



CENTRAL MARIN SANITATION AGENCY

NEWSLETTER | WINTER 2024

CMSA UPGRADES

CMSA COMMISSIONERS

Eli Beckman,
Chair

Sanitary District No. 2

Dean DiGiovanni,
Vice-Chair

San Rafael Sanitation District

Mary Sylla
Secretary

Ross Valley Sanitary District

Maribeth Bushey

San Rafael Sanitation District

Doug Kelly,

Ross Valley Sanitary District

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FINANCE ADMINISTRATION HUMAN RESOURCES

**A NACWA
Peak Performance
Agency**

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General Manager



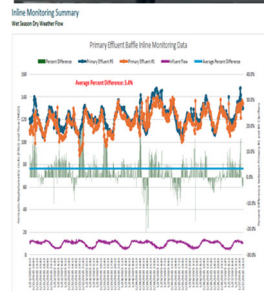
Real-Time Monitoring for the Primary Clarifiers

A new Total Suspended Solids (TSS) meter was installed on the effluent of the primary clarifiers. The meter will provide real-time data, allowing Operations to optimize primary clarifier TSS removal and adjust solids loadings to downstream treatment processes.

Staff also installed radar level monitoring in the primary clarifiers to provide accurate, real-time measurements when primary clarifiers are being filled and placed into service.



Total Suspended Solids Meter

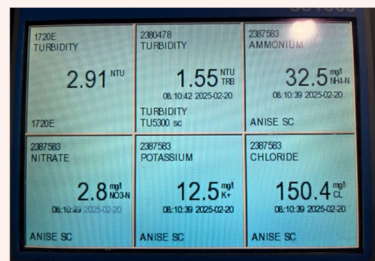


Preparing for Nutrient Removal

Staff have installed ammonia and nitrate probes on the influent and effluent of the secondary treatment process. These probes are providing real-time data on nitrogen nutrients in the secondary system, helping monitor nutrient removal and meeting interim nutrient permit requirements.



Ammonia / Nitrate Probe



Ammonia / Nitrate Readings

Process Tank Coating Repair Project



Primary Clarifier No.1 being rehabilitated in 2024

CMSA is sequentially rehabilitating its seven primary clarifiers. Work on Primary Clarifier No. 1 was completed last year, and Clarifiers No. 2 and No. 3 are scheduled to be completed this calendar year. Additional repairs will include recoating the failing coating systems in the Bisulfite Spill Vault and along the entire north wall of Chloring Contact Tank No. 4 and addressing various facility walkway hairline cracks via application of a waterproofing coating. Construction is anticipated to begin in May and be completed by September 2025.

TECHNICAL SERVICES PROJECTS

Ross Valley Flowmeter Update

The existing flowmeter on the 54-inch diameter Ross Valley Interceptor was installed in the early 1980s. In October 2024, a new flowmeter was pre-purchased identical to the one installed on the San Rafael Interceptor in September 2023. In preparation for installing it, a test installation simulation will be performed, and a contractor will prepare the pipe surface for the new flowmeter clamping ring. The actual flowmeter installation work is planned for September 2025, and staff will coordinate with Ross Valley Sanitary District staff to isolate and drain the pipeline during nighttime low flows.



Proposed new flowmeter for the Ross Valley Interceptor

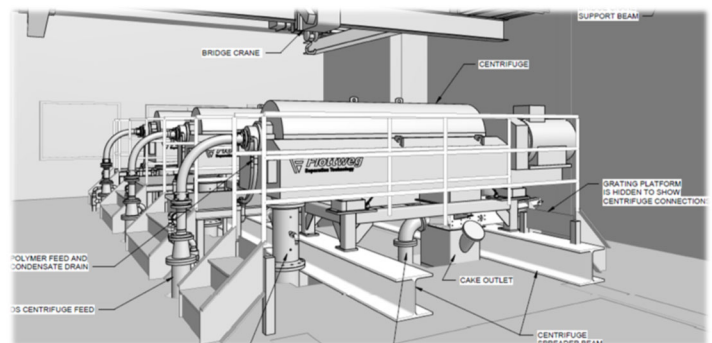
Nutrient Removal Study

The Nutrient Removal Alternatives Evaluation and Facilities Plan Project was initiated in 2024 to evaluate nutrient removal technologies and treatment plant upgrades necessary to meet the newly adopted S.F. Bay Nutrient Watershed Permit discharge requirements. After staff administered a competitive RFP process, the Board awarded the professional services agreement to a Carollo/Hazen team at their August 2024 meeting.

Since then, the consultant team has developed technical memoranda on sampling recommendations, interim optimization strategies, and design criteria for nutrient removal alternatives, which were all reviewed with staff through various workshops. During the evaluation process, Carollo/Hazen identified questions about the capacity of CMSA's existing secondary clarifiers and aeration blower/diffuser systems as the performance requirements necessary to perform nitrogen removal will increase. A detailed evaluation of the precise capacity of these systems is necessary to determine the nutrient removal capacity of modified existing systems and the size of new processes. These additional evaluations will be completed over the next several months and a final recommended nutrient removal alternative will be presented to CMSA's Board in October 2025.

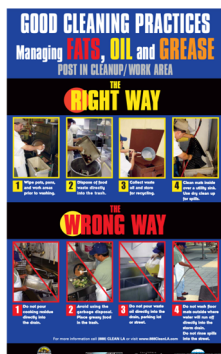
Update on Centrifuge Replacement

The Centrifuge Dewatering Improvements Project includes replacing three centrifuges that have reached the end of their useful lives with new higher capacity units, replacing the monorail hoist with a new bridge crane, replacing the PLC controls, and enlarging the floor access hatch. The new centrifuges were selected and pre-purchased in August 2024, and delivery is expected in late-July 2025. The 60% design workshop was held in December 2024 and included review of the 3D renderings which will be used for the construction plans. Staff will present the final construction documents to the Board during their June 2025 meeting for authorization to publicly bid the project.



3D Rendering of New Centrifuges for the Centrifuge Replacement Project

The CMSA Fat's, Oils, and Grease Inspection Program



CMSA's Fat's, Oil and Grease (FOG) Program was developed based on the Ordinance Regulating the Control of FOG in the Wastewater Collection System. The program's purpose is to prevent the introduction of FOG into the wastewater collection systems where it can result in potential clogging and sewer system overflows, which could negatively impact the environment and public health. CMSA's three Environmental Service Analysts (ESAs) continuously inspect Food Service Establishments (FSEs) throughout the CMSA service area as well as in additional contracted jurisdictions. The inspection process includes compliance measurements of FSE grease interceptors, identification and communication of best management practices, and visual verification that there are no illegal piping connections to the wastewater collection system. This program has removed thousands of gallons of FOG yearly from the wastewater collection system and prevented many potential sewer system overflows.

OPERATIONS AND MAINTENANCE DEPARTMENT ACTIVITIES



Polymer Activation System
Upgrades & Automation

Polymer Activation System Upgrades & Automation

The Agency utilizes polymer for secondary sludge thickening and biosolids dewatering. Polymer Activation Units automatically mix the bulk polymer with reclaimed water to make a diluted solution. This process 'activates' the polymer which can then be utilized in the treatment processes. The old units had reached end-of-life and were recently replaced by staff. Advanced polymer flow-pacing control logic from the units to the Rotary Drum Thickeners was also implemented, utilizing a ratio of polymer pounds to Waste Activated Sludge (WAS) concentration. This new logic is delivering consistent and optimal polymer dosing and maintaining a stable total solids percentage in the thickened WAS. This new logic is delivering consistent and optimal polymer dosing, maintaining a stable total solids percentage in the thickened WAS, and enhance overall system automation. This upgrade will reduce long-term maintenance demands and improve reliability.

Secondary Tank Drain Pump Replacement

The Agency utilizes two pumps to drain the secondary clarifiers to the plant headworks. The secondary tank drain pumps are original to the facility and have reached end-of-life. Agency staff completed the replacement of secondary drain pump No. 1, and tested it and returned it to service. The replacement of pump No. 2 is now underway and is scheduled for completion in April 2025.



Original Pump No. 1



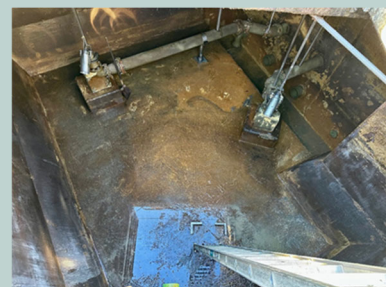
New Pump No. 1



New Pump No. 2
Rebuild in Progress

Continuing Regional SB 1383 Compliance

Semi-annual preventative maintenance was completed on the Organic Waste Receiving Facility (OWRF). This work included shutting down the facility, vactoring out the underground storage tank, and conducting a detailed inspection. The OWRF plays a critical role in CMTA's ability to remain energy positive. Additionally, by accepting food waste and fats, oils, and grease from regional partners, CMTA is supporting compliance with California's SB 1383 mandate to divert organic waste from landfills.



OWRF Cleaning

Turbidity, Turbidity, and More Turbidity



Turbidity Meters

Staff installed a new turbidity meter on the treatment plant's final effluent. This meter will complement an existing turbidity meter located at the secondary effluent. These meters play a crucial role by measuring water clarity and monitoring suspended solids real-time. The meters help Operations optimize treatment processes, ensure regulatory compliance, and quickly identify potential issues affecting plant performance.

FINANCE & ADMINISTRATION DEPARTMENT

Annual Financial Reports

The Agency prepared its Annual Financial Comprehensive Financial Report (ACFR) and Popular Annual Financial Report (PAFR) for June 30, 2024, and submitted them to the Government Finance Officers Association for Certificate of Achievement awards. The Agency has received the ACFR award for 22 consecutive years and the PAFR award for the past 14 years.

Upcoming Budget

It's time to prepare a new two-year budget for the fiscal years ending June 30, 2026 and June 30, 2027. The budget calendar has been issued and department managers have begun the process to update estimates for the Agency's revenue requirements, personnel costing, other departmental operating costs, and capital expenditures. Once prepared, a 10-year financial forecast along with budget narratives will summarize key financial trends for presentation to the Finance Committee in early May, 2025. A draft budget will be presented to the Board at its May meeting.

Promoting 457(b) & 401(a) Plan Education

The Agency embarked on promoting education of its 457(b) and 401(a) plans with its employees by providing quarterly sessions directly with retirement specialists from the plan providers, Mission Square and Nationwide. The sessions have been well received thus far, and the Agency plans to continue providing these sessions to boost employee engagement with this essential retirement savings benefit.

Treasurer Services with North Bay Watershed Association

CMSA entered into contractual services with the North Bay Watershed Association (NBWA) to serve as its Treasurer. Included in this services agreement is the Agency performing all general ledger accounting, accounts payable and receivable processing, and holding custody of NBWA's cash account. The Agency has been a member of NBWA since 2002 and is excited to further build its relationship with the Association.

CWEA STATE AWARDS

CMSA Safety Program of the Year: First Place

CMSA Treatment Plant of the Year (Medium):
Second Place

CMSA Engineering Achievement: Second
Place



Brian Carr: Mechanical Technician of the Year

Eromosele Esoimeme: Pretreatment, Pollution
Prevention (P3) Person of the Year

Sean Clementz: Electrical & Instrumentation Technician
of the Year

NEW EMPLOYEES



Evan Gilmore joined the Agency in March 2025 as a Operator-in-Training. He previously worked as an intern at Graton Community Services District. He holds an associate's degree in Wastewater Treatment, a T1 and D1 Water Treatment license and has passed the Wastewater Treatment Plant Operator Grade 1 exam.



Albert Orozco joined the Agency in February 2025 as a Laboratory Intern. Albert Orozco holds a bachelor's degree in molecular biology from the University of California Berkeley. Albert will assist laboratory staff to develop keys skills required for laboratory experience in the wastewater field.



Victoria Politz joined the Agency in February 2025 as a Laboratory Intern. Victoria Politz holds a bachelor's degree in environmental management and protection from California Polytechnic State University, Victoria will assist laboratory staff to develop keys skills required for laboratory experience in the wastewater field.