CMSA Newsletter

Central Marin Sanitation Agency **April 2005**

GENERAL

Regulatory Consultant Update: We have solicited proposals from consulting firms that understand the Bay Area regulatory environment, are knowledgeable in the current regulatory trends, and have positive experiences negotiating with the Water Board. After the RFQ's (request for proposals) were mailed out to interested parties, the CMSA team set up an evaluation process. The evaluation considered three components: the consultant's SOQ (statement of qualifications), a presentation by the consultant, and the consultant's responses to specific regulatory questions. Three consultants responded with SOQ's and two consultants were invited to make presentations.

The O&A was seven questions including: Please describe your experience with NPDES permit renewal processes in the Bay Area?, What regulatory concerns could be involved with CMSA sharing its outfall with the MMWD desalination plant for disposal of the waste brine solution?, and, What do you foresee as the future of blending issues and their impact to CMSA?

Overall, there were 18 weighted criteria in the evaluation. The team has met, completed the evaluation scoring, and have selected a consultant. The recommendation will be brought to the Board at their May meeting for approval.

BACWA Biosolids Regional Recycling Facility

The Bay Area Clean Water Agencies, BACWA, is the local JPA that coordinates and manages the many permit required regional studies for wastewater agencies. BACWA also addresses long term strategic issues. Last year, a biosolids committee was established with the goal to: develop a publicly supportable, regional biosolids recycling and management program that provides economical, diversified, reliable, and sustainable options that benefit communities and the environment.

CMSA has participated in Phase 1 and Phase 2 of this committee's work. The committee has hired consultants and with contributions of staff time from the large agencies (EBMUD, SFPUC, and CCCSD) collected information on existing biosolids disposal practices; emerging political and regulatory problems; alternative disposal methods (focused to composting and thermal drying); possible sites; and the economics of a regional Class A biosolids facility. Phase 2 will be completed at a cost of ~$110,000.

Now, the committee is struggling on how best to move forward with the next step, which will require a governance structure with a Lead Agency to initiate Facility Planning and the CEQA process. This Phase (3) will cost between $1M and $1.5 Million. Over the next few months all BACWA members (including CMSA) will be weighing the risks of emerging political and legal challenges to current disposal practices against a more sustainable, but more expensive Class A regional facility.

Biosolids News - SB926

Senator Dean Florez (District 16) recently introduced a Bill in the State legislature that would curtail the exporting of biosolids out of the county the are generated in. The Bill has received significant opposition from CASA, the City of Los Angeles and San Francisco, EBMUD, and many other sanitary organizations in the State. Florez has amended the Bill several times and the most recent version prohibits any entity from importing biosolids into Kern County, where 30% of the State's biosolids are land applied. If SB926 passes, it will have significant financial impacts on all southern California wastewater facilities and sets a precedent they CASA and

its members fear will be used in other counties.

CMSA and most of CASA's membership have sent letters of opposition to the State Senate's Environmental Quality Committee. The Bill is scheduled to be heard this week.

MMWD Desalination
The construction of the pilot desalination plant is completed and the permit process has finally come to an end. The last permit, from Fish & Game, enables MMWD to lower the plant intake structure into the San Pablo Bay off the end of the Rod and Gun club pier. Plant start-up will be in early-May, and an official ribbon-cutting ceremony is scheduled for June 7th.

MMWD has received authorization from SRSD and CMSA for disposal of their filter solids into the sanitary sewer for treatment at the plant. Staff will be coordinating with MMWD to collect and analyze the filter water samples to ensure our pretreatment ordinance limits are not exceeded.

Security
Ahlborn Fence & Steel is moving along briskly with our security fence extension and gate automation project. The fence is now completed, all the conduits have been run, and the gate operators installed. CMSA staff will run the wiring, and Ahlborn will then connect and test the operators. Once CMSA staff installs the card readers and controllers, our automated front gates will be fully operational. We expect this project to be wrapped up by the end of May.

CAPITAL/ ENGINEERING

Polymer & Vactor Station Projects
The professional services agreement with Kennedy/Jenks (K/J) has been executed and the scope of work for both projects finalized. We expect to receive design schedules by the end of the week.

The first task of the dewatering project is for K/J to research and then develop initial design concepts for the polymer equipment upgrade. Once staff has evaluated them and selected the best approach, the design process will move forward. We expect this to be about a 12-month project, with the construction phase's dovetailing with our new liquid polymer supply contract next fall, and construction being complete next summer.

On the Vactor side, we will be scheduling a stakeholder meeting with our staff and those from the member agencies to gather ideas for the new facility and concerns with the existing. K/J will utilize this information in developing conceptual design alternatives and bring those back to the stakeholder group for review and comment. The initial design alternatives should be ready for our evaluation in late June, with progressively more complete design phases to follow. We anticipate this being about a 16-month project, with construction being complete by fall 2006.

Cogeneration
The cogeneration engine began natural gas-fueled full scale testing on April 13, and ran continuously for several days. This is the "shakedown" stage, used to identify and correct potential problems that can't be found until the engine is running. As expected, a problem cropped up – one of the 16 cylinders stopped firing. Stewart and Stevenson, the engine vendor, expects to have the problem corrected by May 4. Although we weren't able to cogenerate during the first day of PG&E's summer peak demand period, we expect to control further peak energy charges once we have the engine running again.

The biogas compressor retrofits are progressing – all the equipment and parts are on hand, and the first compressor retrofit is completed. One compressor will provide enough capacity for us to test the biogas system and begin running the engine on biogas as much as possible, further reducing our energy costs. McKenna Engineering, the biogas equipment subcontractor, will have their crew install the second compressor's retrofit by mid-May, providing us with the needed backup compressor capacity.

The final items on the SR Hamilton punch list are being wrapped up, and we expect to be able to bring their contract to the Board for acceptance at the May 10 meeting. As part of their contract wrap-up, we negotiated two excessive delay/extra work claims: Mike Brown Electric's $158,000 claim was settled for $89,600, pending Board approval, and SR Hamilton's $96,341 excessive delay claim was settled for $15,000. The contract with Stewart and Stevenson should be wrapped up in the next several months, pending biogas operation and tuning, correction of any other items that crop up during the shakedown testing, and air quality testing.

As mentioned last month, CMSA's operations and maintenance staff are doing a great job helping us get construction wrapped up and beginning operations of our new cogeneration facility. We expect to have many years successful and efficient operation once everything is settled in.

OPERATIONS & MAINTENANCE

CWEA Conference

Linda Bodwin of Operations and Mike Cadreau of Maintenance attended the California Water Environment Association Annual Conference in Palm Springs. The CWEA conference has presentations on all aspects of our industry: operations, maintenance, laboratory, collection, pre-treatment, industrial waste, management and regulations. Linda attended classes on Operations optimization, improvement and alternative technologies. Mike attended classes on mechanical seals, pump lubrication, and how to reduce costs using condition-based maintenance. They both attended the huge vendor show which exhibits equipment we use and many new and exciting technologies. It is a great place to collect information for when we will need to replace or update equipment.

OIT Recruitment

We will be conducting a recruitment to fill a operations position that opened when long-time operator Larry Johnson retired. We initially received a quote for $9K from a recruiter firm, however, staff recommended we conduct the recruitment in-house. Operations will be working with Kathy Britton to develop our OIT recruitment. We plan to have a list and be able to fill our vacancy by August.

Roof Beam Repair

We will be executing agreements with a general contractor to remove the rotted wood from the Administration Building's roof beams. Once the rotted material is removed, a structural engineer will inspect them and perform load calculations, if needed. Depending on the extent of remaining sound wood, that beam could be repaired or, if the rot is too extensive, it might need replacement. We expect to have a repair estimate in time for inclusion in the FY 2006 budget and, if all goes well, we expect to have the repairs completed by late summer.

O&M Monthly Update

Expect May flowers, since we have had April showers. This extended wet season has kept our weather and sewage cooler so we have not had to start our nitrate odor control stations (we are currently doing nitrate station prep work for start up). The delay equals savings in our calcium nitrate chemical budget for this fiscal year. We are preparing to move into dry weather mode which includes prepping plant processes for PM's on all major pieces of equipment in the plant.

The new final de-chlor vault sampler project performed well for the month. By improving our hydraulic capabilities, this project has improved our abilities to monitor our de-chlorinating process. The DeChlor sample vault HMI (human-machine-interface) screens have been competed, the old code has been disabled in the chlorine building, and SCADA computer reports have been designed.
The E/I shop continued working with the Stewart & Stevenson contractor on the engine power margin response. They were able to speed up the response to the most they can do without engine instability. The engine

now recovers from a 100KW load change in about 30 to 40 seconds. This is still too slow because our utility breaker trip is set for 30 seconds of export. Staring April 19th, Operations was able to run the our new Waukesha cogeneration engine on natural gas for a few days until a cylinder temperature faulted. This was an excellent training exercise as well as generating some power savings.

During the months of May and June, Operations will be conducting a study on the Advanced Primary Treatment mode of operation as part of our Strategic Business Plan process of bench marking and optimization. This month Operations had some Jar testing done, in which Ferric and an anionic polymer were added to the sewage in order to enhance settling of the solids in the primary clarifier. The benefits are improved settling in the clarifier and reduced odors and sulfides in the digestion process.

Last year Cal OSHA instituted a new regulation to protect people working on roofs around skylights. If you are working within six feet of a skylight you have to have fall protection. This may be a safety harness and cable or you may install handrails or safety screens. Operations surveyed all the skylights and their proximity to equipment that will need to be maintained. The safety screens were ordered and ths month Maintenance installed 32 safety screens so that employees can work on roof mounted equipment safely.

BUSINESS SERVICES

Fiscal Year 2005/2006 Budget Planning

The fiscal year 2005/2006 (FY06) budget development is underway and on schedule. In early March, the first draft of the Agency's 5-year Capital Improvement Plan (CIP) and capital account descriptions were completed. During the month of April, we further refined the CIP and began drafting the operating budget and 5-Year forecast. Various methodologies were used to predict FY06 figures including 1) utilizing FY05 actuals to forecast future revenues & expenses, 2) identifying new activities in FY06 that have a significant budget impact, 3) obtaining cost information from outside sources including suppliers, service providers and government entities (i.e., U.S. Department of Labor).

Development of budget analysis documentation is also in progress and scheduled to be presented along with the draft FY06 budget to the CMSA Board at the May 10, 2005 meeting. The final budget will be presented at the June 14, 2005 CMSA Board meeting.

Hydrogen Peroxide Contract

The hydrogen peroxide supply contract with UNIVAR USA expired on 4-28-05. Hydrogen peroxide bid packages were prepared and mailed to five potential hydrogen peroxide suppliers on March 14 and advertised in the Marin Independent Journal the week of March 18. A pre-bid tour occurred on March 30, with two attendees and the bids were opened on April 5, 2005. US Peroxide, LLC was the apparent low bidder. The CMSA Board of Commission awarded US Peroxide, LLC the 50% Hydrogen Peroxide Supply Contract (05-03) at their April 12, 2005 Board meeting. The bid proposal Total Unit Price was $2.1097/gallon for 50% solution delivered to CMSA's two dosing facilities. $2.1097 is a 1.2% reduction in the unit cost compared to the prior contract.

Sodium Bisulfite
The sodium bisulfite supply contract with Basic Chemical Solutions (BCS) will expire on 6-30-05. The contract has a provision allowing for an extension if agreed to by both parties. BCS has declined to extend the contract at the current cost and terms. A new sodium bisulfite bid package was prepared. The bid package will be advertised in the Marin IJ the week of 5-02-05 and will also be sent to six potential sodium bisulfite suppliers during the week of 5-2-05. A pre bid tour is scheduled for May 26, 2005 and the bids will be opened on June 7, 2005.

Mannich Polymer
The mannich polymer supply contract with Polydyne will expire 6-30-05. Normally, a new polymer supply contract would be prepared and sent out to bid and a new contract awarded to the lowest responsible bidder. However, CMSA will discontinue the use of mannich polymer in 6 to 8 months once the emulsion system is in place (dewatering phase IV project). We will be requesting the Board authorize the extension of mannich polymer contract for about 6 months. Extending the contract would guarantee the existing price and avoid the cost of bidding and the uncertainty of the potential bid unit cost.

Computerized Maintenance Management System (CMMS)
CMSA's Computerized Maintenance Management System (CMMS) component of the developing Asset Management program continues to progress on schedule. Currently two phases have been initiated to implement the CMMS module. *Phase One* has the following three milestones: 1) Corrective Maintenance Rollout, 2) Asset Management - Tracking Procedures and Documentation, 3) Asset Tree & Operations Preventative Maintenance data-base population. *Phase One,* was completed on April 13.

CMMS Phase Two has four milestones that divide and focus 20 tasks into specific areas within the plant, and at pump & nitrate stations. The general task descriptions are the collecting, collating & defining of preventive maintenance (PM) tasks, population of the PM databases, and implementation of the preventative maintenance schedule. With the completion of *Phase Two* milestones and tasks, target completion dates have been calculated based on tasks cycle completion times multiplied by the number of preventative maintenance procedures requiring conversion and the quantity of data to be retrieved from the obsolete databases. Initial estimates put the number of PM's requiring conversion at approximately 2,180. This number accounts only for the completed PM after transfer into the new CMMS. Each PM requires multiple pages of data field entries to complete.

Strategic Asset Management Plan
Our current Asset Management Program (AMP) has focused primarily on the implementation of the Computerized Maintenance Management System (CMMS) component. With the CMMS implementation progressing as scheduled we are broadening the scope to initiate development of the Strategic Asset Management Plan (SAMP). We are currently evaluating a proposal from the consulting firm of Brown & Caldwell (B&C) to assist CMSA in developing its SAMP. B&C assisted in the procurement of the CMMS software in 2002.

The major focus will be on evaluating current practices and capabilities, comparing these to industry best practices and development of a tangible strategic asset management plan that compliments the Agencies Strategic Business Plan.

ENVIRONMENTAL SERVICES

NPDES Permit Inspection
We had our annual NPDES Permit Inspection on April 18th. The inspection was performed by Tetra Tech Inc., which is a private consulting firm that has been hired by the State and Regional Boards and the EPA to perform inspections of

programs that the respective agencies oversee. It has been over a year since our last inspection due to the turnover and lack of staff at the Regional Board creating a large backlog.

The purpose of the inspection is to ensure that all of the different requirements in our NPDES permit are being met. They ensure the required testing, reporting, monitoring, record keeping, analytical methods, and plant operations are being documented and performed as stated in our permit. They reviewed the monthly self monitoring reports that we generate for the Regional Board, all of the annual reports that are submitted to the Regional Board and EPA including the Discharge Monitoring Report, Biosolids, Pretreatment Program , Pollution Prevention Program, Contingency Plan, Wastewater Facilities Review and Evaluation, and Operations and Maintenance Manual Review. He inspected the laboratory and reviewed the equipment, calibrations, temperatures, data sheets, custody forms, state certification documentation, quality control, and laboratory certification testing sample results. All documentation, quality control, laboratory, and reporting requirements were in order, accessible, complete, and exceeded the requirements. The inspector was impressed and said our reporting procedures were among the most complete and well organized that he has ever seen.

There was a discussion of the proactive approach CMSA has taken to develop a Wet Weather Operations Manual and the Capacity Study and evaluation of plant expansion options due to our increasing flow. The inspector reviewed the information he was presented and discussed the work that has been done to maintain permit compliance with the increased flows. There was a complete plant inspection to review the overall plant operation, equipment, and maintenance. He wanted to ensure that we had back up equipment and supplies to ensure proper plant operation if there were equipment failures or power outages. It was a very positive plant inspection.

In summary, he said it was one of his best inspections and he could not find any required changes at the time of the inspection. He will document our suspended solids exceedance that occurred in December 2004. Many of the plants around the Bay Area have had many challenges and increased documentation requirements as a result of their inspections. The favorable inspection is a tribute to the dedication and hard work of our staff.

NPDES Testing

The NPDES testing we performed at CMSA for April was in compliance with our permit requirements. We had 100% survival of the fish in our April bioassay. survival to meet this limit.

Earth Day Events

We participated in two Earth Day events this year. On Saturday April 23rd we staffed a booth with LGVSD at the Water Wise Fair at the Marin Civic Center. The event was organized by the Marin Municipal Water District . We gave out a total of 209 environmental quizzes to both adults (193) and children (16). Approximately 800 people attended the fair which means 25% of the total attendance took our wastewater and stormwater environmental education quiz. It was a very environmentally aware group of people attending the fair because 75% of the adults and 88% of the of the kids taking the quiz got 100% of the questions correct.

On Sunday April 24th we had a table at the Marin Earth Day event at the College of Main. It was a good outreach effort where we handed out brochures and answered questions about pollution prevention, reducing FOG (Fats Oil and Grease) in the sanitary sewers, recycling of fluorescent light bulbs, preventing mercury waste and its sources, how wastewater treatment plants work, and related resources available in Marin County.

Member Agency Assistance

We have started to test weekly bacteria samples from

the Lagoons in Corte Madera. We analyze the samples that are collected by the Town of Corte Madera every year during the warm weather when people are swimming, boating, or using the lagoons for recreational purposes. The lagoons are tested to ensure the bacteria counts are within the guidelines according to the California Code of Regulations Title 22 for water that is used for contact recreation.

We have begun our sulfide testing of samples that are from different areas in the collection system. Twice a week SRSD collects samples which we analyze and provide reports and call immediately if they are high. Sanitary District #1 collects samples monthly during the warmest months. We use the information to determine possible areas where sulfides become elevated as the flows decrease and the temperatures increase, resulting in a decrease in the dissolved oxygen and increase in sulfide formation.

Stormwater Assistance

We have signed an updated agreement with the City of San Rafael to continue to issue stormwater citations. It will renew annually unless either party desires to terminate the agreement. It creates a better enforcement program for CMSA that is utilized during our routine inspections of businesses in San Rafael. It will aid us in the prevention of hazardous materials being discharged to the sanitary sewer or the storm drains. We will also notify the San Rafael Fire Department of any businesses that are not handling hazardous materials properly or present additional hazards. This protects the environment, provides better control in managing hazardous wastes, and generates revenue for the city from citations issued to violators of the stormwater ordinance.

We are currently working on updating an agreement with the Town of San Anselmo. It will also renew automatically, provide current contact information, and allow for the issuance of citations. We are working on the training that will be required for our inspection staff members to issue citations for the Town of San Anselmo. They are currently working on the required documentation to ensure the authority and mechanism to enforce their stormwater program is in place.

Zero Discharge Inspections

We are working on our zero discharge inspections in the City of San Rafael. These are inspections of automotive facilities that are not allowed to discharge any process waste or car washing water to the sanitary sewer because they do not have the required pretreatment equipment at their facilities. There are a total of 130 to 140 within our service area in the City of San Rafael. We will be inspecting facilities to ensure they are still zero discharge. Those with floor drains we will check to ensure their drains are capped with a crimped CMSA seal. If there is not a plug in place, we will plug it and reinspect in the future to ensure the plug is not being removed. If they are removing the plug that has been installed, we will need to take further enforcement actions. We also inspect them to ensure they are not discharging anything to the storm drains and that they are storing their hazardous waste properly and in a manner will not result in a discharge to the sanitary sewer or storm drains.

Biosolids National Conference

Robert Cole, our Laboratory Director, attended the biosolids national conference in Nashville, Tennessee. The main focus of this conference is to discuss upcoming regulations and reporting requirements, new treatment technologies, what other treatment plants are doing to dispose of their biosolids, and what new challenges are developing in the country that can impact land application, composting, pelletization, incineration, and landfill of biosolids.

One of the main discussion points of this conference was the biennial review of the Federal Regulations that govern land application of biosolids. There is a biennial review of all of the testing requirements, reporting requirements, and land application restrictions and guidelines that allow biosolids

to be land applied if they meet the documented requirements. They are currently studying 800 different testing methods to determine if the are needed, should be added or removed, can be improved, and if they have an impact on protecting public health or the environment. There is no evidence that indicates that there have been any documented accounts of serious health concerns from the land application of biosolids. The required regulations have been working, but there needs to be a review process to study developing issues and include them in the regulations.

The developing desalination issues are being investigated. With the increased implementation of desalting plants that are utilized to treat brackish groundwater sources, and saltwater desalination plants to produce potable water they are creating treatment plant issues that need to be investigated. Currently the conference mainly discussed the treatment technologies that are being employed and some of the problems that are occurring with the waste brine being discharged to the wastewater treatment plants. There is a study underway by the Water Environment Research Foundation (WERF) that will study the effects of desalting waste products on wastewater treatment facilities and the biosolids they generate. They will come up with guidelines on handling this waste and available pretreatment technology that can be utilized. This will be a future topic of interest because of the potential MMWD desalination plant waste products including filter waste, concentrated brine solution, and membrane cleaning solutions that will need to be disposed of in a way that will have the least impact to CMSA.

LGVSD Assistance

We have been assisting LGVSD with an enforcement action against the Sears automotive repair facility at the Northgate Mall. It also subleases part of the facility to a high volume oil changer. They have had repeated pH violations in their interceptor and they hired an environmental engineering firm to review their pretreatment equipment and facility. They will be making changes based on their review to their battery storage area to contain any battery acid and prevent it from leaking into floor drains leading into their interceptor. They will also have their interceptor pumped, inspected for corrosion, and provide a video tape of the line connecting the interceptor to the line that is owned by LGVSD. They will also monitor the pH to determine if the changes that have been implemented are successful.

We inspected the McInnis Park Golf Center Restaurant and informed them that they need to maintain the grease removal device at their facility. They have previously caused blockages within the LGVSD collection system and were sent a letter, we drafted, to recover the expenses incurred by LGVSD. They are not currently maintaining their grease trap sufficiently and will now have to implement a program to ensure it is being pumped out and the grease removed and disposed of properly.