

APPENDIX A
NOVATO SANITARY DISTRICT
Facility Reliability Assurance Plan and Status Report Evaluation
January 10, 2019

Operation and Maintenance of the Novato Sanitary District (NSD) Wastewater Treatment Facility is the responsibility of Veolia Water West Operating Services, Inc. The service agreement includes processes and equipment at the following locations:

- wastewater treatment facility located at 500 Davidson Street,
- raw sewage pump station located at 445 Bel Marin Keys Blvd, (formerly Ignacio treatment plant), and
- decant return pump station located between Highway 37 and Deer Island Lane, all are located in Novato, CA.

The sanitary sewer collection system is the responsibility of NSD.

Veolia provides regular updates to NSD detailing equipment condition and any deficiencies noted. NSD has a 5-Year Capital Improvement Plan which is updated annually.

Weekly meetings are held between Veolia and NSD management to provide operational status updates. A monthly operations report (MOR) is provided to the NSD District Manager-Chief Engineer and Board of Directors. The MOR is available to the public on the NSD website.

The Novato Sanitary District Wastewater Treatment Facility (operated by Veolia) has systems in place to ensure that processes and equipment are operated, maintained, repaired, and upgraded as necessary, including:

- ❑ Hach WIMS (Citrix) data base to track facility process parameters and laboratory results
- ❑ Oracle Water Asset Management (OWAM) computerized maintenance management software data base. OWAM is a robust system used to track facility equipment with regard to part numbers, maintenance frequency, maintenance work orders, work order instructions, purchasing, and more.
- ❑ CIWQS eSMR reporting system to capture and report analytical data to the State and Regional Water Boards
- ❑ Monthly Safety Inspection Reports
- ❑ Annual Veolia Water Peer Audits
- ❑ The Facility Standard Operating Procedures Manual

In April 2010 a new treatment plant was commissioned. The new facility, capable of providing full secondary treatment up to 30.7 MGD (47 MGD three hour peak) eliminated the practice of blending. Prior to April 2010 blending had been used to process sustained wastewater flows in excess of 9 mgd.

The Novato wastewater treatment facility performed well throughout 2018. We are very happy and proud to report that all permit parameters were met. Table 1 below provides plant performance data from calendar years 2010 through 2018 for flow, effluent BOD, and TSS.

The 2018 average dry weather flow for the Novato Treatment Plant was 3.44 MGD (July, August, & September).

TABLE 1

| 2010 – 2018 Average, Flow, Effluent BOD, & TSS | | | | | |
|--|-------|------|-------|------|-------|
| | Flow | BOD | | TSS | |
| | MGD | mg/L | % Rem | mg/L | % Rem |
| 2010 | 5.57 | 14.6 | 90.0 | 14.2 | 90.8 |
| 2011 | 5.35 | 9.0 | 96.1 | 6.3 | 97.8 |
| 2012 | 5.12 | 6.7 | 97.0 | 5.1 | 98.1 |
| 2013 | 4.23 | 7.5 | 97.1 | 4.8 | 98.7 |
| 2014 | 4.53 | 8.0 | 96.8 | 3.6 | 98.9 |
| 2015 | 3.84 | 8.4 | 97.1 | 4.4 | 98.6 |
| 2016 | 4.71 | 5.5 | 97.8 | 5.3 | 98.1 |
| 2017 | 5.70 | 5.8 | 97.4 | 5.4 | 97.5 |
| 2018 | 4.295 | 5.9 | 97.9 | 4.6 | 98.4 |

Table 2 below illustrates over six years of effluent compliance. Most of the NPDES violations in 2010 occurred early in the year during wet weather blending. As noted above the new treatment plant provides full secondary treatment for all influent (up to 47 mgd).

TABLE 2

| Violations / Excursions | | | | | | | | | | | | | | | | | | |
|-------------------------|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|
| | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | | 2018 | |
| Month | NPDES | WDR | NPDES | WDR | NPDES | WDR | NPDES | WDR | NPDES | WDR | NPDES | WDR | NPDES | WDR | NPDES | WDR | NPDES | WDR |
| Jan | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Feb | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mar | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Apr | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aug | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sep | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oct | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nov | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dec | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 23 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Note: New treatment plant commissioned April 15, 2010.

The Wet Season of 2016/ 2017

Sustained heavy rainfall resulted in abnormally high flows in January and February 2017, see Table 3 below.

TABLE 3

| Month | Average | Daily Maximum | Peak Hourly |
|----------|------------|---------------|-------------|
| January | 12.725 mgd | 28.43 mgd | ~43 mgd |
| February | 12.591 mgd | 24.21 mgd | ~39 mgd |

The facility handled all flows without incident. All processes worked as designed and no violations or permit excursions were experienced. The facility has an excellent record of performance since being commissioned in April 2010.

Conclusion: The reliability of the wastewater facilities and the operation continues to be excellent.