2022 ANNUAL OPERATIONS AND MAINTENANCE REPORT FOR THE NOVATO SANITARY DISTRICT

Prepared by:

Veolia Water West Operating Services, Inc.
500 Davidson Street
Novato, CA 94945

February 7, 2023

TABLE OF CONTENTS

Overview

The continued priorities for 2022 were to maintain a safe working environment and zero lost time, Occupational Safety Health Act recordable incidents, and no treatment plant effluent violations. 2022, Veolia's tenth consecutive year of zero effluent violations and eleventh year of zero recordable incidents. We continue to celebrate this success with the Novato Sanitary District on its vision and commitment to the protection of water quality and the environment.

Key areas of focus throughout the year included:

- Safety Training
- COVID-19 Workplace Compliance
- No Safety Incidents (recordable, lost time, or medical)
- Participation in Veolia *Near Miss and Leading Indicator* Reporting Program
- Regulatory Compliance
- Odor Monitoring
- Reporting (internal and external)
- Record Keeping and Data Base Management
- Facility Energy Management Program
- Employee Education and Certification / Professional Advancement
- Community Outreach and Participation – Limited due to the Pandemic
- Effective Asset Management by using Oracle Work Asset Management System (OWAM) for Maintenance Tracking, Scheduling, Inventory, and Purchasing
- Operation, Management, and Maintenance
- Oversight of Laboratory and Pretreatment Program

Treatment Plant Design Criteria

Wastewater is collected throughout the Novato Sanitary District service area and conveyed by gravity as well as mechanical means (pump stations) to the Novato Treatment Plant (*NTP*). Table 1.0 describes each of the processes influent flow design criteria.

Table 1.0

DESIGN CRITERIA		
Condition	Value	Unit
Average Dry Weather Flow	7.0	MGD
Peak Wet Weather Flow (Max Day)	30.7	MGD
Max Peak Wet Weather (1-3 Hour)	47.0	MGD
Average BOD Loading	14,600	Lbs/D
Average TSS Loading	17,600	Lbs/D

Preliminary Treatment - Influent Pump Station and Headworks

When the wastewater arrives at the NTP, it is pumped from the influent pump station to the headworks. The headworks provides screening of coarse materials and removal of grit which consists of heavy matter such as sand, silt, eggshells and gravel.

Flow and Loading Measurement

Flow at the NTP is measured using a Parshall flume and HydroRanger™ ultra-sonic flow meter in combination. Composite samples for biochemical oxygen demand (BOD) and total suspended solids (TSS) are collected downstream of screening and grit removal. Composite samples are flow proportioned throughout the sampling period (normally 24 hours).

Primary Treatment – Primary Clarifiers

An efficient primary clarifier typically removes approximately 60 – 70% of the solids from the raw wastewater. Clarifiers are large tanks that slow the flow of water and allow by force of gravity to remove solids. Heavier solids referred to as "sludge" settle to the bottom. Lighter material such as fat, oil, grease and plastic, referred to as "scum" rises to the surface. Both sludge and scum are removed from the waste stream and pumped to a digester for additional treatment. The NTP primary clarifiers are covered to contain air/odor that is associated with raw sewage. Air/odor removal is discharged to odor scrubbing biofilters.

Secondary Treatment – Aeration Basins & Secondary Clarifiers

After screening, grit, and primary solids removal, all wastewater receives full secondary treatment. Large rectangular tanks with baffled walls, mechanical mixers, air diffusers, and recirculation pumps make up the aeration basins system. The four aeration basins, each with a capacity of more than 850,000 gallons, provides complete secondary treatment under all flow conditions. Each aeration basin has three anoxic (no dissolved oxygen) zones accounting for almost 25% of the tank's volume. The anoxic zones convert nitrate and nitrite to nitrogen gas to reduce the level of total nitrogen in the effluent. Secondary clarifiers allow for the separation of the biomass that was created in the aeration basins to settle and allow the wastewater to clarify. The clarified wastewater flows to the ultraviolet disinfection process and the settled biomass is returned to the influent of the aeration basins.

Ultra Violet (UV) Disinfection

Prior to discharging wastewater it must be disinfected. Ultraviolet light disrupts the DNA of pathogens and other life forms leaving them incapable of reproduction.

Effluent Disposal – Bay Discharge / Reclamation / Storage

The District's NPDES Permit (National Pollutant Discharge Elimination System) effective September 1st, 2020 allows for year-round discharge to San Pablo Bay with stringent effluent limits from May 1st through October 31st. Throughout the historical non-discharge season, May 1st through October 31st, effluent is stored for future use, specifically for pasture irrigation.

Effluent Reuse – Recycled Water

Recycled water was produced in 2022 for irrigation of parks, landscaping, and golf courses. Additionally, a portion of the recycled water is provided to a car wash facility. Recycled water receives added treatment in order to comply with stringent Title 22 regulations.

Treatment Plant Performance Tables

The tables that follow provide the summary of the plants'; performance, maintenance program, consumables, and energy results for the period of January 1, 2022 through December 31, 2022. The Annual Waste Characteristics & Loading Summaries are provided below in Tables 2.0 – 9.0 and in the attachment section of this report.

Table 2.0

2022 Influent Flows and Loading Summary		
Condition	Value	Unit
Average Daily Flow Rate	3.77	MGD
Average Dry Weather Flow (Jun/Jul/Aug)	3.28	MGD
Peak Wet Weather Flow (Max Day)	18.12	MGD
Max Peak Wet Weather (1-3 Hour)	25.1	MGD
Average Biochemical Oxygen Demand (BOD)	313	mg/L
Average BOD Loading	9,843	lbs/Day
Average Total Suspended Solids (TSS)	323	mg/L
Average TSS Loading	10,339	lbs/Day

Table 3.0

2022 Plant Performance		
Total Volume of Wastewater	1,378.55	Million Gallons
Total Volume of Reclaimed Water and Reclamation	587.61	Million Gallons
Recycled – Title 22 (Novato Sanitary District, North Marin Water District Deer Island)	193.67	Million Gallons
Flow Discharged to San Pablo Bay	792.56	Million Gallons
Average BOD Effluent	5	mg/L
Total Pounds of BOD Treated	3,619,430	lbs
Average TSS Effluent	5	mg/L
Total Pounds of TSS Treated	3,774,340	lbs
Total Pounds of Bio-solids Treated	2,481,912	lbs
Total Cubic Feet of Biogas Produced	36,328,995	ft^3

Table 4.0

2022 Violations / Excursions	
Total Number	0
NPDES (Bay Discharge)	0
Waste Discharge Reporting (WDR) (Reclamation)	0

Table 5.0

2022 Plant Effluent		
	Value	Unit
BOD Removal	98	%
TSS Removal	98	%

Table 6.0

2022 Consumables and Energy Summary	
Total, Million Gallons	1,378.55
*Electricity – kWh / Year	3,449,540
Electricity – kWh / MG	2,486
Natural Gas Cubic Feet/Year	6,003,266
*Natural Gas – Therms / Year	60,047
Diesel Fuel – Gallons / Year	1,500

*Excludes Administration Building and Recycled Water Plant

Table 7.0

2022 Waste Discharge Limits / Reclamation			
Parameter	Limit	Units	Violations
BOD Monthly Average	40	mg/L	0
Total Coliform – 5 Sample Median	240	mpn/100 ml	0
Total Coliform - Maximum	10,000	mpn/100 ml	0
pH – High	9.0	s.u.	0
pH – Low	6.0	s.u.	0

Table 8.0

2022 NPDES Wet Season Limits - November – April			
Parameter	Limit	Units	Violations
BOD Weekly	40	mg/L	0
BOD Monthly	25	mg/L	0
TSS Weekly	40	mg/L	0
TSS Monthly	25	mg/L	0
BOD Removal (minimum)	85	%	0

TSS Removal (minimum)	85	%	0
Enterococcus – 6 Week Rolling Geometric Mean	30	Col/100 ml	0
Enterococcus – No More than 10 Percent All Samples	110	CFU/100mL	0
Fecal Coliform - Median	140	mpn/100 ml	0
Fecal Coliform - 90th Percentile	430	mpn/100 ml	0
Ammonia – Daily Maximum	21	mg/L	0
Ammonia - Monthly Average	5.9	mg/L	0
pH – High	8.5	s.u.	0
pH – Low	6.5	s.u.	0
Oil & Grease - Daily Maximum	20	mg/L	0
Oil & Grease - Monthly Average	10	mg/L	0

Table 9.0

2022 NPDES Dry Season Limits - May, September, & October			
Parameter	Limit	Units	Violations
BOD Weekly	30	mg/L	0
BOD Monthly	15	mg/L	0
TSS Weekly	20	mg/L	0
TSS Monthly	10	mg/L	0
BOD Removal (minimum)	85	%	0
TSS Removal (minimum)	85	%	0
Enterococcus – 6 Week Rolling Geometric Mean	30	Col/100 ml	0
Enterococcus – No More than 10 Percent All Samples	110	CFU/100mL	0
Fecal Coliform - Median	140	mpn/100 ml	0
Fecal Coliform - 90th Percentile	430	mpn/100 ml	0
Ammonia – Daily Maximum	21	mg/L	0
Ammonia - Monthly Average	5.9	mg/L	0
pH – High	8.5	s.u.	0
pH – Low	6.5	s.u.	0
Oil & Grease - Daily Maximum	15	mg/L	0
Oil & Grease - Monthly Average	5	mg/L	0

Operational Program

Throughout 2022, the majority of the treatment plant equipment operated full time with the exception of the equipment listed below:

Novato Treatment Plant - Equipment Out of Service – Due to Planned Servicing, Maintenance, or Replacement

- Aeration Basin #1 & #3 (standby)
- Primary Clarifier #1 (standby)
- Secondary Clarifier #2 (standby)
- Digester #1 (standby)

Environmental Services Program and Public Education Activities

Retrospective Screening for SARS-CoV-2 in the Bay Area: January-December 2022

Sampling of influent composite samples were collected between January 2022 and July 2022 and analyzed by the Berkeley Water Center (BWC) at the University of California, Berkeley. On July 20, 2022, the analysis transitioned to Verily® through December 2022. Typically, three influent composite samples per week were provided to Verily. Details of the results are available at https://covid-web.org/ . All Marin County COVID and information can be found at https://coronavirus.marinhhs.org/surveillance#keyindicators (scroll down for the wastewater information). Verily continued to test the influent solids for Monkey Pox, Influenza A, and RSV. That information can be accessed from the Verily Novato data link above or directly at this location. https://storage.googleapis.com/wastewater-export/mpox.html

Pretreatment Program

All significant industrial and industrial users were inspected and sampled in 2022. All quarterly and self-monitoring reports were received. All Class I thru Class III discharge permits were current as of December 31, 2022.

Fats, Oils and Grease (FOG) Program

In 2022, the FOG Program focused on inspection of food service establishments and receiving support documentation confirming compliance with the Districts regulations.

Public Education and Training

Liz Falejczyk, Veolia Water Environmental Services Supervisor attended Zoom® Marin County Wastewater Agency Public Education Committee Meetings in 2022. Website: https://savrbay.org/ . Liz and Kurt Hawkyard, Veolia Water Laboratory Technician also attended workshops sponsored by the California Environmental Laboratory Accreditation Program virtual training throughout the year for implementation of the TNI 2016 Standards.

Bay Area Clean Water Agencies (BACWA) - 2022
Liz Falejczyk, Veolia Water Environmental Services Supervisor attended the following virtual meetings; BACWA Laboratory Committee, BACWA Permits Committee, BACWA Pretreatment Committee.

Whole Effluent Toxicity Testing - 2022
Quarterly Acute and Chronic Toxicity is required during Bay Discharge. The Acute test had 100% survival. The Chronic Toxicity, test results for survival and growth were very good at <1.0 Toxicity Unit-chronic) TUc each. See 2021-2022 Chronic Toxicity results below.

Test Date	02/21	4/21	9/21	10/21	2/22	4/22
EC_{25} (%)	>100	>100	>100	>100	>100	>100
NOEC (%)	100	100	100	100	100	100
TUc(100/EC_{25})	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Pollution Prevention
The 2022 Annual Pollution Prevention and Minimization Report was submitted as required through the California Integrated Water Quality System (CIWQS).

Recycled Water Reporting
The Annual Recycled Water Report was submitted as required by the new Water Quality Order 2016-0068-DDW. The volumetric reporting of Influent volumes through the final destination (San Pablo Bay, Reclamation, and Recycled Water) of the treated wastewater including the level of treatment were uploaded into the GeoTracker® software program.

Discharge Monitoring Report-Quality Assurance (DMR-QA) Study's
The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. The results including those of NSD and the contract laboratories utilized by the laboratory. The Veolia laboratory employees successful completed the two studies with the results being forwarded to the State of California coordinator as required. The 2022 Certificates are provided below.

Ver. 1
Page 9 of 9

CERTIFICATE OF EXCELLENCE

In recognition of the quality of your laboratory in proficiency testing for

WS-315

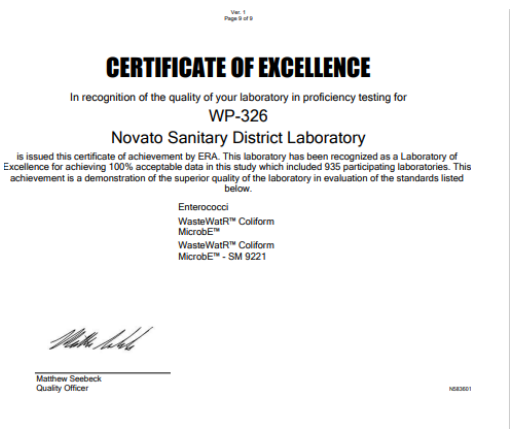
Novato Sanitary District Laboratory

is issued this certificate of achievement by ERA. This laboratory has been recognized as a Laboratory of Excellence for achieving 100% acceptable data in this study which included 577 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

Heterotrophic Plate Count

Craig Huff
Senior Technical Manager

N883601



Ver. 1
Page 9 of 9

CERTIFICATE OF EXCELLENCE

In recognition of the quality of your laboratory in proficiency testing for

WP-326

Novato Sanitary District Laboratory

is issued this certificate of achievement by ERA. This laboratory has been recognized as a Laboratory of Excellence for achieving 100% acceptable data in this study which included 935 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

Enterococci
WasteWatR™ Coliform MicrobE™
WasteWatR™ Coliform MicrobE™ - SM 9221

Matthew Seebeck
Quality Officer

N883601

Ver. 1
Page 10 of 10

CERTIFICATE OF EXCELLENCE

In recognition of the quality of your laboratory in proficiency testing for

WP-330

Novato Sanitary District Laboratory

is issued this certificate of achievement by ERA. This laboratory has been recognized as a Laboratory of Excellence for achieving 100% acceptable data in this study which included 956 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

Demand	Hardness
Minerals	pH
Total Residual Chlorine	Turbidity

Craig Huff
Senior Technical Manager

N883601

Ver. 1
Page 9 of 9

CERTIFICATE OF EXCELLENCE

In recognition of the quality of your laboratory in proficiency testing for

WP-332

Novato Sanitary District Laboratory

is issued this certificate of achievement by ERA. This laboratory has been recognized as a Laboratory of Excellence for achieving 100% acceptable data in this study which included 622 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

Simple Nutrients

Craig Huff
Senior Technical Manager

N883601

Asset Management Program

Computerized Maintenance Management System (CMMS)

Key components of an Oracle Work Asset Management (OWAM or WAM) software program include:

- OWAM is a robust multi-layered asset management system which provides modules for purchasing, inventory control, asset life cycle cost, as well as the typical scheduling and maintenance tracking tools.
- Preventive maintenance (PM) is a scheduled maintenance activity generally tied to equipment runtime or time periods (weekly / quarterly).
- Equipment inventory is crucial to all phases of Asset Management. Equipment at the NTP has been entered into the OWAM data base.
- Criticality Assessment is typically performed every 5 years. The last assessment was conducted in 2019. The next assessment is scheduled for June 2023.

2022 MAINTENANCE ACTIVITIES – OVER $10,000.00		
2022	**Equipment**	**Activity**
	Preliminary Grit and Screening Building	Replacement of screenings grinder unit
	#3 Water Pump #1 and #2	Refurbished, reinstalled and return to operation.
	Ignacio Generator System	Rebuilt coolant system and maintenance.

2022 MAINTENANCE ACTIVITIES		
January	**Equipment**	**Activity**
	Influent Pumping Station and Aeration Basins Odor Bed	Replacement of #2 fan bearings.
	Ultraviolet Disinfection Systems	Replacement of bearings in inlet gate #2, motorized gate operator.
February	**Equipment**	**Activity**
	Novato Facility and Ignacio Pump Station Standby Generators	Annual service conducted.
	Ultraviolet Disinfection Systems	Gate #2 motorized gate operator serviced by the manufacturer
March	**Equipment**	**Activity**
	Electrical Tie-in Survey Shutdown	Participation in March 25th and March 31st events.
	Annual Flow Measurement Calibration	Conducted preventive maintenance and calibrations.
	Heating, Ventilation, and Air Conditioning.	Performed annual maintenance and temperature adjustments.
	Aeration Blower #3	Replacement of batteries in the uninterruptible power supplies unit.
	Reclamation Rubber Hose	Replacement of rubber transfer hose.
April	**Equipment**	**Activity**
	Primary Sludge/Scum Pump #2	Replacement of the rotor and stator.
	Primary Scum Tank #1	Roy's Sewer Service cleaned the tank.
May	**Equipment**	**Activity**
	Aeration Basin # 2 - Zone 2A Mixer	Removed, rebuilt unit and installed.
	Outfall Inspection – May 9-, 2022	Assisted with the shutdown of the Novato treatment

		plant and storage of treated effluent.
	Ignacio E&M PC Panel	Replacement of premium panel PC plus Windows 10
June	**Equipment**	**Activity**
	Forklift	Scheduled maintenance and repairs.
	Reclamation Gorman Rupp Pump	Major repairs and maintenance.
	Diesel Leak Detection Alarm	Installation of new alarm system.
July	**Equipment**	**Activity**
	#3 Water Filter System	Replacement of the electrical motor.
	#2 Sodium Hypochlorite Storage Tank	Repaired the sidewall access port.
	Digester Boiler	Conducted the annual service.
August	**Equipment**	**Activity**
	Odor Control Beds	Addition of organic woodchips to each biofilter bed.
	Digester Sludge Pump # 2	Replacement of the rotor and stator.
	Gravity Belt Thickener # 1	Replacement of the drive bearings.
	Calcon Systems®	Performance of thermographic and electrical maintenance.
	Primary Clarifier #2, Sludge and Scum Pump #3	Replacement of the pump rotor and stator.
	N-Tron Switch	Replacement of N-Tron networking and spare.
	Eaton 9SX UPS Battery	Replacement of UV battery.
	Voltus® Energy Shutdown	PG&E program requesting to transfer NTP from the power grid to generator power.
September	**Equipment**	**Activity**
	District Outfall Piping Assessment	Assisted with this project. September 8th – 19th
	Calcon Systems®	Performed the annual electrical maintenance and electrical Inspections.
	Standby Generator #1	Replacement of the batteries.
	Main Electrical Transfer Switch #3	Replacement of the selector switch.
	Life Rings	Replacement of life rings and enclosures
October	**Equipment**	**Activity**
	Primary Clarifier #2	Placed clarifier online and shutdown primary clarifier #1.
	Electrical Harmonic Study	Assisted the District with this project.
	Influent Pumps	Removal, inspection, and performance of preventative maintenance on each of 6 pumps.
	Return Activated Sludge and Waste Activated Sludge Pumps	Removal, inspection, and performance of preventative maintenance on each of 5 pumps.

	Voltus® Energy Shutdown	PG&E program requesting to transfer NTP from the power grid to generator power.
November	**Equipment**	**Activity**
	Administrative Building Standby Generator	Replacement of the batteries.
	Aeration Basins	Replacement of the life rings and enclosures.
	Landesign Weed Control	Weed abatement and removal.
December	**Equipment**	**Activity**
	Digester Transfer Pump #2	Replacement of the pump rotor and stator.
	#3 Water Filtering System	Service of the filter and adjustments of set points.
	Standby Generators # 2 & #3	Replacement of the batteries.
	Ultraviolet Disinfection Motor Control Center	Replacement of the uninterruptible power supply unit and batteries.
	Eaton UPS Batteries	Performance of the annual maintenance and Inspections.

Safety and Training 2022

GOAL ZERO
Leading Safety Together

The Environmental, Health, Safety & Transportation (EHS&T) department's team of professionals is dedicated to creating a safe, secure and compliant workplace through ongoing education, awareness and risk-control programs. We provide support to Veolia operations, as well as due diligence activities for future business opportunities, with our Corporate, Industrial, and Municipal & Commercial presence. We also seek to influence employee safety and well-being beyond the workplace through reinforcement of positive lifestyle choices and behaviors.
We focus our continual improvement efforts in alignment with Veolia's five (5) pillars:

- Management Involvement
- Employee Involvement and Development
- Communication and Dialogue
- H&S Risk Management
- H&S Performance Monitoring & Control

Veolia Water recognizes the importance of an effective health and safety program to the well-being of each employee, the general public, clients/facility owners, and to the overall success of our company. Veolia Water is committed to providing its employees a healthful and safe place of employment. To that end, Veolia Water provides the proper training, materials, and equipment so

that work can be performed safely and in compliance with the Occupational Safety and Health Administration (OSHA) Regulations and other applicable standards.

Veolia Water has had no incidents from June 1, 2010 to present at the Novato Treatment Plant. 2022 was an incident free year. In recognition of this achievement - each employee received a cash incentive reward from Veolia Water for 11 years no loss time. Below is the safety calendar for 2022.

Safety Training Calendar - 2022

2022 Municipal Water H&S Training Calendar

Month	Safety Topic	Notes
1st Quarter		
January Online – JJK/VNAU	1) HazCom: What You Need to Know OSHA Annual 2) Emergency Preparedness and Response	HazCom for **all** employees. Brief employees on site SDS locations and types of HazMat labeling systems used onsite Laboratory Chemical Hygiene Plan, where applicable - annual review, certification, and training
February Online – JJK/VNAU	Lockout/Tagout: OSHA Annual Put a Lock on Hazardous Energy	For plant/field employees. Review Site Program/Permit Changes - e.g., new equipment or changes to Energy Control Procedures.
March Online – JJK/VNAU	1) Fire Prevention & Response 2) Fire Extinguisher Use (both OSHA Annual)	**All** employees must take 'Fire Prevention and Response.' Employees designated to use Fire Extinguishers (e.g., Hot Work Fire Watch) must also take 'Fire Extinguisher Use.' Optional to have training provided by outside vendor for hands-on training in lieu of JJK Fire Extinguisher Use
2nd Quarter		
April Online – JJK/VNAU	Confined Spaces: Entry Team Training - Maintenance Activities (OSHA Annual)	For all plant/field employees. Review site PRCS program changes, affected spaces etc.
May Online – JJK/VNAU	1) Scaffold Safety for General Industry 2) Excavations for Construction	For all plant and field employees.
June Online – JJK/VNAU	1) Heat Stress 2) Ergonomics: Industrial, or Back Safety: Keep Your Back in Action	Heat Stress for all plant/field employees. Plant/field employees will take Industrial Ergonomics course, and Office/admin employees will take the Back Safety course, no need to take both.
3rd Quarter		
July Online – JJK/VNAU	1) Scissor Lifts for General Industry 2) Aerial Lifts for General Industry 3) Ladder Safety	For all plant/field employees. Enroll employees in each course that applies (i.e., no need to take an aerial lift course etc., if employees do not use aerial lifts at work.)
August Online – JJK/VNAU	Personal Protective Equipment: Employee Essentials Includes OSHA Annual Hearing Protection PPE for Hearing Conservation Program sites	**NOTE:** Sites under a Hearing Conservation Program must also conduct annual audiometric testing and evaluation for STS. Applicable to admin staff who enter plant work areas.
September Online – JJK/VNAU	1) Respiratory Protection (OSHA Annual) 2) Fall Protection for General industry	Respiratory Protection training only for affected workers who must don respirators as part of their work requirements.
4th Quarter		
October Online – JJK/VNAU	1) Machine Guarding 2) Defensive Driving	For all plant/field employees.
November Online – JJK/VNAU	1) Cold Stress 2) Winter Safety	For all employees.
December Online – JJK/VNAU	1) Bloodborne Pathogens: Safety in the Workplace (OSHA Annual) 2) Active Shooter/Active Threat	For all employees. BBP course not required if employees receive BBP training as part of first aid training.

Notes: **In response to the COVID-19 pandemic, classroom format trainings are discontinued until further notice and monthly safety training sessions are to be conducted using JJK web-based courses which must be taken through the VNA University LMS.** Some training topics must be complemented with site-specific content, refer to the Notes column. The Notes column also provides guidance on which employees must take a particular training and alternative options. **"OSHA Annual"** denotes annual OSHA required training.

Veolia Environmental & Compliance

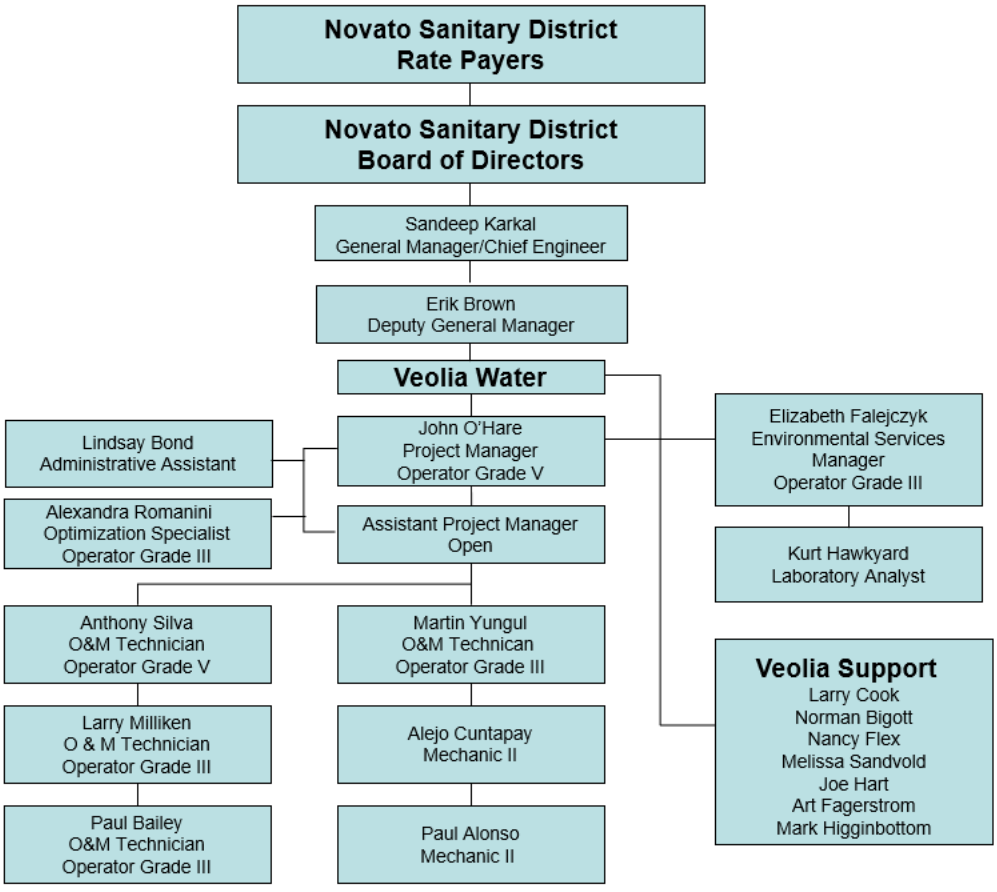
The Veolia Environmental & Compliance Corporate Team provides technical support and guidance on environmental matters and compliance issues for improving regulatory performance at each of our facilities. The team's objectives are; reduce/mitigate risks, improve environmental performance, and enhance employee awareness of environmental issues. Veolia has developed an

Environmental Management System (EMS) to focus on our company's environmental goals and objectives. The corporate down to the project level criteria are listed below.

- Establishing policies and procedures
- Monitoring and tracking environmental issues
- Measuring and controlling environmental impacts
- Conducting assessments and reviewing performance
- Identifying environmental interactions and risks
- Informed on legal requirements
- Addressing compliance issues and system non-conformances
- Setting targets for environmental performance improvement

Staffing and Organization

Organization Chart – Novato Sanitary District/Veolia Water



Certification Status (Details)

John P. O'Hare – Project Manger

Grade V California Wastewater Treatment Plant Operator #10669, June 30, 2024
Grade I, Environmental Compliance Inspection, CWEA #04074112, July 31, 2023
Grade I, Laboratory Analyst, California, CWEA #05013114, March 31, 2023
Grade I, Plant Maintenance Technologist, CWEA #050751016, July 31, 2023
Grade I, Water Distribution Operator, California Department of Public Health #34234 April 1, 2025

Assistant Project Manager
Open

Alexandra Romanini - Optimization Specialist
Grade III California Wastewater Treatment Plant Operator – #76269, November 22, 2025
Water Treatment Operator, Grade T1, #44994, March 1, 2025
Laboratory Analyst Grade I, #1308233107, March 31, 2023.

Anthony M. Silva – Operator III
Grade V California Wastewater Treatment Plant Operator #10973, December 31, 2023
Grade II Collection System Maintenance Technician, CWEA #354, January 31, 2023

Larry Milliken – Operator III
Grade III California Wastewater Treatment Plant Operator #41483, August 12, 2023

Paul Bailey – Operator III
Grade III California Wastewater Treatment Plant Operator #28322, December 24, 2025

Martin Yungul – Operator III
Grade III California Wastewater Treatment Plant Operator #43219, July 17, 2023

Elizabeth G. Falejczyk – Environmental Services Supervisor
Operator III California Wastewater Treatment Plant Operator #6334, August 17, 2024

Kurt Hawkyard – Laboratory Technician/Pretreatment Programs Inspector
Laboratory Analyst Grade II, #1308212134, June 30, 2023
Industrial Waste Grade II, #1308211129, June 30, 2023
Environmental Compliance Inspector, Grade II, #1308214737, March 31, 2023

Summary of Shifts - 2022

The facility continued to be manned 8 hours per day, 7 days per week with an on call operator available nights and the weekend.

Additional Veolia Support

- Larry Cook, President, Municipal Water Contract Operations Business, West Region
- Norman Bigott, Veolia Water West Technical Director
- Art Fagerström, PE, BCEE, Veolia Technical Manager, Corporate Technical Support
- Mark Higginbottom, Veolia Energy Efficiency Manager- Rotating Equipment

- Gary Timmer, Veolia West Health & Safety Manager
- Melissa Sandvold, Veolia Western Region, VP of Operations
- Joe Hart, Veolia, Regional Asset Manager

Contract Adjustments

The Amended and Restated Novato Operations and Maintenance Service Agreement was renegotiated and adopted May 10, 2021 based on a fixed fee price contract. Included in the base contract fee are management, operation, and maintenance. Exceptions to the fixed price include:

Schedule 13 – Pass through Costs

Section 5.6 – Performance Bond

Schedule 8 – Cost Adjustment and Escalation Indices

Schedule 8 – Flow and Loading Adjustments

Schedule 5 – Operation of Recycled Water Facility

Equipment Repair in excess of $10,000

Fiscal Year 2021/22 service fee adjustment of 5.0%.

Title 22 – Recycled Water Production Report for 2022

All water produced by the Novato Sanitary District (NSD) Recycled Water Facility was distributed by the North Marin Water District (NMWD).

In 2022, compliance testing for coliform was performed at the NMWD laboratory, NMWD is a State of California Environmental Laboratory Accreditation Program certified facility.

Recycled Water Table 6.0 below provides a summary of the quantity and quality of recycled water produced by NSD.

Table 6.0 Recycled Water Plant

Novato Sanitary District 2022 Recycled Water Production Data				
Month	Water Delivered (Million Gal)	Effluent Turbidity (NTU)	Effluent CT Value (mg min/L)	Effluent Coliform (mpn/100 ml)
Criteria	1.7 mgd	<2	>450	<2.2

		Max	Ave	Min	Ave	Max	7 Med
January	N/A	N/A	N/A	N/A	N/A	N/A	N/A
February	0.429	N/A	N/A	N/A	N/A	N/A	N/A
March	11.305	1.3	0.78	>450	>450	<1	<1
April	12.812	1.7	0.75	>450	>450	<1	<1
May	21.399	1.4	0.76	>450	>450	<1	<1
June	33.882	1.5	1.04	>450	>450	<1	<1
July	33.535	1.7	0.86	>450	>450	<1	<1
August	34.418	1.1	0.65	>450	>450	<1	<1
September	22.168	1.3	0.74	>450	>450	<1	<1
October	19.748	1.3	0.43	>450	>450	<1	<1
November	3.975	N/A	N/A	N/A	N/A	N/A	N/A
December	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL	193.671	+ Deer Island 6.119 = 199.79 MG					

Attachments

Annual Waste Characteristics & Loading Summary

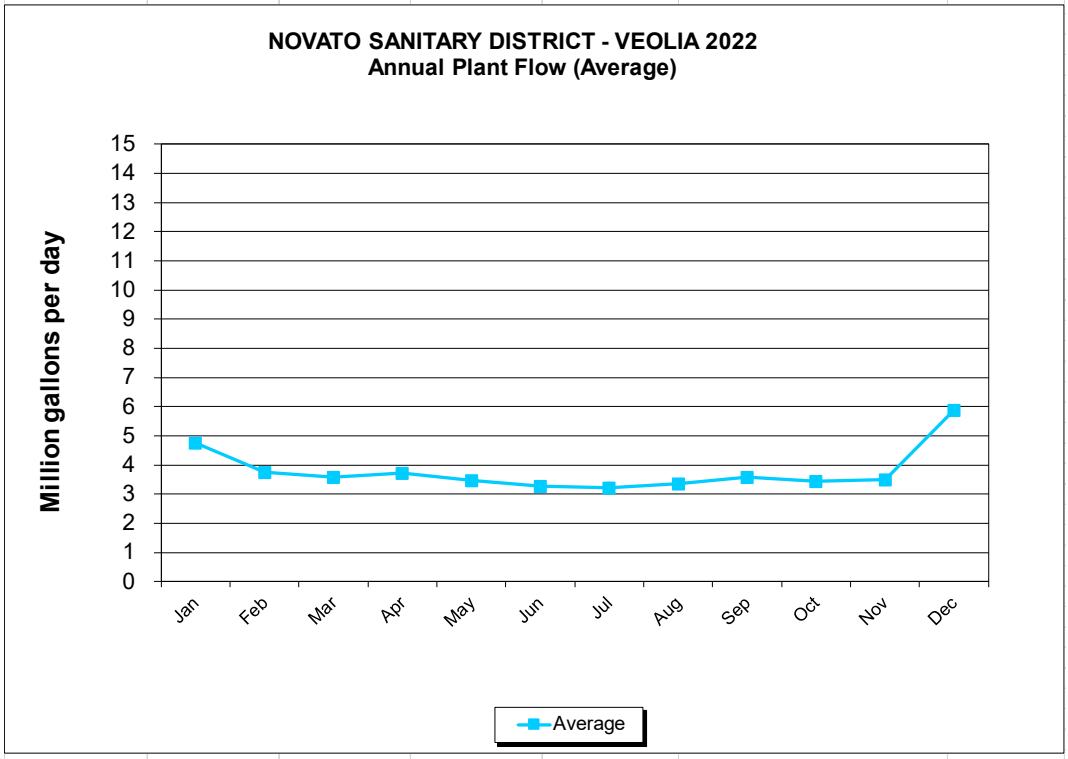
NOVATO SANITARY DISTRICT - VEOLIA
PLANT FLOW

Annual Waste Characteristics & Loading Summary

(IN GALLONS TIMES 1,000,000)

YEAR: 2022 PRINT DATE: 1-Feb-2023

	Total Flow	High	Low	Average		
January	147.63	7.07	3.67	4.76	Peak Wet Weather Flow (MAX Day)	18.12
February	105.09	4.10	3.52	3.75	Max Peak Wet Weather (1-3 Hour)	25.10
March	111.19	4.43	3.21	3.59		
April	111.87	5.22	3.18	3.73		
May	107.31	4.15	3.07	3.46		
June	98.39	3.57	3.10	3.28		
July	99.29	3.57	2.97	3.20	Three month dry weather averages:	3.28
August	103.81	3.80	3.10	3.35	(June, July, August)	
September	107.06	4.85	2.97	3.57		
October	106.67	3.84	2.95	3.44		
November	105.10	4.36	3.05	3.50		
December	182.26	18.12	3.53	5.88		
ANNUAL TOTAL	1385.67					
ANNUAL MAX.	182.26	18.12				
ANNUAL MIN.	98.39		2.95			
ANNUAL AVG.	115.47			3.79	**Avg. Dry Weather Flow**	**3.28**



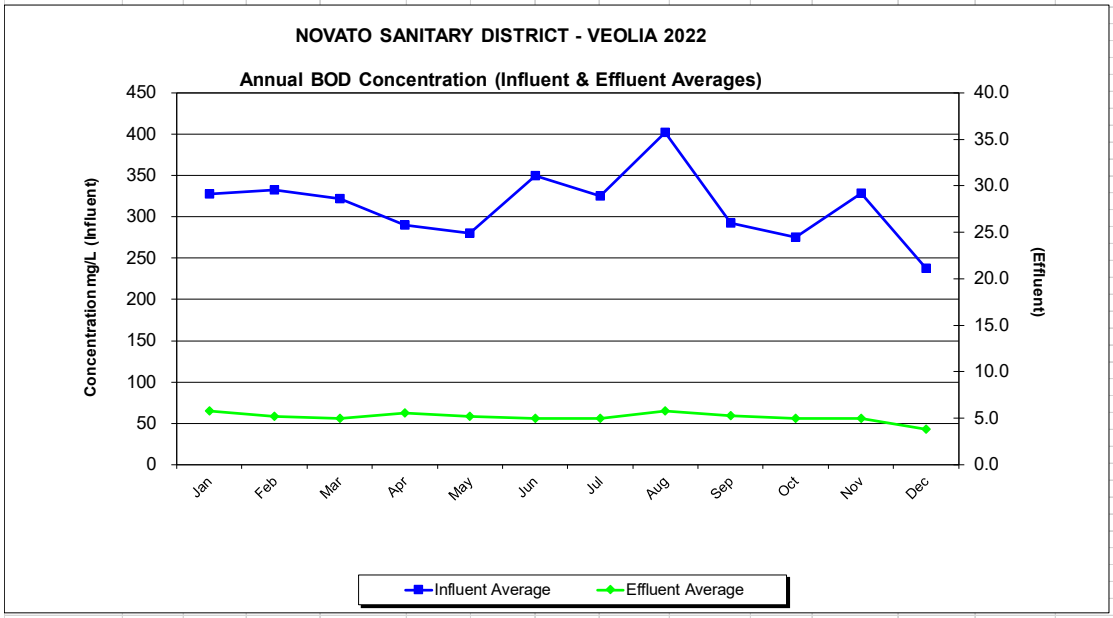
NOVATO SANITARY DISTRICT - VEOLIA

BOD (Influent & Effluent)

Annual Waste Characteristics & Loading Summary

YEAR: 2022 PRINT DATE: 1-Feb-2023

	INFLUENT							EFFLUENT						
	Concentration (mg/L)			No. of Samples	Loading (lb/day)			Concentration (mg/L)			No. of Samples	Loading (lb/day)		
	High	Low	Average		High	Low	Average	High	Low	Average		High	Low	Average
January	520	210	328	4	16783	10233	12547	8.0	5.0	5.8	5	308	171	245
February	420	290	333	4	12960	9136	10352	8.0	4.0	5.2	5	534	133	244
March	348	310	322	5	9794	9282	9534	5.0	5.0	5.0	6	156	134	146
April	330	290	290	4	9650	7679	9097	8.0	5.0	5.6	7	266	142	182
May	330	260	280	4	9715	7116	7997	7.0	5.0	5.2	12	210	132	158
June	375	334	350	5	10133	9282	9546	5.0	5.0	5.0	15	148	129	136
July	420	280	325	4	11419	7356	8574	5.0	5.0	5.0	12	145	128	134
August	760	300	402	5	20600	8132	11497	16.0	5.0	5.8	15	434	131	164
September	360	230	293	4	10689	6157	8819	8.0	5.0	5.3	12	324	132	162
October	300	260	275	4	8482	7453	7835	5.0	5.0	5.0	5	146	138	143
November	400	290	328	5	11476	8040	9688	5.0	5.0	5.0	6	177	129	150
December	254	220	237	4	22862	7487	12634	10.0	2.0	3.8	12	1039	61	208
ANNUAL HIGH	760	334	402	5	22862	10233	12634	16.0	5.0	5.8	15	1039	171	245
ANNUAL LOW	254	210	237	4	8482	6157	7835	5.0	2.0	3.8	5	145	61	134
ANNUAL AVG.	401	273	313	4	12880	8113	9843	7.5	4.7	5.1	9	324	130	173



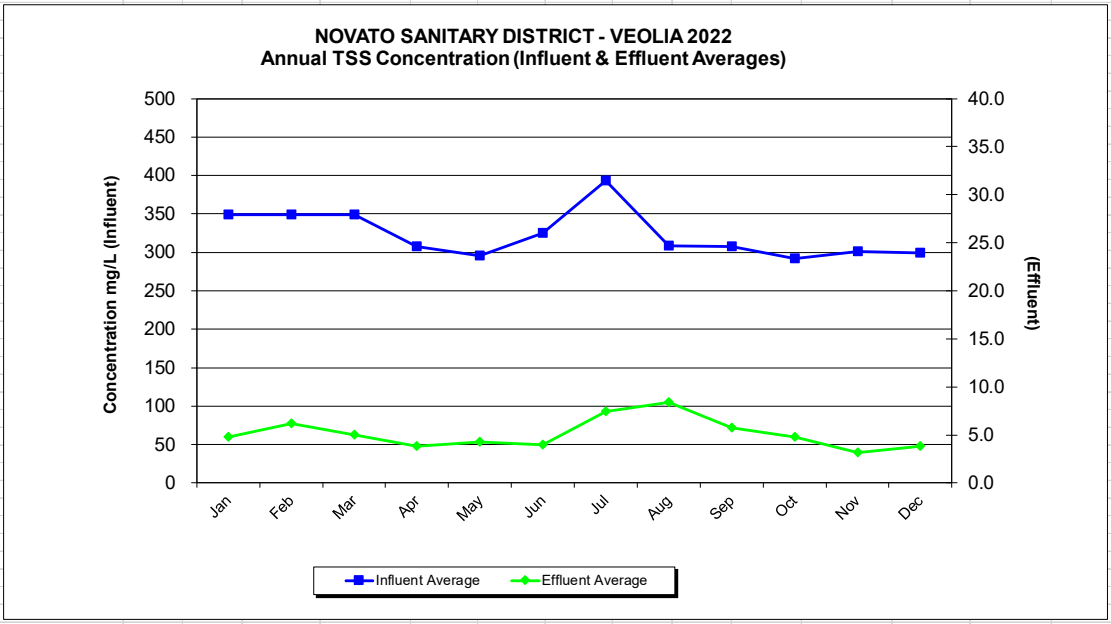
NOVATO SANITARY DISTRICT - VEOLIA

SUSPENDED SOLIDS (Influent & Effluent)

Annual Waste Characteristics & Loading Summary

YEAR: 2022 PRINT DATE: 1-Feb-2023

	INFLUENT							EFFLUENT						
	Concentration (mg/L)			No. of Samples	Loading (lb/day)			Concentration (mg/L)			No. of Samples	Loading (lb/day)		
	High	Low	Average		High	Low	Average	High	Low	Average		High	Low	Average
January	442	201	349	4	17031	10813	13434	7.0	4.0	4.8	4	295	136	204
February	442	201	349	4	13860	6337	10757	9.0	3.0	6.2	4	301	92	196
March	403	286	349	5	12570	8563	10349	11.0	3.0	5.0	5	329	80	148
April	353	274	308	4	10127	8646	9623	3.0	3.0	3.9	4	200	80	118
May	350	272	295	4	10304	7300	8436	7.0	3.0	4.3	4	206	79	121
June	380	266	325	5	10078	7210	8876	6.0	3.0	3.9	5	170	78	107
July	542	270	394	4	14736	7093	10379	13.0	5.0	7.4	4	358	136	200
August	350	254	308	5	10362	6885	8948	22.0	4.0	8.4	5	598	108	238
September	348	274	308	4	10332	8192	9221	11.0	3.0	5.8	4	360	80	174
October	315	260	292	4	9195	7177	8326	7.0	3.0	4.8	4	203	83	138
November	326	275	301	5	10421	7422	8920	4.0	2.0	3.2	5	116	57	94
December	334	255	299	4	33877	8984	16799	10.0	2.0	3.8	4	1039	61	208
ANNUAL HIGH	542	286	394	5	33877	10813	16799	22.0	5.0	8.4	5	1039	136	238
ANNUAL LOW	315	201	292	4	9195	6337	8326	3.0	2.0	3.2	4	116	57	94
ANNUAL AVG.	382	257	323	4	13575	7885	10339	9.2	3.2	5.1	4	348	89	162

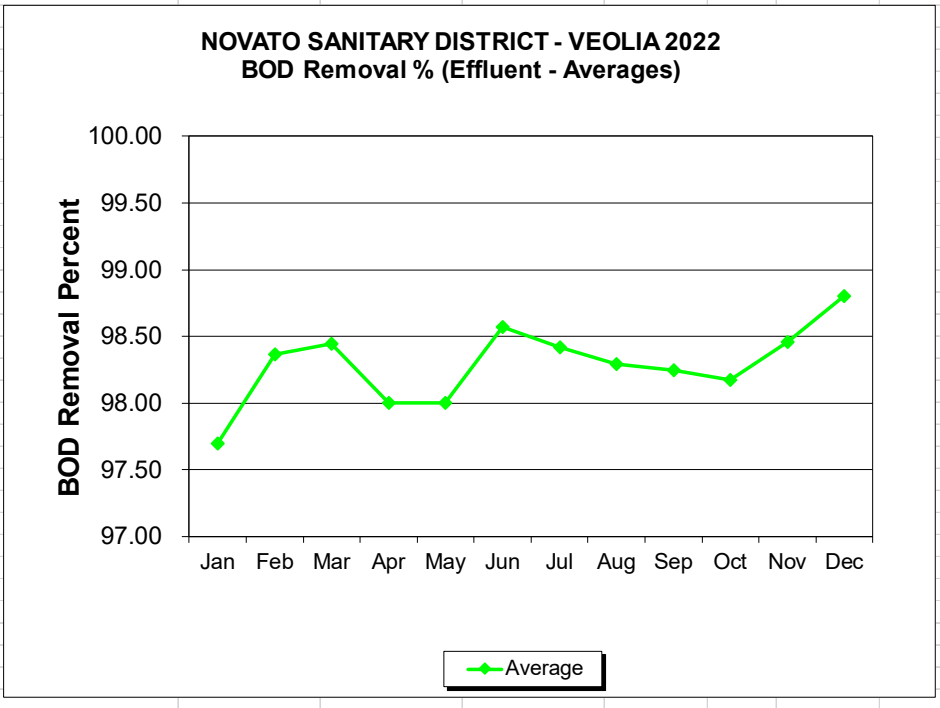


NOVATO SANITARY DISTRICT - VEOLIA
BOD Removal Percent

Annual Waste Characteristics & Loading Summary

YEAR: 2022 PRINT DATE: 1-Feb-2023

	High	Low	Average	Number of Samples
January	98.3	97.1	97.7	3
February	98.8	97.2	98.4	4
March	98.6	98.4	98.4	5
April	98.5	97.2	98.0	4
May	98.5	97.3	98.0	4
June	98.7	98.5	98.6	5
July	98.8	98.2	98.4	4
August	98.6	97.9	98.3	5
September	98.6	97.8	98.2	4
October	98.3	98.1	98.2	4
November	98.8	98.3	98.5	5
December	99.1	98.4	98.8	4
				Number of Samples Total = 51
ANNUAL MAX.	99.10	98.50	98.80	
ANNUAL MIN.	98.33	97.14	97.70	1st Qtr. 12 2nd Qtr. 13
ANNUAL AVG.	98.63	97.88	98.29	3rd Qtr. 13 4th Qtr. 13

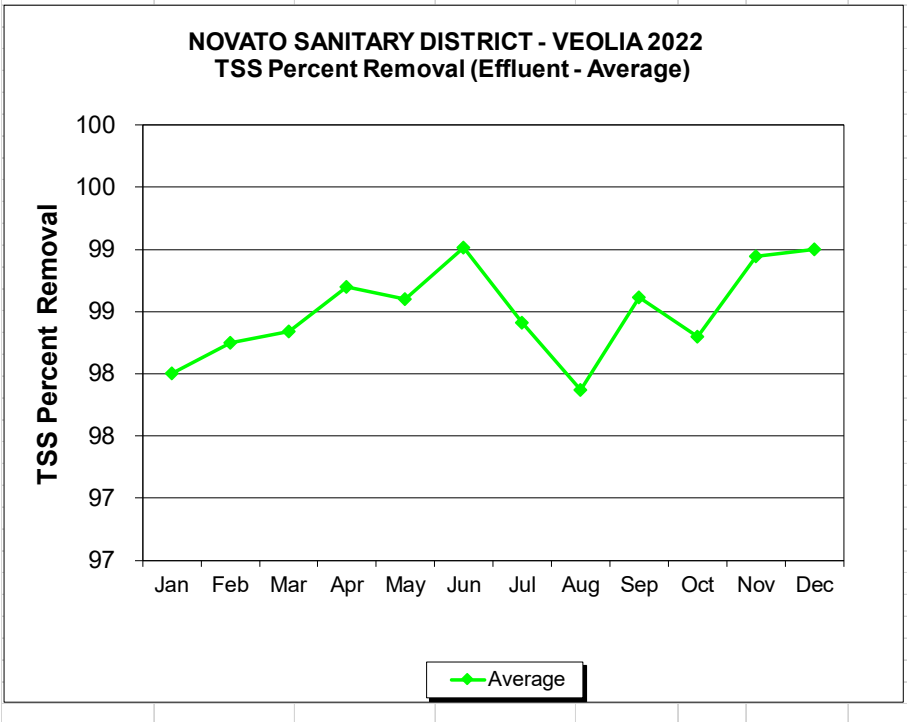


NOVATO SANITARY DISTRICT - VEOLIA
TSS Percent Removal

Annual Waste Characteristics & Loading Summary

YEAR: 2022 PRINT DATE: 1-Feb-2023

	High	Low	Average	Number of Samples
January	99	98	98	0.0
February	99	97	98	4.0
March	99	96	98	5.0
April	99	98	99	4.0
May	99	98	99	4.0
June	99	99	99	5.0
July	99	98	98	4.0
August	99	97	98	5.0
September	99	98	99	4.0
October	99	98	98	4.0
November	99	99	99	5.0
December	99	98	99	0.0
				Number of Samples Total = 44
ANNUAL MAX.	99	99	99	
ANNUAL MIN.	99	96	98	1st Qtr. 9 2nd Qtr. 13
ANNUAL AVG.	99	98	99	3rd Qtr. 13 4th Qtr. 9



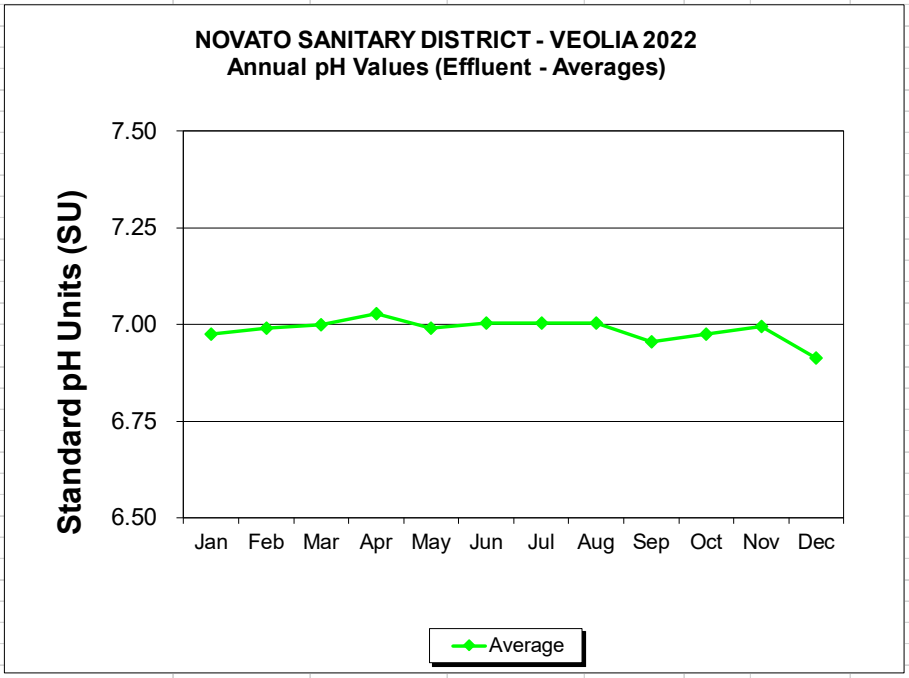
NOVATO SANITARY DISTRICT - VEOLIA

pH (Effluent)

Annual Waste Characteristics & Loading Summary

YEAR: 2022 PRINT DATE: 1-Feb-2023

	High	Low	Average	Number of Samples
January	7.0	6.9	7.0	21
February	7.1	6.9	7.0	20
March	7.1	6.9	7.0	23
April	7.1	6.9	7.0	21
May	7.1	6.9	7.0	22
June	7.1	6.9	7.0	22
July	7.1	6.9	7.0	21
August	7.1	6.9	7.0	23
September	7.1	6.8	7.0	22
October	7.1	6.9	7.0	21
November	7.1	6.9	7.0	22
December	7.0	6.8	6.9	22
				Number of Samples Total = 260
ANNUAL MAX.	7.10	6.90	7.03	
ANNUAL MIN.	7.00	6.80	6.91	1st Qtr. 64 2nd Qtr. 65
ANNUAL AVG.	7.08	6.88	6.99	3rd Qtr. 66 4th Qtr. 65



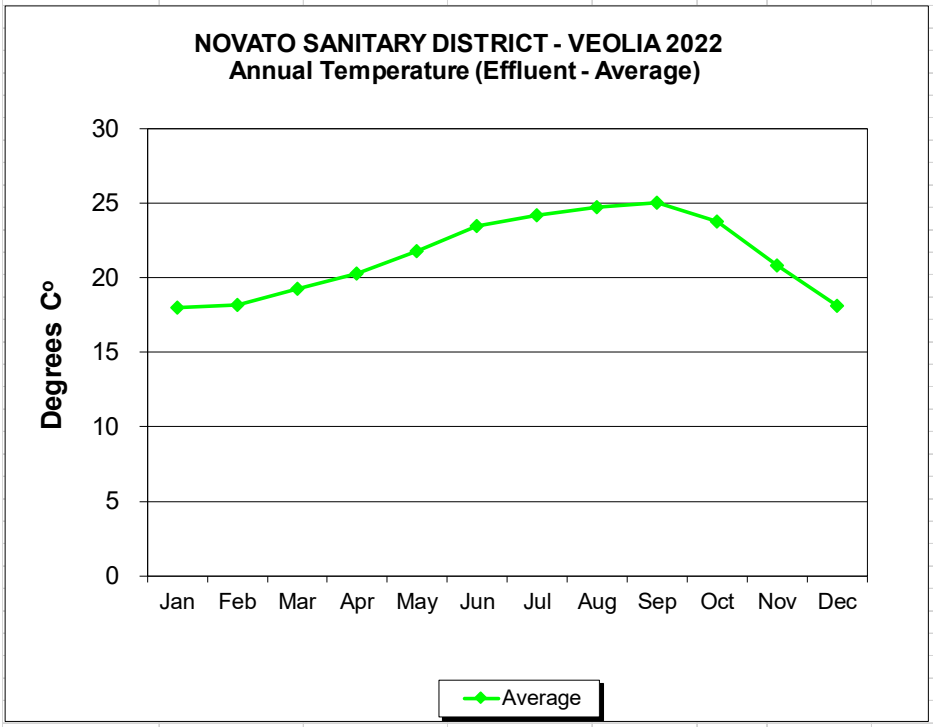
NOVATO SANITARY DISTRICT - VEOLIA

TEMPERATURE (Effluent)

Annual Waste Characteristics & Loading Summary

YEAR: 2022 PRINT DATE: 1-Feb-2023

	High	Low	Average	Number of Samples
January	19.1	17.3	18.0	21.0
February	19.4	16.8	18.2	20.0
March	20.3	18.2	19.3	23.0
April	22.0	19.0	20.3	21.0
May	24.4	19.7	21.8	22.0
June	25.5	21.9	23.5	22.0
July	24.9	23.4	24.2	21.0
August	25.7	24.0	24.8	23.0
September	26.7	23.5	25.1	22.0
October	25.0	22.2	23.8	21.0
November	22.2	19.1	20.8	22.0
December	19.7	16.8	18.1	22.0
				Number of Samples Total = 260
ANNUAL MAX.	26.7	24.0	25.1	
ANNUAL MIN.	19.1	16.8	18.0	1st Qtr. 64 2nd Qtr. 65
ANNUAL AVG.	22.9	20.2	21.5	3rd Qtr. 66 4th Qtr. 65



NOVATO SANITARY DISTRICT - VEOLIA

OIL & GREASE (Effluent)

Annual Waste Characteristics & Loading Summary

YEAR: 2022 PRINT DATE: 1-Feb-2023

* = Reclamation - No Oil & Grease required

	EFFLUENT						
	Concentration (mg/L)			No. of Samples	Loading (lb/day)		
	High	Low	Average		High	Low	Average
January	1.5	1.5	1.5	1	1.5	1.5	1.5
February	1.5	1.5	1.5	1	1.5	1.5	1.5
March	1.5	1.5	1.5	1	1.5	1.5	1.5
April	1.5	1.5	1.5	1	1.5	1.5	1.5
May*							
June*							
July*							
August*							
September*							
October	1.5	1.5	1.5	1	1.5	1.5	1.5
November	1.5	1.5	1.5	1	1.5	1.5	1.5
December	1.5	1.5	1.5	1	1.5	1.5	1.5
ANNUAL HIGH	1.5	1.5	1.5	1	1.5	1.5	1.5
ANNUAL LOW	1.5	1.5	1.5	0	1.5	1.5	1.5
ANNUAL AVG.	1.5	1.5	1.5	1	1.5	1.5	1.5