

APPENDIX A
NOVATO SANITARY DISTRICT
Wastewater Facility Review (and Reliability) Evaluation
January 15, 2020

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. Veolia conducted an equipment Condition Assessment and Criticality Assessment in 2019 which a summary was presented to the NSD Board of Directors on January 13, 2020.

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 based on site walks and improvements.
- ❑ Electronic Operation and Maintenance Manual which were prepared for the 2010 facility upgrade. The manual is used for reference when operating the facility.
- ❑ Standard Operating Procedures which are an extension to the Operation and Maintenance Manual to provide standardized details and procedures.

In April 2010 a new treatment plant was commissioned. The new facility, capable of providing full secondary treatment up to 30.7 Million Gallon Day (MGD) (47 MGD three hour peak).

The 2019 average dry weather flow for the Novato Treatment Plant was 3.50 MGD (August, September, and October).

The Novato wastewater treatment facility performed well throughout 2019. 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 2019 for flow, effluent Biochemical Oxygen Demand (BOD), and Total Suspended Solids (TSS).

TABLE 1

2011 – 2019 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	4.29	5.9	97.9	4.6	98.4
2019	5.76	6.0	98.0	4.0	99.0

Table 2 below illustrates over eight years of effluent compliance. As noted above the new treatment plant provides full secondary treatment for all influent (up to 47 mgd).

TABLE 2

Violations / Excursions																		
	2011		2012		2013		2014		2015		2016		2017		2018		2019	
Month	NPDES	WDR	NPDES	WDR	NPDES	WDR	NPDES	WDR	NPDES	WDR	NPDES	WDR	NPDES	WDR	NPDES	WDR	NPDES	WDR
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct	2	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The Wet Season of 2019

Sustained heavy rainfall resulted in abnormally high flows in February 2019, see Table 3 below.

TABLE 3

Month	Average	Peak Hourly
February	12.82 mgd	30.30 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 on April 15, 2010.

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

