

Monthly Operating Report

Richmond WWTP and Collection System

March, 2017

Executive Summary

Wastewater Treatment Plant

- There were no NPDES permit violations in the month of March 2017.

In regards the two violations reported in the February 2017 monthly report (two brief instances where traces of chlorine were detected in the combined plants effluent), an internal inquiry concluded the two were “non-preventable”, and could not be avoided. Plans are being prepared to upgrade the standby generator controls as well as the disinfection and dechlorination delivery systems, which were the main reasons for the problems encountered. Further, a communication with Vince Christian (Regional Board Permit Engineer) clarified that any chlorine residual needs to be precisely at the top of the hour (or on the hour) for it to be counted as a violation. In addition, there was an alert that this situation was likely to be corrected by the State next year; an exceedance will be counted as a violation irrespective of the time of its occurrence.

- There was a total 3.49 inches of rainfall according to the rain gauge at the Richmond WWTP in March 2017. The largest single day total was 1.25 inches on March 21.
- There was 1 blending event in March as follows: 3/21/17 from 1055 hours thru 1920 hours. The total volume blended was 1.832 million gallons.
- The monthly acute aquatic bioassay test passed with 100% survival of the fathead minnows.
- There were no phoned in odor complaints or fence line H₂S alerts in March.
- The Electrical Upgrade Project is progressing and expected to conclude in May. There has been a recent development with PG&E where their original design for new electrical service needs to be modified to meet code requirements. This development could set the project back a month. There are two smaller projects, plant lighting upgrades and security camera system which Central Sierra Electric will work on during any potential PG&E delay.

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Table 1 Parameter	Monthly Performance Indicators	Limit/Target
Treatment Plant Operations:		
Influent Flow, daily average (MGD)	8.38	N/A
Effluent Flow, daily average (MGD)	8.63	N/A
Influent BOD ₅ , avg. mg/L	243	N/A
Influent TSS, avg. mg/L	269	N/A
Effluent TSS, monthly average mg/L	10.3	30 or less
Effluent BOD, monthly average mg/L	12.8	30 or less
% BOD Removal	93.5	> 85
% TSS Removal	95.4	> 85
NPDES Effluent Limit Violations	0	0
Blending events	1	0
Total volume blended, MG	1.83	0
Odor complaints	0	0
Digested sludge pumped to drying beds, MG	1.83	N/A
Average Daily Volume of Leachate Received, Gal	27,753	N/A
Leachate received, Gal	610,571	N/A
Leachate received YTD, MG	1.45	N/A

Maintenance

- Staff completed 294 maintenance work orders during the month; 89 at sewer lift stations, 92 for storm water pump stations and 113 at the treatment plant (92 preventatives and 21 corrective).
- Replaced the H2S detector in between Dystor 1 and 2 with a new model RKI detector
- Rebuilt Primary sludge pumps 1 and 2
- Removed and replaced sludge transport line flush pump
- DAFT 1 grating and handrail replacements

Look Ahead; April - May

- The cog rake electrical panel upgrade is scheduled for installation
- New Ferry Point lift station pump replacement expected installation
- Semiannual Dystor cover inspection

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- Digester gas flow meter conduit run and SCADA connection
- Primary Scum auger rebuild
- ICI generator replacement project

Collection Systems

Sanitary Sewer System

During the month of March there were three sanitary sewer overflows (SSO's) all of which were capacity related with a combined volume of 7,875 gallons.

There were a total of thirteen sanitary sewer service calls in March, eight of which were private lateral issues. (See table 2).

Sanitary Sewer Point Repair Highlights:

There were two sanitary sewer repairs performed during the month of March 2017. The emergency dig up of stuck nozzle started in March will be completed in April. Contracted staff installed 10 new manhole frames and covers in various locations within the City of Richmond.

Storm Water

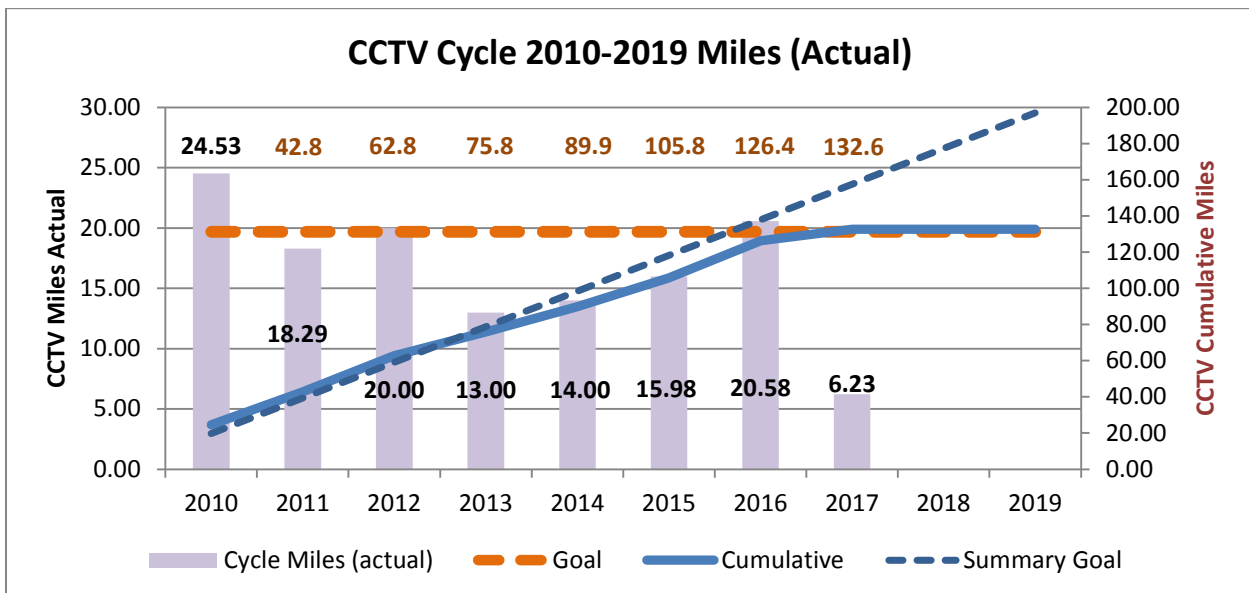
There were ten (10) storm-water related service calls in March (See table 3).

Storm Water Point Repair Highlights

- Staff installed a new trash capture device at Atlas Rd and Giant Hwy in March.

Collection Systems Monthly Performance Indicators

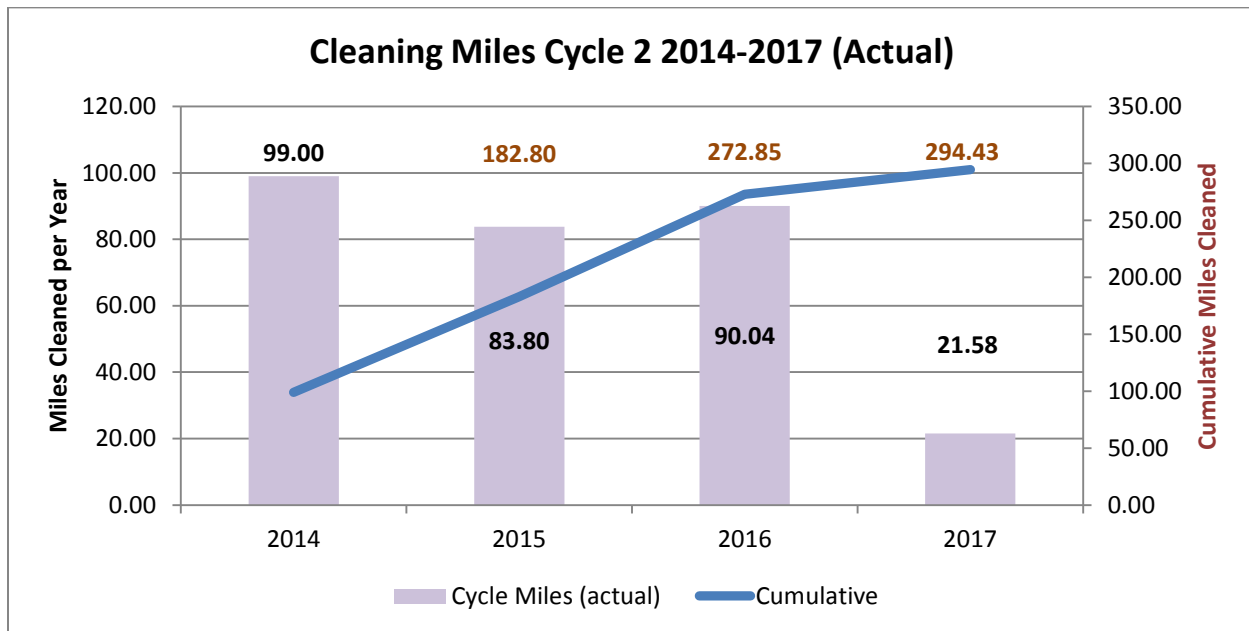
Veolia is in the 8th year of a 10-year CCTV cycle. Cycle start date was January 1, 2010.



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Veolia is in the 4th year of a 4-year sewer cleaning cycle. Cycle start date was January 1, 2014. Cumulative footage exceeds the goal to-date.



Sanitary System Performance Indicators

Table 2

Performance Indicator	Monthly Actual	Target/Limit
Service Calls (Public Facilities/Assets)	13	N/A
Service Call Response Time (minutes)	<30	<30
Private Lateral Service Calls; Regular/After Hours	8/0	N/A
Regular/OT Hours Spent on Private Lateral Calls	0/0	N/A
Point Repairs Completed	0	N/A
Manhole Inspections	0	N/A
Manhole Repairs	0	N/A
CCTV (Closed Circuit TV) (ft.)	14,179	7,000
GPS Surveys	0	As needed
Cleaning (ft.)	42,522	25,000
Cleaning QA/QC Events	2	4
SSOs for current month – Mainline	0	10/yr
Total Mainline SSO Volume (gallons)	0	0
Total Mainline SSO Volume Recovered (gallons)	0	100%
% Mainline SSO Volume Recovered	0	100%
# SSOs – Wet Weather (localized capacity issue)	3	0

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# SSOs – Engineered Overflow Structure	0	0
Total SSO Volume from Engineered Overflow Structure	0	N/A
SSOs – Private Laterals	0	N/A
General Maintenance	5	N/A
Sewer Lift Station PMs	89	N/A
Potential SSOs Eliminated due to SmartCover Monitors	0	N/A
SSOs – Mainline – Resulting in Property Damage	0	0
Total Wet Weather SSOs Year to Date	35	0
Total Dry Weather SSOs Year to Date	0	10 - Baykeeper
Number and Percentage of SSOs During 2017 with Discharge Reaching Storm Water Conveyance	35 of 35 - 100%	N/A

Storm Water System Performance Indicators

Table 3

Performance Indicator	Monthly Actual	Target/Limit
Storm Point Repairs	1*	N/A
Storm Manhole Repairs	0	N/A
Storm Manhole Inspections	0	N/A
Storm Service Calls	10	N/A
Storm CCTV (ft)	405	N/A
Storm GPS Surveys	0	N/A
Storm Pipe Cleaning (ft)	58	N/A
Storm General Maintenance Cleaning (Linear feet of V-Ditches, Culverts or Creeks)	0	N/A
Pump Stations/Inlet/Outlet Channels Cleaned	1	N/A
Cash Basins/inlets Cleaned	2	N/A
Storm Vaults Cleaned/Inspected	0	N/A
GSRD (trash capture device) Cleaning/Inspections	1	4/year
Flap Gate/Duck Bill Inspections	0	4/year
Storm Water Pump Station PMs	92	N/A

*Installed a single trash capture device

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Capital Improvement Program

Electrical Upgrade Project Construction

- Took delivery of and set in place the Main 15kV Switchgear Building.
- Pulled wire at Digester Building and Disinfection Building Area.
- Pulled Fiber Optic and 15kV Cable.
- Set in place two transformers behind Main Switchgear Building
- Hauled-off all spoils to clean up site.

13th Street Capacity Improvement Project Design

- This project replaces pipelines with NASSCO PACP Structural Grade 4 and 5 defects in the sewershed that flows to the 13th Street interceptor and replaces and upsizes the 13th Street interceptor from Costa to Garvin.
- Bids were opened on October 20, 2016. The project has been on hold pending approval of SRF funding and will now be combined with the 23rd Street Sewer Replacement Design and re-bid in May 2017.

23rd Street Sewer Replacement Project Design

- This project replaces the existing 21-inch diameter interceptor sewer and adjacent 6-inch diameter collector sewer between Ohio and Cutting Blvd.
- 100 percent design documents are complete and the project is being combined with the 13th Street project. The combined project will be bid in May 2017. Start of construction is anticipated in mid-2017.

Cutting, Carlson, and Hoffman Boulevard Project Designs

- This project replaces pipelines with NASSCO PACP Structural Grade 4 and 5 defects in the sewersheds that flows to Cutting Boulevard. Reduction of inflow and infiltration will reduce the need to upsize the Cutting Boulevard interceptor, thereby reducing overall cost and construction impact to the City.
- 90 percent design documents for the Hoffman Boulevard improvements have been completed and reviewed by Veolia and City staff. 90 percent design documents for Cutting/Carlson Boulevard are in progress and require completion of the remainder of CCTV inspections. Bidding for both projects will occur after the City receives approval for SRF funding.

WWTP Facility Plan Project

- Provided as-needed support for the CWSRF loan applications.
- Prepared additional information requested by the State for the Technical Package for the WWTP Critical Improvements Project SRF Application.

WWTP Critical Improvements Project Design

- Continued preparation of the 100% design deliverable.
- Provided as-needed support for the process sampling effort.
- Began preparation of final progress meeting with City and Veolia.