and/or replacement of State Park Pump Station.

Justification

State Park Pump Station was constructed in 1985. The Asset Management Program in addition to condition assessment, ongoing operational issues and risk/consequence of failure have determined the pump station requires rehabilitation and/or replacement.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design					300,000						300,000
Construction/Maintenance						983,400	983,400				1,966,800
Total					300,000	983,400	983,400				2,266,800

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					300,000	983,400	983,400				2,266,800
Total					300,000	983,400	983,400				2,266,800

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CWP007

Project Name

Marina Street Pump Station

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$2,371,200

Rehabilitation and/or replacement of Marina Pump Station.

Justification

Marina Pump Station was constructed in 1985. The Asset Management Program in addition to condition assessment, ongoing operational issues and risk/consequence of failure have determined the pump station requires rehabilitation and/or replacement.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance						300,000	1,017,800	1,053,400			2,371,200
Total						300,000	1,017,800	1,053,400			2,371,200

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund						300,000	1,017,800	1,053,400			2,371,200
Total						300,000	1,017,800	1,053,400			2,371,200

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CWP008

Project Name

Lemon Street Pump Station

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$2,360,600

Rehabilitation and/or replacement of Lemon Street Pump Station.

Justification

Lemon Street Pump Station was constructed in 1957. The Asset Management Program in addition to condition assessment, ongoing operational issues and risk/consequence of failure have determined the pump station requires rehabilitation and/or replacement.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design							325,000				325,000
Construction/Maintenance								1,017,800	1,017,800		2,035,600
Total							325,000	1,017,800	1,017,800		2,360,600

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund							325,000	1,017,800	1,017,800		2,360,600
Total							325,000	1,017,800	1,017,800		2,360,600

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CWP009

Project Name

Sandy Beach Pump Station

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$2,431,800

Rehabilitation and/or replacement of Sandy Beach Pump Station.

Justification

Sandy Beach Pump Station was constructed in 1992. The Asset Management Program in addition to condition assessment, ongoing operational issues and risk/consequence of failure have determined the pump station requires rehabilitation and/or replacement.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design								325,000			325,000
Construction/Maintenance									1,053,400	1,053,400	2,106,800
Total								325,000	1,053,400	1,053,400	2,431,800

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund								325,000	1,053,400	1,053,400	2,431,800
Total								325,000	1,053,400	1,053,400	2,431,800

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

CWP010

Project Name

Shady Lane Pump Station

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$1,440,300

Rehabilitation and/or replacement of Shady Lane Pump Station.

Justification

Shady Lane Pump Station was constructed in 1988. The Asset Management Program in addition to condition assessment, ongoing operational issues and risk/consequence of failure have determined the pump station requires rehabilitation and/or replacement.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design									350,000		350,000
Construction/Maintenance										1,090,300	1,090,300
Total									350,000	1,090,300	1,440,300

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund									350,000	1,090,300	1,440,300
Total									350,000	1,090,300	1,440,300

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

CWP011

Project Name

Carquinez & 3W Pump Station Rehab

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$2,760,200

Rehabilitation and/or replacement of pump station components.

Justification

The Carquinez and 3W Pump Stations were constructed in 1988. Their components are in need of rehabilitation and/or replacement. Components of this work that cannot be included in the MIPS project SRF loan will be addressed in this project.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance			50,000	1,355,100	1,355,100						2,760,200
Total			50,000	1,355,100	1,355,100						2,760,200

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			50,000	1,355,100	1,355,100						2,760,200
Total			50,000	1,355,100	1,355,100						2,760,200

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PEE002

Project Name

WWTP Switchgear and Breaker Testing

I/I Reduction Project

No

Project Manager

Frank Silveria

Department

Operations

Contact

Johnson Ho

Type

Wastewater

Useful Life

10

Category

Major Maintenance

Priority

2

Description

Total Cost

\$860,100

This project includes maintenance and reliability upgrades to major electrical components at the WWTP.

Justification

The reliability and safety of electrical systems at the WWTP are required for the operation of the plant processes, regulatory compliance, and operator safety.

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
155,000	Construction/Maintenance	150,000			166,300			184,400			204,400	705,100
Total	Total	150,000			166,300			184,400			204,400	705,100

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
155,000	Sewer Fund	150,000			166,300			184,400			204,400	705,100
Total	Total	150,000			166,300			184,400			204,400	705,100

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # PGN001
Project Name WWTP Facilities/Struct ures

I/I Reduction Project
Project Manager

Department Operations
Contact Johnson Ho
Type Unknown
Useful Life
Category Major Maintenance
Priority N/A

Total Cost \$1,250,000

Description

This project is a general placeholder for required funds related to the rehabilitation and replacement of WWTP physical structures. It is intended to be an annual funding amount of approximately \$75,000 which is based on historical expenditures.

Justification

Budgeting for these types of expenditures is necessary to ensure adequate funds are available to keep the WWTP operating reliably, safely, and meeting compliance.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000
Total	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000
Total	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # PGN002
Project Name WWTP Equipment

I/I Reduction Project
Project Manager

Department Operations
Contact Johnson Ho
Type Wastewater
Useful Life
Category Major Maintenance
Priority N/A

Total Cost \$1,250,000

Description

This project is a general placeholder for required funds related to the rehabilitation and replacement of WWTP equipment such as pumps, blowers, valves, etc. It is intended to be an annual funding amount of approximately \$75,000 which is based on historic

Justification

Budgeting for these types of expenditures is necessary to ensure adequate funds are available to keep the WWTP operating reliably, safely, and meeting compliance.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Capital	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000
Total	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000
Total	75,000	75,000	100,000	100,000	125,000	125,000	150,000	150,000	175,000	175,000	1,250,000

Capital Improvement Plan

FY 22 thru FY 31

Vallejo Flood & Wastewater District

Project #PGR002

Project NamePlant and Pump Stations Security System Upgrade

I/I Reduction Project No

Project Manager Frank Silveria

Department Operations

Contact Johnson Ho

Type Wastewater/Stormwater

Useful Life 10

Category New Capital

Priority N/A

Description

Total Cost \$180,000

Upgrade treatment plant and pump station security systems. Examples: cameras, door intrusion alarms, access gate badge readers.

Justification

Current plant and pump station security systems have passed their useful life; newer and superior technologies exist for upgrading security related systems.

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
105,000	Capital		75,000									75,000
Total	Total		75,000									75,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
105,000	Sewer Fund		75,000									75,000
Total	Total		75,000									75,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	PGR003
Project Name	Ryder Basin Rehab

I/I Reduction Project No
 Project Manager Gus Silva

Department Operations
 Contact Johnson Ho
 Type Wastewater
 Useful Life 25
 Category New Capital
 Priority 4

Description	Total Cost \$1,060,000
Rehabilitation of the Ryder Street Basin, including foundation and liner replacement.	
Justification	
To ensure continued reliable operation of the Ryder Street Equalization Basin preventative and restorative maintenance is required. The Ryder Basin is essential to the wet weather operation of the WWTP and the minimization of blending events.	

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
40,000	Planning/Design		120,000									120,000
Total	Construction/Maintenance			450,000	450,000							900,000
	Total		120,000	450,000	450,000							1,020,000

Pri or	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
40,000	Sewer Fund		120,000	450,000	450,000							1,020,000
Total	Total		120,000	450,000	450,000							1,020,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # PGR016
Project Name Plant Facilities and Grounds Rehabilitation

I/I Reduction Project No
Project Manager Unassigned

Department Operations
Contact Johnson Ho
Type Wastewater
Useful Life 25
Category New Capital
Priority N/A

Total Cost \$1,620,000

Description

Various general plant grounds and facilities rehabilitation efforts due to age, wear and settlement. Replacement of electrical conductors between Headworks and Primary Clarifiers due to ground settlement.

Justification

General rehabilitation of plant facilities and structures.
- Facilities interior and exterior rehabilitation
- Paving, building envelope.
- Repair impacts to underground utilities due to ground settlement.

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
620,000	Construction/Maintenance	800,000	200,000									1,000,000
Total	Total	800,000	200,000									1,000,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
620,000	Sewer Fund	800,000	200,000									1,000,000
Total	Total	800,000	200,000									1,000,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PGR017

Project Name

WWTP MP Regulatory Driven Imp. Phase 1

I/I Reduction Project
Project Manager

Department Operations
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$103,016,000

Wastewater Treatment Plant expansion and improvements required by regulatory changes and related changes to discharge permit requirements.

Justification

Anticipated regulatory changes and associated discharge permit limits regarding increased nutrient removal and reduction/elimination of wet weather blending will trigger large-scale wastewater treatment plant expansion and improvements.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance							4,000,000	49,508,000	49,508,000		103,016,000
Total							4,000,000	49,508,000	49,508,000		103,016,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund							4,000,000	49,508,000	49,508,000		103,016,000
Total							4,000,000	49,508,000	49,508,000		103,016,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	PHW002
Project Name	Headworks Rehabilitation

I/I Reduction Project No
 Project Manager Kyle Broughton

Department Operations
 Contact Johnson Ho
 Type Wastewater
 Useful Life 25
 Category New Capital
 Priority 1

Description	Total Cost \$1,740,552
The Headworks Upgrade Project Phase 2 is a placeholder for funding to begin upgrading the bar screens, grit chambers, and ancillary components of the headworks following the design project. The exact scope of this project phase will depend on the estimate	
Justification	
The Headworks facility was constructed in 1988. The headworks (bar screens, grit chambers, etc.) are essential to the reliable operation of the WWTP. Poor screening and grit removal has a negative impact on the lifetime of downstream components and can l	

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
	265,352	Construction/Maintenance	100,000	500,000	875,200							1,475,200
Total		Total	100,000	500,000	875,200							1,475,200

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
	265,352	Sewer Fund	100,000	500,000	875,200							1,475,200
Total		Total	100,000	500,000	875,200							1,475,200

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PMB001

Project Name

Relocate Mechanical/Electrical Shop

I/I Reduction Project No
Project Manager Frank Silveria

Department Operations
Contact Johnson Ho
Type Wastewater
Useful Life 50
Category New Capital
Priority N/A

Description

Relocate electrical shop to Building 68 to provide workspace and workshop for electrical staff.

Justification

Additional electricians and mechanics were added to staff in previous budget cycle, increasing space needs for occupancy and worker safety in the previously shared workspace and shop areas.

Total Cost \$330,000

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
180,000	Construction/Maintenance	100,000	50,000									150,000
Total	Total	100,000	50,000									150,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
180,000	Sewer Fund	100,000	50,000									150,000
Total	Total	100,000	50,000									150,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	PMB003
Project Name	Sear s Point Pump Station Mechanical Rehab

I/I Reduction Project No
 Project Manager Unassigned

Department Operations
 Contact Johnson Ho
 Type Wastewater
 Useful Life 25
 Category New Capital
 Priority 1

Description	Total Cost	\$2,543,323
Sears Point pump station rehabilitation. Includes replacement of pumps and discharge piping, mechanical and electrical components, surge system, structural and corrosion repairs in the wet well, and modifications to mitigate effects of site settlement.		
Justification	Sears Point Pump Station is the District's largest sewer pump station, with the highest risk and consequence of failure. The affected equipment is at the end of its useful service life and due for replacement and/or rehabilitation.	

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
	393,323	Construction/Maintenance	950,000	1,200,000								2,150,000
Total		Total	950,000	1,200,000								2,150,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
	393,323	Sewer Fund	950,000	1,200,000								2,150,000
Total		Total	950,000	1,200,000								2,150,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PMB006

Project Name

Sear s Point Priority 1 Electr ical

I/I Reduction Project

Project Manager Frank Silveria

Department Operations

Contact Johnson Ho

Type Unknown

Useful Life

Category New Capital

Pr iority 1

Description

The project reroutes pump electrical feeds from the pumps to their power source at the motor control center in the pump station's control building.

Justification

The existing electrical feeds between the pumps and motor control center have been impacted by ground settlement and subject to imminent failure if not addressed. The conduits have cracked under stress and cannot be re-used. The electrical conductors ha

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance	400,000										400,000
Total	400,000										400,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	400,000										400,000
Total	400,000										400,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #POC001

Project NamePlant Odor Contr ol Rehabilitation

I/I Reduction Project No

Project Manager Unassigned

Department Operations

Contact Johnson Ho

Type Wastewater/Stormwater

Useful Life 25

Category New Capital

Priority N/A

Description

Total Cost \$270,000

The Plant Odor Control Rehabilitation project includes replacement of the odor control media, and repairs to aging ancillary components.

Justification

Odor control is an essential part of any wastewater treatment facility located in a populated area. Without adequate odor control, odors from the treatment process will not be adequately contained, potentially leading to a increase in complaints for m com

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
0	Construction/Maintenance	100,000	170,000									270,000
Total	Total	100,000	170,000									270,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
0	Sewer Fund	100,000	170,000									270,000
Total	Total	100,000	170,000									270,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project # POC002
Project Name District Data and Net work Infra struct ure Rehab

I/I Reduction Project No
Project Manager Frank Silveria

Department Operations
Contact Johnson Ho
Type Wastewater/Stormwater
Useful Life 10
Category New Capital
Priority N/A

Total Cost \$1,560,557

Description

Annual implementation of IT master plan to replace, rehabilitate and upgrade District data and network infrastructure and ensure reliability and security (treatment plant, pump stations, administrative systems).

Justification

Ongoing renewal of District data and network infrastructure is required to maintain reliability and security.

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
423,557	Capital	100,000	100,000	103,600	107,100	110,900	114,800	118,800	122,900	127,200	131,700	1,137,000
Total	Total	100,000	100,000	103,600	107,100	110,900	114,800	118,800	122,900	127,200	131,700	1,137,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
423,557	Stormwater Fund	10,000	10,000	10,400	10,700	11,100	11,500	11,900	12,300	12,700	13,200	113,800
Total	Sewer Fund	90,000	90,000	93,200	96,400	99,800	103,300	106,900	110,600	114,500	118,500	1,023,200
	Total	100,000	100,000	103,600	107,100	110,900	114,800	118,800	122,900	127,200	131,700	1,137,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

POC003

Project Name

Plant Odor Contr ol Replacement

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$1,095,600

Rehabilitation and replacement of wastewater treatment plant odor control facilities including blowers, foul air piping and ducts, mechanical valves and couplings, dry media beds, and other ancillary equipment.

Justification

Wastewater treatment plant odor control facilities were constructed in 1987 and 1988; its components are in need of rehabilitation and/or replacement as part of Asset Management Program.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance					1,095,600						1,095,600
Total					1,095,600						1,095,600

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					1,095,600						1,095,600
Total					1,095,600						1,095,600

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #	POF016
Project Name	MIPS/3W PS/ Secondary Effluent Project

I/I Reduction Project No
Project Manager Kyle Broughton

Department Operations
Contact Johnson Ho
Type Wastewater
Useful Life 25
Category New Capital
Priority N/A

Total Cost \$40,327,435

Description
The MIPS, 3W, Effluent Bypass Design Project replaces the existing Mare Island Pump Station, constructs a new chlorine contact tank (CCT D) to replace CCT B, rehabilitates the Carquinez Pump Station, provides a means to produce 3W from CCT C or D, provide
Justification
Based on condition assessment and the findings from the Asset Management Study, the Mare Island Pump Station and CCT B are past their useful life and require replacement. By relocating the Mare Island Pump Station and constructing CCT D, the WWTP will hav

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
2,827,435	Construction/Maintenance	4,000,000	20,000,000	13,500,000								37,500,000
Total	Total	4,000,000	20,000,000	13,500,000								37,500,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
2,827,435	Sewer Fund	4,000,000	20,000,000	13,500,000								37,500,000
Total	Total	4,000,000	20,000,000	13,500,000								37,500,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	POF017
Project Name	MIPS Resiliency Project

I/I Reduction Project
Project Manager

Department Operations
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description	Total Cost	\$1,100,000
The MIPS Resiliency project (Phase 1) includes the relocation of "dry utilities" outside of the existing structure in advance of the Mare Island Pump Station and Chlorine Contact Tank D construction project.		
Justification	This project is necessary to ensure the District can continue to beneficially use existing infrastructure and reduce cost expenditures during the future replacement project. Relocating utilities from the 1957 structure will provide operational resiliency	

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Construction/Maintenance	350,000	500,000									850,000
Total	Total	350,000	500,000									850,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
250,000	Sewer Fund	350,000	500,000									850,000
Total	Total	350,000	500,000									850,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

POF019

Project Name

New Secondary Treatment Outfall

I/I Reduction Project
Project Manager

Department Operations
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$10,704,400

Construction of a new (second) treated effluent force main to the Mare Island Strait.

Justification

Anticipated regulatory changes and associated discharge permit limits regarding increased nutrient removal and reduction/elimination of wet weather blending will trigger large-scale wastewater treatment plant expansion and improvements. Associated improv

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance										10,704,400	10,704,400
Total										10,704,400	10,704,400

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund										10,704,400	10,704,400
Total										10,704,400	10,704,400

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PPG003

Project Name

WWTP Power Reliability Improvements

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$1,967,100

Rehabilitation and/or replacement of wastewater treatment plant electrical power infrastructure components.

Justification

Asset Management Program replacement and/or rehabilitation of electrical power infrastructure. Electrical power from the grid is the primary source of power for the plant. The electrical backbone infrastructure is aging and critical for reliability of

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance										1,967,100	1,967,100
Total										1,967,100	1,967,100

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund										1,967,100	1,967,100
Total										1,967,100	1,967,100

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PPL008

Project Name

Septage Receiving Station

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost

\$500,000

Construction of a new septage receiving station.

Justification

The existing septage receiving station allows septage haulers and the general public (recreational vehicles, inhabited RVs) access to the treatment plant and poses security and worker safety issues. This project will replace or improve the septage receiv

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance						500,000					500,000
Total						500,000					500,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund						500,000					500,000
Total						500,000					500,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #	PPR001
Project Name	Primary R&R: Civil, Mechanical, Structural

I/I Reduction Project No
Project Manager Unassigned

Department Operations
Contact Johnson Ho
Type Wastewater
Useful Life 25
Category New Capital
Priority N/A

Description	Total Cost \$1,863,900
The WWTP has two sets of primary clarifiers, one bank which is used for dry-weather flows (PCs 9 - 12) and another bank which is used only during wet-weather (PCs 1 - 8). This project encompasses general upgrades to the mechanical, structural, electrical,	
Justification	Primary Clarifiers 9-11 were constructed in 1988. The findings from the Asset Management Study included upgrades to the primary clarifiers as essential components reach the end of their useful life. The primary clarifiers are needed to ensure reliable op

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
461,000	Capital	350,000	100,000				952,900					1,402,900
Total	Total	350,000	100,000				952,900					1,402,900

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
461,000	Sewer Fund	350,000	100,000				952,900					1,402,900
Total	Total	350,000	100,000				952,900					1,402,900

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PPR002

Project Name

Wet Weather Primary Rehab

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost

\$1,245,200

The Wet Weather Primary Clarifiers Improvements Project focuses on rehabilitation of the existing flow splitting structures and associated mechanical/electrical components which facilitate wet weather treatment operations.

Justification

Primary Clarifiers 1-8 were constructed in the 1950s and 1970s. The ability to reliably route flow to Primary Clarifiers 1 - 8 is essential to overall WWTP operations, reduction in blending events, and ensuring the WWTP can physically process wet weather

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance				200,000	522,600	522,600					1,245,200
Total				200,000	522,600	522,600					1,245,200

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund				200,000	522,600	522,600					1,245,200
Total				200,000	522,600	522,600					1,245,200

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PSC001

Project Name

Secondary: Biotower Rehab/Media Replacement

I/I Reduction Project

No

Project Manager

Unassigned

Department

Operations

Contact

Johnson Ho

Type

Wastewater

Useful Life

25

Category

New Capital

Priority

3

Description

Replacement of Biotower Media (1 of 2 units).

Justification

Based on typical useful life of plastic media used in trickling filters the media is already past its useful life. As the trickling filters are essential for the WWTP to meet effluent permit requirements, it is important that the media be replaced to redu

Total Cost

\$4,125,000

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design					125,000						125,000
Construction/Maintenance						4,000,000					4,000,000
Total					125,000	4,000,000					4,125,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					125,000	4,000,000					4,125,000
Total					125,000	4,000,000					4,125,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PSC005

Project Name

Secondary: RAS/WAS Mechanical-Electrical

I/I Reduction Project

No

Project Manager

Unassigned

Department

Operations

Contact

Johnson Ho

Type

Wastewater/Stormwater

Useful Life

25

Category

New Capital

Priority

2

Description

The project includes the replacement and rehabilitation of mechanical, electrical, and instrumentation system components associated with the secondary process return and waste-activated sludge pumping facilities.

Justification

Secondary treatment facilities were constructed in 1985. Based on the findings from the Asset Management Study, the RAS/WAS pumping facilities are past their useful remaining life and require upgrades. The RAS/WAS pumping facilities are essential for the

Prior	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
50,000	Construction/Maintenance		500,000	670,900	670,900							1,841,800
Total	Total		500,000	670,900	670,900							1,841,800

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
50,000	Sewer Fund		500,000	670,900	670,900							1,841,800
Total	Total		500,000	670,900	670,900							1,841,800

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PSC016

Project Name

Secondary Blower Replacement

I/I Reduction Project

Project Manager

Department

Operations

Contact

Johnson Ho

Type

Unknown

Useful Life

Category

New Capital

Priority

4

Description

Total Cost \$60,000

Replacement of secondary treatment aeration tank blower unit(s). Single unit scheduled for FY21/22.

Justification

Aeration Tank blowers operate continuously and are some of the largest energy consumer within the treatment plant. Phased periodic replacement is recommended for operational dependability/resiliency and for energy efficiency and associated annual cost sa

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance	60,000										60,000
Total	60,000										60,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund	60,000										60,000
Total	60,000										60,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #	PSC017
Project Name	North Secondary Clarifier Rehab

I/I Reduction Project
Project Manager

Department Operations
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description	Total Cost	\$1,540,000
The North Secondary Clarifier is part of the existing secondary treatment process including the trickling filters (biotowers), activated sludge tanks, and North Secondary Clarifier. The project includes the rehabilitation of concrete walls, clarifier walk		
Justification	The North Secondary Clarifier was constructed in 1985. The North Secondary Clarifier is an essential part of the secondary treatment process and its reliable operation is required to ensure permit compliance. It is anticipated that the condition of the N	

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance			870,000	670,000							1,540,000
Total			870,000	670,000							1,540,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			870,000	670,000							1,540,000
Total			870,000	670,000							1,540,000

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PSC018

Project Name

Secondary Blower Replacement

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$65,000

Replacement of secondary treatment aeration tank blower unit. Single unit scheduled for FY23/24.

Justification

Aeration Tank blowers operate continuously and are some of the largest energy consumer within the treatment plant. Phased periodic replacement is recommended for operational dependability/resiliency and for energy efficiency and associated annual cost sa

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance			65,000								65,000
Total			65,000								65,000

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			65,000								65,000
Total			65,000								65,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PSC019

Project Name

Secondary Effluent Bypass and Metering

I/I Reduction Project
Project Manager

Department Operations
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

Total Cost \$2,776,800

Construction of treated effluent pipeline flow meters and connections to the Ryder Basin.

Justification

The proposed improvements will provide increased permit compliance, improved discharge permit reporting accuracy, and increased operational resiliency. The project will allow non-compliant effluent to be routed to the Ryder Basin during treatment plant p

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design			50,000								50,000
Construction/Maintenance				788,400	788,400	150,000	1,000,000				2,726,800
Total			50,000	788,400	788,400	150,000	1,000,000				2,776,800

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund			50,000	788,400	788,400	150,000	1,000,000				2,776,800
Total			50,000	788,400	788,400	150,000	1,000,000				2,776,800

Capital Improvement Plan
Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PSC020

Project Name

Biotower 1 Distributor Arm Replacement

I/I Reduction Project
Project Manager

Department Operations
Contact
Type Unknown
Useful Life
Category New Capital
Priority N/A

Description

This project focuses on rehabilitation and reliability of the trickling filter (biotower) through distributor arm replacement. The distributor arm conveys pumped primary effluent to the top of the trickling filter media bed for treatment.

Justification

Reliability of the secondary process is essential to the overall reliability of the WWTP and the ability to meet NPDES permit limits. The distributor arm is a major component of the trickling filters and will be due for replacement based on condition and

Total Cost \$1,129,900

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance				1,129,900							1,129,900
Total				1,129,900							1,129,900

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund				1,129,900							1,129,900
Total				1,129,900							1,129,900

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PSC021

Project Name

Biotower 2 Distributor Arm Replacement

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$1,169,500

This project focuses on rehabilitation and reliability of the trickling filter (biotower) through distributor arm replacement. The distributor arm conveys pumped primary effluent to the top of the trickling filter media bed for treatment.

Justification

Reliability of the secondary process is essential to the overall reliability of the WWTP and the ability to meet NPDES permit limits. The distributor arm is a major component of the trickling filters and will be due for replacement based on condition and

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Construction/Maintenance							1,169,500				1,169,500
Total							1,169,500				1,169,500

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund							1,169,500				1,169,500
Total							1,169,500				1,169,500

Capital Improvement Plan

Vallejo Flood & Wastewater District

FY 22 *thru* FY 31

Project #

PSH003

Project Name

Belt Filter Press Rehabilitation

I/I Reduction Project

No

Project Manager

Kyle Broughton

Department

Operations

Contact

Johnson Ho

Type

Wastewater

Useful Life

20

Category

Major Maintenance

Priority

2

Description

Total Cost

\$1,755,254

The belt filter presses (BFP) dewater lime-stabilized biosolids prior to hauling to Tubbs Island. Dewatering is required to reduce the volume and weight of biosolids that need to be hauled. The BFPs are at the end of their useful life and require signific

Justification

Dewatering is an essential part of the WWTP operation. Without dewatering, the volume of biosolids to be hauled would increase significantly and the quality of the biosolids for land application at Tubbs Island would be significantly reduced.

Pri or	Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
1,405,254	Capital	350,000										350,000
Total	Total	350,000										350,000

Prior	Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
1,405,254	Sewer Fund	350,000										350,000
Total	Total	350,000										350,000

Capital Improvement Plan

FY 22 *thru* FY 31

Vallejo Flood & Wastewater District

Project #

PSH007

Project Name

Replace Lime System

I/I Reduction Project

Project Manager

Department

Operations

Contact

Type

Unknown

Useful Life

Category

New Capital

Priority

N/A

Description

Total Cost \$5,198,200

The lime stabilization process at the WWTP produces an alkaline, Class B biosolids product that is used as a soil amendment at Tubbs Island for the production of silage crops.

Justification

The Solids Handling Facility was constructed in 1994. The existing lime stabilization process is nearing the end of its useful life based on the findings from the Asset Management Study and will equipment need upgrades to continue functioning reliably.

Expenditures	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Planning/Design					300,000						300,000
Construction/Maintenance						2,449,100	2,449,100				4,898,200
Total					300,000	2,449,100	2,449,100				5,198,200

Funding Sources	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	Total
Sewer Fund					300,000	2,449,100	2,449,100				5,198,200
Total					300,000	2,449,100	2,449,100				5,198,200

Appendix H – Performance Measurement Report

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2020 Performance Measurement Report



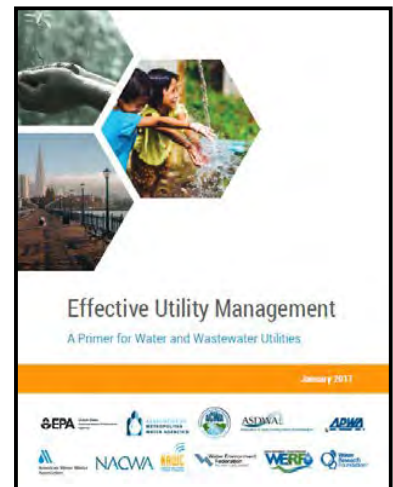
Introduction to the Report

This is the first report by the Vallejo Flood and Wastewater District (VFWD) regarding its performance. It includes performance measures that, when taken as a whole, should give the reader a sense of how well the utility is performing and being managed. This report is prepared by management for use by VFWD's Board of Directors and the general public.

VFWD has chosen to use the Effective Utility Management framework for presenting this information. This framework is specific to water and wastewater utilities and provides a comprehensive evaluation of multiple attributes of the District.

About Effective Utility Management

Effective Utility Management (EUM) is a framework for evaluating water and wastewater utilities. In May 2007, six major water and wastewater associations and the United States Environmental Protection Agency agreed to support EUM collectively and individually throughout the water sector. EUM is designed to help utility managers make practical, systematic changes to achieve excellence in utility performance, and encapsulates the collective knowledge and experience of utilities leaders who are committed to helping improve water and wastewater management.



EUM has identified Ten Attributes of Effectively Managed Water Sector Utilities. This performance measurement report has been divided into those ten attributes, as they are intended to help utilities maintain a balanced focus on all important operational areas rather than quickly moving from one problem to the next.

More can be learned about Effective Utility Management by visiting the website www.waterEUM.org.

Quick-Glance Ratings

Along with every Key Performance Indicator, this report provides an analysis of how VFWD is doing within that area. The report uses four different evaluation indicators, as follows:

“Satisfactory” – signifies that VFWD has met its goals, or that the trend is positive.

“Watch” – signifies that VFWD is in danger of not meeting its goals, that the trend is indeterminate, or that there is insufficient data to make an assessment.

“Unsatisfactory” – signifies that VFWD has not met its goals or that the trend is negative.

“Not Available” – signifies that VFWD has not developed sufficient data to make a determination for this performance indicator.

Executive Summary

This is the first of what is intended to be an annual Performance Measurement report produced by the Vallejo Flood and Wastewater District. This report will be used by management to identify specific trends or issues regarding the Ten Attributes of Effectively Managed Water Sector Utilities. The following is a summary of the District's performance as an effective wastewater utility.

<u>Attribute</u>	<u>2020 Assessment</u>	<u>5-Year Trend Assessment</u>
#1 - Product Quality	Satisfactory	Satisfactory
#2 - Customer Satisfaction	Satisfactory	Satisfactory
#3 - Employee and Leadership Development	Satisfactory	Satisfactory
#4 - Operational Optimization	Watch	Watch
#5 - Financial Viability	Unsatisfactory	Unsatisfactory
#6 - Infrastructure Strategy and Performance	Satisfactory	Satisfactory
#7 - Enterprise Resilience	Satisfactory	Satisfactory
#8 - Community Sustainability	Watch	Satisfactory
#9 - Water Resource Sustainability	N/A	N/A
#10 - Stakeholder Understanding and Support	Satisfactory	Satisfactory

Attribute #1: Product Quality

Attribute Definition

Produces “fit for purpose” water and other recovered resources (e.g., energy, nutrients, biosolids) that meet or exceed full compliance with regulatory and reliability requirements and consistent with customer, public health, ecological, and economic needs. Products at VFWD include treated wastewater effluent, stormwater discharge, and biosolids.

Assessment	
Year 2020	Satisfactory
5-Year Trend	Satisfactory

Key Performance Indicators

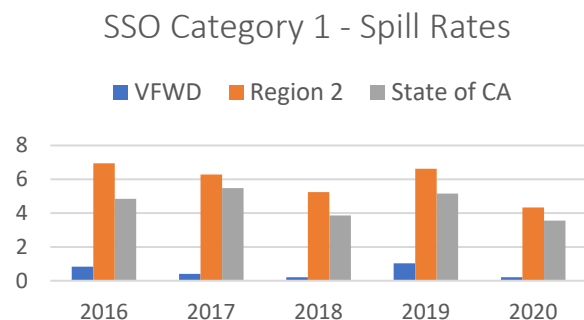
	2016	2017	2018	2019	2020
Wastewater NPDES Permit Violations	1	2	0	0	0
Biosolids Regulatory Violations	10	0	1	0	0
Category 1 Sanitary Sewer Overflows	6	3	2	6	1

Analysis and Discussion

The District has a National Pollutant Discharge Elimination System (NPDES) permit for discharging treated sewage into the Mare Island Strait. In December 2016, the District violated the permit during a storm event due to errant configuration of a sodium bisulfate probe that lead to a chlorine violation. In January 2017, there were two separate violations of the District’s NPDES discharge permit, one a chlorine violation (discharge violation) and one a blend composite collection failure (reporting violation). After these violations, the District implemented changes in its Standard Operating Procedures, particularly those related to storm event preparation, to ensure these same violations are not repeated. Since January 2017, there have been no violations of the District’s NPDES discharge permit.

Biosolids disposal is regulated through the Code of Federal Regulations, Title 40 Part 503. In 2016, there were several violations related to pH sampling errors. Several changes were implemented to standard procedures to help ensure that these types of errors are not repeated. Since then, the District has only had one violation (a missed sampling event) in the following four years.

The District has consistently had few Sanitary Sewer Overflows (SSOs). When evaluating Category 1 SSOs (the most serious), the District’s Spill Rate Index, which is the number of spills per 100 miles of mainline pipe, is consistently below both the Region 2 (Bay Area) average and the State of California average (see chart on right). The volume of spills per capita on an annual basis is also consistently below regional and state averages.



Attribute #2: Customer Satisfaction

Assessment	
Year 2020	Satisfactory
5-Year Trend	Satisfactory

Attribute Definition

Provides reliable, responsive, and affordable services in line with explicit, customer-derived service levels. Utilizes a mix of evolving communication technologies to understand and respond to customer needs and expectations, including receiving timely customer feedback and communicating during emergencies. Provides tailored customer service and outreach to traditional residential, commercial, and industrial customers, and understands and exercises as appropriate the opportunities presented by emergent customer groups (e.g., high strength waste producers, power companies).

Key Performance Indicators

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
FOPS Service Call Average Response Time (minutes)	18	22	15	25	17
Development Review Response Time (days)	To be gathered				

Analysis and Discussion

The Field Operations Department (FOPS) maintains a goal to respond to customers with sewer backups within 60 minutes, measured from when the call is received to when staff arrives at the location. The District consistently meets this goal, and explains why the average response time is consistently under 30 minutes year over year.

The Engineering Department maintains a goal to complete development review on submitted projects within 30 days. As development review is coordinated through the City of Vallejo, the city maintains this data. As of the date of this report, the City has not been able to produce the data, but it is intended that this data will be available for next year's report.

Attribute #3: Employee and Leadership Development

Assessment	
Year 2020	Satisfactory
5-Year Trend	Satisfactory

Attribute Definition

Recruits, develops, and retains a workforce that is competent, motivated, adaptive, and safety-focused. Establishes a participatory, collaborative organization dedicated to continual learning, improvement, and innovation. Ensures employee institutional knowledge is retained, transferred, and improved upon over time. Emphasizes and invests in opportunities for professional and leadership development, taking into account the differing needs and expectations of a multigenerational workforce and for resource recovery operations. Establishes an integrated and well-coordinated senior leadership team.

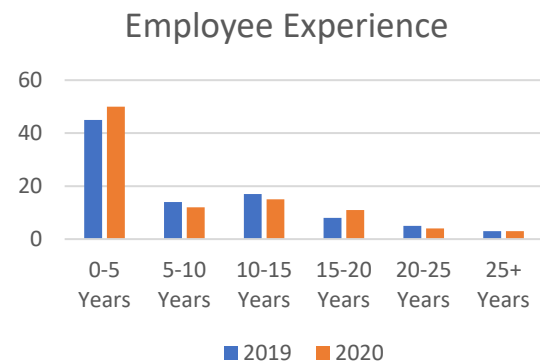
Key Performance Indicators

	2016	2017	2018	2019	2020
Online Safety Training Courses	na	na	1,985	1,714	2,226
% of Online Trainings Completed On-Time	na	na	86%	87%	93%

Analysis and Discussion

Target Solutions, established at the District in 2018, is an online tool used to deliver much of the District's safety-related training curricula. Staff has been relatively successful at completing their assignments on time, with significant results in 2020.

The District has a skewed distribution of employee experience (duration), with approximately half the employees with five or fewer years of experience. This indicates that there may be considerable training needed, with some associated inefficiencies in the short term, as new employees learn their jobs and increase proficiency. The relatively low numbers of employees nearing retirement is a possible indicator that the District should not expect significant loss of experience in the short term.



To help address the increased need for training, the operating departments (Field Operations, Plant Operations, Maintenance) are developing a comprehensive competency-based training program to build and enhance needed skills and for cross training purposes.

The District has several programs in place to promote leadership development, particularly among those in the Superintendent and Supervisor classifications. The District encourages specific employment law certifications through the Liebert Cassidy Whitmore (LCW) consortium, to provide specific skills and knowledge necessary for supervisors in the California public sector. The Finance Department has also developed an in-house training for understanding budgets, financial reports, and compliance with procurement policies, all

necessary skills for successful leadership. The Safety and Risk Management Department has ensured that supervisors receive necessary Cal/OSHA training as required.

In development are training programs to address other knowledge, skills and abilities that leaders need to possess and practice. The District is currently pilot testing EVOLVE, a leadership-focused training program focused on leadership in local government administration. The District is also developing the POWER (Preparing Our Wastewater Employees to Rise) Academy, an in-house developed program to provide a one-year experience to current and future agency leaders focused on the leadership skills needed specifically here at the District. The intention is to develop cohorts of five people per year to go through these programs.

As these programs are developed and delivered, metrics to evaluate their participation and effectiveness will be developed and reported.

Attribute #4: Operational Optimization

Assessment	
Year 2020	Watch
5-Year Trend	Watch

Attribute Definition

Ensures ongoing, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations in service to public health and environmental protection. Makes effective use of data from automated and smart systems, and learns from performance monitoring. Minimizes resource use, loss, and impacts from day-to-day operations, and reduces all forms of waste. Maintains awareness of information and operational technology developments to anticipate and support timely adoption of improvements.

Key Performance Indicators

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Energy Consumption (kW-h per MG)	2,205	1,999	1,710	1,645	2,021
Chemical Consumption (gallons per MG of NaOCl)	50	56	57	60	68
Operations – Planned Maintenance as % of Total	na	na	na	19%	29%

Analysis and Discussion

The treatment plant achieved a reduction in energy usage in 2017 by changing its primary outfall from the Carquinez Strait to the Mare Island Strait. As energy usage increased in 2020, the plant staff have initiated several projects to reduce consumption. These include conversion from a dry to wet polymer in solids dewatering (dry polymer requires air compressor conveyance), and changing the scum disposal process. Plant staff are also installing a power monitoring system that can measure power consumption by each process area, to better manage power consumption in the future.

About half of the plant's Sodium Hypochlorite (NaOCl) usage is for odor control in headworks, and the other half is used in wastewater disinfection after solids removal. It is suspected that the increased usage in the past two years is due to the deterioration of the chemical pumps used in disinfection causing the increased loading. In early 2021, the plant started piloting a different type of chemical pump to address this problem and should reduce NaOCl application (and by default, the application of sodium bisulfite – used to remove residual chlorine).

The hours of maintenance activity, tracked by type of maintenance, was only first available in late 2018. The low number of hours performing “preventive maintenance” activities in the last two years is partially an artifact of the computerized maintenance management system (CMMS) not being fully populated to capture all hours worked by maintenance staff, and partially reflective of maintenance staff efforts to focus more on corrective than preventive work orders. As the CMMS system matures and plant staff focuses on a “root cause analysis” approach to reducing significant corrective maintenance activities, it is expected that the percentage of preventive maintenance work orders will increase over time.

Attribute #5: Financial Viability

Assessment	
Year 2020	Unsatisfactory
5-Year Trend	Unsatisfactory

Attribute Definition

Understands and plans for the full life-cycle cost of utility operations and value of water resources. Establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues. Establishes predictable rates— consistent with community expectations and acceptability—adequate to recover costs, provide for reserves, maintain support from bond rating agencies, plan and invest for future needs, and taking into account affordability and the needs of disadvantaged households. Implements sound strategies for collecting customer payments. Understands the opportunities available to diversify revenues and raise capital through adoption of new business models, including revenues from resource recovery.

Key Performance Indicators

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Operating Ratio (Wastewater Fund)	1.07	1.04	1.11	1.13	1.06
Operating Ratio (Stormwater Fund)	3.10	0.73	1.42	0.35	0.82
Debt Service Coverage	194%	187%	176%	174%	301%
Wastewater Reserve Policy Compliance – Emergency	No	Yes	Yes	No	Yes
Wastewater Reserves Policy Compliance – Liquidity	No	No	No	No	No
Stormwater Reserve Policy Compliance – Emergency	Yes	Yes	Yes	Yes	Yes
Stormwater Reserves Policy Compliance – Liquidity	Yes	Yes	Yes	Yes	Yes

Analysis and Discussion

The Operating Ratios for the two funds are defined as total operating revenue plus property tax revenue, divided by total operating expenses (including debt service, but excluding depreciation). This calculation reveals whether annual revenues are sufficient to cover cash-related operating expenses. An amount over 1.0 indicates sufficient revenues, while a number below 1.0 indicates the use of reserves to cover ongoing operations. In the Stormwater Fund, revenues were adjusted down in FY19 to account for overreporting of revenue in FY18, which explains the fluctuations. FY20 is a representative (non-adjusted) year for this metric.

Overall, the Key Performance Indicators show that the **Wastewater Fund** revenues are sufficient to meet their operating expense and debt service requirements, but are not yet meeting their emergency and liquidity reserve targets. The rate increase in 2018 was designed to resolve this, on a trend that would produce reserve policy compliance in FY26. The analysis indicates that this goal is still achievable and that the District is on target to meet it.

In the **Stormwater Fund**, the operating ratio indicates that the annual revenues into this fund are not sufficient to cover the annual operating expenses, and that fund equity is being used to meet this requirement and to pay for capital outlays. The fund currently has sufficient reserves for emergency and liquidity needs, but this will not be the case in the future if the fund continues to draw on fund equity for operational needs. A rate study is currently underway to evaluate the extent of this problem and provide recommendations to the Board.

Attribute #6: Infrastructure Strategy and Performance

Assessment	
Year 2020	Satisfactory
5-Year Trend	Satisfactory

Attribute Definition

Understands the condition of and costs associated with critical infrastructure assets. Plans infrastructure investments consistent with community needs, anticipated growth, system reliability goals, and relevant community priorities, building in a robust set of adaptation strategies (e.g., for changing weather patterns, customer base). Maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable risk consistent with customer, community, and regulator-supported service levels. Assures asset repair, rehabilitation, and replacement efforts are coordinated within the community to minimize disruptions and other negative consequences.

Key Performance Indicators

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Sewer Renewal & Replacement - \$	na	\$2.9m	\$1.7m	\$2.9m	\$1.3m
Sewer Renewal & Replacement - % of System	na	0.2%	0.1%	0.2%	0.2%
Sewer Condition Assessment - % of System	10%	10%	10%	4%	5%
Sewer Cleaning - % of System Mains	50%	50%	50%	49%	49%
Upper Lateral - # replaced	170	174	153	159	126
Upper Lateral - % of System New since 1990	na	28.9%	29.4%	29.8%	30.1%

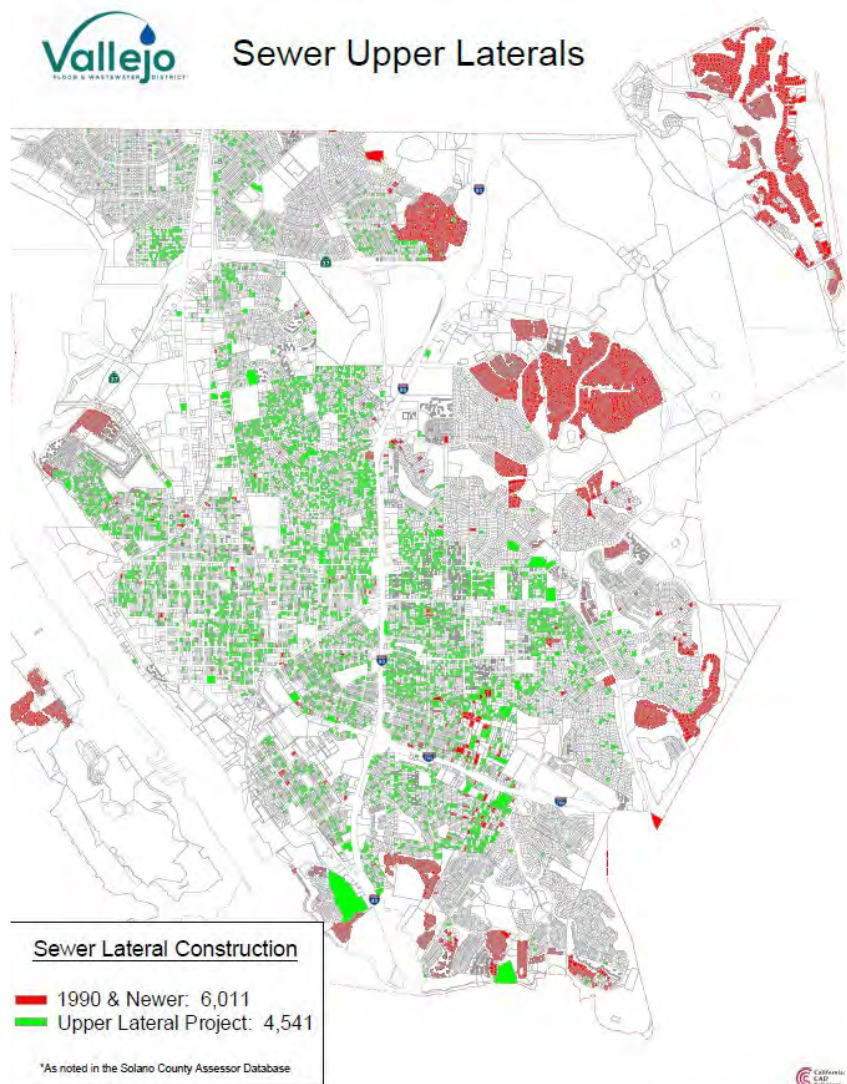
Analysis and Discussion

The District continues to meet its NPDES permit requirements to spend \$1.25 million annually on sewer collection system rehabilitation and replacement. As a percentage of the system, the number fluctuates as each annual project may have more or less linear feet, depending on the pipe size, site conditions, depth of pipe, and rehabilitation methods used.

Sewer condition assessment is the percentage of sewer gravity mains under 18 inches in diameter that were assessed using CCTV equipment. In 2019 and 2020, the District dropped from running two CCTV crews to one, as personnel issues, vacancies, and then position freezes due to anticipated future year COVID-19 financial impacts. Given the District's intensive training program for new hires, it can take up to two years for an employee to reach optimal efficiency in a particular program area. Other issues, such as a change in assessment methodologies also contributed to the need for additional training and lowered production. In 2021 and beyond, it is expected that the number of assessments completed will increase and eventually return to 2018 levels, assuming that personnel assigned to this program remain stable. The District has also implemented changes in the program where assets are inspected based on risk assessment, rather than just periodic rotation, which has increased the emphasis on "harder to reach" system segments. This work takes more time, but is ultimately more important in the overall efforts at overflow risk management.

Systematic sewer cleaning is vital to protecting the system from fats, oil and grease buildup, root intrusions and other blockages that can lead to sewer overflows. The District maintains a goal to clean all gravity mains 15 inches and under at least every five years, with particular pipe segments cleaned more frequently based on prior experience and risk assessment. The data show a consistent trend of cleaning pipe segments that, when added together, represent about half of the entire gravity main system.

The District's Upper Lateral Grant program is available to property owners to help replace sewer laterals that have deteriorated and are allowing in groundwater or stormwater through infiltration. The goal is to increase the percentage of properties with new laterals or laterals in good condition, which for this report is defined as any new or replaced lateral since 1990 as a percentage of total residential laterals. In 2020, the percentage of new or replaced exceeded 30% of the total system.



Attribute #7: Enterprise Resiliency

Assessment	
Year 2020	Satisfactory
5-Year Trend	Satisfactory

Attribute Definition

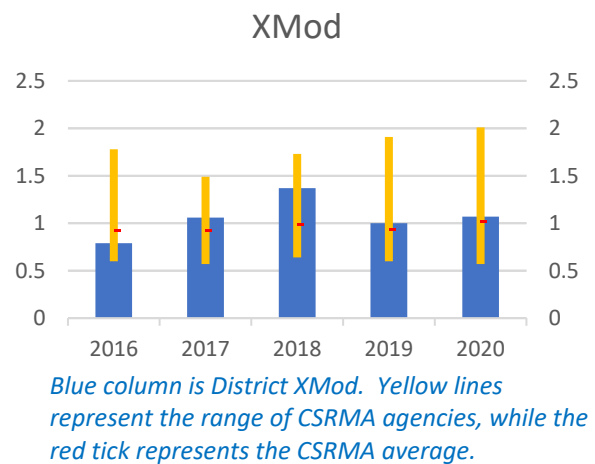
Ensures utility leadership and staff work together internally, and coordinate with external partners, to anticipate, respond to, and avoid problems. Proactively identifies, assesses, establishes tolerance levels for, and effectively manages a full range of business risks (including interdependencies with other services and utilities, legal, regulatory, financial, environmental, safety, physical and cyber security, knowledge loss, talent, and natural disaster-related) consistent with industry trends and system reliability goals. Plans for and actively manages around business continuity.

Key Performance Indicators

	2016	2017	2018	2019	2020
Experience Modification (XMOD) Rate	0.79	1.06	1.37	1.00	1.07
Lost Time Days for Work-Related Injuries	487	276	123	113	154

Analysis and Discussion

The District's Experience Modification (XMod) Rate is a calculation that includes the last three years of experience, including both frequency and severity, of workers compensation (WC) claims. An XMod of 1 equals the "expected" rate for the wastewater utility industry. Any number below 1 indicates the District's experience was better than the expected, and over 1 indicates more WC claims than the average. It is useful to compare this number against other similar agencies. The chart at the right compares the District against all the California Sanitation Risk Management Association (CSRMA) members, showing the CSRMA high, low and average XMod Rate. The District consistently performs near the average of CSRMA agencies.



The impact that work-related injuries and illnesses can have on the productivity and resiliency of the District is measured by the number of days of lost time or restricted time due to these injuries or illnesses. In the past five years, the District has seen improvements in this area.

In the plant and at pump stations, the District has established standards and procedures to enhance resiliency:

- The District uses a three-source approach to energy – the PG&E electricity grid, natural gas, and diesel. In the event of both electricity and natural gas interruption, on-site diesel supplies are adequate to meet a 10-day demand.

- All critical pump stations (36 of 38) have on-site diesel generators with 3-7 day supplies of diesel.
- The District maintains a 25-day supply capacity of lime (for solids processing), with reorder triggers at 13 days remaining.
- In the event of levee failure or other limitations at Tubbs Island, the District can dispose of biosolids at a nearby facility that will continue to use the material for beneficial reuse.
- Plant Operations staff will shift to 12-hour schedules in 2021, allowing for necessary training opportunities to increase the number of qualified Grade 3 (or above) operators to run shifts in the event of an operator shortage.

Areas where additional effort will be applied toward enterprise resiliency include business process continuity with the implementation of new Enterprise Resources Planning software, an evaluation of chemistry supply backup contracts, and implementation of off-premises computer server redundancy. The District will also be implementing a new Enterprise Employee Health and Safety software suite to better track and analyze employee resiliency and emergency preparedness metrics.

Attribute #8: Community Sustainability

Assessment	
Year 2020	Watch
5-Year Trend	Satisfactory

Attribute Definition

Takes an active leadership role in promoting and organizing community sustainability improvements through collaboration with local partners (e.g., transportation departments, electrical utilities, planning departments, economic development organizations, watershed and source water protection groups). Manages operations, infrastructure, and investments to support the economic, environmental, and social health of its community. Integrates water resource management with other critical community infrastructure, social and economic development planning to support community-wide resilience, support for disadvantaged households, community sustainability, and livability.

Key Performance Indicators

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Biosolids Beneficial Reuse	100%	100%	100%	100%	100%
Reduced Rate Program Participation	1,687	1,895	1,793	1,656	1,018

Analysis and Discussion

For the past five years (and longer), the District has land applied its biosolids and contracted with a farmer to grow silage crops, putting 100% of the District's biosolids into beneficial reuse. The District is exploring the possibility of expanding its program to accept biosolids from other wastewater treatment facilities, which would drive the percentage of reuse over 100%.

In 2016, the District established a Reduced Rate Program, providing a reduced sewer fee to those owner-occupied houses that qualify under the PG&E CARE program based on household income. Participation in the program has significantly decreased in the past two years, and the 2021 number, which represents the FY 2020-21 fiscal year, is expected to be lower than 2020 due to the outreach difficulties during the COVID-19 pandemic. Staff is researching possible causes, and will take efforts to expand the program's marketing and participation. The "Watch" assessment in the "Community Sustainability" attribute category is due to this decrease in program subscription.

The District takes a lead roll in coordinating the Vallejo Watershed Alliance, a community-based group working to improve the greater Vallejo watershed, through the coordination of monthly workdays and California Coastal Cleanup Day in area watersheds.

Attribute #9: Water Resource Sustainability

Assessment	
Year 2020	N/A
5-Year Trend	N/A

Attribute Definition

Ensures the availability and sustainable management of water for its community and watershed, including water resource recovery. Understands its role in the complete water cycle, understands fit for purpose water reuse options, and integrates utility objectives and activities with other watershed managers and partners. Understands and plans for the potential for water resource variability (e.g., changing weather patterns, including extreme events, such as drought and flooding), and utilizes as appropriate a full range of watershed investment and engagement strategies (e.g., Integrated Planning). Engages in long-term integrated water resource management, and ensures that current and future customer, community, and ecological water-related needs are met.

Key Performance Indicators

2016 2017 2018 2019 2020

N/A

Analysis and Discussion

This attribute is primarily for those agencies that produce drinking water or recycled water. The District does neither. The District has evaluated whether it should begin to produce recycled water, but there are insufficient anticipated users of the water to justify the capital expense.

Attribute #10: Stakeholder Understanding and Support

Assessment	
Year 2020	Satisfactory
5-Year Trend	Satisfactory

Attribute Definition

Engenders understanding and support from stakeholders (anyone who can affect or be affected by the utility), including customers, oversight bodies, community and watershed interests, and regulatory bodies for service levels, rate structures, operating budgets, capital improvement programs, and risk management decisions. Actively promotes an appreciation of the true value of water and water services, and water's role in the social, economic, public and environmental health of the community. Actively engages in partnerships, involves stakeholders in the decisions that will affect them, understands what it takes to operate as a "good neighbor," and positions the utility as a critical asset (anchor institution) to the community.

Key Performance Indicators

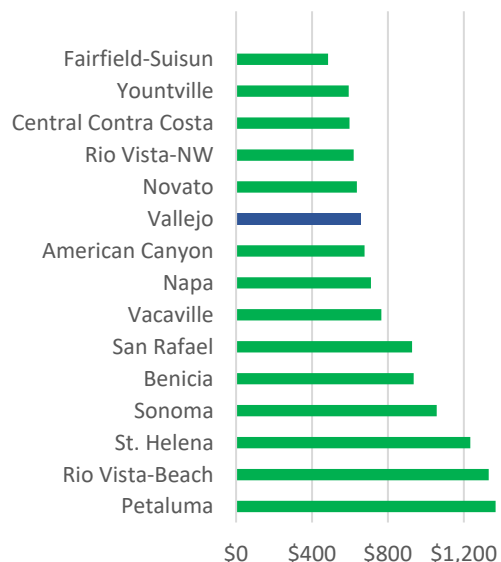
	2016	2017	2018	2019	2020
Public Education Participants	1,726	1,631	1,535	1,023	837
Comparative Rate Rank – sewer rate	76%	72%	66%	72%	77%

Analysis and Discussion

Public education and event participation are measured on a fiscal year basis, meaning that the 2020 number represents July 2019 to June 2020 activity. Due to the COVID-19 pandemic, education and cleanup events were significantly curtailed in Spring 2020. It is expected that participation will increase when schools again allow outside presentations, field trips resume, and gathers for creek cleanup days are again possible.

Comparative Rate Rank is a measure the District's sewer rate for residential customers taken as a percentage of the average of other sewer agencies' rates. At rating of 77% means that, when the sewer rate for comparable agencies are averaged together, the Vallejo Flood and Wastewater District's sewer rate is only 77% of the average. Any number under 100% means that the District's rates are below the area average. The chart at the right shows the District's rate compared to other agencies. The District's percentage has increased recently due to the fee increase approved and implemented in Spring 2018.

Residential Sewer Rates



Appendix I

SSMP Audits

I1: 2014 Audit Report

I2: 2017 Audit Report

I3: 2020 Audit Report

I4: 2022 Audit Report

I1. 2014 Audit Report

This Audit Report summarizes the tasks that were completed in support of the audit of the Vallejo Flood and Wastewater District's (VFWD/District) 2014 Sewer System Management Plan (SSMP). The VFWD (formerly Vallejo Sanitation and Flood Control District) SSMP was originally created in 2006 and was last updated January 23, 2014; however, the SSMP had not been significantly updated from the original document. The intent of this audit is to evaluate the effectiveness of the SSMP and its compliance with the requirements State Water Board Order No. 2006-0003-DWQ Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems and Order No. WQ 2013-0058-EXEC Amending Monitoring and Reporting Program (MRP) for the WDR.

In May 2017, a gap analysis was performed on the 2014 SSMP document to help guide updates to the 2017 SSMP Update. The gap analysis evaluated each of the elements based on satisfying three criteria: does the element meet WDR compliance; does the element provide an effective management tool; and does the element meet best management practices (BMP).

In December 2018, a retroactive audit on the 2014 SSMP was initiated which intended to build upon the May 2017 gap analysis and achieve a fully regulatory-compliant audit. An overall effectiveness evaluation could not be completed because there were no performance measures documented in the 2014 SSMP. An effectiveness evaluation of each SSMP Element was completed and is provided below. The May 2017 gap analysis is attached.

Requirement	Effectiveness Evaluation
ELEMENT 1 – GOALS	
Effectiveness of Element 1	Overall goal to reduce SSOs is being met; sub-goals are specific to VFWD but should be revisited based on progress since 2012 SSMP. Metrics could be integrated into sub-goals to strengthen evaluation of effectiveness. Element is effective.
ELEMENT 2 – ORGANIZATION	
Effectiveness of Element 2	Responsible (LRO) or authorized (DS) representatives have not been specifically identified by job title or name, although SSO reporting is being performed per WDR and CIWQS requirements. Element is effective, but needs improvement to be brought in-line with SSMP guidelines.
ELEMENT 3 – LEGAL AUTHORITY	
Effectiveness of Element 4	O&M Program components are summarized in a narrative format, but few metrics are presented. Element is effective in describing program at a high level, but needs improvement to satisfy SSMP guidelines. Provide information on mapping procedures, cleaning/PM metrics, training, infrastructure inventories, and parts inventories.
ELEMENT 5 – DESIGN AND PERFORMANCE STANDARDS	
Effectiveness of Element 5	Element contains exact copy of District Design and Construction Standards. Element could be improved by providing summary of document which brings forward key design considerations.
ELEMENT 6 – OVERFLOW EMERGENCY RESPONSE PLAN (OERP)	
Effectiveness of Element 6	Element contains stand-alone OERP document. Element format is effective as-is, but needs updating with current information. No information is provided on OERP training.

Sewer System Management Plan

2014 SSMP Audit Report



Requirement	Effectiveness Evaluation
ELEMENT 7 – FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM	
Effectiveness of Element 7	The District has invested significant effort in targeting FOG-related SSOs. The FOG Control Program has proven effective in reducing FOG-related SSOs. Element is effective.
ELEMENT 8 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN	
Effectiveness of Element 8	Element outlines capacity management methods of I/I reduction and conveyance/treatment improvements. The District had zero capacity-related SSOs from 2006-2013, and 4 between 2014-2017. Element should be updated to reflect any recent capacity evaluation efforts.
ELEMENT 9 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS	
Effectiveness of Element 9	Specific element did not exist in 2012 SSMP. Element should be developed with detail on monitoring and tracking efforts which will allow evaluation of SSMP effectiveness.
ELEMENT 10 – SSMP PROGRAM AUDITS	
Effectiveness of Element 10	Specific element did not exist in 2012 SSMP. No audits have been performed. Element should be developed and updated in next SSMP.
ELEMENT 11 – COMMUNICATION PROGRAM	
Effectiveness of Element 11	The District's communication and outreach activities are documented. Element is effective, but needs updating with current information.

I2. 2017 Audit Report

An audit was performed in December 2018 on the Vallejo Flood and Wastewater District's (District) December 2017 Sewer System Management Plan (SSMP). The 2017 SSMP document included updates to the District's 2014 SSMP to reflect changes in the regulations of the State Water Resources Control Board (SWRCB) and was brought before the District Board and approved on December 12, 2017.

Audit methods included a Gap Analysis and an Effectiveness Evaluation using the District's performance indicators. The intent of the audit is to evaluate the effectiveness of the SSMP elements and the SSMP's compliance with the State Water Board Order No. 2006-0003-DWQ, Statewide Waste Discharge Requirements for Sanitary Sewer Systems (WDR) and Order No. WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program (MRP) for the WDR.

Gap Analysis

The Gap Analysis portion of the audit uses industry reference materials, benchmarking data, and SWRCB regulatory enforcement procedures to identify areas for improvement in the SSMP itself, or the District's management or maintenance procedures. The Gap Analysis evaluated each WDR/MRP requirement on the following scale:

- **BMP Gap** – An element of collection system operation or management could be improved to Best Management Practices.
- **Management Tool Gap** – An element of the SSMP could be improved to enhance the effectiveness of the SSMP as a collection system management tool.
- **WDR Compliance Gap** – SSMP is not compliant with existing SSMP WDR.

The Gap Analysis results are presented in the table below. It should be noted that a "check mark" indicates that a gap exists as described in the column. An element with no "check marks" has been evaluated to be in compliance. Comments indicate recommended action items to comply with the WDRs, or to achieve BMP goals or improved management tools. The column at the far right indicates how the gap was addressed in the 2018 updates. At the end of each element section, an overall evaluation of the effectiveness of the SSMP element is provided along with suggestions on improvement if applicable.

Requirement		BMP Gap	Management Tool Gap	WDR Compliance Gap	Comments	Changes made in 2018 SSMP Updates to address Gaps
ELEMENT 1 – GOALS						
A.	Are the goals stated in the SSMP still appropriate and accurate?				No Gap identified. Goals are compliant and reflect current practices and initiatives.	
Effectiveness of Element 1		Element is effective. No changes recommended.				

Sewer System Management Plan

2017 SSMP Audit Report



Requirement		BMP Gap	Management Tool Gap	WDR Compliance Gap	Comments	Changes made in 2018 SSMP Updates to address Gaps
ELEMENT 2 – ORGANIZATION						
A.	Is the list of Contact Info for Responsible Officials in SSMP Content Development current?				No Gap identified. The Contact Info list is current.	
B.	Is the District Organization Chart current?			✓	Organizational Chart should be updated to include recently added Field Operations Staff.	New org chart included from District website and modified to include 2018 staffing changes
C.	Are the role and responsibilities descriptions an accurate portrayal of staff responsibilities?				No Gap identified. Roles and responsibility descriptions are accurate and current.	
D.	Does the SSMP identify the Chain of Communication for reporting SSOs, and is it accurate and up-to-date?				No Gap identified. Chain of Communication and SSO reporting accurate and up to date; SSO Reporting flow chart included in document.	
E.	Does the SSMP identify staff responsible for implementing, specific measures in the SSMP?				No Gap identified. Responsible Officials listed in table.	
Effectiveness of Element 2		Element is effective. To meet WDR compliance, Organization Chart should be updated with recently added Field Operations Staff, and in the future whenever significant staff changes are made.				
ELEMENT 3 – LEGAL AUTHORITY						
Does the SSMP contain references to the current District Code documenting the District’s legal authority to:						
A.	Prevent illicit discharges?				No Gap identified.	
B.	Require that sewers and connections be properly designed and constructed?				No Gap identified.	
C.	Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the District?				No Gap Identified. Table 6, Row 4 and 5 in Upper Laterals section should be reviewed and confirmed (Stormwater Discharge Ordinance)	
D.	Limit discharges of fats, oil and grease?				No Gap identified.	
E.	Enforce any violation of its sewer ordinances?				No Gap identified.	
Effectiveness of Element 3		Element is effective. District has powers granted through ordinances which are clearly defined with Legal Authority Checklist and excerpts from District Code.				

Sewer System Management Plan

2017 SSMP Audit Report



Requirement		BMP Gap	Management Tool Gap	WDR Compliance Gap	Comments	Changes made in 2018 SSMP Updates to address Gaps
Training						
G.	Is the training information and calendar current?		✓	✓	A training calendar is not provided in the current SSMP.	Health and Safety Manual added as Appendix which includes training requirements by topic, job classification, and frequency
H.	Does the SSMP document current training expectations and programs?				No Gap identified. Update section to include tracking program(s) currently used.	
Major Equipment and Critical Replacement Parts Inventories						
I.	Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system?				No Gap identified. Full inventory of major equipment added as Appendix.	
J.	Are critical replacement parts identified and sufficient to respond to emergencies?				Full inventory of critical replacement parts added as Appendix.	
Effectiveness of Element 4		Element is effective in describing program, but needs improvement to meet full WDR compliance. Provide information on training schedules; Additional information on cleaning/PM metrics would provide improved management tools.				
ELEMENT 5 – DESIGN AND PERFORMANCE STANDARDS						
A.	Does the SSMP contain current design and construction standards for the installation of new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?				No Gap identified.	
B.	Does the SSMP document current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects?				No Gap identified.	

Sewer System Management Plan

2017 SSMP Audit Report



Requirement		BMP Gap	Management Tool Gap	WDR Compliance Gap	Comments	Changes made in 2018 SSMP Updates to address Gaps
Effectiveness of Element 5		Element is effective. Element contains copy of District Design and Construction Standards and summary of document which brings forward key design considerations.				
ELEMENT 6 – OVERFLOW EMERGENCY RESPONSE PLAN (OERP)						
A.	Does the District's OERP establish procedures for the emergency response, notification, and reporting of SSOs?				No Gap identified. OERP included as Appendix.	
B.	Does the OERP establish procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Revised MRP? Does the SSMP identify the officials who will receive immediate notification?		✓		No Gap identified. Consider updating/adding to OERP flow charts to be District-specific (SSO Response Procedure).	Updated SSO Reporting Chain of Communication; added SSO Reporting Flow Chart (SSMP and OERP)
C.	Are staff and contractor personnel appropriately trained on the procedures of the OERP?			✓	No specific language on OERP training. Include a paragraph on training procedures and/or add OERP training to Health & Safety Manual.	Added clarification about tailgate debriefs which review workflow/incidents in comparison with OERP standards
D.	Does the SSO OERP include a program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to surface waters and to minimize or correct any adverse impact on the environment resulting from the SSOs?				No Gap identified. OERP included as Appendix.	
Effectiveness of Element 6		Element is effective, but needs additional information to meet WDR compliance. No information is provided on staff OERP training.				

Sewer System Management Plan

2017 SSMP Audit Report



Requirement		BMP Gap	Management Tool Gap	WDR Compliance Gap	Comments	Changes made in 2018 SSMP Updates to address Gaps
ELEMENT 7 – FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM						
A.	Does the FOG Control Program include efforts to educate the public on the proper handling and disposal of FOG?				No Gap identified; the District has a well-developed public education/outreach program.	
B.	Does the District have a plan and schedule for disposal of FOG generated within the service area?				No Gap identified	
C.	Does the District have sufficient legal authority to implement and enforce the FOG Control Program?				No Gap identified; legal authority also discussed in Element 3.	
D.	Are requirements for grease removal devices, best management practices (BMP), record keeping, and reporting established in the District's FOG Control Program?				No Gap identified; record keeping and BMPs also discussed in Element 3.	
E.	Does the District's FOG Control Program identify sections of the collection system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?				No Gap identified; legal authority also discussed in Element 3.	
F.	Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?				No Gap identified; FOG-related SSOs have been reduced from 12 (2009) to ≤1 per year. Update Table 8 (Historical FOG-Related SSOs in Mainlines) to end of 2017.	
Effectiveness of Element 7		Element is effective. The District has invested significant effort in targeting FOG-related SSOs. The FOG Control Program has proven effective in reducing FOG-related SSOs.				
ELEMENT 8 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN						
A.	Does the plan evaluate hydraulic deficiencies in the system, establish sufficient design criteria and recommend both short and long-term capacity enhancement and improvement projects?				No Gap identified	

Sewer System Management Plan

2017 SSMP Audit Report



Requirement		BMP Gap	Management Tool Gap	WDR Compliance Gap	Comments	Changes made in 2018 SSMP Updates to address Gaps
B.	Does the District's CIP establish a schedule of approximate completion dates for both short and long-term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?				No Gap identified; Current budget with high priority CIPs is included as Appendix.	
Effectiveness of Element 8		Element is effective. The District had zero capacity-related SSOs from 2006-2013, and 4 between 2014-2017. Element should be updated to reflect any capacity evaluation efforts since 2006.				
ELEMENT 9 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS						
A.	Does the SSMP accurately portray the methods of maintaining and tracking relevant information that can be used to establish and prioritize appropriate SSMP activities?				No Gap identified; Performance measures identified and tracked in Infor	
B.	Is the District able to sufficiently evaluate the effectiveness of SSMP elements and PM program based on relevant information?				No Gap identified	
C.	Does the SSMP identify and illustrate SSO trends including frequency, location, and volume.				No Gap identified; Historical SSO trends by cause and SSOs by volume are included for 2007-2017	
Effectiveness of Element 9		Element is effective.				
ELEMENT 10 – SSMP PROGRAM AUDITS						
A.	Have SSMP Audits been completed? Audits must occur every two years and a report must be kept on file.		✓	✓	No audit has been performed or is included in the SSMP document.	Audits were performed on 2014 SSMP and 2017 (December) SSMP and are included in Appendix.
Effectiveness of Element 10		Element needs improvement. Gap analysis completed in 2017 on 2014 SSMP could be expanded to serve as full audit. This audit will be included as a full audit on the 2017 version.				

Sewer System Management Plan

2017 SSMP Audit Report



Requirement		BMP Gap	Management Tool Gap	WDR Compliance Gap	Comments	Changes made in 2018 SSMP Updates to address Gaps
ELEMENT 11 – COMMUNICATION PROGRAM						
A.	Does the District effectively communicate with the public and other agencies about the development and implementation of the SSMP and continue to address any feedback?				No Gap identified; the SSMP is posted on the website and is open for review at the time of updates.	
Effectiveness of Element 11		Element is effective. The District's communication and outreach activities are active and documented.				

Evaluation of Effectiveness of SSMP

Performance indicators developed in the 2017 SSMP Update (Section IX: Monitoring, Measurement, and Program Modifications) were used to measure the performance of the wastewater collection system and the effectiveness of the SSMP. Performance indicator metrics were retrieved from the District's CMMS (Infor) and the California Integrated Water Quality System (CIWQS) online database. Selected performance indicators are listed below. Historical results are presented in the following sections.

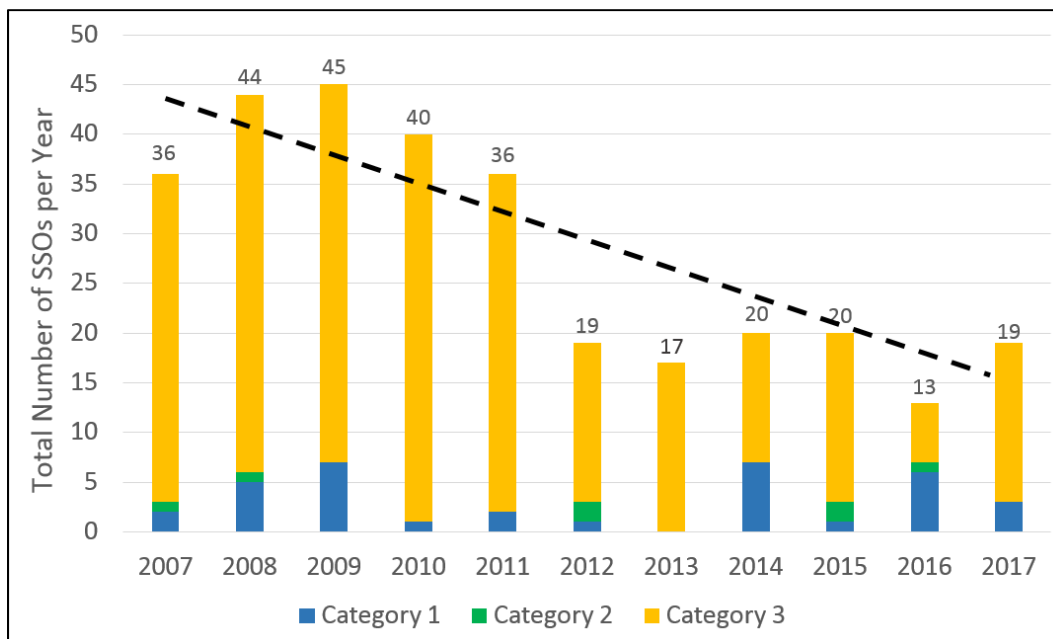
1. SSOs
 - o Total number of SSOs per year
 - o Number of SSOs by cause (roots, grease, debris, structural failure, capacity, pump station failure, and other)
 - o SSO Rate (number per 100 miles per year);
2. Volume of sewage recovered compared to total volume spilled;
3. Volume of sewage discharged to Waters of the State; and
4. Percentage of spills during wet-weather events.

1. SSOs

Total Number of SSOs per Year

Figure 1 presents the trend in total number of SSOs per year, by category. SSOs have steadily declined since 2007 due to the District's SSO-targeted maintenance activities.

Figure 1 – SSOs per Year



Number of SSOs by Cause

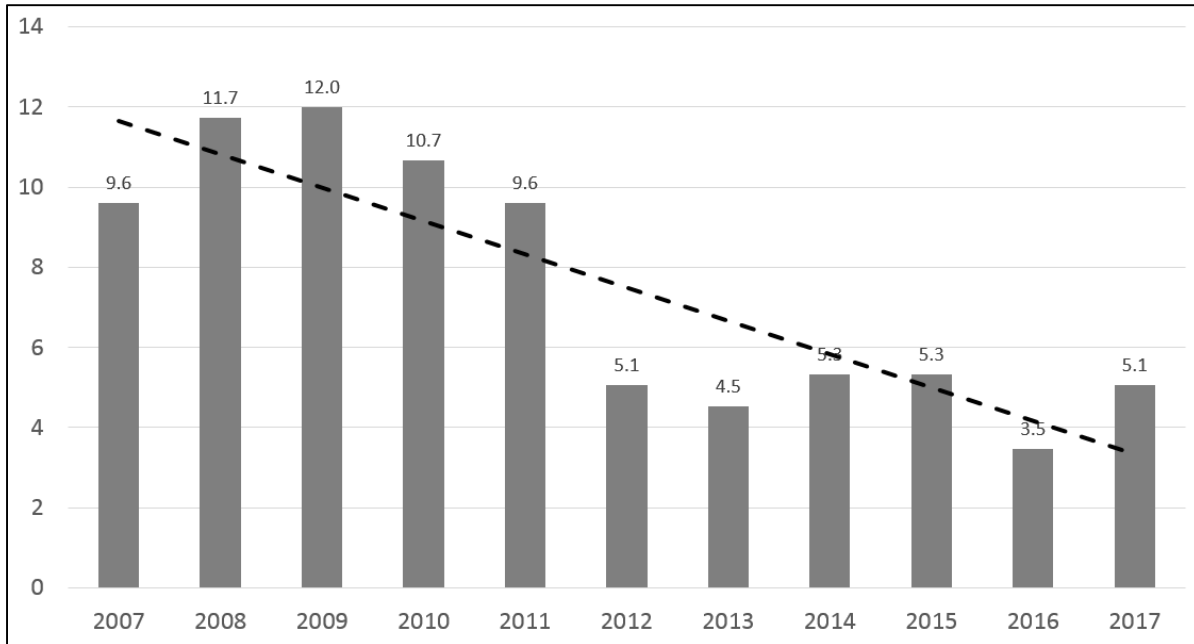
Table 1 presents the SSOs by cause for each year. SSOs caused by grease at one time accounted for approximately one third of the SSOs per year; however, this number is down below 10 percent of the total SSOs in recent years. This can be attributed in part to the implementation of the FOG Control Program. Roots account for the greatest portion of the District's SSOs. The District has an aggressive root control program using foaming to control recurring roots, in addition to hydro jetting and hogging.

Table 1. SSOs by Cause								
Calendar Year	Roots	Debris	Grease	Capacity	Structural Failure	Pump Station Failure	Other	Total
2007*	5	-	5	-	-	-	26	36
2008	13	-	10	-	2	2	17	44
2009	25	1	12	-	1	-	6	45
2010	14	4	7	-	1	-	14	40
2011	13	4	3	-	3	-	13	36
2012	11	1	2	-	1	-	4	19
2013	7	-	3	-	1	-	6	17
2014	6	1	1	1	2	-	9	20
2015	12	2	1	-	1	-	4	20
2016	6	1	1	1	2	-	2	13
2017	12	2	-	3	1	-	1	19
*2007 Volumes reported in CIWQS are lower than actual volumes due to reporting lag (only 16 out of 36 SSOs reported). The difference (20 SSOs were included in the "Other" category)								

SSO Rate

Figure 2 presents the trend in SSO rate. The SSO rate per 100 miles of gravity main follows the trend of the number of SSOs per year because the length of gravity mains has not changed (375 miles). The District's 2017 SSO rate of 5.1 is below the Region 2 average rate of 6.84 SSOs per 100 miles of gravity main (Fiscal Year 2016-17).

Figure 2 – SSOs per 100 Miles of Gravity Main

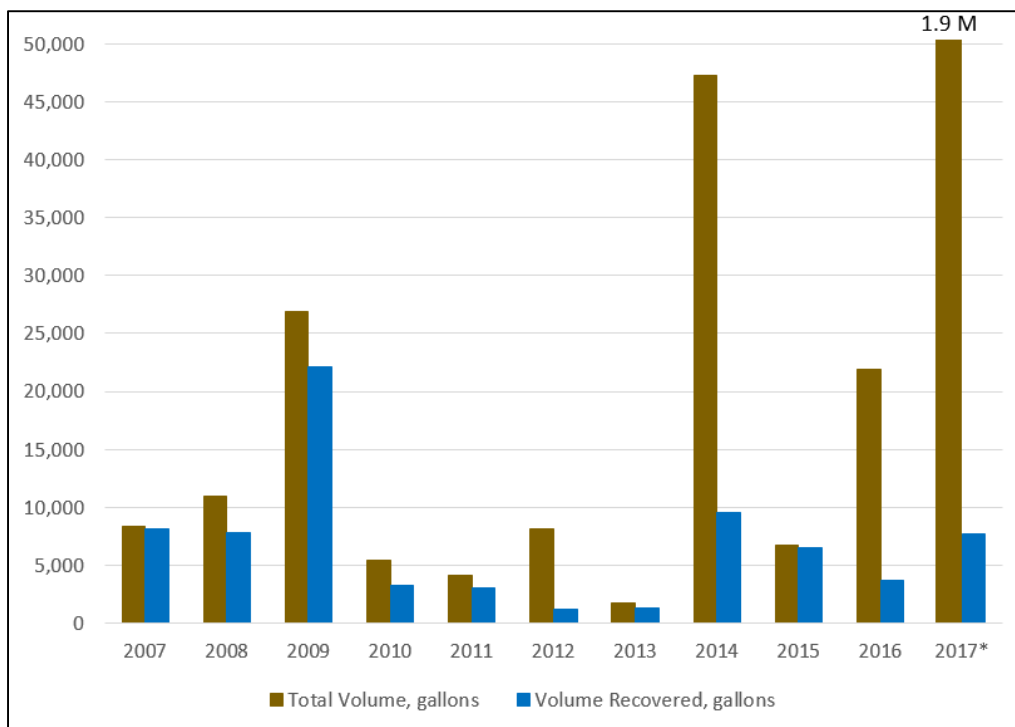


2. Volume of Sewage Recovered vs. Total Volume Spilled

Table 2 presents the volume of sewage recovered vs. total volume spilled. Figure 3 presents the trend in volume of sewage recovered vs. total volume spilled. This metric indicates the effectiveness of the District's response to SSOs. Overall, the District has been effective at recovering spilled SSOs.

Table 2. Volume Sewage Recovered vs. Total Volume Spilled			
Calendar Year	Total Volume Spilled, gallons	Volume Recovered, gallons	Percent Recovered (% of Total Spilled)
2007	8,350	8,085	97%
2008	10,975	7,755	71%
2009	26,913	22,084	82%
2010	5,357	3,230	60%
2011	4,125	3,068	74%
2012	8,084	1,128	14%
2013	1,688	1,288	76%
2014	47,275	9,525	20%
2015	6,764	6,544	97%
2016	21,867	3,624	17%
2017*	1,913,841	7,670	0.4%
*2017 included an SSO at the Ryder Street storage basin which is one of the District's NPDES permits; see below			

Figure 3 - Volume Sewage Recovered vs. Total Volume Spilled



In 2017, the District experienced a Category 1 SSO at their Ryder Street storage basin which resulted in a spill of 1.91 million gallons (MG). The Ryder Street basin serves as an equalization facility for the collection system when interceptor flows overwhelm the treatment facility influent capacity (typically during wet weather events). Although the Ryder Street basin is one of the District's NPDES permitted discharges, it is considered a collection system facility, and thus discharges from the basin are reported in the CIWQS database. The SSO volumes from the Ryder Street storage basin are included in all SSO figures presented herein unless specifically noted. The District acknowledges that the 2017 Ryder Street storage basin SSO was a controlled discharge through an existing NPDES permitted discharge location.

In 2014, higher than average spill volumes were primarily due to SSOs caused by heavy rainfall/capacity restrictions and a tripped circuit breaker at a pump station.

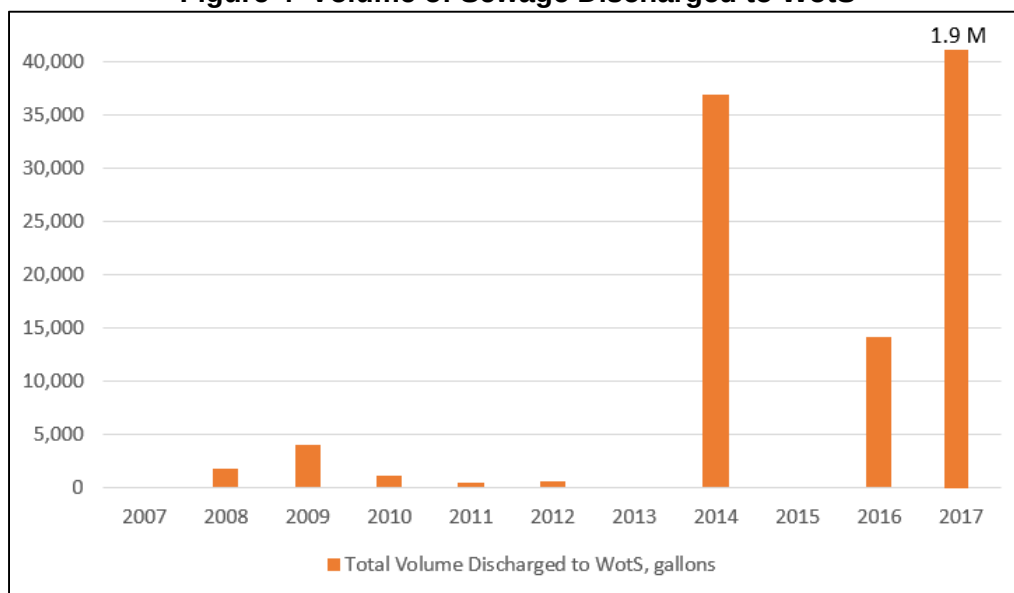
Excluding only the 2017 results, the District's average Total Volume Spilled is 3,770 gallons per 100 miles of pipe, compared to the Region 2 average of 16,705 gallons per 100 miles of pipe.

3. Volume of Sewage Discharged to Waters of the State (WotS)

Table 3 presents the volume of sewage discharged to WotS. Figure 4 presents the trend in volume of sewage discharged to WotS. The volume discharged generally corresponds to the difference between total volume spilled and volume recovered (previous metric).

Table 3. Volume of Sewage Discharged to WotS	
Calendar Year	Total Volume Discharged to WotS, gallons
2007	165
2008	1,800
2009	4,047
2010	1,140
2011	500
2012	625
2013	0
2014	36,845
2015	100
2016	14,178
2017	1,911,516

Figure 4 Volume of Sewage Discharged to WotS



4. Percentage of Spills During Wet-Weather Events

SSOs during wet weather can be the result of insufficient hydraulic capacity or from high flows compounding the effects of a maintenance or blockage issue. For example, a minor grease or debris blockage met with higher than normal flows can cause a hydraulic bottleneck in the system, and result in an overflow. The higher intensity and duration storm events experienced recently throughout the region mean that wet-weather SSOs will continue and may increase in the future. Wet-weather SSOs are typically not an indication of maintenance deficiencies.

Review of the CIWQS data indicates that six (6) SSOs occurred during wet-weather events from 2008 to 2017 (note 2007 was not included due to reporting lag). This represents 1.9% of all SSOs (six out of 309). Three SSOs were caused by large rain events and resulting capacity overflows in the sanitary sewer; two were caused by surcharged storm drain facilities (one blocked catch basin and one surcharged storm drain); and one was caused by the combination of a large rain event and root ball.

Overall Performance of System

Vallejo Flood and Wastewater District continues to consistently reduce the number of SSOs that occur within its service area. Since 2012 we have consistently had the opportunity to report no spill certifications in CIWQS with a range of between 2 to 4 a year, each year. The majority of the SSOs that have occurred over the last 5 years have been caused by root intrusion in VCP four-inch laterals, and six and eight-inch diameter mains. With this area of our system identified as presenting the highest risk, most of the District's collection system's inspection, maintenance and capital improvement efforts are focused in this area of the system.

The District has a robust Collection System maintenance program. Sanitary sewer mains and lower laterals are cleaned on scheduled intervals. The entire system 15-inch diameter and under is evaluated through our Jet Inspection Program every 3-5 years depending on previous inspection results. The entire system is CCTV inspected on an 8-year cycle. The majority of our in-house underground repair work consists of mainline spot repairs and lower lateral replacements.

Capital Improvement Projects are generated and prioritized for rehabilitation or replacement by coordinated efforts between Field Operations and Engineering. Those evaluated projects are then entered into our 10-year Capital Improvement Program. Engineering creates projects based on funding and priorities. The District's NPDES permit requires \$1.25 Million of targeted I&I reduction work on the sanitary sewer collection system. The targeted project amount in the District's CIP is between \$2 million and \$4 Million annually. The Engineering Department also manages the District's Upper Lateral Program. This program is designed to reduce I&I in private laterals, while providing property owner reimbursement for their upper lateral replacement. This program has had good success helping homeowners repair upper laterals and in reducing the amount of I&I entering the District's collection system.

(Ken Taylor, Field Operations Superintendent)

13. 2020 Audit Report

Introduction

An audit was performed in October 2020 on the Vallejo Flood and Wastewater District's (District) Sewer System Management Plan (SSMP). The SSMP was last updated in January 2019 but remained titled under the December 2017 SSMP to align with the five-year update frequency requirement. The last audit performed by the District was in December 2018; therefore, this October 2020 audit satisfies the two-year audit frequency as required by the State Water Board Order No. 2006-0003-DWQ, Statewide Waste Discharge Requirements for Sanitary Sewer Systems (WDR).

The intent of the audit is to evaluate the effectiveness of the SSMP elements and the SSMP's compliance with WDR Order No. 2006-0003-DWQ, and Order No. WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program (MRP) to the WDR.

Audit Process

2020 audit methods included a Gap Analysis and an Effectiveness Evaluation using the District's performance indicators. Two workshops were also held with District staff in October 2020 to review the Gap Analysis results, evaluate regulatory compliance, and assess effectiveness of the SSMP. Workshop PowerPoints are included as Attachment A to this Report. During these workshops, District staff also identified necessary updates to the SSMP document. Updates to the SSMP document will be performed as part of this audit process and incorporated into the current SSMP (December 2017 version).

Gap Analysis

The Gap Analysis portion of the audit uses industry reference materials, benchmarking data, and State Board regulatory enforcement procedures to identify areas for improvement in the SSMP itself, or the District's management or maintenance procedures. The Gap Analysis evaluated each WDR/MRP requirement on the following scale:

- **Management Tool Gap** – An element of the SSMP could be improved to enhance the effectiveness of the SSMP as a collection system management tool or best practice.
- **WDR Compliance Gap** – SSMP is not compliant with existing SSMP WDR.

The Gap Analysis was performed by Justin Keating, Director of Field Operations. Gap Analysis results were reviewed with District staff during the October 2020 compliance workshop; the results are presented in the table below. It should be noted that a "check mark" indicates that a gap exists as described in the column. An element with no "check marks" has been found to be in compliance. Comments indicate action items recommended to comply with the WDRs or to improve the SSMP as a management tool. The column at the far right indicates how the gap will be addressed in the subsequent 2020 SSMP updates. At the end of each Element section, a summary of the effectiveness of the SSMP Element is provided along with suggestions on improvement if applicable.

Sewer System Management Plan

2020 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2019 SSMP Required
ELEMENT 1 – GOALS					
A.	Are the goals stated in the SSMP still appropriate and accurate?			No Gap identified. Goals are compliant and reflect current practices and initiatives.	-
Effectiveness of Element 1		Element is effective. No changes recommended.			
ELEMENT 2 – ORGANIZATION					
A.	Is the list of Contact Info for Responsible Officials in SSMP Content Development current?		✓	Several role titles and staff changes have occurred since 2019; a second LRO was added. Role responsibilities and process are correct. All documents require updating to reflect changes.	Update role titles and staff names
B.	Is the District Organization Chart current?		✓		Update with new org chart from District website (July 2020)
C.	Are the role and responsibility descriptions an accurate portrayal of staff responsibilities?		✓		Update role titles and staff names
D.	Does the SSMP identify the Chain of Communication for reporting SSOs, and is it accurate and up-to-date?		✓		
E.	Does the SSMP identify staff responsible for implementing, specific measures in the SSMP?		✓		
Effectiveness of Element 2		Element is effective. Process and responsibilities are correct. To meet WDR compliance, role titles and staff changes should be updated in all documents.			
ELEMENT 3 – LEGAL AUTHORITY					
Does the SSMP contain references to the current District Code documenting the District’s legal authority to:					
A.	Prevent illicit discharges?			No Gap identified.	-
B.	Require that sewers and connections be properly designed and constructed?			No Gap identified.	-
C.	Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the District?			No Gap Identified.	-
D.	Limit discharges of fats, oil and grease?			No Gap identified.	-
E.	Enforce any violation of its sewer ordinances?			No Gap identified.	-
Effectiveness of Element 3		Element is effective. District has powers granted through ordinances which are clearly defined with Legal Authority Checklist and excerpts from District Code.			

Sewer System Management Plan

2020 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2019 SSMP Required
ELEMENT 4 – OPERATIONS AND MAINTENANCE PROGRAM					
Collection System Maps					
A.	Does the SSMP reference the current process and procedures for maintaining the District's wastewater collection system maps?			No Gap identified.	-
B.	Are the District's wastewater collection system maps complete, current, and sufficiently detailed (including showing applicable storm water conveyance facilities)?			No Gap identified. The District recently cleared a backlog of system map updates through a focused effort and dedicated staff time.	-
Prioritized Preventive Maintenance					
C.	Does the SSMP describe current preventive maintenance activities and the system for prioritizing regular maintenance and cleaning of the system?			No Gap Identified.	Add historical cleaning results for cleaning activities (2018 and 2019)
D.	Is there a system to document scheduled and conducted activities?			No Gap identified. District has recently implemented a GIS/CMMS work order link to improve efficiency of preventative maintenance activities.	Add description of new GIS/CMMS link
Rehabilitation and Replacement Planning					
E.	Is there an ongoing condition assessment program? Are the current components of this program documented in the SSMP?			No Gap identified. The District has adopted the industry-standard NASSCO PACP coding for pipeline condition assessment.	Add historical CCTV inspection results (2018 and 2019)
F.	Is there a system for prioritizing the rehabilitation and replacement program? Does the Capital Improvement Plan (CIP) include a time schedule for implementing the short- and long-term needs, plus a schedule for developing the funds needed for the CIP?			No Gap identified. Current Master Plan (MP) effort is underway, including flow monitoring. The MP will incorporate hydraulic and condition deficiencies into a prioritized CIP.	Add information about ongoing MP
Training					
G.	Is the training information and calendar current?			No Gap identified.	-
H.	Does the SSMP document current training expectations and programs?			No Gap identified.	-
Major Equipment and Critical Replacement Parts Inventories					
I.	Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system?		✓	Major equipment inventory was recently updated.	Update Appendix C - Major Equipment Inventory

Sewer System Management Plan

2020 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2019 SSMP Required
J.	Are critical replacement parts identified and sufficient to respond to emergencies?			No Gap identified.	-
Effectiveness of Element 4		Element is effective. District has dedicated significant effort in recent years to improving O&M processes and efficiency of the PM program.			
ELEMENT 5 – DESIGN AND PERFORMANCE STANDARDS					
A.	Does the SSMP contain current design and construction standards for the installation of new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?		✓	District Engineering Standards were updated July 2020.	Update reference(s) to current Engineering Standards
B.	Does the SSMP document current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects?		✓		
Effectiveness of Element 5		Element is effective.			
ELEMENT 6 – OVERFLOW EMERGENCY RESPONSE PLAN (OERP)					
A.	Does the District's OERP establish procedures for the emergency response, notification, and reporting of SSOs?			No Gap identified.	-
B.	Does the OERP establish procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Revised MRP? Does the SSMP identify the officials who will receive immediate notification?			No Gap identified.	-
C.	Are staff and contractor personnel appropriately trained on the procedures of the OERP?	✓		District staff are trained at appropriate intervals on the OERP and SSO response. Due to recent staff changes, the District is conducting in-house SSO Response and spill volume training late 2020 for all staff. Contractors are trained on a project-by-project basis to suit specific project needs.	Consider incorporating language in standard specifications for required contractor OERP/SSO training.

Sewer System Management Plan

2020 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2019 SSMP Required
D.	Does the SSO OERP include a program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to surface waters and to minimize or correct any adverse impact on the environment resulting from the SSOs?			No Gap identified. The District maintains 17 level-sensing SmartCovers at select manholes throughout the collection system to monitor flows/potential SSOs.	-
Effectiveness of Element 6		Element is effective. Consider adding OERP training requirements for contractors in District standard specifications.			
ELEMENT 7 – FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM					
A.	Does the FOG Control Program include efforts to educate the public on the proper handling and disposal of FOG?			No Gap identified; the District has a well-developed public education/outreach program.	-
B.	Does the District have a plan and schedule for disposal of FOG generated within the service area?			No Gap identified	-
C.	Does the District have sufficient legal authority to implement and enforce the FOG Control Program?			No Gap identified; legal authority also discussed in Element 3.	-
D.	Are requirements for grease removal devices, best management practices (BMP), record keeping, and reporting established in the District’s FOG Control Program?			No Gap identified; record keeping and BMPs also discussed in Element 3.	-
E.	Does the District’s FOG Control Program identify sections of the collection system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?			No Gap identified; legal authority also discussed in Element 3.	-
F.	Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?			No Gap identified; FOG-related SSOs have been reduced from 12 (2009) to ≤2 per year. Update SSMP Table (Historical FOG-Related SSOs in Mainlines) to end of 2019.	Add historical SSO results (2018 and 2019)
Effectiveness of Element 7		Element is effective. The District has invested significant effort in targeting FOG-related SSOs. The FOG Control Program has proven effective in reducing FOG-related SSOs.			

Sewer System Management Plan

2020 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2019 SSMP Required
ELEMENT 8 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN					
A.	Does the plan evaluate hydraulic deficiencies in the system, establish sufficient design criteria and recommend both short and long-term capacity enhancement and improvement projects?			No Gap identified. Current Master Plan (MP) effort is underway.	Add information about ongoing MP and historical capacity related SSO data (2018 to 2019)
B.	Does the District's CIP establish a schedule of approximate completion dates for both short and long-term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?				
Effectiveness of Element 8		Element is effective.			
ELEMENT 9 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS					
A.	Does the SSMP accurately portray the methods of maintaining and tracking relevant information that can be used to establish and prioritize appropriate SSMP activities?			No Gap identified. District has recently implemented a GIS/CMMS work order link to improve efficiency of preventative maintenance activities.	Add description of new GIS/CMMS link
B.	Is the District able to sufficiently evaluate the effectiveness of SSMP elements and PM program based on relevant information?			No Gap identified. Metrics were reviewed during workshop and determined to be adequate.	-
C.	Does the SSMP identify and illustrate SSO trends including frequency, location, and volume.			No Gap identified.	Add historical SSO trends by cause and volume (2018-2019)
Effectiveness of Element 9		Element is effective.			
ELEMENT 10 – SSMP PROGRAM AUDITS					
A.	Have SSMP Audits been completed? Audits must occur every two years and a report must be kept on file.			No Gap identified. Last audits performed in December 2018 and October 2020 (herein),	-
Effectiveness of Element 10		Element is effective. The October 2020 audit process involved two workshops to evaluate compliance and effectiveness. During these workshops, District staff identified new programs implemented since the last SSMP Update and content in the SSMP that requires updating.			
ELEMENT 11 – COMMUNICATION PROGRAM					
A.	Does the District effectively communicate with the public and other agencies about the development and implementation of the SSMP and continue to address any feedback?			No Gap identified; the SSMP is posted on the website and is available for review at the time of updates.	-
Effectiveness of Element 11		Element is effective. The District's communication and outreach activities are active and documented.			

Evaluation of Effectiveness of SSMP

Performance indicators developed in the 2017 SSMP Update (Section IX: Monitoring, Measurement, and Program Modifications) were used to measure the performance of the wastewater collection system and the effectiveness of the SSMP. Performance indicator metrics were retrieved from the California Integrated Water Quality System (CIWQS) online database. Selected performance indicators are listed below. Historical results through 2019 are presented in the following sections.

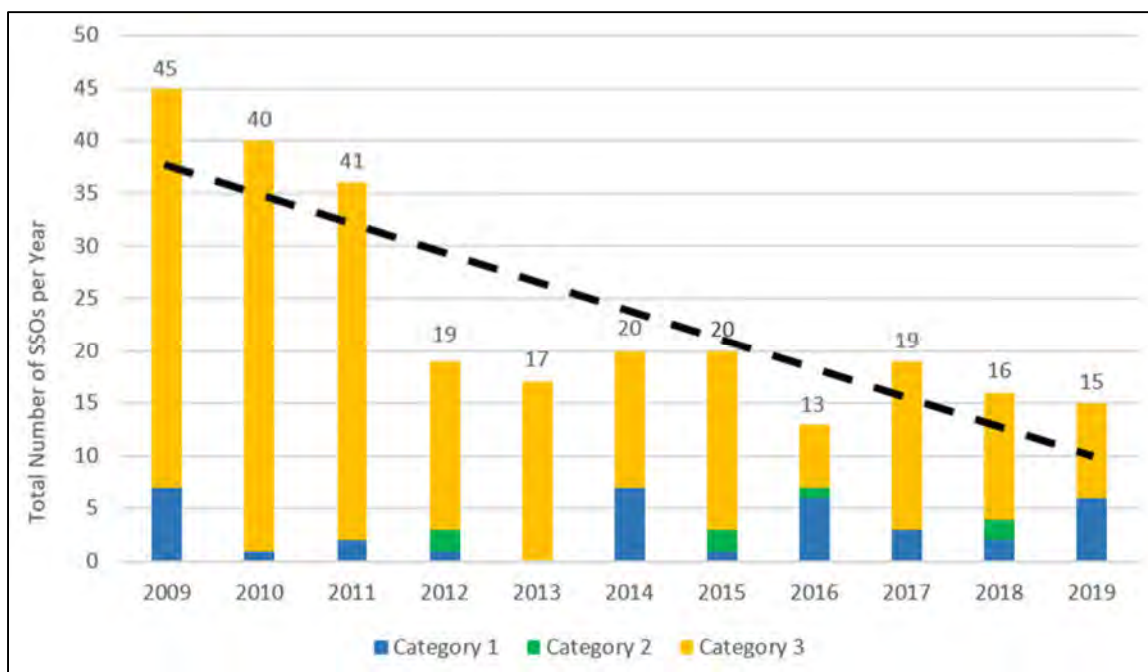
1. SSOs
 - Total number of SSOs per year
 - SSO Rate (number per 100 miles per year)
 - Number of SSOs by cause (roots, grease, debris, structural failure, capacity, pump station failure, and other)
2. Volume of sewage recovered compared to total volume spilled
3. Volume of sewage discharged to Waters of the State
4. Percentage of spills during wet-weather events.

1. SSOs

Total Number of SSOs per Year

Figure 1 presents the trend in total number of SSOs per year, by category. SSOs have steadily declined since 2009 due to the District's SSO-targeted maintenance activities.

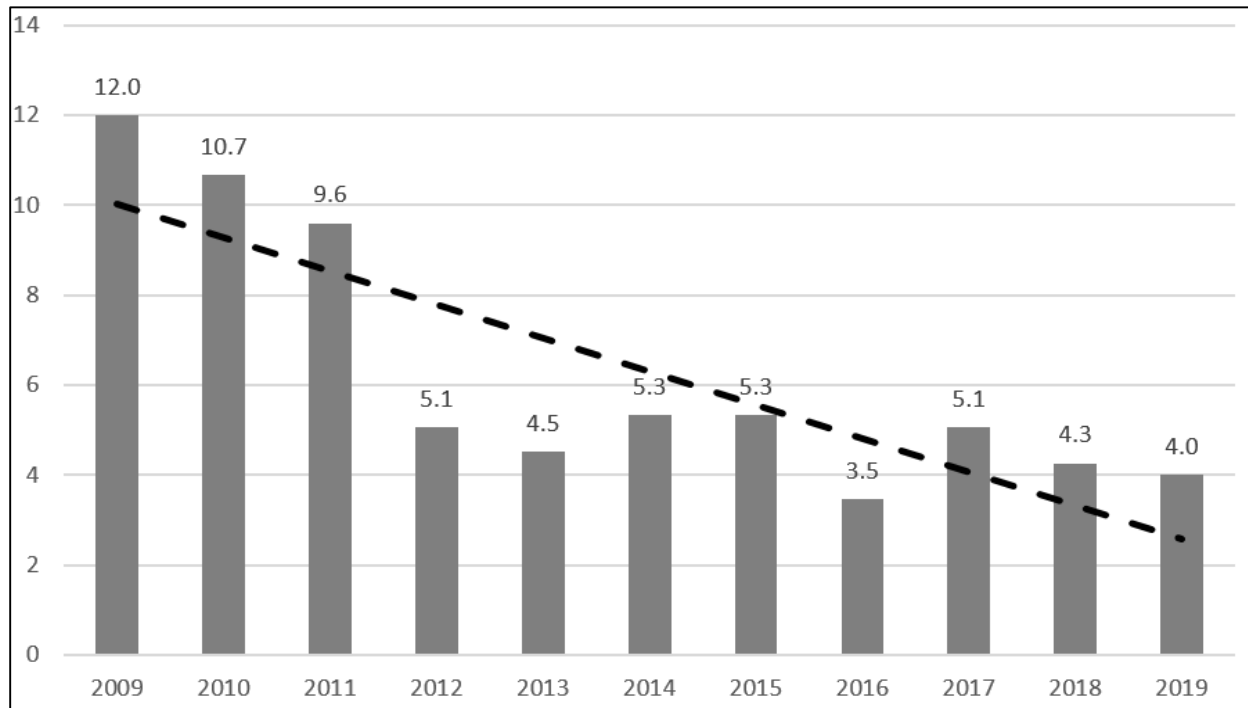
Figure 1 – SSOs per Year



SSO Rate

Figure 2 presents the trend in SSO rate. The SSO rate per 100 miles of gravity main follows the trend of the number of SSOs per year because the length of gravity mains has not changed (375 miles). The District's 2019 SSO rate of 4.0 is below the Region 2 average rate of 5.64 SSOs per 100 miles of gravity main (Fiscal Year 2018-19)¹.

Figure 2 – SSOs per 100 Miles of Gravity Main



¹ California Water Boards' Annual Performance Report – Fiscal Year 2018-19

https://www.waterboards.ca.gov/about_us/performance_report_1819/plan_assess/12411_sso_sewage_volume.html

Sewer System Management Plan

2020 SSMP Audit Report



Number of SSOs by Cause

Table 1 presents the SSOs by cause for each year. SSOs caused by grease at one time accounted for approximately 25 percent of the SSOs per year; however, this number is down to around 10 percent of the total SSOs in recent years. This can be attributed in part to the implementation of the FOG Control Program. Roots have historically accounted for the greatest portion of the District's SSOs. The District has an aggressive root control program using foaming to control recurring roots, in addition to hydro jetting and rodding.

Table 1. SSOs by Cause								
Calendar Year	Roots	Debris	Grease	Capacity	Structural Failure	Pump Station Failure	Other	Total
2009	25	1	12	-	1	-	6	45
2010	14	4	7	-	1	-	14	40
2011	13	4	3	-	3	-	13	36
2012	11	1	2	-	1	-	4	19
2013	7	-	3	-	1	-	6	17
2014	6	1	1	1	2	-	9	20
2015	12	2	1	-	1	-	4	20
2016	6	1	1	1	2	-	2	13
2017	12	2	-	3	1	-	1	19
2018	9	3	1	-	2	-	1*	16
2019	7	3	2	1	-	1	1*	15
								*Due to vandalism

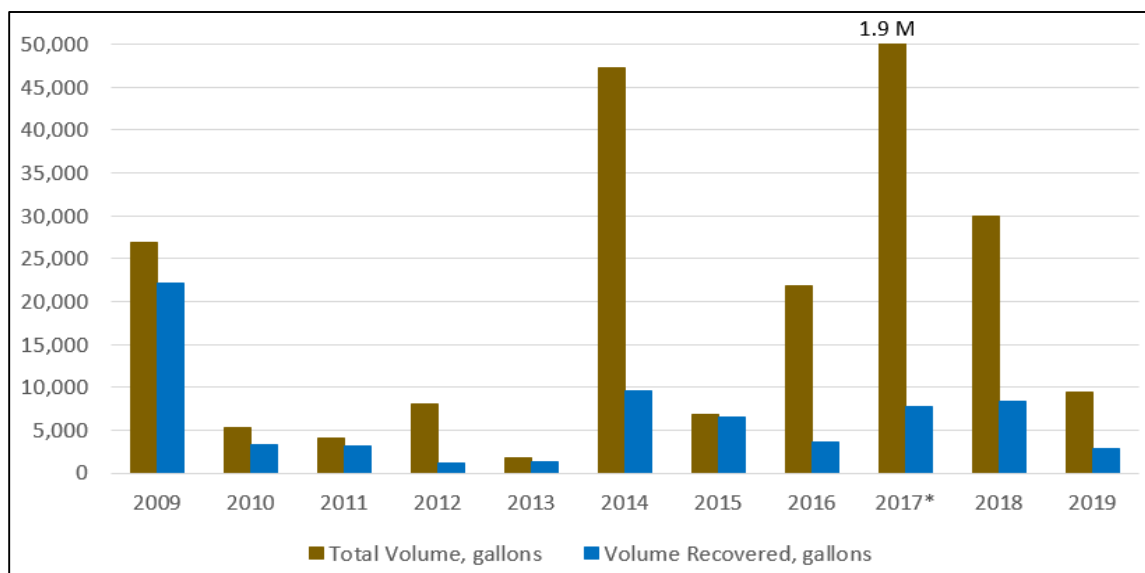
2. Volume of Sewage Recovered vs. Total Volume Spilled

Table 2 presents the volume of sewage recovered vs. total volume spilled. Figure 3 presents the trend in volume of sewage recovered vs. total volume spilled. This metric indicates the effectiveness of the District's response to SSOs. Since 2009 (excluding the 2017 results), the District's average Total Volume Spilled is 4,305 gallons per 100 miles of pipe, compared to the Region 2 average of 43,074 gallons per 100 miles of pipe. Overall, the District has been effective at recovering spilled SSOs.

Table 2. Volume Sewage Recovered vs. Total Volume Spilled			
Calendar Year	Total Volume Spilled, gallons	Volume Recovered, gallons	Percent Recovered (% of Total Spilled)
2009	26,913	22,084	82%
2010	5,357	3,230	60%
2011	4,125	3,068	74%
2012	8,084	1,128	14%
2013	1,688	1,288	76%
2014	47,275	9,525	20%
2015	6,764	6,544	97%
2016	21,867	3,624	17%
2017*	1,913,841	7,670	0.4%
2018	29,938	8,333	28%
2019	9,452	2,849	30%

*2017 included an SSO at the Ryder Street storage basin which falls under one of the District's NPDES permits; see details in 2018 Audit

Figure 3 - Volume Sewage Recovered vs. Total Volume Spilled



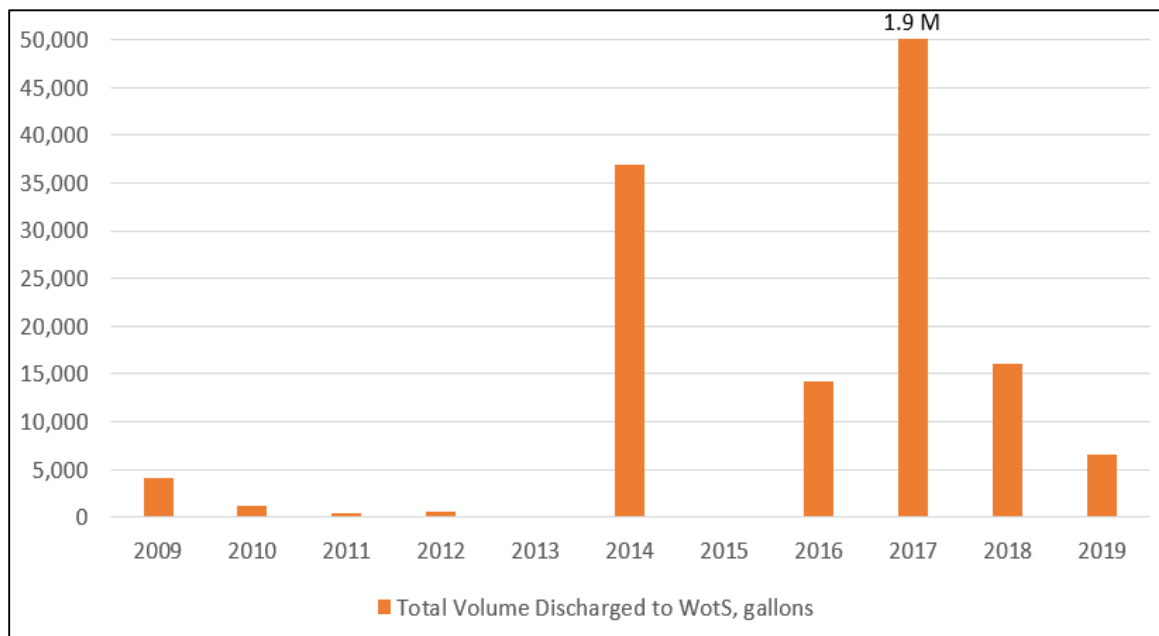
3. Volume of Sewage Discharged to Waters of the State

Table 3 presents the volume of sewage discharged to Waters of the State (WotS). Figure 4 presents the trend in volume of sewage discharged to WotS. The volume discharged generally corresponds to the difference between total volume spilled and volume recovered (previous metric).

Table 3. Volume of Sewage Discharged to WotS	
Calendar Year	Total Volume Discharged to WotS, gallons
2009	4,047
2010	1,140
2011	500
2012	625
2013	0
2014	36,845
2015	100
2016	14,178
2017*	1,911,516
2018	16,050
2019	6,573

*2017 included an SSO at the Ryder Street storage basin which falls under one of the District's NPDES permits; see details in 2018 Audit

Figure 4 Volume of Sewage Discharged to WotS



4. Percentage of Spills During Wet-Weather Events

SSOs during wet weather can be the result of insufficient hydraulic capacity or from high flows compounding the effects of a maintenance or blockage issue. For example, a minor grease or debris blockage met with higher than normal flows can cause a hydraulic bottleneck in the system and result in an overflow. The higher intensity and duration storm events experienced recently throughout the region mean that wet-weather SSOs will continue and may increase in the future. Wet-weather SSOs are typically not an indication of maintenance deficiencies.

Review of the CIWQS data indicates that five (5) SSOs occurred during wet-weather events from 2009 to 2019. This represents 2.3% of all SSOs (five out of 260).

Overall Performance of System

Provided by Justin Keating, Director of Field Operations (December 2020)

Vallejo Flood and Wastewater District continues to consistently reduce the number of SSOs that occur within its service area. Since 2012 we have consistently had the opportunity to report no spill certifications in CIWQS with a range of between 2 to 6 a year, each year. In 2020 we had the lowest record of SSO's in a single year. The majority of the SSOs that have occurred over the last 5 years have been caused by root intrusion in VCP four-inch laterals, and six and eight-inch diameter mains. With this area of our system identified as presenting the highest risk, most of the District's collection system's inspection, maintenance and capital improvement efforts are focused in this area of the system.

The District has a robust Collection System maintenance program. Sanitary sewer mains and lower laterals are cleaned on scheduled intervals. The entire system 15-inch diameter and under is evaluated through our Jet Inspection Program every 3-5 years depending on previous inspection results. The entire system is CCTV inspected on an 8-year cycle. The majority of our in-house underground repair work consists of mainline spot repairs and lower lateral replacements. Over the last 3 years, the District has been focusing on streamlining many of the tools used to maintain the collection system. This has included upgraded equipment and further integration of our GIS and CMMS software, which has had an impact on Field Operations maintenance efficiency.

Capital Improvement Projects are generated and prioritized for rehabilitation or replacement by coordinated efforts between Field Operations and Engineering. Those evaluated projects are then entered into our 10-year Capital Improvement Program. Engineering creates projects based on funding and priorities. The District's NPDES permit requires \$1.25 Million of targeted I&I reduction work on the sanitary sewer collection system. The targeted project amount in the District's CIP is between \$2 million and \$4 Million annually. The Engineering Department also manages the District's Upper Lateral Program. This program is designed to reduce I&I in private laterals, while providing property owner reimbursement for their upper lateral replacement. This program has had good success helping homeowners repair upper laterals and in reducing the amount of I&I entering the District's collection system.

Attachment A – SSMP Audit Workshop PowerPoint Slides

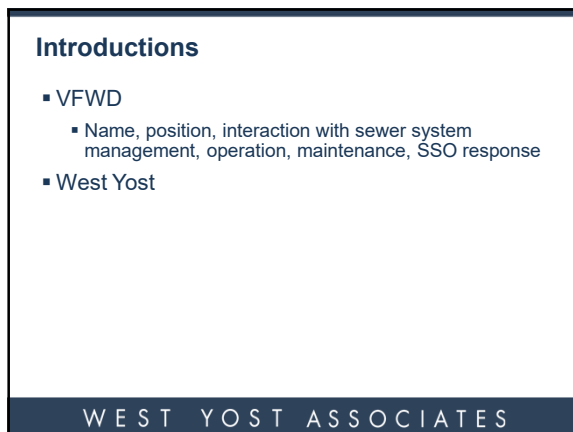
- **Compliance Workshop**
- **Effectiveness Workshop**



1



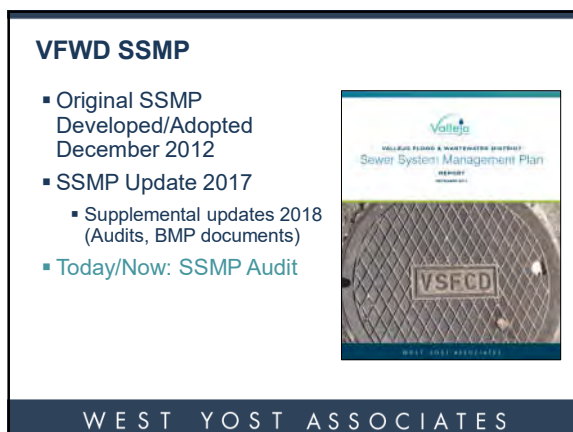
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Today: VFWD SSMP Audit

1. Review Audit Results
2. Focus on select Elements – JK audit checklist
 - Purpose/Requirements of Element
 - **From VFWD Staff:**
 - Details on specific information that is out-of-date
 - How to update?
 - How to make better?

The SSMP is your document!

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VFWD SSMP Audit

Element 1: Goals

Purpose: Develop a single comprehensive goal or several broad goals that reflect the Enrollee's (VFWD) commitment to all aspects of the sanitary sewer system and are unique to the infrastructure and system performance

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VFWD SSMP Audit

Element 1: VFWD Goals

1.1 SSMP GOALS

The goals of the District SSMP are to focus on SSO reduction and mitigation by way of:

- Implementation of annual team production and Best Management Practices focusing on **system cleaning, maintenance and repair**;
- Performance of comprehensive and continuous **condition assessment** of the system;
- **Repair, Rehabilitation, or Replacement** of lines that cannot be effectively maintained through a robust and appropriately funded Capital Improvement Program (CIP);
- Targeting exceptional levels of **customer service** that are responsive and result in high levels of customer satisfaction; and
- Providing the best **equipment, training and communication with staff** so that we can reach and maintain these goals.

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VFWD SSMP Elements

1. Goals
- 2. Organization**
3. Legal Authority
4. Operations and Maintenance Program
5. Design and Performance Standards
6. OERP
7. FOG Control Program
8. SECAP
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

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VFWD SSMP Audit

Element 2: Organization

Requirements:

- Identify the name, **contact info** of the **responsible or authorized representative** and for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program.
- Identify lines of authority through an **organization chart** or similar document with a narrative explanation; and
- Identify **chain of communication for reporting SSOs**, from receipt of a complaint or other information, including the person responsible for reporting SSOs

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VFWD SSMP Audit

Element 2: Organization

ELEMENT II: ORGANIZATION		
A.	Is the List of District Staff Responsible for SSMP current?	☐ ☒
B.	Is the Sanitary Sewer Overflow Responder List current?	☐ ☒
C.	Is Figure 2-1 of the SSMP, the District Organization Chart, current?	☐ ☒
D.	Are the position descriptions an accurate description of current staff responsibilities?	☐ ☒
E.	Is Table 2-2 in the Chain of Communication for Reporting and Responding to SSOs section accurate and up-to-date?	☐ ☒
Discussion:		

PROBLEMS
CORRECT,
3 OF 5 THIS
NOT

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VFWD SSMP Elements

1. Goals
2. Organization
3. Legal Authority
- 4. Operations and Maintenance Program**
5. Design and Performance Standards
6. OERP
7. FOG Control Program
8. SECAP
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

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VFWD SSMP Audit**Element 4: Operations and Maintenance***Requirements:*

- Maintain an **up-to-date map** of the sanitary sewer system
- **Describe routine preventive operation and maintenance activities** by staff and contractors
- **Develop rehabilitation and replacement plan** to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions
- Provide **training** on a regular basis for staff in sanitary sewer system operations, maintenance, and require contractors to be appropriately trained; and
- Provide **equipment and replacement part inventories**, including identification of critical replacement parts.

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**VFWD
SSMP Audit**

**Element 4:
Operations
and
Maintenance**

ELEMENT 4: OPERATIONS AND MAINTENANCE	
Collection System Maps	
A. Does the SSMP reference the current process and procedures for maintaining the District's wastewater collection system maps?	☒ ☐
B. Are the District's wastewater collection system maps complete, current and sufficiently detailed?	☒ ☐
C. Are storm drainage facilities identified on the collection system maps? If not, are SSO responses able to determine locations of storm drainage inlets and pipes for possible discharge to waters of the river?	☒ ☐
Preventive Maintenance	
D. Does the SSMP describe current preventive maintenance activities and the system for prioritizing the timing of work?	☒ ☐
E. Based upon information in the Annual SSO Report, are the District's preventive maintenance activities sufficient and effective in maintaining SSOs and floodages?	☒ ☐
Schedule Inspections and Condition Assessments	
F. Is there an on-going condition assessment program sufficient to develop a capital improvement plan addressing the proper management and protection of infrastructure assets? Are the current components of this program documented in the SSMP?	☒ ☐
Contingency Equipment and Replacement Inventory	
G. Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system and documents the procedures of inventory management?	☐ ☒
H. Are contingency and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?	☒ ☐
Training	
I. Does the SSMP document current training expectations and programs?	☒ ☐
Outreach to Planners and Building Contractors	
J. Does the SSMP document currently outreach efforts to planners and building contractors?	☒ ☐
Discussion:	

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VFWD SSMP Elements

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
- 5. Design and Performance Standards**
6. OERP
7. FOG Control Program
8. SECAP
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

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VFWD SSMP Audit**Element 5: Design and Performance Standards***Requirements:*

- **Design and construction standards and specifications** for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems
- **Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances** and for rehabilitation and repair projects.

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VFWD SSMP Elements

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
5. Design and Performance Standards
- 6. Overflow and Emergency Response Plan (OERP)**
7. FOG Control Program
8. SECAP
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

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VFWD SSMP Audit

Element 6: Overflow Emergency Response Plan

Requirements:

- Proper **notification procedures** so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner
- A program to ensure **appropriate response to all overflows**
- Procedures to ensure prompt **notification to appropriate regulatory agencies** and other potentially affected entities of all SSOs
- Procedures to ensure that appropriate staff and contractor personnel are **aware of and follow the Emergency Response Plan** and are appropriately trained
- Procedures to address emergency operations**, such as traffic and crowd control and other necessary response activities
- A **program to ensure that all reasonable steps are taken to contain and prevent SSOs**, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge

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VFWD SSMP Audit

Element 6: Overflow Emergency Response Plan

ELEMENT VI: OVERFLOW AND EMERGENCY RESPONSE PLAN			
A.	Does the District's Sanitary Sewer Overflow Emergency Response Plan establish procedures for the emergency response, notification, and reporting of SSOs?	☒	☐
B.	Is District staff and contractor personnel appropriately trained on the procedures of the Sanitary Sewer Overflow Emergency Response Plan?	☒	☐
C.	Considering SSO performance data, is the Sanitary Sewer Overflow Emergency Response Plan effective in handling SSOs in order to safeguard public health and the environment?	☒	☐
D.	Are all SSO and claims reporting forms current or do they require revisions or additions?	☒	☐
E.	Does all SSO event recordkeeping meet the SSS GWDWR requirements? Are all SSO event files complete and certified in the CIWQS system?	☒	☐
F.	Is all information in the CIWQS system current and correct? Have periodic reviews of the data been made during the year to assure compliance with SSS GWDWR? Have all Technical Report and Water Quality Sampling requirements been certified and uploaded to the CIWQS data management system?	☒	☐
G.	Was required training on SSMP and OERP completed and documented? Were field exercises with field staff on SSO volume estimation conducted and documented?	☒	☐
H.	Did all public improvement plans and specifications that could impact collection system operations include requirements for OERP training or were contractor OERP programs at least as stringent as the District OERP? Were regular items included in project meeting agendas to discuss emergency response procedures and communications?	☐	☒

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VFWD SSMP Elements

- Goals
- Organization
- Legal Authority
- Operations and Maintenance Program
- Design and Performance Standards
- OERP
- FOG Control Program
- 8. SECAP**
- Monitoring, Measurement, and Program Modifications
- SSMP Program Audits
- Communication Program

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VFWD SSMP Audit

Element 8: System Evaluation and Capacity Assurance Plan (SECAP)

Requirements:

- Prepare and implement a capital improvement plan (CIP)** that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event.
- Evaluation:** Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency.
- Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation to establish appropriate design criteria; and
- Capacity Enhancement Measures:** The steps needed to establish a short- and long-term capital improvement plan (CIP). The CIP shall include an implementation **schedule** and shall **identify sources of funding**.

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Element 8: System Evaluation and Capacity Assurance Plan (SECAP)

SSMP Audit Checklist			
ELEMENT VIII: SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN			
A.	Does the Sanitary Sewer Strategic Plan evaluate hydraulic deficiencies in the system, establish sufficient design criteria and recommend both short and long term capacity enhancement and improvement projects?	☒	☐
B.	Does the District's Capital Improvement Program (CIP) establish a schedule of approximate completion dates for both short and long-term capacity improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?	☒	☐

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VFWD SSMP Elements

- Goals
- Organization
- Legal Authority
- Operations and Maintenance Program
- Design and Performance Standards
- OERP
- FOG Control Program
- SECAP
- 9. Monitoring, Measurement, and Program Modifications**
- SSMP Program Audits
- Communication Program

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VFWD SSMP Audit

Element 9: Monitoring, Measurements and Program Modifications

Requirements:

- Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities
- Monitor the implementation and, where appropriate, measure the **effectiveness** of each element of the SSMP;
- Assess the success of the **preventative maintenance program**
- Update program elements, as appropriate, based on monitoring or performance evaluations
- **Identify and illustrate SSO trends, including: frequency, location, and volume.**

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Element 9: Monitoring, Measurements and Program Modifications

ELEMENT IX: MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS		
A.	Does the SSMP accurately portray the methods of tracking and reporting selected performance indicators?	☒ ☐
B.	Is the District able to sufficiently evaluate the effectiveness of the SSMP elements based on relevant information?	☒ ☐
C.	Have all graphs and tables of performance results been updated with the most current results?	☐ ☒

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VFWD SSMP Elements

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
5. Design and Performance Standards
6. OERP
7. FOG Control Program
8. SECAP
9. Monitoring, Measurement, and Program Modifications
- 10. SSMP Program Audits**
11. Communication Program

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Q&A

- Discussion of other Elements?
- How to improve SSMP and Elements?
- General observations about system operation/field work?
 - Any notes on maps/SSMP/field trucks?
 - What could be improved in handling of SSOs to make it easier, more efficient, etc.?

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Next Steps

1. VFWD + WY update SSMP Elements as identified
2. Workshop 2 – SSMP Effectiveness – date TBD
3. VFWD + WY prepare SSMP Audit Report

VFWD Staff:

- Keep the SSMP up-to-date continually as a "working document"
 - Schedule and perform SSMP audits at a minimum of every two years
 - Schedule and perform SSMP updates every five years

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Thanks!

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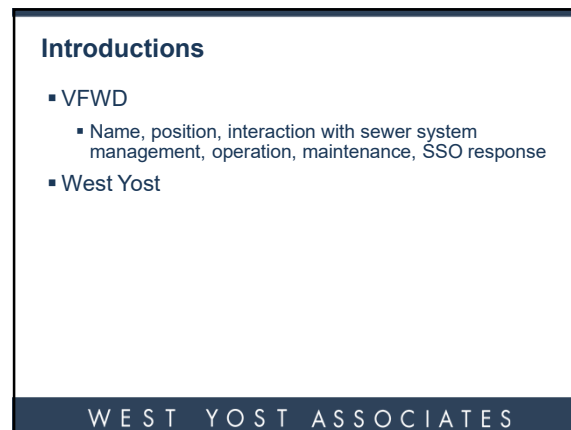


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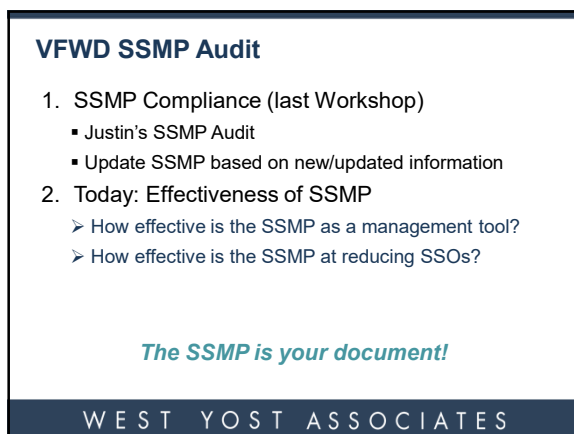
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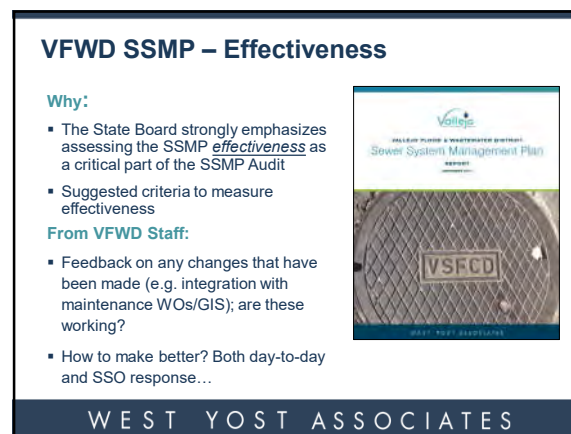
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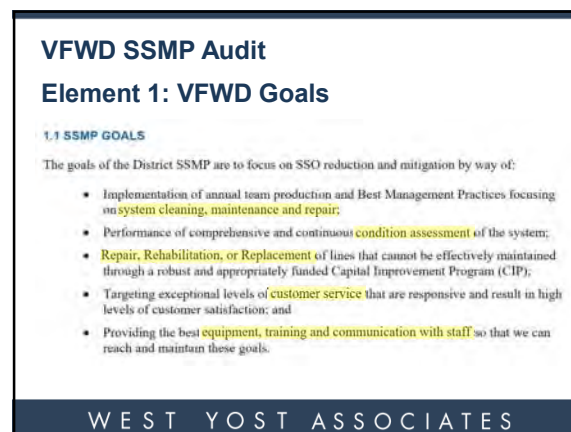
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6

Effectiveness of SSMP

1 – GOALS ✓

- District goals are effective.
- Review regularly and align goals as necessary to the performance indicators in Element 9 that measure achievement of these goals.

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VFWD SSMP Elements

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
5. Design and Performance Standards
6. OERP
7. FOG Control Program
8. SECAP
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

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Effectiveness of SSMP

2 - ORGANIZATION

- This Element should be updated regularly in a "working document" fashion.
- Develop procedures to keep staff and LRO lists up to date
- Omit redundant lists / make reference to master list (i.e. website vs SSMP)
- More than one LRO should be established (back-up)
- Feedback on ways to make updating easier?

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VFWD SSMP Elements

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
5. Design and Performance Standards
6. OERP
7. FOG Control Program
8. SECAP
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

WEST YOST ASSOCIATES

10

Effectiveness of SSMP

4 – OPERATION AND MAINTENANCE PROGRAM

- Taken care of GIS mapping backlog; how can that process be improved?

Recent/Ongoing Improvements

- System modeling in-process (pipes 8"+)
- Map updates from field crews – backlog recently addressed
- New GIS layering for jetting & hogging is tied to work orders and prevents overlapping of work areas
- Annual root foaming in July
 - Sole-source contractor to mitigate WWTP problems
- Abandoned "homemade" custom condition assessment to more standardized system (NASSCO PACP)
- SSOs trending down since SSMP implementation

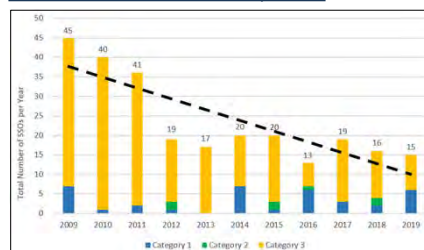
WEST YOST ASSOCIATES

11

Effectiveness of SSMP

4 – OPERATION AND MAINTENANCE PROGRAM

SSO Trends – Number of SSOs per Year



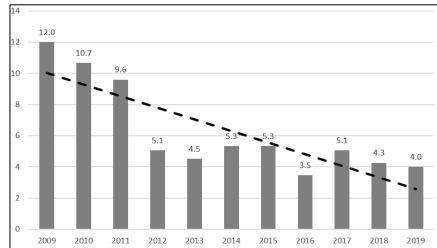
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Effectiveness of SSMP

4 – OPERATION AND MAINTENANCE PROGRAM

SSO Trends – Per 100 Miles of Gravity Main



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4 – OPERATION AND MAINTENANCE PROGRAM

SSO Trends – Number of SSOs per Year, by Cause

Table 1. SSOs by Cause

Calendar Year	Roots	Debris	Grease	Capacity	Structural Failure	Pump Station Failure	Other	Total
2009	25	1	12	-	1	-	6	45
2010	14	4	7	-	1	-	14	40
2011	13	4	3	-	3	-	13	36
2012	11	1	2	-	1	-	4	19
2013	7	-	3	-	1	-	6	17
2014	6	1	1	1	2	-	9	20
2015	12	2	1	-	1	-	4	20
2016	6	1	1	1	2	-	2	13
2017	12	2	-	3	1	-	1	19
2018	9	3	1	-	2	-	1	16
2019	7	3	2	1	-	1	1	15

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4 – OPERATION AND MAINTENANCE PROGRAM

SSO Trends – Volume of Sewage Recovered vs. Total Volume Spilled

Table 2. Volume Sewage Recovered vs. Total Volume Spilled

Calendar Year	Total Volume Spilled, gallons	Volume Recovered, gallons	Percent Recovered (% of Total Spilled)
2009	26,913	22,084	82%
2010	5,357	3,230	60%
2011	4,125	3,068	74%
2012	8,084	1,128	14%
2013	1,688	1,288	76%
2014	47,275	9,525	20%
2015	6,764	6,544	97%
2016	21,867	3,624	17%
2017*	1,913,841	7,670	0.4%
2018	29,938	8,333	28%
2019	9,452	2,849	30%

*2017 included an SSO at the Ryder Street storage basin which is one of the District's NPDES permits

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4 – OPERATION AND MAINTENANCE PROGRAM

SSO Trends – Volume of Sewage Recovered vs. Total Volume Spilled



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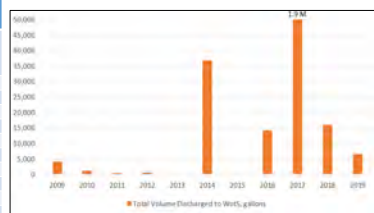
Effectiveness of SSMP

4 – OPERATION AND MAINTENANCE PROGRAM

SSO Trends – Volume of Sewage Discharged to Waters of the US

Table 3. Volume of Sewage Discharged to WotS

Calendar Year	Total Volume Discharged to WotS, gallons
2009	4,047
2010	1,140
2011	500
2012	625
2013	0
2014	36,845
2015	100
2016	14,178
2017	1,911,516
2018	16,050
2019	6,573



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VFWD SSMP Elements

- Goals
- Organization
- Legal Authority
- Operations and Maintenance Program
- Design and Performance Standards
- 6. Overflow and Emergency Response Plan (OERP)**
- FOG Control Program
- SECAP
- Monitoring, Measurement, and Program Modifications
- SSMP Program Audits
- Communication Program

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Effectiveness of SSMP

6 – OVERFLOW EMERGENCY RESPONSE PLAN (OERP)

- 1/3 staff is new – Training required (internal spill/SSO training)
- Need to incorporate contractor SSMP training into standard specifications (Engineering developing template)

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VFWD SSMP Elements

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
5. Design and Performance Standards
6. OERP
7. FOG Control Program
8. SECAP
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

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Effectiveness of SSMP

9 – PROGRAM MODIFICATION

- SSO Trends – incorporate
- Develop procedures to keep performance results up to date – updating tables with empty lines (now; Update)
- Actively add lines to maintenance schedules as staffing permits
- Develop method to track SSO lines/locations to identify trends over time (i.e. GIS)

Suggested Effectiveness Performance Indicators

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Suggested Effectiveness Performance Indicator

- Add to VFWD metrics?

Performance Indicator	
Input	Total SSO Response Time Total main force spent responding (not including SSOs) Total number of scheduled main force inspections
Workload/Output	Total number of SSOs responded to in 12-month period Total miles of sewer line maintained Total number of pump stations maintained Total number of grinder pumps maintained Total number of man hole inspections conducted Total SSOs > 1,000 gallons responded to Total FOG related SSOs cleared Total non-related SSOs cleared Total SSOs due to other causes (debris, vandalism) Total number of capacity related SSOs Total number of SSOs due to pump station malfunctions Total SSOs responded to within 3-hour window Total number of stoppages in force
Efficiency	Number of SSOs per 100 miles of sewer line Number of pump stations with one or more malfunctions Number of SSOs that reached waters of the United States Average response time per SSO
Effectiveness/Reliability	Percentage of SSOs <100 gallons Percentage of SSOs due to FOG Percentage of SSOs due to debris Percentage of SSOs due to other causes Percentage of SSOs that reached waters of the United States Percentage of pump stations with one or more malfunctions resulting in an SSO Percentage of SSOs with response time 3 hours or less Percentage of stoppages not resulting in an SSO

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Q&A and Next Steps

- Action Item List
- Q&A
- Complete Audit Report – Draft & Final
 - Anne to send to JK and revise
- Update SSMP Elements as discussed
 - PDF to replace page.
 - JK will update online version
- Keep the SSMP up-to-date continually as a “working document”

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Thanks!

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I4. 2022 Audit Report

INTRODUCTION

An audit was performed in November 2022 on the Vallejo Flood and Wastewater District's (District) Sewer System Management Plan (SSMP). The SSMP was last updated in January 2019 but remained titled under the December 2017 SSMP to align with the five-year update frequency requirement. The last audit performed by the District was in October 2020; therefore, this November 2022 audit satisfies the two-year audit frequency as required by the State Water Board Order No. 2006-0003-DWQ, Statewide Waste Discharge Requirements for Sanitary Sewer Systems (WDR).

The intent of the audit is to evaluate the effectiveness of the SSMP elements and the SSMP's compliance with WDR Order No. 2006-0003-DWQ, and Order No. WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program (MRP) to the WDR.

AUDIT PROCESS

2022 audit methods included a Gap Analysis and an Effectiveness Evaluation using the District's performance indicators. The District also completed a separate audit checklist which informed the Gap Analysis. Updates to the SSMP document that come out of the audit process will be incorporated into the 2022 SSMP update (anticipated completion December 2022).

GAP ANALYSIS

The Gap Analysis portion of the audit uses industry reference materials, benchmarking data, and State Board regulatory enforcement procedures to identify areas for improvement in the SSMP itself, or the District's management or maintenance procedures. The Gap Analysis evaluated each WDR/MRP requirement on the following scale:

- **Management Tool Gap** – An element of the SSMP could be improved to enhance the effectiveness of the SSMP as a collection system management tool or best practice.
- **WDR Compliance Gap** – SSMP is not compliant with existing WDR.

An Audit checklist was complete by Justin Keating, Director of Field Operations. The checklist results were reviewed with the District in November 2022 and were used to complete the Gap Analysis; the results are presented in the table below. It should be noted that a "check mark" indicates that a gap exists as described in the column. An element with no "check marks" has been found to be in compliance. Comments indicate action items recommended to comply with the WDRs or to improve the SSMP as a management tool. The column at the far right indicates how the gap will be addressed in the subsequent 2022 SSMP updates. At the end of each Element section, a summary of the effectiveness of the SSMP Element is provided along with suggestions on improvement if applicable.

Sewer System Management Plan

2022 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
ELEMENT 1 – GOALS					
A.	Are the goals stated in the SSMP still appropriate and accurate?			No Gap identified. Goals are compliant and reflect current practices and initiatives.	-
Effectiveness of Element 1		Element is effective. No changes recommended.			
ELEMENT 2 – ORGANIZATION					
A.	Is the list of Contact Info for Responsible Officials in SSMP Content Development current?		✓	Several role titles and staff changes have occurred since 2020. Role responsibilities and processes are correct. All documents require updating to reflect changes.	Update role titles and staff names
B.	Is the District Organization Chart current?		✓		Update with new org chart from District website (Sept 2021)
C.	Are the role and responsibility descriptions an accurate portrayal of staff responsibilities?		✓		Update role titles, staff names, and contact info
D.	Does the SSMP identify the Chain of Communication for reporting SSOs, and is it accurate and up-to-date?		✓		
E.	Does the SSMP identify staff responsible for implementing, specific measures in the SSMP?		✓		
Effectiveness of Element 2		Element is effective. Process and responsibilities are correct. To meet WDR compliance, role titles and staff changes should be updated in all documents.			
ELEMENT 3 – LEGAL AUTHORITY					
Does the SSMP contain references to the current District Code documenting the District’s legal authority to:					
A.	Prevent illicit discharges?			No Gap identified.	-
B.	Require that sewers and connections be properly designed and constructed?			No Gap identified.	-
C.	Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the District?			No Gap Identified.	-
D.	Limit discharges of fats, oil and grease?			No Gap identified.	-
E.	Enforce any violation of its sewer ordinances?			No Gap identified.	-
Effectiveness of Element 3		Element is effective. District has powers granted through ordinances which are clearly defined with Legal Authority Checklist and excerpts from District Code.			

Sewer System Management Plan

2022 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
ELEMENT 4 – OPERATIONS AND MAINTENANCE PROGRAM					
Collection System Maps					
A.	Does the SSMP reference the current process and procedures for maintaining the District's wastewater collection system maps?			No Gap identified.	-
B.	Are the District's wastewater collection system maps complete, current, and sufficiently detailed (including showing applicable storm water conveyance facilities)?		✓	There have been several developments in the past few years which included new sewer installations.	Update maps to include recently developed areas.
Prioritized Preventive Maintenance					
C.	Does the SSMP describe current preventive maintenance activities and the system for prioritizing regular maintenance and cleaning of the system?			No Gap Identified.	Add historical results for cleaning activities (up to 2022)
D.	Is there a system to document scheduled and conducted activities?			No Gap identified. District implemented a GIS/CMMS work order link in 2020 to improve efficiency of preventative maintenance activities.	Incorporate description of new GIS/CMMS link
Rehabilitation and Replacement Planning					
E.	Is there an ongoing condition assessment program? Are the current components of this program documented in the SSMP?			No Gap identified. The District has adopted the industry-standard NASSCO PACP coding for pipeline condition assessment.	Add historical CCTV inspection results (up to 2022)
F.	Is there a system for prioritizing the rehabilitation and replacement program? Does the Capital Improvement Plan (CIP) include a time schedule for implementing the short- and long-term needs, plus a schedule for developing the funds needed for the CIP?			No Gap identified. Current Master Plan (MP) effort is underway, which provides a prioritized CIP.	Add information about MP
Training					
G.	Is the training information and calendar current?			No Gap identified.	-
H.	Does the SSMP document current training expectations and programs?			No Gap identified.	-
Major Equipment and Critical Replacement Parts Inventories					
I.	Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system?		✓	Major equipment inventory was recently updated.	Update Appendix C - Major Equipment Inventory

Sewer System Management Plan

2022 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
J.	Are critical replacement parts identified and sufficient to respond to emergencies?			No Gap identified.	Update Appendix D – Critical Replacement Parts inventory
Effectiveness of Element 4		Element is effective. District has dedicated significant effort in recent years to improving O&M processes and efficiency of the PM program.			
ELEMENT 5 – DESIGN AND PERFORMANCE STANDARDS					
A.	Does the SSMP contain current design and construction standards for the installation of new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?			District Engineering Standards were updated July 2020.	Update reference(s) to current Engineering Standards
B.	Does the SSMP document current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects?				
Effectiveness of Element 5		Element is effective.			
ELEMENT 6 – OVERFLOW EMERGENCY RESPONSE PLAN (OERP)					
A.	Does the District’s OERP establish procedures for the emergency response, notification, and reporting of SSOs?			No Gap identified.	-
B.	Does the OERP establish procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Revised MRP? Does the SSMP identify the officials who will receive immediate notification?			No Gap identified.	-
C.	Are staff and contractor personnel appropriately trained on the procedures of the OERP?	✓		District staff are trained at appropriate intervals on the OERP and SSO response. The District has identified that training is not up to date due to recent staff changes. Contractors are trained on a project-by-project basis to suit specific project needs.	District management to prioritize training new staff in schedule. Consider incorporating language in standard specifications for required contractor OERP/SSO training.

Sewer System Management Plan

2022 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
D.	Does the SSO OERP include a program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to surface waters and to minimize or correct any adverse impact on the environment resulting from the SSOs?			No Gap identified. The District maintains 20 level-sensing SmartCovers at select manholes throughout the collection system to monitor flows/potential SSOs.	-
Effectiveness of Element 6		Element is effective. Consider adding OERP training requirements for contractors in District standard specifications.			
ELEMENT 7 – FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM					
A.	Does the FOG Control Program include efforts to educate the public on the proper handling and disposal of FOG?			No Gap identified; the District has a well-developed public education/outreach program.	-
B.	Does the District have a plan and schedule for disposal of FOG generated within the service area?			No Gap identified	-
C.	Does the District have sufficient legal authority to implement and enforce the FOG Control Program?			No Gap identified; legal authority also discussed in Element 3.	-
D.	Are requirements for grease removal devices, best management practices (BMP), record keeping, and reporting established in the District’s FOG Control Program?			No Gap identified; record keeping and BMPs also discussed in Element 3.	-
E.	Does the District’s FOG Control Program identify sections of the collection system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?			No Gap identified; legal authority also discussed in Element 3.	-
F.	Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?			No Gap identified; FOG-related SSOs have been reduced from 12 (2009) to ≤2 per year.	Add historical SSO results (up to 2022)
Effectiveness of Element 7		Element is effective. The District has invested significant effort in targeting FOG-related SSOs. The FOG Control Program has proven effective in reducing FOG-related SSOs.			

Sewer System Management Plan

2022 SSMP Audit Report



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
ELEMENT 8 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN					
A.	Does the plan evaluate hydraulic deficiencies in the system, establish sufficient design criteria and recommend both short and long-term capacity enhancement and improvement projects?			No Gap identified. Current Master Plan (MP) identifies prioritized CIP.	Add information from MP CIP and historical capacity related SSO data (up to 2022).
B.	Does the District’s CIP establish a schedule of approximate completion dates for both short and long-term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?				
Effectiveness of Element 8		Element is effective.			
ELEMENT 9 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS					
A.	Does the SSMP accurately portray the methods of maintaining and tracking relevant information that can be used to establish and prioritize appropriate SSMP activities?			No Gap identified. District implemented a GIS/CMMS work order link in 2020 to improve efficiency of preventative maintenance activities.	Add description of new GIS/CMMS link
B.	Is the District able to sufficiently evaluate the effectiveness of SSMP elements and PM program based on relevant information?			No Gap identified. Performance indicator for ‘no spill months’ added.	Add no spill month data (2019-2022)
C.	Does the SSMP identify and illustrate SSO trends including frequency, location, and volume.			No Gap identified.	Add historical SSO trends by cause and volume (up to 2022)
Effectiveness of Element 9		Element is effective.			
ELEMENT 10 – SSMP PROGRAM AUDITS					
A.	Have SSMP Audits been completed? Audits must occur every two years and a report must be kept on file.			No Gap identified. Last audits performed in October 2020 and November 2022 (herein).	-
Effectiveness of Element 10		Element is effective.			
ELEMENT 11 – COMMUNICATION PROGRAM					
A.	Does the District effectively communicate with the public and other agencies about the development and implementation of the SSMP and continue to address any feedback?			No Gap identified; the SSMP is posted on the website and is available for review at the time of updates.	-
Effectiveness of Element 11		Element is effective. The District’s communication and outreach activities are active and documented.			

EVALUATION OF EFFECTIVENESS OF SSMP

Performance indicators developed in the 2017 SSMP Update (Section IX: Monitoring, Measurement, and Program Modifications) were used to measure the performance of the wastewater collection system and the effectiveness of the SSMP. During the 2022 Gap Analysis, an additional performance indicator was identified – number of “no spill months”. Performance indicator metrics were retrieved from the California Integrated Water Quality System (CIWQS) online database. Selected performance indicators are listed below. Historical results through 2022 are presented in the following sections.

1. SSOs
 - Total number of SSOs per year
 - SSO Rate (number per 100 miles per year)
 - Number of SSOs by cause (roots, grease, debris, structural failure, capacity, pump station failure, and other)
2. Volume of sewage recovered compared to total volume spilled
3. Volume of sewage discharged to Waters of the State
4. Percentage of spills during wet-weather events.
5. Number of certified No Spill months

1. SSOs

Total Number of SSOs per Year

Figure 1 presents the trend in total number of SSOs per year, by category. SSOs have steadily declined since 2012 due to the District’s SSO-targeted maintenance activities.

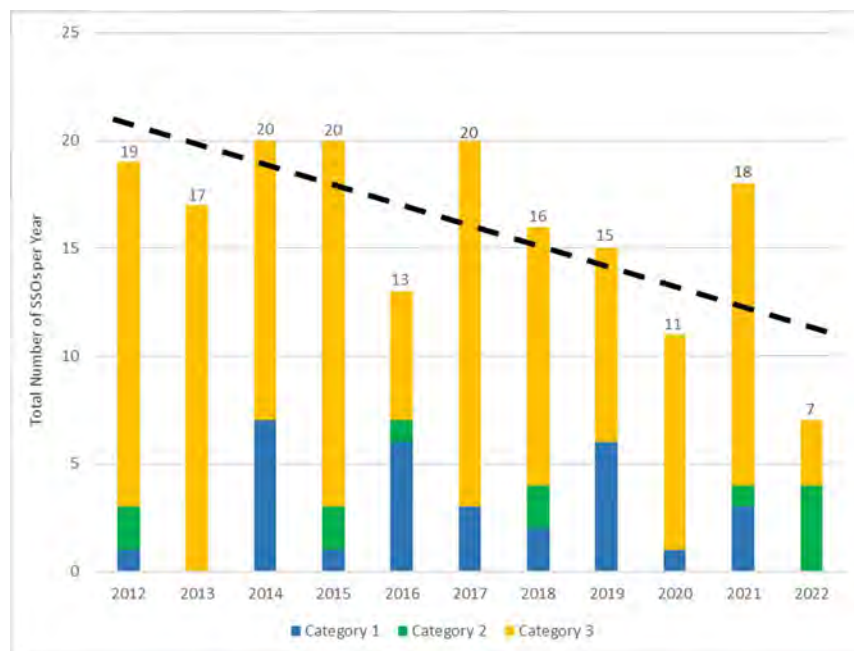


Figure 1 – SSOs Per Year

SSO Rate

Figure 2 presents the trend in SSO rate. The SSO rate per 100 miles of gravity main follows the trend of the number of SSOs per year because the length of gravity mains has not changed significantly. The District's 2022 SSO rate of 1.77 is below the Region 2 average rate of 3.87 SSOs per 100 miles of gravity main (Fiscal Year 2021-22)¹.

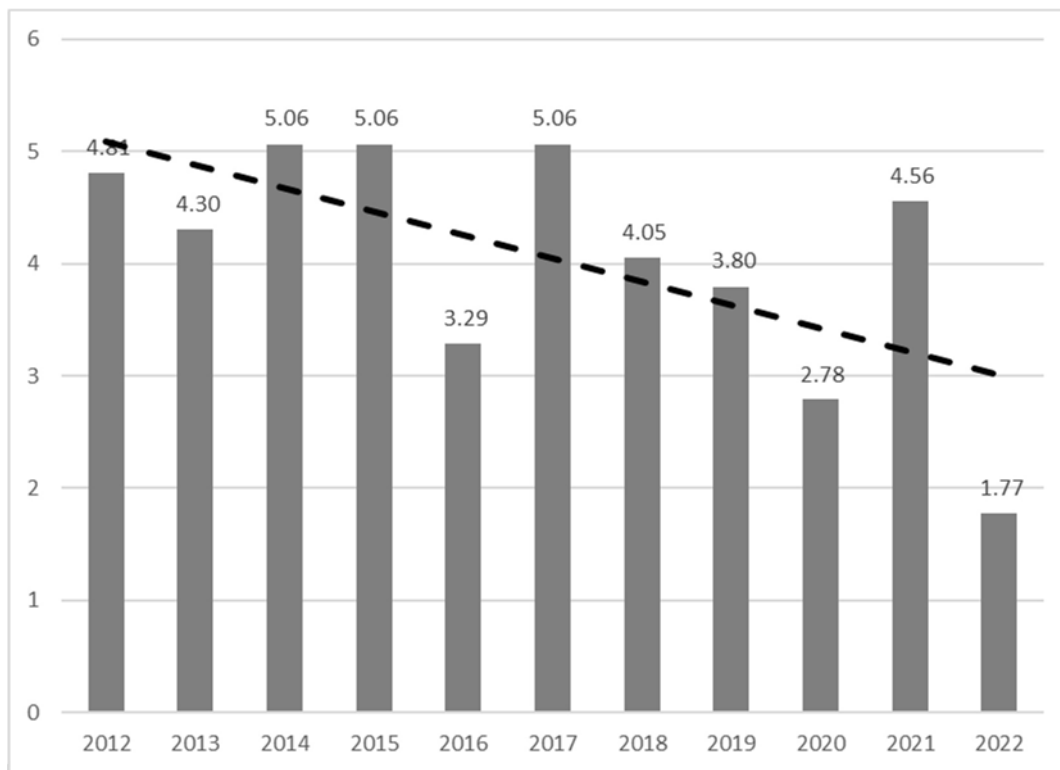


Figure 2 – SSOs Per 100 Miles of Gravity Main

¹ California Water Boards' Annual Performance Report – Fiscal Year 2021-22
https://www.waterboards.ca.gov/about_us/performance_report_2021/plan_assess/124_sanitary_sewage_overflow.html

Sewer System Management Plan

2022 SSMP Audit Report



Number of SSOs by Cause

Table 1 presents the SSOs by cause for each year. Figure 3 presents the percentage of SSOs by cause since 2012. SSOs caused by grease at one time accounted for approximately 25 percent of the SSOs per year; however due to fewer SSOs occurring by any cause, tracking the percentage of grease related SSOs is no longer representative of the success of the program. Instead, it should be noted the amount of SSOs occurring each year has decreased on average since 2012, providing a measure of success in the District's implementation of the FOG Control Program.

Roots have historically accounted for the greatest portion of the District's SSOs, and this remains the case. The District has an aggressive root control program using foaming to control recurring roots, in addition to hydro jetting and rodding. Additionally, several pipe segments with reoccurring root intrusion have been identified for replacement in the District's CIP.

Table 1. SSOs by Cause								
Calendar Year	Roots	Debris	Grease	Capacity	Structural Failure	Vandalism	Other	Total
2012	11	1	2	-	1	1	3	19
2013	7	-	3	-	1	1	5*	17
2014	6	1	1	1	2	1	8*	20
2015	12	2	1	-	1	1	3	20
2016	6	1	1	1	2	-	2	13
2017	13	3	-	1	1	2	-	20
2018	9	3	1	-	2	1	-	16
2019	7	3	2	1	-	1	1*	15
2020	3	4	2	-	2	-	-	11
2021	7	4	3	1	1	2	-	18
2022	2	-	1	-	2	1	1	7
*One or more SSOs caused due to pump station failure								

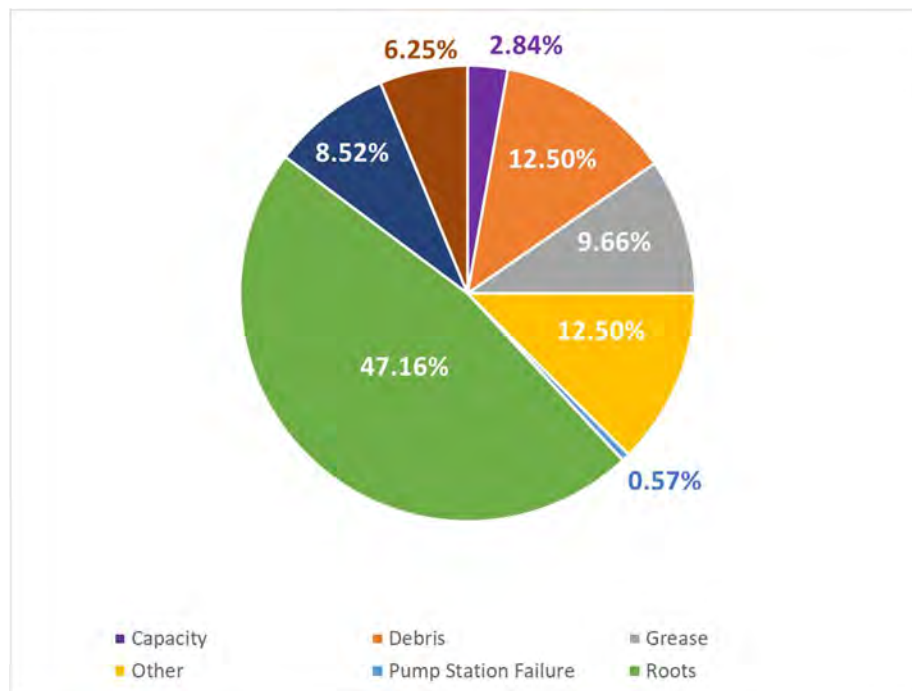


Figure 3 – Percentage of SSOs By Cause (2012-2022)

2. Volume of Sewage Recovered vs. Total Volume Spilled

Table 2 presents the volume of sewage recovered vs. total volume spilled. Figure 4 presents the trend in volume of sewage recovered vs. total volume spilled. This metric indicates the effectiveness of the District's response to SSOs. Since 2012 (excluding the 2017 results), the District's average Total Volume Spilled is 5,002 gallons per 100 miles of pipe, compared to the Region 2 average of 77,767 gallons per 100 miles of pipe. Including the 2017 results the average increases to 47,116 gallons but remains below the Region 2 average. Overall, the District has been effective at recovering spilled SSOs.

Sewer System Management Plan

2022 SSMP Audit Report



Table 2. Volume of Sewage Recovered vs. Total Volume Spilled			
Calendar Year	Total Volume Spilled (gallons)	Volume Recovered (gallons)	Percent Recovered (% of Total Spilled)
2012	8,084	1,128	14%
2013	1,688	1,288	76%
2014	41,665	3,915	9%
2015	12,374	12,154	98%
2016	21,867	3,624	17%
2017*	1,913,901	7,730	0.4%
2018	29,938	8,333	28%
2019	9,452	2,849	30%
2020	3,132	2,073	66%
2021	37,755	10,139	27%
2022	23,372	11,134	48%

*2017 included an SSO at the Ryder Street storage basin which falls under one of the District's NPDES permits. Details included in 2018 audit.

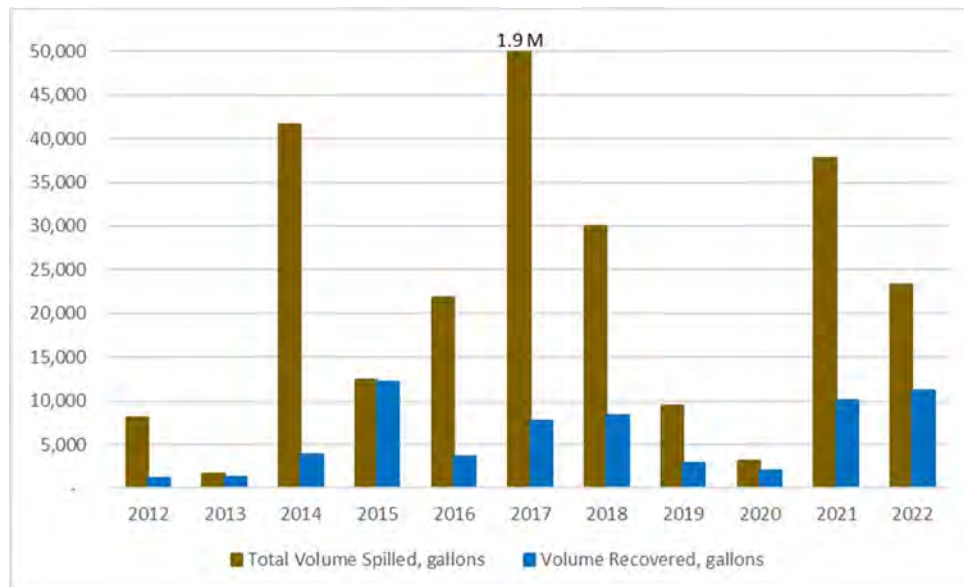


Figure 4 – Volume of Sewage Recovered vs. Total Volume Spilled

3. Volume of Sewage Discharged to Waters of the State

Table 3 presents the volume of sewage discharged to Waters of the State (WotS). Figure 5 presents the trend in volume of sewage discharged to WotS. The volume discharged generally corresponds to the difference between total volume spilled and volume recovered (previous metric).

Table 3. Volume of Sewage Recovered vs. Total Volume Spilled	
Calendar Year	Total Volume Discharged to WotS (gallons)
2012	625
2013	0
2014	36,845
2015	100
2016	14,178
2017*	1,911,516
2018	16,050
2019	6,573
2020	916
2021	23,290
2022	0
*2017 included an SSO at the Ryder Street storage basin which falls under one of the District's NPDES permits. Details included in 2018 audit.	

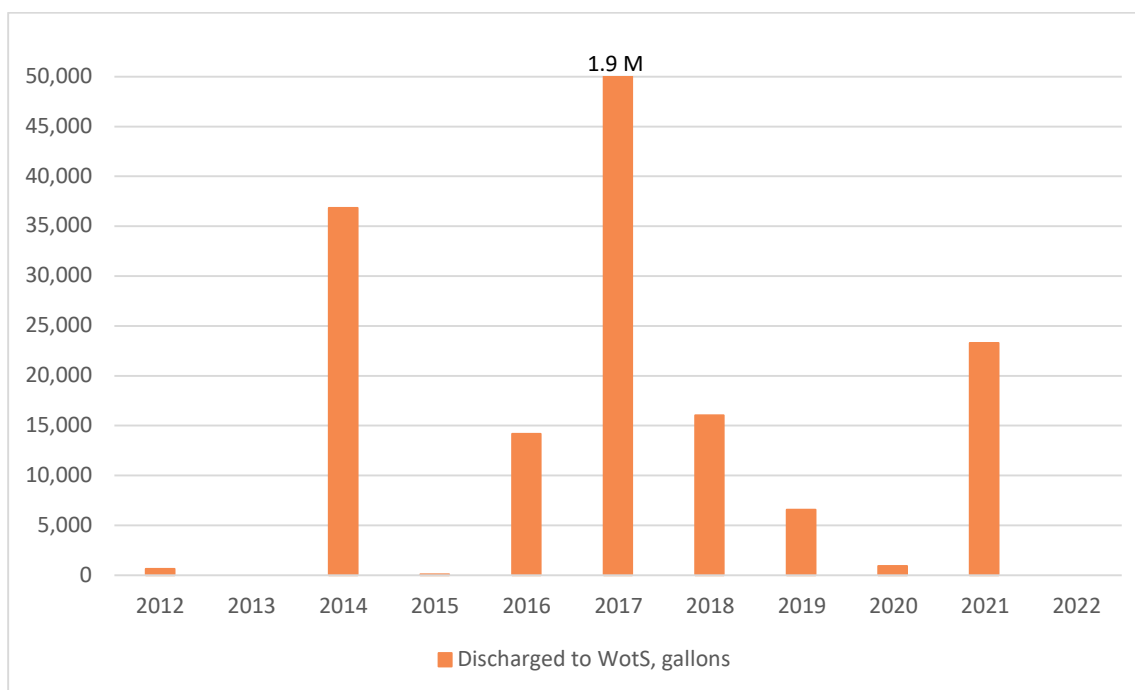


Figure 5. – Volume of Sewage Discharged to WotS

4. Percentage of Spills During Wet-Weather Events

SSOs during wet weather can be the result of insufficient hydraulic capacity or from high flows compounding the effects of a maintenance or blockage issue. For example, a minor grease or debris blockage met with higher-than-normal flows can cause a hydraulic bottleneck in the system and result in an overflow. The higher intensity and duration storm events experienced recently throughout the region mean that wet-weather SSOs will continue, and frequency may increase in the future. Wet-weather SSOs are typically not an indication of maintenance deficiencies.

Review of the CIWQS data indicates that six (6) SSOs occurred during wet-weather events from 2012 to 2022. This represents 3% of all SSOs (6 out of 175).

5. Certified No Spill Months

No-spill Certifications are required within 30 days after the end of each calendar month if there are no SSOs during the calendar month.

The number of No Spill months was added in 2022 as a performance indicator. Table 3 presents the number of No Spill months.

Table 4. Total No Spill Months	
Calendar Year	Certified No Spill Months
2012	2
2013	2
2014	2
2015	4
2016	2
2017	4
2018	3
2019	5
2020	6
2021	4
2022	6

OVERALL PERFORMANCE OF SYSTEM

Provided by Justin Keating, Director of Field Operations (December 2022)

Vallejo Flood and Wastewater District continues to consistently reduce the number of SSOs that occur within its service area. Since 2012 we have consistently had the opportunity to report no spill certifications in CIWQS with a range of between 2 to 6 a year, each year. In 2022 we had the lowest record of SSO's in a single year. The majority of the SSOs that have occurred over the last 5 years have been caused by root intrusion in VCP four-inch laterals, and six and eight-inch diameter mains. With this area of our system identified as presenting the highest risk, most of the District's collection system's inspection, maintenance and capital improvement efforts are focused in this area of the system.

The District has a robust Collection System maintenance program. Sanitary sewer mains and lower laterals are cleaned on scheduled intervals. The entire system 15-inch diameter and under is evaluated through our Jet Inspection Program every 3-5 years depending on previous inspection results. The entire system is CCTV inspected on an 8-10 year cycle. The majority of our in-house underground repair work consists of mainline spot repairs and lower lateral replacements. Over the last 5 years, the District has been focusing on streamlining many of the tools used to maintain the collection system. This has included upgraded equipment and continued integration of our GIS and CMMS software, which has had an impact on Field Operations maintenance efficiency.

Capital Improvement Projects are generated and prioritized for rehabilitation or replacement by coordinated efforts between Field Operations and Engineering. Those evaluated projects are then entered into our 10-year Capital Improvement Program. Engineering creates projects based on funding and priorities. The District's NPDES permit requires \$1.25 Million of targeted I&I reduction work on the sanitary sewer collection system. The I&I reduction work completed during the last 2 years have focused in the District's "Meadows" area, which is typically one of the heaviest sources of I&I in the service area. The targeted project amount in the District's CIP is between \$2 million and \$4 Million annually. The Engineering Department also manages the District's Upper Lateral Program. This program is designed to reduce I&I in private laterals, while providing property owner reimbursement for their upper lateral replacement. This program has had good success helping homeowners repair upper laterals and in reducing the amount of I&I entering the District's collection system.

Field Operations has put a great deal of emphasis on succession planning over the last 5 years. This has resulted in the internal promotions to many key positions within the department. Field Operations has also started the process of developing a competency-based training program. The goal of this program is to ensure the skills of our current and future workforce are learned and performed to a standard.

SSMP Audit Guidance Documents

J1: SSMP Audit Checklist Template

J2: SSMP Audit Standard Operating Procedures (SOP)

J1. SSMP Audit Checklist Template

INTRODUCTION

The intent of the audit is to evaluate the effectiveness of the SSMP elements and the SSMP's compliance with WDR Order No. 2006-0003-DWQ, and Order No. WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program (MRP) to the WDR.

AUDIT PROCESS

Audit methods include a Gap Analysis and an Effectiveness Evaluation using the District's performance indicators.

GAP ANALYSIS

The Gap Analysis portion of the audit uses industry reference materials, benchmarking data, and State Board regulatory enforcement procedures to identify areas for improvement in the SSMP itself, or the District's management or maintenance procedures. The Gap Analysis evaluated each WDR/MRP requirement on the following scale:

- **Management Tool Gap** – An element of the SSMP could be improved to enhance the effectiveness of the SSMP as a collection system management tool or best practice.
- **WDR Compliance Gap** – SSMP is not compliant with existing WDR.

Typically, the use of a "check mark" indicates that a gap exists as described in the column. An element with no "check marks" has been found to be in compliance. Comments indicate action items recommended to comply with the WDRs or to improve the SSMP as a management tool. The column at the far right indicates how the gap will be addressed in the subsequent SSMP updates. At the end of each Element section, a summary of the effectiveness of the SSMP Element is provided along with suggestions on improvement if applicable.

Sewer System Management Plan SSMP Audit Checklist Template



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
ELEMENT 1 – GOALS					
A.	Are the goals stated in the SSMP still appropriate and accurate?	✓	✓		
Effectiveness of Element 1					
ELEMENT 2 – ORGANIZATION					
A.	Is the list of Contact Info for Responsible Officials in SSMP Content Development current?				
B.	Is the District Organization Chart current?				
C.	Are the role and responsibility descriptions an accurate portrayal of staff responsibilities?				
D.	Does the SSMP identify the Chain of Communication for reporting SSOs, and is it accurate and up-to-date?				
E.	Does the SSMP identify staff responsible for implementing, specific measures in the SSMP?				
Effectiveness of Element 2		Element is effective. Process and responsibilities are correct. To meet WDR compliance, role titles and staff changes should be updated in all documents.			
ELEMENT 3 – LEGAL AUTHORITY					
Does the SSMP contain references to the current District Code documenting the District's legal authority to:					
A.	Prevent illicit discharges?				
B.	Require that sewers and connections be properly designed and constructed?				
C.	Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the District?				
D.	Limit discharges of fats, oil and grease?				
E.	Enforce any violation of its sewer ordinances?				
Effectiveness of Element 3					

Sewer System Management Plan SSMP Audit Checklist Template



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
ELEMENT 4 – OPERATIONS AND MAINTENANCE PROGRAM					
Collection System Maps					
A.	Does the SSMP reference the current process and procedures for maintaining the District's wastewater collection system maps?				
B.	Are the District's wastewater collection system maps complete, current, and sufficiently detailed (including showing applicable storm water conveyance facilities)?				
Prioritized Preventive Maintenance					
C.	Does the SSMP describe current preventive maintenance activities and the system for prioritizing regular maintenance and cleaning of the system?				
D.	Is there a system to document scheduled and conducted activities?				
Rehabilitation and Replacement Planning					
E.	Is there an ongoing condition assessment program? Are the current components of this program documented in the SSMP?				
F.	Is there a system for prioritizing the rehabilitation and replacement program? Does the Capital Improvement Plan (CIP) include a time schedule for implementing the short- and long-term needs, plus a schedule for developing the funds needed for the CIP?				
Training					
G.	Is the training information and calendar current?				
H.	Does the SSMP document current training expectations and programs?				
Major Equipment and Critical Replacement Parts Inventories					

Sewer System Management Plan SSMP Audit Checklist Template



I.	Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system?				
----	--	--	--	--	--

Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
J.	Are critical replacement parts identified and sufficient to respond to emergencies?				
Effectiveness of Element 4					
ELEMENT 5 – DESIGN AND PERFORMANCE STANDARDS					
A.	Does the SSMP contain current design and construction standards for the installation of new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?				
B.	Does the SSMP document current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects?				
Effectiveness of Element 5		Element is effective.			
ELEMENT 6 – OVERFLOW EMERGENCY RESPONSE PLAN (OERP)					
A.	Does the District’s OERP establish procedures for the emergency response, notification, and reporting of SSOs?				
B.	Does the OERP establish procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Revised MRP? Does the SSMP identify the officials who will receive immediate notification?				

Sewer System Management Plan SSMP Audit Checklist Template



C.	Are staff and contractor personnel appropriately trained on the procedures of the OERP?				
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Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
D.	Does the SSO OERP include a program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to surface waters and to minimize or correct any adverse impact on the environment resulting from the SSOs?				
Effectiveness of Element 6					
ELEMENT 7 – FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM					
A.	Does the FOG Control Program include efforts to educate the public on the proper handling and disposal of FOG?				
B.	Does the District have a plan and schedule for disposal of FOG generated within the service area?				
C.	Does the District have sufficient legal authority to implement and enforce the FOG Control Program?				
D.	Are requirements for grease removal devices, best management practices (BMP), record keeping, and reporting established in the District's FOG Control Program?				
E.	Does the District's FOG Control Program identify sections of the collection system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?				

Sewer System Management Plan SSMP Audit Checklist Template



F.	Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?				
Effectiveness of Element 7					

Sewer System Management Plan SSMP Audit Checklist Template



Requirement		Management Tool Gap	WDR Compliance Gap	Comments	Changes to 2017 SSMP Required
ELEMENT 8 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN					
A.	Does the plan evaluate hydraulic deficiencies in the system, establish sufficient design criteria and recommend both short and long-term capacity enhancement and improvement projects?				
B.	Does the District's CIP establish a schedule of approximate completion dates for both short and long-term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?				
Effectiveness of Element 8					
ELEMENT 9 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS					
A.	Does the SSMP accurately portray the methods of maintaining and tracking relevant information that can be used to establish and prioritize appropriate SSMP activities?				
B.	Is the District able to sufficiently evaluate the effectiveness of SSMP elements and PM program based on relevant information?				
C.	Does the SSMP identify and illustrate SSO trends including frequency, location, and volume.				
Effectiveness of Element 9					
ELEMENT 10 – SSMP PROGRAM AUDITS					
A.	Have SSMP Audits been completed? Audits must occur every two years and a report must be kept on file.				
Effectiveness of Element 10					
ELEMENT 11 – COMMUNICATION PROGRAM					
A.	Does the District effectively communicate with the public and other agencies about the development and implementation of the SSMP and continue to address any feedback?				
Effectiveness of Element 11					

EVALUATION OF EFFECTIVENESS OF SSMP

Performance indicators developed in the 2017 SSMP Update (Section IX: Monitoring, Measurement, and Program Modifications) are used to measure the performance of the wastewater collection system and the effectiveness of the SSMP. During the 2022 Gap Analysis, an additional performance indicator was identified – number of “no spill months”. Performance indicator metrics are retrieved from the California Integrated Water Quality System (CIWQS) online database. Performance indicators are listed below.

1. SSOs
 - o Total number of SSOs per year
 - o SSO Rate (number per 100 miles per year)
 - o Number of SSOs by cause (roots, grease, debris, structural failure, capacity, pump station failure, and other)
2. Volume of sewage recovered compared to total volume spilled
3. Volume of sewage discharged to Waters of the State
4. Percentage of spills during wet-weather events.
5. Number of certified No Spill months

J2. SSMP Audit Standard Operating Procedures (SOP)

SEWER SYSTEM MANAGEMENT PLAN (SSMP) AUDIT

Standard Operating Procedures



SOP-XX/Aug-2018

Author: **Name**

Owner: Field Operations Department, VFWD

Reviewer: **Name**

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ADMINISTRATIVE

Introduction

- The purpose of this SOP is to provide established instructions and steps for District Employees to audit the Sanitary Sewer Management Plan. All work shall be performed safely in compliance with applicable standards and in a manner that minimizes adverse impacts.
- This SOP was developed based on a compilation of best available information, knowledge, field experience, and general industry practices. In general, this document should be used as a reference, with the understanding that differences may exist between what is references in this document and what is appropriate under site-specific conditions.

References

- A Guide for Developing and Updating of Sewer System Management Plans (SSMPs)
- San Francisco Bay Regional Water Quality Control Board: Sewer System Management Plan (SSMP) Development Guide
- Biennial Sewer System Management Plan Audit Report Template, BACWA
- VFWD SSMP Audit Checklist Template

Objectives

The purpose of the SSMP Audit is to evaluate the effectiveness of the SSMP and its Elements and to determine the compliance of the District with the SSMP requirements. The Audit must identify any deficiencies in the SSMP and any corrective actions to be taken to be in compliance with the SSMP Elements.

- The objectives of the SSMP Audit are to:
 - Provide a narrative of the SSMP effectiveness
 - Demonstrate compliance with the WDRs
 - Provide steps and a schedule for implementing any corrective action
- Upon Completion of this SOP the operator will be aware of the steps to:
 - Review an SSMP
 - Conduct an SSMP Audit (SSMP Audit Checklist)
 - Prepare an SSMP Audit Report

SOP-XX

Sewer System Management Plan Audit



Frequency

The State Water Resources Control Board requires that internal SSMP Audits are performed every two (2) years. The SSMP Audit Reports must be kept on file.

Terminology

- Closed Circuit Television (CCTV).
- Capital Improvement Plan (CIP).
- California Integrated Water Quality System (CIWQS).
- Fat, Oils, and Grease (FOG).
- Sewer System Management Plant (SSMP).
- Sanitary Sewer Overflow (SSO).
- Sanitary Sewer System Waste Discharge Requirements (SSS WDR).

Employee Responsibility

- Employees are responsible for following District policies and procedures during completion of regulatory and administrative tasks.
- Employees are responsible for notifying management when SOP procedures are inconsistent with field actions, outdated, or unsafe.

Management Responsibility

- Management is responsible to provide employees adequate education and training to effectively complete District administrative tasks.

PROCEDURES

Review the SSMP

Step 1: Review the SSMP and its individual Elements, keeping in mind the requirements of the SSS WDR.

Step 2: Review current operations and management practices employed for the sanitary sewer system.

SSMP Audit Checklist

Note: As the audit is being performed, the following aspects should be documented. This will form the basis for the narrative portion of the SSMP Audit Report:

- Information identified as out of date or inaccurate
- Programs/activities working well
- Programs/activities needing improvement

Step 1: Introduction Section – Review the size and physical features of the system to make sure they are up to date.

Step 2: Perform SSMP Audit Checklist (found in Appendix J of SSMP)

Assess Effectiveness of SSMP

Step 1: Assess the effectiveness of the SSMP using the metrics identified in the SSMP:

- Number of SSOs
- SSO Rate (per 100 miles)
- Volume of sewage recovered vs. volume spilled
- Volume of sewage discharged to Waters of the State
- Percentage of spills during wet-weather events
- Certified no spill months

Step 2: Verify the data collected is sufficient to evaluate the effectiveness of the SSMP.

Corrective Action Planning

Once the audit checklist and assessment have been performed, all necessary changes and updates to the SSMP should be documented along with a timeline for completion.

Step 1: Compile list of SSMP Audit action items

Step 2: Assign completion dates for action items.

Prepare an Audit Report

Step 1: Prepare Audit Report document containing the following information:

SOP-XX

Sewer System Management Plan Audit



- Completed Audit Checklist
- Assessment of Effectiveness of SSMP
- Corrective Action Planning

Step 2: File Audit in District records and Appendix I of SSMP.

Task Complete.

Appendix K

SSMP Change Log

Appendix K. Log of SSMP Changes

Date	SSMP Element	Description of Change/Revision Made	Person Authorizing Change
Dec-2022	Appendix A	Updated Responsible officials and titles	Director of Human Resources and Risk
Dec-2022	Appendix C	Updated Major Equipment inventory	Director of Field Operations
Dec-2022	Appendix D	Updated Critical Parts inventory	Director of Field Operations
Dec-2022	Appendix E	Engineering Design Standards updated with most recent version (2020)	Director of Engineering
Dec-2022	Appendix F	Updated "All-Call" list in OERP	Director of Field Operations
Dec-2022	Appendix G	Updated FOG Materials	Director of Environmental Services
Dec-2022	Appendix H	Included latest Budget document	Director of Finance/Treasurer
Dec-2022	Appendix I	Added 2022 SSMP Audit to the document	Director of Field Operations
Dec-2022	Appendix J	Updated form to most current version	Director of Field Operations
Dec-2022	Element 1	Updated sewer size, material, by diameter (Tables 1 & 2)	Director of Field Operations
Dec-2022	Element 2	Updated Organization chart and titles	Director of Field Operations
Dec-2022	Element 3	Updated ordinance link, and section formatting	Director of Environmental services and Director of Engineering
Dec-2022	Element 4	Included information from 2020 audit and SSMP update that did not make it into the document. Updated cleaning rates (Tables 7-11)	Director of Field Operations
Dec-2022	Element 5	Removed 6-inch pipe diameter from Table 14 since size is not allowed for gravity sewer	Director of Engineering
Dec-2022	Element 6	OERP changed to SERP and supporting documents updated tor reflect change	Director of Field Operations and Director of Human Resources and Risk
Dec-2022	Element 7	Updated table 15 to include 2018-2022 data	Director of Environmental Services
Dec-2022	Element 8	Updated to reference ongoing Master Pla	Director of Engineering
Dec-2022	Element 9	Updated to include 2 performance measures % of spills during wet-weather events, and certified no-spill months. Updated data in tables and figures to include 2018-2022 data	Director of Field Operations
Dec-2022	Element 10	Updated attachment to include recent 2022 audit	Director of Field Operations
Dec-2022	Element 11	Updated based on district website Dec 2022.	Director of Field Operations

Appendix L

SSMP Board Adoption Documents



Consent
Agenda Item No 6 F
Date: December 11, 2012

BOARD COMMUNICATION

TO: THE HONORABLE PRESIDENT AND BOARD OF TRUSTEES

FROM: RONALD J. MATHESON, DISTRICT MANAGER
ANDY JANNINGS, FIELD OPERATIONS SUPERINTENDENT

SUBJECT: APPROVE THE DISTRICT'S SANITARY SEWER MANAGEMENT PLAN

RECOMMENDATION

Adopt the Resolution Approving the District's Sanitary Sewer Management Plan (SSMP).

SUMMARY

The State Water Resources Control Board requires the SSMP be in compliance with the Statewide General Waste Discharge Requirements for sanitary sewer systems. The plan includes 10 sections: Section 1 – Goal, Section 2 – Organization, Section 3 – Sanitary Sewer Overflow Response Plan, Section 4 – Fats Oils and Grease Control Program, Section 5 – Legal Authority, Section 6 – Measures and Activities, Section 7 – Design and Construction Standards, Section 8-9 – Capacity Assurance and Measurement Program, Section 10 – Public Communication Program.

BACKGROUND AND DISCUSSION

The District began development of the SSMP in 2006 completing Sections 1, 3, 4, 7, 8, and 9. In 2007 Sections 2, 5 and 6 were completed. Full implementation was achieved in 2008 with the completion of Section 10.

FISCAL IMPACT

None

DOCUMENTS ATTACHED

- A. Resolution
- B. To read the complete SSMP please go to the District's website at www.vsfcd.com.

PROPOSED ACTION

Adopt the Resolution approving the District's Sanitary Sewer Management Plan.

CONTACT

Ronald J. Matheson, District Manager, 644-8949
Andy Jannings, Field Operations Superintendent, 644-8949, ext. 271

RESOLUTION NUMBER 2012 – 5474

APPROVE THE DISTRICT’S SANITARY SEWER MANAGEMENT PLAN (SSMP)

BE IT RESOLVED, by the Board of Trustees of the Vallejo Sanitation and Flood Control District of Solano County, California as follows:

WHEREAS, the State Water Resources Control Board approved The Statewide General Waste Discharge Requirements for sanitary sewer systems; and

WHEREAS, the Statewide General Waste Discharge Requirements for sanitary sewer systems mandates the development of a Sewer System Management Plan (SSMP); and

WHEREAS, the District completed the implementation of its Sanitary Sewer Management Plan (SSMP) in April 2008; and

IT IS, THEREFORE, RESOLVED, by the Board of Trustees of the Vallejo Sanitation and Flood Control District that the District’s Sanitary Sewer Management Plan (SSMP) is approved.

ADOPTED by the Board of Trustees of the Vallejo Sanitation and Flood Control District on the 11th day of December, 2012 by the following vote:

AYES:	President Davis, Trustees Hannigan, Brown, Gomes, Kondylis, McConnell, Sampayan and Sunga
NOES:	None
ABSENT:	None
ABSTAIN:	None

WITNESS my hand and the Seal of said District this 11th day of December 2012.

CATHERINE C. SPARKS
District Clerk



District Manager
Melissa Morton

December 12, 2017
Consent Item No. 6D

BOARD COMMUNICATION

TO: THE HONORABLE PRESIDENT AND BOARD OF TRUSTEES

FROM: MELISSA MORTON, DISTRICT MANAGER
KEN TAYLOR, FIELD OPERATIONS SUPERINTENDENT

SUBJECT: APPROVE THE DISTRICT'S SANITARY SEWER MANAGEMENT PLAN

BACKGROUND AND DISCUSSION

The State Water Resources Control Board requires the Sanitary Sewer Management Plan (SSMP) be in compliance with the Statewide General Waste Discharge Requirements for sanitary sewer systems. The District began development of the SSMP in 2006 completing Sections 1, 3, 4, 7, 8, and 9. In 2007 Sections 2, 5 and 6 were completed. Full implementation was achieved in 2008 with the completion of Section 10. Final adoption and approval by the Board of Trustees was completed in 2012. The State Water Resources Control Board requires recertification every five years or upon a major update. Since 2008 the State Water Resources Control Board and the SSMP Stakeholders have worked together to help refine the content, expectations and requirements to be included in an agency's SSMP. This update of the District's SSMP is intended to encompass the changes in regulatory expectations of the State Water Resources Control Board.

RECOMMENDATION

Adopt the resolution approving the District's Sanitary Sewer Management Plan.

ALTERNATIVES CONSIDERED

None, this is a regulatory requirement as part of the Statewide General Waste Discharge Requirements.

ENVIRONMENTAL REVIEW

This is not a project under CEQA and no environmental review is required.

FISCAL IMPACT

This item was budgeted in the 2017-2018 biennial budget.

PROPOSED ACTION

Adopt a resolution approving the District's Sanitary Sewer Management Plan.

DOCUMENTS ATTACHED

- A. Resolution
- B. Updated Sanitary Sewer Management Plan

CONTACT PERSON

Ken Taylor, Field Operations Superintendent, 707-644-8949 ext. 1707

RESOLUTION NUMBER 2017-5838

**RESOLUTION TO APPROVE THE DISTRICT'S
SANITARY SEWER MANAGEMENT PLAN (SSMP)**

BE IT RESOLVED, by the Board of Trustees of the Vallejo Sanitation and Flood Control District of Solano County, California as follows:

WHEREAS, the State Water Resources Control Board approved The Statewide General Waste Discharge Requirements for sanitary sewer systems;

WHEREAS, the Statewide General Waste Discharge Requirements for sanitary sewer systems mandates the update of a Sewer System Management Plan (SSMP) every 5 years; and

WHEREAS, the District last approved its SSMP in December 2012; and

WHEREAS, The District has revised and updated its SSMP to reflect changes in the regulations of the State Water Resources Control Board.

IT IS, THEREFORE, RESOLVED by the Board of Trustees of the Vallejo Sanitation and Flood Control District that the Board approves the Sanitary Sewer Management Plan (SSMP)

ADOPTED by the Board of Trustees of the Vallejo Sanitation and Flood Control District on the 12th day of December, 2017 by the following vote:

AYES: President Sampayan, Trustees Dew-Costa, Hannigan, McConnell, Miessner, Sunga and Verder-Aliga.

NOES:

ABSENT: Trustee Malgapo

ABSTAIN:

WITNESS my hand and the Seal of said District this 12th day of December, 2017.

HOLLY M. CHARLEY
District Clerk

BOARD COMMUNICATION

TO: THE HONORABLE PRESIDENT AND BOARD OF TRUSTEES

FROM: MELISSA MORTON, DISTRICT MANAGER 
MARK TOMKO, DIRECTOR OF ENGINEERING

SUBJECT: RECEIVE INFORMATION UPDATE ON MARE ISLAND – MARCH 2023

BACKGROUND AND DISCUSSION

The purpose of this Board Communication is to summarize recent activity on Mare Island that involved Vallejo Flood and Wastewater District.

PERMITS UNDER REVIEW

- 110 Pintado Street (BP22-00906) - Mare Island Art Studios
 - o Tenant Improvement of Building 515
 - o District provided review letter on December 22, 2022.
 - o Owner of Mare Island Art Studios contacted the District several times to discuss the connection fee. To date the connection fee has not been paid or any of the requirements in the December 22, 2022 letter addressed. The permit status is listed as Awaiting Resubmittal.
 - o Sanitary sewer discharge from development utilizes DOM 3 that requires upgrades to maintain reliability. District has notified the Mare Island Company (MIC).
- 1015 Walnut Avenue (BP22-01714) – Market & Cafe
 - o Tenant Improvement to convert first floor of Quarters N to a café/deli.
 - o District provided review letter on December 28, 2022.
 - o To date, none of the requirements in the December 28th letter have been addressed.
 - o Applicant resubmitted on March 8, 2023.
 - o District provided second review letter on March 15, 2023, see Attachment A.
 - o Following discussion with Applicant on March 15, District removed grease interceptor requirement as no food preparation will be done on-site.
- 975 Nimitz Avenue (BP22-00306) – Tenant Improvement to convert second floor of Building 483 to wine barrel storage
 - o District provided review letter on January 10, 2023.
 - o On February 23, 2023, applicant requested fee deferral through the City of Vallejo.
 - o District provided fee deferral policy to City and Mare Island Company on February 23, 2023.
 - o District called Brian Nagy on March 16, 2023 and left a message to inquire about the status of BP22-00306.
 - o The Pretreatment Questionnaire was received on March 29, 2023.
- Building Demolition (DM23-00002) – Demolition of Building 489, located between Walnut Avenue and Azura Drive, just south of A Street.
 - o District staff required via email correspondence that Applicant shall abandon/block off sewer lateral either by excavating existing lateral or installing a concrete plug at the nearest downstream maintenance hole.

- o Follow up conversation on March 23rd, Applicant indicated that they located the maintenance hole the lateral is connected to as the best place to plug the sewer lateral.
- Building Demolition (DM23-00006 - 00008) – Demolition of Buildings FA4, SA32-05, and SA32-06 located on Nimitz Avenue, directly across from Dry Dock 3, and east of Building 690.
 - o Application was submitted through Community Development on March 7, 2023.
 - o This includes the demolition of three concrete bunker style buildings.
 - o District staff confirmed with Applicant on March 15th that no existing sanitary sewer or storm drain connections exist and therefore no review by the District is required.
- Building Demolition (DM22-00005 – DM22-00013) – Demolition of various buildings on North Mare Island
 - o District staff required applicant to abandon/block off several unused sewer lines on Mare Island to reduce inflow/infiltration (I/I) and eliminate unused sewer lines.
 - o Work has been completed and will reduce I/I on North Mare Island.

MARE ISLAND INFRASTRUCTURE ASSESSMENT

- Monthly Project Management Meeting, March 6, 2023
 - o West Yost met with District, City and Mare Island Company staff to discuss project status.
- Data Collection and Sharing
 - o District staff continued to collect and share available historical and technical information with the Design Team.
- North Mare Island Scope Reductions
 - o Based on Mare Island Company's plan for North Mare Island, West Yost provided a plan to reduce the scope on North Mare Island by approximately \$17,000.
- Flow Monitoring
 - o West Yost's consultant, V&A installed flow monitors at three locations leading to DOM 4 with an additional monitor to measure flow leaving DOM 4. The four locations should provide representative flows for Mare Island.
 - o Flow monitors were installed March 9th prior to a significant rain event.
 - o Flow monitors were not included as part of the base scope and have been funded through scope reductions on North Mare Island, Contingency Funds, and reduced CCTV scope. It is anticipated that potential additional EDA Grant Funding will replenish the CCTV scope.
- Documents and Technical Memorandums Provided for Review and Comment
 - o West Yost provided their Draft Field Work Safety Plan for review and comment on March 3rd; District staff responded on March 6th. The Final Safety Plan was provided by West Yost on March 8th.
 - o West Yost provided a Draft Storm Design Criteria Technical Memorandum on February 27th, Staff reviewed and responded with comments on March 9th.

DOM 3 Lift Station

- DOM 3 is a sewer lift station that pumps sewer flow on Mare Island to DOM 4. Various maintenance activities are required for DOM 3 including the replacement of both pumps and the influent valves. To accomplish this, sediment build up in the wet well will need to be removed. The sediment was tested and found to be contaminated by heavy metals and will need to be disposed of at a suitable location.

On 10/14/2022, Pump 1 experienced a failure of the pump volute due to excessive

- corrosion that flooded the dry well. District staff responded to pump down the flooded area and isolate the failed pump. Currently, DOM 3 is operating on a single pump with no redundancy.

- The cost estimate received for the sediment removal and disposal is \$67,850 on a Time & Materials basis. The materials estimate prepared by the District to replace the failed pump and influent valves would be \$50,000. Replacement of both pumps would be approximately \$90,000 - \$100,000.

DOM 4 Lift Station

- DOM 4 is a sewer lift station that pumps all sewer flow from Mare Island across Mare Island Strait. The District is working with a consultant to complete an evaluation and rehabilitation/replacement design of variable frequency drives (VFD), motor control center (MCC), and programmable logic controller (PLC) for a design cost of \$68,500. The estimated construction cost for the work is \$563,000.

RECOMMENDATION

Information only

ALTERNATIVES CONSIDERED

None

ENVIRONMENTAL REVIEW

This is an administrative update and is not considered a project under CEQA per Section 15378; therefore, no environmental review is required.

FISCAL IMPACT

The rehabilitation and replacement costs for DOM 3 and DOM 4 is estimated at \$800K. The responsibility for funding has not been determined. The District has been excluded from any Specific Plan discussions on Mare Island; therefore, have not been part of the discussion of the Mare Island Company's future plans that may impact DOM 3 and DOM 4.

PROPOSED ACTION

Receive information update on Mare Island

DOCUMENTS ATTACHED

A. 1015 Walnut Avenue Second Review Letter

CONTACT PERSON

Mark Tomko, Director of Engineering, (707) 652-7801



(707) 644-8949 (Admin)
(707) 644-8976 (Billing)
www.VallejoWastewater.org
450 Ryder Street
Vallejo, CA 94590

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Peter Bregenzer
Mina Loera-Diaz
Erin Hannigan
Diosdado "JR" Matulac
Charles Palmares
Rozzana Verder-Aliga

District Manager

Melissa Morton

March 15, 2023

Quarters N Market & Café
1015 Walnut Avenue, Quarters N
Vallejo, CA 94592
Attention: Sylvia Larsen (slarsen@rimarchitects.com)

SENT VIA EMAIL

RE: Tenant Improvement of Quarters N, 1015 Walnut Avenue, BP22-01714

Pursuant to Vallejo Flood and Wastewater District (VFWD) Ordinance No. 2018-70A and 2017-70B, RIM Architects (Applicant) must obtain a sanitary sewer connection and storm drain connection permit, as a result of a change in use and tenant improvements at Quarters N, 1015 Walnut Avenue, Vallejo, California (Tenant Improvements).

PERMIT ISSUANCE REQUIREMENTS

To obtain the permits, Applicant must pay a permit fee and comply with the other permit issuance requirements set forth below:

1. Pretreatment Questionnaire. Per Section 6.3.1 of the District's Engineering Standards, the Applicant must complete and return a Pretreatment Questionnaire describing non-domestic sewage discharges associated with the proposed improvements specifically related to the kitchen. The Pretreatment Questionnaire can be found on the District's website here, <https://www.vallejowastewater.org/204/Permitting-Plan-Review>.
2. FOG Removal. Per Section 6.4 of the District's Engineering Standards, the Applicant shall install a grease interceptor or trap in a manner consistent with the District's standards to prevent fats, oils, and greases (FOG) from being discharged to the sanitary sewer system.
3. Sewer Connection Fee. The estimated sewer connection fee for the property based on 8,690 square feet of commercial space is \$29,676.35 (\$3,415/1000 sq. ft).
4. Storm Drain Connection Fee. VFWD staff has determined that no additional impervious area will be added; therefore, no additional connection fee is required for storm drainage.
5. Additional Fees. Applicant must also pay design review fees and inspection fees, initially estimated to be \$847.00. There may be additional requirements to repair the existing sanitary sewer and storm drain system based on the video inspection and these issues will be coordinated with the Mare Island Company.

Wastewater. Stormwater. Floodwater.

6. Sanitary Sewer and Storm Drain Information Form (SSI). The Applicant must complete and return to the District a Sanitary Sewer and Storm Drain Information Form (SSI) describing the details of the project. The SSI can be found on the District's website here, <https://www.vallejowastewater.org/204/Permitting-Plan-Review>.

CONDITIONS OF APPROVAL

The District, at its sole discretion, may elect to Conditionally Approve the project to move forward pending the receipt and/or completion of the following:

1. Sanitary Sewer Video Inspection. The Applicant must provide a drawing that shows the sanitary sewer system for the building (location and size of piping as it leaves the building) and from the building to the sanitary sewer main. Applicant is required to video inspect the sanitary sewer main from 1015 Walnut Avenue to the 27-inch sewer main in Railroad Avenue. Applicant must notify VFWD's inspector George Guorgui by phone at (707) 652-7811 at least 24 hours prior to the inspection and the video inspection recording must be provided to VFWD for review.
2. Storm Drain Video Inspection. The Applicant must provide a drawing that shows the drainage for the building, from the building to the storm drain system, and complete a video inspection of the storm drain system from the building to the outfall(s) to the Mare Island Strait. The Applicant must notify VFWD's inspector George Guorgui by phone at (707) 652-7811, at least 24 hours prior to the inspection, and the video inspection recording must be provided to VFWD for review.

If you have any questions please call or e-mail me at (707) 558-3409 or bash@vallejowastewater.org.

VALLEJO FLOOD AND WASTEWATER DISTRICT



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George Guorgui, VFWD