



## MONTHLY NEWSLETTER

January 2010

### ADMINISTRATION

#### Second Quarter Budget Performance

The Finance Department prepared the FY10 Second Quarter Budget Status Report for the CMSA Board and management staff. As of December 31, 2009, the Agency had received 48.9% (\$4.68 million) of the budgeted revenues (\$9.58 million) and incurred 49.5% (\$3.9 million) of budgeted operating expenses (\$8.46 million): both are within reasonable operating range with the year 50% complete.

Asset Management activities under the Capital Improvement Program are at 35.6% (414k) of budget (\$1.16 million). There are outstanding purchase orders totaling \$160,000 for biotower rotary arm replacement, process control system and asset management, plant pumps, process tanks, cogenerator repairs and maintenance, and centrifuge maintenance.

The Revenue Bond Program is at 82.4% of budget and includes \$4.6 million in contractual obligations associated with executed WWIP contracts with Western Water, Carollo Engineers, and Harris & Associates. The remaining budget balance of \$12 million represents a \$1 million set aside for WWIP change orders and CMSA staff

and administration costs for FY 2009-10, and \$11 million for projects to be initiated during FY 2009-10 through FY 2011-12.

#### Wet Weather Operations

The Wet Weather Improvement Project (WWIP) Operation Strategy Testing (testing the programming to control the new facilities) began in December. These process control changes for the WWIP required Electrical/Instrumentation staff to install and test new HMI screens. Alarm screens for Area Ten have been programmed and the system and control strategies are being tested. Operations coordinated plant flow diversions to the effluent storage pond as Carollo Systems tested control programming. Operations secured Aeration tanks #2 and #3 temporarily to facilitate the installation of new right angle drives for two tank inlet gate motor operators. Operations then assisted Carollo Systems with aeration tank gate integration and testing. Carollo has written programming to control gates on all four aeration tanks for the aeration process modes: Plug Flow, Series Flow, and Contact Stabilization. Operations also assisted Carollo systems with calibrating the new bubbler system in new CCT's before the testing of Area Ten PLC's

and the Effluent Pump Station control strategy.

Operations continues working on the "Process Risk Analysis" with each Lead operator responsible for an area. The Lead and operators list all the area's equipment with analysis of criticality, impact of failure and possible failure modes. Recovery strategies are being developed and SOPs updated as needed.

### PROJECTS

#### Wet Weather Improvement Project

The project is nearing its completion, with final completion scheduled for April 2010. Change orders are at 2.8% of the construction contract amount, an amount well below the 5% change order budget.

The Effluent Pump Station (EPS) was successfully started up and run during the wet weather events the week of January 17<sup>th</sup> and staff have been trained in its operation. This is a major milestone. Once the operational testing is completed, the EPS will be fully operational. The new contact tanks are in operation as are the dechlorination mixing system and effluent flow meters.

Mechanical equipment installation for the new Primary Clarifiers is nearly complete, and the equipment wiring and electrical system testing are underway. The control strategy testing is almost complete for the automated Aeration Basin gates to enable rapid switching to contact stabilization mode.

The entire plant road has been repaved, and the remaining paving work – slurry sealing the front drive, visitor and staff parking lots and the maintenance yard, repairing and overlaying the corporation yard pavement, and performing some minor touchups are currently scheduled for March, weather permitting.

### **Outfall Crack Investigation**

The State and Federal regulatory permits and authorizations for this work were finalized in December, and staff issued an extra work directive to Western Water Constructors to perform the excavation needed for the inspection. One critical component of the work is dewatering the excavation since it is near the S.F. Bay, and the plan was to discharge the water into the San Rafael Sanitation District's collection system, as is required for any construction water within the District. However, once SRSD confirmed its maximum pipeline discharge rate in that area, it was determined that the dewatering operation had the potential to produce

significantly more water than SRSD could accept.

Staff are working collaboratively with Carollo Engineers, Harris, and Western Water to explore alternatives that could produce significantly less dewatering flow while still enabling the inspection. If no alternative excavation approach can be developed, then we will have to prepare an alternative dewatering disposal method, which will likely require going back to the regulatory agencies for approval of the modified dewatering plan.

### **Bar Screen Replacement**

The Agency tested the performance of the new headworks screens with the over 100MGD wet weather flow event in January. The bar screen equipment efficiently removed the influent solids, conveyed it, and filled up two rug bins during the winter storm event. The implemented changes during the equipment start-up period assured the screens' ability to handle these wet weather conditions. These finer screens have noticeably reduced the amount of untreatable material carried downstream into the rest of the treatment processes during wet weather. The washer/compactors performed better than in previous high flow events, and staff are working collaboratively with Carollo Engineers, Western Water, and the manufacturer to

determine whether upsizing the hoppers and augers is needed.

Agency staff received as-built documents from the manufacturer, and, together with Carollo Engineers, are in the process of reviewing them. Staff are working with Harris and Western Water on developing the final punch list items.

### **Biotower Arm Replacement**

The Contractor, Western Water, disassembled the existing biotower arms and removed and replaced the top layer of the biotower media last month. Agency staff are performing the daily construction inspection. Due to changes in the bolt pattern on the new bearing, and resulting interference with the structure of the original cast iron base, a new base and turntable are being fabricated, at no additional cost, by the manufacturer. The new equipment assemblies are in the process of fabrication and are scheduled to arrive onsite in late March.

### **Maintenance Projects**

The variable frequency drive (VFD) for centrifuge #2 recently failed, as have the drives for #1 and #3 in the recent past. Electrical staff (E/I) removed the faulty VFD and replaced it with a Teco VFD, which has proven to be more dependable with the additional benefit of costing about a third of the original drives.

On Christmas Day Operations found that one of the Waukesha cogeneration engine's two turbo changers was starting to fail. Operations secured the engine and the next day, Maintenance replaced the turbo with one from stock. The failed unit will be sent out for a rebuild and will be returned to inventory as a critical spare.

E/I staff are currently designing and ordering material for the antenna mast and photovoltaic system for the SCADA radio repeater site that we will install on the CMSA hilltop above Andersen Drive. The site will give an unobstructed view and radio path to the SD2 pump stations. We will be able to have a more reliable radio telemetry system and be able to switch the stations still on dedicated phone lines to radio.

A number of small maintenance projects were completed in November including: The basket strainers on our polymer pumps discharge piping cracked due to the required daily cleaning of the strainers. Maintenance staff fabricated stainless steel support brackets to eliminate the problem.

Maintenance staff replaced the rotating assembly for the Gorman-Rupp tank drain pump for our Primary Clarifiers. A lip seal had failed, allowing sewage to contaminate the bearings.

The bioassy pH analyzer quit working before the start of the December bioassay. The pH

probe was rebuilt and the instrument re-calibrated so the test could start.

The cathodic protection instrumentation has been added to the new PLC in the effluent meter vault. We will now be able to monitor the current and voltage of the system on the process control system and have the history. E/I shop completed the vault wiring and the SCADA installation for the new (WWIP) effluent sample vault. The information from this PLC will be used to control sampling and SBS polishing.

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### **ENVIRONMENTAL SERVICES**

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#### **NPDES Testing**

The CMSA lab testing was in compliance with permit requirements, with 100% survival in our December and January bioassays.

#### **Public Outreach Activities**

Staff has started several shows for our new "Go With The Flow" juggler show performed by "Rock Steady Juggling" for school-aged children grades 3-5. The interactive show provides the audience with the information about what can and cannot go down the drains in their homes and businesses to prevent problems and protect the sewers, treatment plant, and the Bay.

The planning for 2010 is almost complete as staff is waiting for the last dates to be

added to the 2010 calendar for public education activities. The promotional items have been ordered and this will be the second year using the starfish logo and our slogan "Be a Star Do Your Part To Protect The Bay."

#### **Laboratory**

The elevated flows during the wet weather season increase the potential for Sanitary Sewer Overflows (SSOs). When SSOs occur, we assist our member agencies by performing bacteriological analyses to determine if there has been an impact when the SSO reaches a body of water (creek, stream, storm drain channel, or the Bay). Samples analyses are made upstream, downstream, and at the spill site to allow both the member agency and the regulatory agency to determine if additional samples need to be analyzed or additional actions need to be taken to protect public health.

#### **Environmental Compliance/Industrial Waste Program**

Environmental services staff is working on several annual reports for our environmental compliance programs, including the CMSA, LGVSD, and The Wastewater Treatment Agencies of Marin County public education program reports. The programs and events will be summarized into a comprehensive report for submission to the Regional Water Board. The reports are

required in our NPDES permit to demonstrate that we are actively doing our part to educate the public and prevent pollution.

### **Mercury Reduction Program**

Mailing of the Mercury Reduction Ordinance to dental offices will take place in mid-February after the LGVSD Mercury Reduction Ordinance is effective. We will also have a presentation at the February Marin County Dental Society meeting to discuss the Ordinance, Best Management Practices to prevent discharge of mercury to the sanitary sewer, the installation schedule for amalgam separators, and an upcoming workshop with amalgam separator vendors. Additional outreach will occur with emails and newsletters sent to the dental community by the Marin County Dental Society.

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### **CONTRACT/OUTSIDE SERVICES**

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#### **SRSD**

We are currently performing inspections at restaurants that have self-clean permits. These restaurants maintain their traps by performing routine cleaning every 15 days. At least 3/4 of the inspections have been completed and all facilities have been in compliance. One Notice of Violation (NOV) was issued to Churro Station, who has a pumping permit that requires their trap to be pumped every 30 days by a licensed hauler. The trap has not been pumped as required.

#### **LGVSD**

On January 11, a petroleum odor and substantial black solids were detected at the Duckett pump station. A petroleum-like sheen was present at the pump station and at the treatment plant. LGVSD and CMSA staff inspected manholes upstream of the pump station to see if there was a presence of petroleum products. No definitive evidence was present other than slight petroleum odor at one manhole.

Dye tests of the plumbing connections at the new BJ's, Calgang, and Chipolte restaurants at the Northgate Mall were performed. All of the appropriate sinks were connected to the interceptors.

#### **RVSD**

Staff is working with the last five restaurants that have not installed traps. Extensions have been granted due to the challenges caused by the slow economy. We have met with the restaurants to discuss what we can do to assist them in complying. They have all contacted plumbers and are in various stages of the installation process.

#### **Tamalpais Community Services District**

CMSA and TCSD staff will be meeting soon to determine what actions TCSD's restaurants will have to undertake for installation of grease traps and what method of monitoring the District would like them to

perform to comply with a Fats, Oils and Grease (FOG) program.

#### **SD#2**

Maintenance completed regular checks and routine preventive maintenance (including generator checks and wet well cleaning) for all 19 pump stations for December and January. The ultrasonic level transducer at Saba Pump Station was failing. The ultrasonic system was replaced with a submersible pressure transmitter, which is a more reliable instrument, and less prone to false readings caused by foaming or turbulence. We expect fewer call outs and overtime with the new system. The battery charger for the emergency generator at Village pump station failed. A temporary charger was wired in until a replacement charger is received. The power monitor at Industrial Pump Station failed and shut down the station. We removed the monitor and simulated the correct signals so the station could run until a new unit was installed.

Maintenance completed 86 USA (underground services dig requests) mark-ups of pump station piping in December and January. SD #2 received their BAAQMD compliant replacement portable generator in December and CMSA submitted its permit application to the BAAQMD.