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AGENCY WELL-PREPARED FOR HUGE STORM

The biggest storm in several years hit northern California on Thursday December 11, flooding roads, toppling trees, and knocking out power to parts of the North Bay.



Headworks during the peak of the storm.

The key challenge to operating the treatment plant during storm events is the potential for geographic isolation. With two bridges and two highways as the only access routes into the county, high winds or tides can potentially turn the area into an island for hours at a time. To get ahead of the storm, staff arranged in advance to have chemical storage tanks topped off, grit and debris bins emptied, loose items secured, and treatment processes aligned to take this gully washer head-on.

Additional staff was dispatched to Agency managed collection system pump stations to test run stand-by generators, top-off fuel tanks, and stage storm equipment.

On the morning of December 11, just after 6:00 a.m, the main thrust of the storm hit central Marin. The event produced 4.4 inches of rain in less than 24 hours as recorded by the Agency's rain gauge, resulting in a peak flow rate of 103 MGD.

By mid-day December 12, the Agency had utilized 12,000 gallons of hypochlorite for disinfection and 6,000 gallons of sodium bisulfite solution for dechlorination of the treated water. The Headworks influent screens had removed 18 yards of rags from the inflowing water, and the grit system removed 16 yards of sand and rocks. It was a very busy 34 hours for Agency staff.



Blending channel in use during peak flow.

NEW FACES AT THE AGENCY

Electrical and Instrumentation Technician Dan Walker joined the Agency's maintenance team in December. Dan comes to us with wide-ranging experience, and has worked for Chevron, Phillips 66, UC Berkeley's wastewater treatment facility, and was general foreman over the construction of a 10-acre natural gas storage facility. Dan lives in Martinez with his wife, Jenni, and youngest son, Colton.

A college internship turned into a full-time opportunity for Noel Rafalo. Noel applied for and was granted an internship at the Agency in January, working one day a week while pursuing his Associates of Science Degree in Wastewater Technology at Santa Rosa Junior College. In November, Noel was interviewed and selected as the primary job candidate for a paid temporary Operator-In-Training position. During off hours, Noel enjoys spending time in the outdoors with his family.



Noel Rafalo



Jose Gutierrez



Dan Walker

Jose Gutierrez has been a CMSA Operator since April of 2008, and joined the Environmental Services Department in November. One of the department's key environmental compliance positions opened up in January that was a good fit for Jose, who has a BS in Biology from University of the Pacific. Jose lives in Dixon with his wife, Sarah.

OPERATIONS & MAINTENANCE

LANDSCAPING IMPROVEMENTS USING “XERISCAPING” METHODS

Xeriscaping simply means landscaping with slow-growing, drought tolerant plants to conserve water and reduce maintenance costs. Also, xeriscapes generally require fewer pest control measures than traditional landscapes.

The Agency implemented a landscaping improvement project in November to provide a functional, cost-efficient, visually pleasing, and environmentally friendly open area. Utilizing xeriscaping concepts, the lawn located behind the Administration Building was removed along with the area’s sprinkler system. Next, staff laid out a walking path, mulched the entire area for weed control, and planted two drought tolerant Prairie Fire Crabapple trees and initial cuttings.



View of the rear of the Administration Building with the new drought-tolerant Xeriscape that replaced the thirsty lawn.



Phase II of this project will commence in the early spring with staff planting harvested native cuttings from existing drought tolerant shrubs from within the facility.

FOG STATION GETS A FEW UPGRADES

After reviewing 12 months of the Fats, Oils, and Grease (FOG)/Food Waste station maintenance data, the Agency found that the originally installed material strainer that separates solids from liquids was undersized for the amount of FOG that the station was receiving. To help increase the capacity and efficiency of this process, a new, larger screen system (a heavy object trap) was installed. A diesel-fired hot water generator (Hotsy) was also installed to rinse the screen before its contents are emptied into the debris bin.

Additionally, a new concrete pad was constructed to support a jib crane and larger debris bin.



Heavy object trap (circle) and Hotsy System (red box).

NEW PUMPS REPLACE OLD ORIGINALS

The facility’s three centrifuge-feed pumps are vital equipment in delivering biosolids to the centrifuges for dewatering, after which they are transported offsite to beneficial reuse sites.



New centrifuge-feed pumps.

These pumps, which date back to the plant’s construction, were assessed in 2012, and the findings showed that they were nearing the end of their lifecycles and needed to be replaced.

During project design, it was decided to transition from the old hydrostatic drives to more energy-efficient variable frequency drives (VFD). This work included removal and installation of new pumps and bases, an upgrade of electrical equipment, installation and programming of the new VFD units, and removal of the old electrical conduit.

AGENCY PROJECTS AND INITIATIVES



Existing Maintenance Facility under evaluation.

MAINTENANCE FACILITY MODIFICATIONS PROJECT IN CONCEPTUAL STAGE

The Agency's existing maintenance building is L-shaped, where half of the building is fully enclosed and the other half is an open-sided canopy. The enclosed portion has office spaces, work benches, and a shop area. The canopy portion is used for parking electric carts, temporary storage, and has a fueling station. The Maintenance Facility Modifications Project will determine improvements to better utilize the space within the existing building footprint.

The Agency hired FME Architecture and Design (FME) to conduct a needs assessment to determine office, storage, and workspace configurations, and prepare conceptual plans and cost estimates for up to three improvement options. FME recently completed the needs assessment and is currently preparing conceptual plans for two promising options. The selected option will be integrated into the FY 16 Capital Improvement Plan.

CONSTRUCTION TO BEGIN IN JUNE FOR NEW INSTALLATION

The Sludge Thickening System Replacement Project will replace two existing dissolved air floatation (DAF) thickeners with two rotary drum thickeners (RDT). The DAFs have reached the end of their useful life and are no longer the industry standard for thickening secondary sludge. RDTs have a smaller footprint, and use less power than the DAFs, and will not emit odors like the DAFs.

The construction contract was advertised for public bidding last fall, and nine bids were received. Mountain Cascade (MCI) was the low bidder at \$1,780,250, and its bid was \$850,750 below the engineer's cost estimate, and \$1,091,150 below the Agency's budget amount.



Example of rotary drum thickener (RDT).

MCI and the Agency are currently in the process of procuring equipment. Construction will begin in June and will be completed by February 2016. The Agency has a contract with HDR Engineering to provide engineering services during construction, and staff will manage and inspect the construction with assistance from Dee Consultants.

HYPOCHLORITE STORAGE ROOM PROJECT UPDATE

A condition assessment in October 2011 concluded that the epoxy coating and concrete floor in the



Existing hypochlorite storage room floor.

hypochlorite chemical storage room have signification chloride damage. If not removed, the chlorides will ultimately degrade the structural integrity of the concrete floor and its internal rebar.

Rehabilitation work will involve removing and replacing the damaged concrete and rebar, replacing the chemical piping system, and installing a new, non-skid epoxy coating. The Agency issued the contract documents for public bidding in December

and received three construction bids in January 2015. A construction contract was recently awarded to Pacific Infrastructure for \$1.035 million. Construction activities will begin in late February and are scheduled to be completed in October.

(AGENCY PROJECTS CONTINUED ON BACK PAGE)

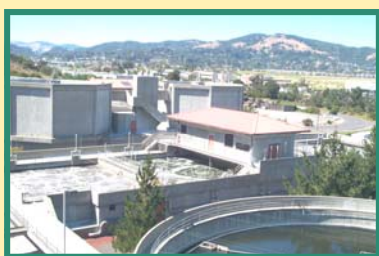
ENVIRONMENTAL SERVICES

NPDES TESTING

The CMSA lab testing was in compliance with National Pollutant Discharge Elimination System (NPDES) permit requirements, with 95-100% survival in all of our recent bioassays.

PUBLIC OUTREACH ACTIVITIES

The Wastewater Treatment Agencies of Marin County were very busy in 2014, educating the public about preventing pollution and protecting the environment. The public education and outreach booth was staffed at 16 events throughout the county during the calendar year. A total of 4,017 people took the environmental quiz and were educated about wastewater related environmental topics.



View of CMSA to the northwest.

Every year, many students and members of the general public tour CMSA's treatment plant. A total of 539 interested people now have a better understanding about how wastewater is treated to make it safe for discharge into San Francisco Bay.

The elementary school outreach program *Where Does It Go?* juggler show was performed at twenty elementary schools in Marin County reaching over 5,480 students.

The public education program helped sponsor the EcoKids section of the school newspaper, *FastForward*, with 110,000 copies for students and parents in Marin County. CMSA also provides financial support for the pharmaceutical take back program in Marin County which properly disposed of 5,500 pounds of pharmaceuticals in 2014.

ENVIRONMENTAL COMPLIANCE INSPECTIONS

CMSA's NPDES permit requires having programs to control and inspect dischargers within our service area. The program requires maintaining awareness of all dischargers in the service area, and to characterize waste products that are stored, generated, and discharged, or have the potential to be discharged.

During 2014, CMSA staff performed a total of 971 inspections to ensure that hazardous materials were not being discharged into the sanitary sewer system. Locations included auto-related facilities, industrial yards, and manufacturing, transportation, and recycling facilities.

Additionally, inspections are made of restaurants and markets that may discharge grease upstream of areas where grease has been found to accumulate in the sanitary sewers.



Hazardous? Inspections will tell.

FINANCE

BUDGET PERFORMANCE UPDATE

As of January 31, 2015 the Agency invoiced 82% of budgeted operating revenue and incurred 60.4% of total budgeted operating expenses. The Capital Improvement Program budget was at 27.3% of budget.

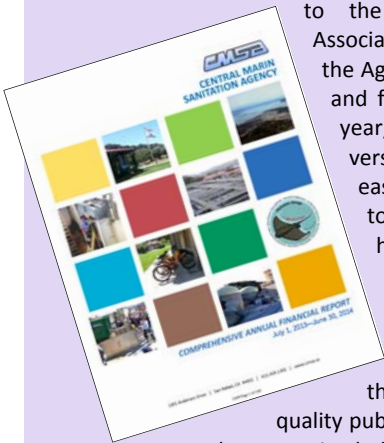
FY 2013-14 FINANCIAL AUDIT HAS POSITIVE FINDINGS

The Agency's independent auditors, Chavan and Associates, LLP (C&A), completed the audit of the Agency's financial statements for the fiscal year ending June 30, 2014, and the Agency once again received an unqualified opinion that the financial statements were free of material misstatements, and that the audit did not identify any deficiencies and material weaknesses with respect to the Agency's financial operations. The findings for both the internal control and financial audits were presented to and accepted by the Board.

CAFR AND PAFR REPORTS RECEIVE AWARDS

The FY 2013-14 audited financial statements have become the basis for the Agency's thirteenth Comprehensive Annual Financial Report (CAFR) and fifth Popular Annual Financial Report (PAFR) submissions to the Government Finance Officers Association (GFOA). The CAFR summarizes the Agency's initiatives, accomplishments and financial activities during the fiscal year, and the PAFR is a condensed version of the CAFR intended to be easily read and more understandable to interested parties who do not have a financial background. Both reports are evaluated by an independent panel of finance officers who determine whether the content in the reports meet the numerous GFOA guidelines for quality public sector reporting. CMSA is proud to have received the Certificate of Achievement for Excellence in Financial Reporting from the GFOA for the past twelve years and equally proud to have received the Award for Outstanding Achievement in Popular Annual Financial Reporting for the last four years.

Both the CAFR and PAFR are available online at www.cmsa.us/finance on the Financial Information tab.



ADMINISTRATION

PERFORMANCE EVALUATION PROGRAM IN USE

CPS HR Consulting delivered the new employee performance evaluation form and workplan templates for Agency use last fall. Since then, staff has tested the form and template on selected employee evaluations and developed an administrative procedure to guide employees and supervisors in conducting employee evaluations. Employees and supervisors received an orientation on the new process in February, and all upcoming evaluations will be conducted using the new procedures and documents.

REVENUE BONDS REFINANCING MOVING FORWARD

In October 2006, the Agency issued \$68.73 million in tax-exempt revenue bonds to fund the Agency's Wet Weather Improvements Program and other capital improvement projects. Since then, the Agency has been making annual debt service payments of \$4.6 million on the outstanding debt. The outstanding serial bonds carry an average interest rate of 4.3% and have maturities that extended into FY 2031-32.



In October 2014, the Agency's financial advisor, Public Financial Management (PFM), advised that this would be an opportune time to consider refinancing the existing revenue bond given the low cost of borrowing. In November, PFM presented the refinancing opportunity to the Board. \$55.5 million in new revenue bonds would be issued at an interest rate of 3.05% to pay off the existing revenue bonds. This refinancing would save the \$9.2 million in debt service payments to CMSA through FY 2031-32.

The Board authorized initiation of the refinancing process if it is able to meet a minimum 3% debt service savings threshold. Bond counsel has prepared the refinancing documents, and in March the Board will consider authorizing issuance of the refunding bonds.

AGENCY PROJECTS AND INITIATIVES (CONTINUED FROM INSIDE)

SEARCHING FOR THAT SWEET SMELL OF SUCCESS

The Odor Control System Improvements Project is a major capital project in the 10-Year Capital Improvement Program, and will ultimately involve replacing the three original odor scrubbers located throughout the treatment plant with a technology that is appropriate for each area. The Agency issued a request for proposals to engineering consultants to prepare design documents for the project, and received three competitive and innovative proposals.

At their November meeting, the Board awarded a design contract to Brown and Caldwell (B&C) for preliminary design, design, and bid period services. The preliminary design is currently underway and includes activities to collect air samples to establish design criteria, evaluate several odor control technologies, and recommend the most cost effective technology for each location. B&C will then prepare contract documents for public bidding that describe the necessary improvements to replace the odor scrubbers. Design work is expected to be completed in August.

