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**A NACWA Platinum 10  
Peak Performance  
Agency**

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**RECYCLED WATER UPDATE**

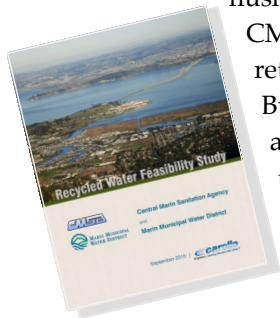
Over the past couple of years, CMSA has worked with the Marin Municipal Water District (MMWD) to explore using our recycled water in the central Marin service area. At the end of 2015, two recycled water initiatives were finished—construction of a truck filling station at the treatment plant and acceptance of a Recycled Water Feasibility Study by the State Water Resources Control Board.

Recycled water from the truck filling station can be used off-site for certain allowable uses, such as sewer line flushing, street cleaning, construction site dust control, and limited irrigation. Initial users will be San Rafael Sanitation, Ross Valley Sanitary, and Corte Madera for sewer line flushing. MMWD plans to prepare a press release to inform interested users that recycled water is available at CMSA. To obtain a permit from MMWD, users need to attend a recycled water training class and have their vehicles pass an inspection.



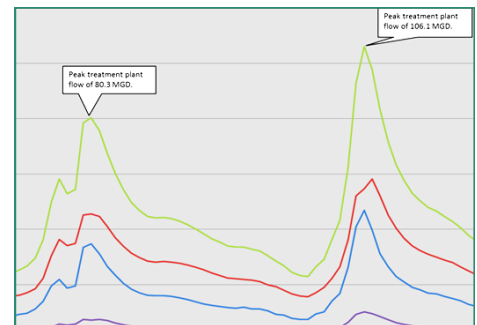
*Recycled Water Truck Fill Station.*

The recommended project in the Recycled Water Feasibility Study is for CMSA to provide tertiary recycled water to San Quentin for irrigation, car washing, boiler use, and toilet flushing. That project includes building additional treatment facilities at CMSA, constructing a pump station and pipeline to San Quentin, and retrofitting some of San Quentin’s buildings for the toilet flushing. Building the facilities to deliver the recycled water would cost approximately \$8.5 million, and with operating costs the annual water delivery cost is about \$3,000/acre-foot. MMWD plans to incorporate the recommended project in its next Water Supply Master Plan, where it will be evaluated with other water supply alternatives.



**THIRD LARGEST MEASURED FLOW EVER**

The Agency received the third largest amount of water ever recorded during a storm event on January 18-19. The facility measured a peak influent flow rate of 106.1 million gallons of water moving through the facility, and the water was effectively treated and released to the San Francisco Bay. In addition to the large volume of water treated during these two storm events, influent screens removed 75 yards of inorganic solids (rags, plastics, etc.), the facility’s grit separation system removed 47 yards of grit (sand, pebbles, gravel), and the vector truck receiving station removed 10.5 yards of debris brought into the facility from the collection system agencies’ vacuum trucks.



*Graph of peak flows of 80.3 and 106.1 MGD*

## OPERATIONS & MAINTENANCE

### CRITICAL SPARE PART SAVES THE DAY



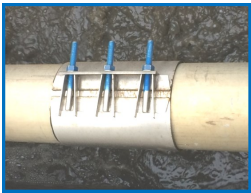
Recently, the Agency's cogeneration engine was running over speed and beyond its design limit. Maintenance technicians found that the speed controlling gear assembly (pictured) had failed. A failed roller bearing in these assemblies typically requires several weeks to repair, but staff quickly made the repair with a spare bearing in inventory. Power was restored and the engine began normal operation, avoiding the purchase of electricity.

### WORKING ON AN INFLATABLE ROOF

The facility's two digesters use an engineered membrane system to store biogas. The laser level indicator on digester #2, which is used to calculate the biogas volume stored, was damaged during a storm event and required replacement. This instrument is located directly on top of the outer dome. In a matter of hours, staff used a rough terrain forklift to lift a technician onto the dome to complete repairs.



### NEW COUPLERS THAT EXPAND AND CONTRACT



Technicians completed a project to replace 20 existing mild steel couplings with new stainless steel compression couplers that allow for expansion and contraction. These air supply lines sit right above an aerated water channel, and after 30 years of water spray and exposure to the elements, the original couplers were at the end of their lifecycle.



### ORIGINAL CONTROL CABINETS ALL TO BE REPLACED BY 2017

Over the past two years, the Agency has designated projects to upgrade the facility's sump pump system control cabinets. The original cabinets were reaching 30 years of service, and based on the findings in a 2012 condition assessment, staff prepared a multi-year panel replacement plan. The Agency is currently in year three and will continue to replace two control panels per year until all of the original panels have been replaced, projected for 2017.

### LIGHT-WEIGHT AND RUST-RESISTANT ACCESS

Corroding access plates above the Headworks needed replacement. Staff completed a minor project to replace the existing steel plates with aluminum plates, shown at right. These new style access covers are significantly lighter in weight and have much greater rust-resistance than the original covers.



### THE GREAT GREEN WALL

Deciduous trees that were planted after the refurbishment of the facility's effluent storage pond in 2007 do not provide a sufficient visual barrier from I-580 in the autumn when the leaves fall. Staff recently augmented the greenery wall by planting 20 cypress and cedar trees, all California native coastal evergreens.

## AGENCY ENGINEERING PROJECTS

### NEW SLUDGE THICKENING SYSTEM PROVES TO BE A BIG IMPROVEMENT



*Newly installed RDT's under new canopy.*

Thickeners remove water from the secondary treatment solids before being sent to the anaerobic digesters for further treatment. The two new rotary drum thickeners (RDTs) have been installed, and passed operational testing which demonstrated that they remove more water while using less energy than the old dissolved air flotation equipment (DAFs). The Sludge Thickening System Replacement Project was awarded to Mountain Cascade, with a construction contract amount of \$1,780,250, and began in December 2014. The project is nearing completion with the installation of a canopy, painting pipelines, and concrete surface restoration.

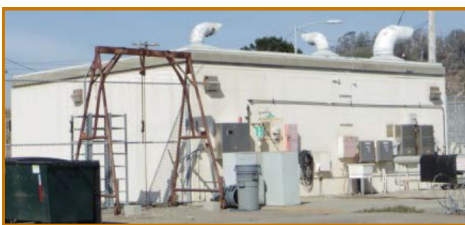
### CHEMICAL STORAGE ROOM PROJECT COMPLETED ON TIME AND UNDER BUDGET

The Chemical Storage Room Rehabilitation Project, contracted to Pacific Infrastructure (PIC) in February 2014, involved removing and replacing concrete damaged by chlorides, replacing the chemical pumping and piping system, and installing a new, non-skid epoxy coating on the floor and the lower part of the walls. PIC met a critical project milestone by completing the project before the wet weather season began, so the temporary chemical station that was set up outside the room could be shut down. The final cost, including consultant services, inspection, testing, equipment, and construction was \$1,260,972. The CMSA Board accepted the construction project as complete in December 2015.



*Chemical Storage Room rehabilitation completed.*

### SAN QUENTIN PUMP STATION AND FORCEMAIN EVALUATED



*San Quentin pump station.*

CMSA's agreement with the California Department of Corrections and Rehabilitation (CDCR) requires the Agency to select an engineering consultant to perform a comprehensive condition assessment of the San Quentin main pump station and its forcemain. GHD Engineering was hired in July 2015, and the work included assessment of the site, structures, mechanical components, HVAC system, electrical and instrumentation controls, and the force main pipeline, and an analysis of

screening technologies for automated removal of large debris in the wastewater. GHD has completed the work, and the findings will be used by staff to prepare a capital improvement plan for CDCR review and consideration of adoption.

### SAFETY ENHANCED FOR ELECTRICAL DISTRIBUTION SYSTEM

The Agency, with assistance from an engineering consulting firm, recently completed an assessment to classify process areas in the treatment plant as they relate to NFPA820, a national fire protection standard that sets requirements for electrical work and equipment in areas that may contain explosive atmospheres. A map of these areas was created, and all areas have been identified with signage. Staff has also been trained on proper work procedures in these areas, such as leaving electronic devices outside unless they are designed to not cause a spark.



## ENVIRONMENTAL SERVICES

### AGENCY LAB TESTING AT 100%

The CMSA lab testing has been in compliance with NPDES permit requirements, with 100% survival in all of our recent bioassay tests.

### SAFE DRUG DISPOSAL

The wastewater treatment agencies of Marin County support the pharmaceutical take back program of Marin. For 2015, a total of 7,073 pounds of pharmaceuticals were collected and disposed of properly.



### MONITORING THE SYSTEM

CMSA's National Pollutant Discharge Elimination System (NPDES) permit requires the Agency to monitor all dischargers in the Agency's service area. Last year, staff inspected more than 1,000 locations, such as industrial yards, restaurants, markets, manufacturers, auto facilities, recycling centers, and biotech companies.

### STAFF SPEAKS AT P3S CONFERENCE

This March, the California Water Environment Association (CWEA) held a P3S Conference—*pretreatment, pollution prevention, and stormwater*. Gretchen Mueller, Environmental Services Analyst, moderated a session, and Robert Cole, Environmental Services Manager, spoke on the public education program.



### AGENCY AWARD WINNERS

The annual CWEA awards recognize members who have contributed to their individual organizations, CWEA, and the wastewater industry as a whole. For 2015, CMSA received these awards from the Redwood Empire Section:

*Public Education Program of the Year,*  
Wastewater Treatment Agencies of Marin

*Plant Safety Medium (26-75 Employees)*

James Clark, *Mechanical Technician of the Year*

Robert Cole, *Community Engagement and Outreach Person of the Year*

Kit Groves, *Electrical and Instrumentation Person of the Year*

Noel Rafalo, *Murray McKinnie Award (OIT or Grade 1)*

Mary Jo Ramey, *P3S Person of the Year*

Ray Tiongson, *Operator of the Year*

### REMILLARD PARK POND

Reclaimed water from CMSA's treatment plant is delivered to Remillard Park Pond in Larkspur when it requested. The water helps to maintain the pond's water level and a habitat for the Western Pond Turtle, a threatened species. In 2015, 1.54 million gallons were requested and delivered.



## FINANCE UPDATES

### FY 2015-16 BUDGET PERFORMANCE

As of January 31, 2016 the Agency reported 78.3% of budgeted operating and debt service revenue which includes both receipts and receivables.

- Operating revenues totaled \$8.4M
- Debt service revenues totaled \$4.4M
- Total operating expenses were \$6.5M, or 60% of the \$10.8M adopted budget
- CIP was 68.3% of budget, and included \$2.3M in actual expenditures and \$637K in encumbered funds

### BOND DISCLOSURE FILING

CMSA recently provided investors an update on financial information pertaining to the Agency and the member agencies in connection with the Agency's Series 2015 Refunding Revenue Bonds. We are happy to share that no material changes were reported and the Agency continues to meet the financial and reporting requirements of the bond covenants.

### FY 2014-15 CMSA ACHIEVED A CLEAN AUDIT

Chavan and Associates, the Agency's independent auditors, completed the financial audit for the fiscal year ending June 30, 2015, and the Agency once again received an excellent review. The findings were accepted by the CMSA Board at the November meeting.

### AGENCY HIRES NEW LIFE INSURANCE CARRIER

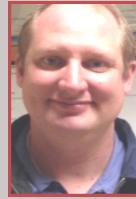
CMSA has contracted with a new insurance company, Lincoln Financial Group (LFG), to provide life, long-term disability, and AD&D insurance benefits for Agency employees. LFG was selected because of its A.M. Best rating of "A+," and its very competitive rates. In addition, LFG provides complimentary travel assistance, and access to counseling and consulting resources.

### INTRANET FILE STRUCTURE UPDATE

Agency staff, working in a cross-departmental team, has developed a comprehensive digital organizational plan for Agency documents and digital assets. The "File Structure Team" has created a guidance document that outlines the content and format of the new system, and includes standard naming conventions for files and documents, and an organization plan for the shared drive. Training for staff and implementation of the new system is underway.

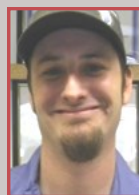
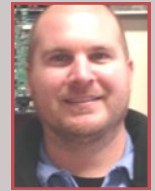
## PERSONNEL NEWS

### NEW FACES AT THE AGENCY



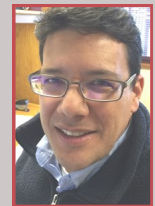
**Jeffrey Waters** joined the Agency in November as an Operator III. He spent the last eight years working at the Sausalito-Marín City Sanitary District. Jeff lives in El Cerrito and enjoys the outdoors, playing guitar, and spending time with family.

**Jon Farr** joined the Agency in December as an Electrical & Instrumentation Technician. Prior to working for CMSA, Jon, a certified electrician by trade, worked as an electrical supervisor for KVAL Machinery. Jon lives in Petaluma and enjoys spending his free time outdoors in nature.



**Ryan Word** started work at the Agency in November as an Operator III. Ryan has five years of experience, is a state-certified Grade IV operator, and spent the last five years working for the City of Fortuna. He enjoys spending his free time with his family and hitting the slopes for snowboarding.

**Carlos Oblites** joined the Agency in September as the new Administrative Services Manager. Carlos has worked with the Agency as its investment advisor, and has over 20 years of financial management experience as a Director at PFM Asset Management LLC. Carlos lives with his wife and two daughters in Novato, and enjoys hiking with them in Marin and in the High Sierra.

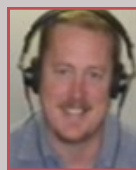


### NEW HIRES TO COME ON BOARD IN EARLY SPRING

The Agency has been recruiting for two positions:

- *Wastewater Treatment Plant Operator*—Interviews with finalists were held on March 2.
- *Assistant Engineer*—Finalists have been identified, and interviews are scheduled for early April.

### CAREER OPPORTUNITY FOR LONG-TIME EMPLOYEE



Lead Operator Brian Bokkin, an 11-year veteran operator, leaves the Agency for the opportunity to advance his career by taking a supervisory position at the Santa Rosa (Laguna) wastewater treatment facility.

His long-time colleagues and friends here at CMSA wish him the best of luck in his new position.