



# CMSA

## CENTRAL MARIN SANITATION AGENCY

NEWSLETTER | SUMMER 2021

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### A NACWA Peak Performance Agency

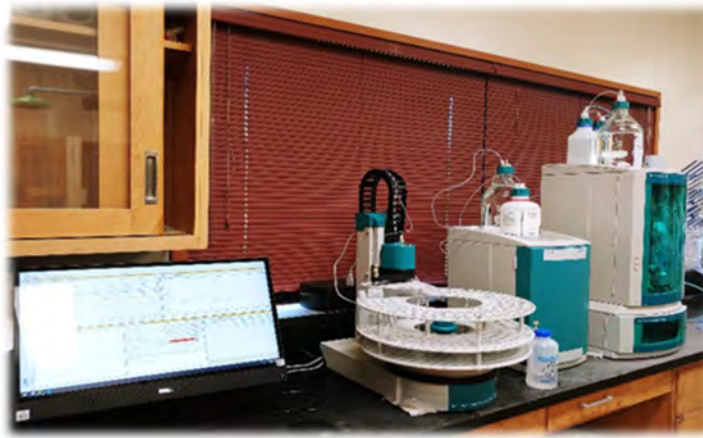
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Jason R. Dow, P.E.  
General Manager



## NEW AND IMPROVED AT CMSA

### New Laboratory Equipment Has Arrived



*New Ion Chromatography System located in CMSA's Lab.*

Our new Ion Chromatography (IC) System has arrived and will be used by laboratory staff to conduct anion and volatile fatty acid (VFA) analyses. The anion analysis is conducted on final effluent and biosolids, and includes measuring concentrations of nitrate, nitrite, chloride, fluoride, orthophosphate, and sulfate. These analyses are currently performed by outside laboratories.

Staff also analyze total VFAs on digester sludge by distillation, a lengthy and labor-intensive process. The new IC will significantly improve the VFA analysis efficiency by automating most of the process, and it will also allow laboratory staff to conduct anion analyses in-house. The staff time and contract lab expense savings results in an equipment payback of less than three years. The IC recently arrived, is currently being installed and started up by the vendor, and staff is completing the associated training, method development, documentation, and certification requirements.

### Rehabilitated Secondary Clarifier No. 3

The construction contract was awarded to GSE Construction in February 2021 for \$476,900. Work included coating all the steel mechanisms, resurfacing the concrete effluent trough, weir leveling, and replacing the walkway, center column, and associated equipment to extend the life of the clarifier. GSE began onsite construction activities in April, performed the blasting and coating work in May, and completed the mechanical and electrical improvements in June. The project finished on time and the clarifier has been put back into service without any issues. With the timely completion of this project, staff will begin planning for the rehabilitation of two more secondary clarifiers next year.



*Secondary Clarifier No. 3 in service after rehabilitation.*

## TECHNICAL SERVICES PROJECTS

### Switchgear Quick Connect Panel is Under Construction

Our main Switchgear receives electricity from PG&E and our generators, and distributes the electricity to buildings and treatment facility areas. A backup generator quick connect panel will provide an additional method to power our facilities, by allowing a rental generator to connect to the Switchgear.



It will strengthen our electrical system's reliability and resiliency in the event of power outages, such as PG&E Public Safety Power Shutdowns. The Agency pre-purchased the 1,600-amp quick connect panel and the project completion is anticipated by August 2021.

### Replacing the Administration Building Roof

Stronger Building Services was awarded this construction contract in April for \$721,000. This project includes removing and replacing the leaky metal roof and skylights, including the underlayment, gutters and flashings. Most of the demolition work has been completed, and the contractor has installed the new underlayment and framing for the patio skylight. The new roof panels have arrived and by the end of August, this project should be completed.



### New Cogeneration System is Under Construction

Construction of the new Jenbacher cogeneration system is progressing well, and when on-line, it will help the Agency become energy independent and provide redundancy for our



power generation system. The new system has a higher efficiency and lower emissions than the existing Waukesha system, and is anticipated to produce 100 percent of the Agency's electricity needs from our biogas, as well as export excess renewable energy to MCE under a Power Purchase Agreement. We pre-purchased the cogeneration engine and other major equipment, which have arrived onsite and were handed to the installation contractor, GSE. We anticipate construction to be completed by the end of the year.

### Sludge Pumps to be Replaced

This project replaces six Return Activated Sludge pumps that are over 30 years old, and replaces their aging seal water system, check valves, plug valves, and associated piping and electrical wiring. In June, the Agency awarded the project to GSE Construction for \$486,100. GSE is currently preparing equipment submittals, and onsite construction is anticipated to begin in September.



## OPERATIONS AND MAINTENANCE DEPARTMENT ACTIVITIES

### Legacy Equipment Being Removed



When it comes to decommissioning a piece of equipment, the focus often turns to asset disposal and what to do with it. While that is a major issue, what to do with the remaining mechanical, electrical, and conveyance components also requires consideration. At 35 years in continuous operation, there were several facility areas that had isolated and capped piping, deenergized electrical conduit, instruments, or control panels that remained after equipment upgrades or replacement. Operations staff developed a list of legacy equipment throughout the treatment facilities and staff members from the Operations and Maintenance Departments systematically began the process of removing these items and clearing space on the walls, floors, and ceilings. Now we'll have to paint!

### Aeration Basin Influent Gates Replacement



Our four aeration tanks are equipped with cast iron sluice gates that control the flow into the tanks based on process needs. During annual preventive maintenance and condition assessment activities inside Tank No. 3, staff noted severe corrosion and unrepairable sealing surface leaks on both 35-year-old cast iron gates. Replacement gates were procured, and staff began the replacement process, opting for

lightweight stainless-steel gates which were recently installed and tested for watertightness.



### Chemical Pump Motor Drives

Positive displacement pumps are used to transport hypochlorite to various treatment process areas. The original electronic drive components, installed in 1996/7, are now obsolete and replacement parts are hard to procure. In consultation with the pump supplier, staff purchased the new generation of drive units and controllers. Operations removed each pump from service, one at a time, while maintenance technicians installed new shaft seals, inverter duty motors, and motor adapter units. Once the conversion was completed, each unit was programmed and then tested for control responsiveness as well as behavior after a power failure.



### Asset QR Code Technology Integration

QR codes, otherwise known as Quick Response codes, allow staff to access different types of content by simply scanning them with their smartphones or data tablets. All equipment and assets are being assigned a unique QR code which will enable staff to scan equipment to perform equipment inspections, write work orders, view equipment performance and historical information, verify that equipment parts are in inventory, perform maintenance, update asset information, have instant access to operating and maintenance procedures, and access to safety bulletins and data sheets while standing in front of the asset. They will eliminate the redundancy of transferring field notes back in the office.



## THE LATEST FROM FINANCE AND ADMINISTRATION

### New 2-Year Budget

We have prepared our second two-year budget that will be submitted to the Government Finance Officers Association for the Distinguished Budget Presentation Award. The first two-year budget award for FY20 and FY21 was received on first-time submission. The award is a significant accomplishment for the dedication and hard work of all involved in drafting the budget. It has extensive narrative to tell the story of the Agency, detailed performance measures to benchmark with other public agencies, an operating section by department, a capital improvement program, and a 10-year financial forecast.



### Annual Financial Audit to Begin

The Agency's annual financial audit is scheduled to begin the week of September 20. Staff is busy gathering the information needed to close FY21. With the expanded functionality and reporting capability of the new financial system, we anticipate a smooth close and audit.

### Evaluating Pension Obligation Bonds

Public Financial Management, our financial advisor, is working with staff to evaluate the feasibility of issuing pension obligation bonds or using additional discretionary payment scenarios to reduce or eliminate our \$13.3M unfunded pension obligation with CalPERS. The next step is to review the alternatives with the Agency Finance Committee to yield the greatest amount of savings with the least amount of budget impact.

### New 5-Year Strategic Plan

Earlier this year, with the end of our multi-year strategic plan in sight, our Strategic Planning Committee together with an outside consultant, worked with the Board to prepare a new five-year strategic plan for the years FY22 to FY26. It includes updated mission, vision, and values statements and six revised goals. The Board adopted a business plan for FY22 that is comprised of twenty-one objectives and 54 strategic actions to be completed over the next year. The strategic and business plans incorporate the concepts of continual improvement, a culture of safety, and that the Agency is adaptive, resilient, reliable, and effective with carrying out its mission.

## HELLO TO NEW ARRIVALS & FAREWELL TO RETIREES!

**Steve Lepori** joined the CMSA team as a Mechanical Technician in February 2021. He previously worked for 9 years at the City of Rohnert as a potable water systems operator. A Bay Area native and current resident of Rohnert Park, he attended Santa Rosa Junior College. His hobbies include working out, riding dirt bikes, and going on hikes with his girlfriend.



**Itzel Montano** graduated from Solano College with a Bachelor of Science in Biomanufacturing and previously worked for Molecule Labs as a Quality Technician III. In 2020-2021 she worked with us as an intern assisting with CMSA's Digester Organic Loading Pilot Study, and in April 2021 she joined our staff as a Laboratory Analyst. She lives in Vacaville and her hobbies include hiking, do-it-yourself (DIY) crafts, and spending time with family.

**Cesar Estrada** began as an Institutional Utility Laborer in June 2021. Prior to working for the Agency, Cesar worked as a Bail Bondsman for 9 years. He lives in Sonoma and enjoys spending time with his two daughters, watching sports, and barbecuing with friends and family.



**Michael Wilson** previously worked for the City of Benicia's Wastewater Treatment Plant. He started his maintenance career at 18 when he joined the Canadian Navy as a Marine Engineer Technician in his birthplace, Victoria, British Columbia. In June 2021, he joined our staff as an Electrical and Instrumentation Technician. He likes to spend time with his family, and really enjoys the outdoors and all of the activities it offers.

**Adrianna Mendoza** came aboard in June 2021 as the Administrative Specialist serving as Board Clerk and providing administrative support to staff. She brings a wealth of experience to CMSA as a former Administrative Assistant with the Central Contra Costa Sanitary District. She has a Bachelor's degree in Psychology from Linfield College, Oregon, and lives in Sonoma with her husband and flat-coated retriever.



**Kate Brouillet** retired in July 2021. She was the Administrative Specialist here for eight years. Kate was full of positive energy and could always be found walking on one of the wellness walking paths at lunchtime. In her immediate retirement, she plans to travel and spend time with family and friends.

**Russ Turnbull** retired in July 2021. He was originally hired in September 1997, left for a brief two-year stint at the Vallejo Sanitation and Flood Control District, and came back to work at the Agency as an Electrical and Instrumentation Technician. Russ' legacy at CMSA lives on in the electrical cabinets and instruments he designed, built, and installed. Russ intends to spend the next few months traveling and then will sit down to decide what's next.

