CMSA Monthly Report

GENERAL

February 25, 2004 Storm Event
This storm caused influent flows to peak at 102 million gallons per day (MGD) with a consistent influent flow of 95 MGD for more than two hours (0800-1000 hours). Fortunately, a low tide of +1.1 feet occurred at the peak flow period (approximately 10 a.m.) allowing this volume of flow to pass through the plant. A storm of longer duration coupled with higher tides would have resulted in use of the storage pond and eventually flooding of the secondary process.

MMWD Desalination EIR
MMWD is about 5 months into the EIR preparation process for the desalination facility. Their consultant, URS, plans to have the administrative draft EIR completed by late May, conduct the public workshops in July, and have the draft EIR ready for publication and comment by mid-August 2004.

The EIR's preferred alternative for brine disposal is through our marine outfall and the preferred intake location is at the end of a new Marin Rod & Gun Club Pier. A concern that will probably be expressed by the public during future comment sessions and workshops is the apparent proximity of the intake structure to the outfall. On a map they look very close, but URS's initial analyses indicate that it is highly unlikely that "short circuiting" will occur, or in other words our effluent will not be drawn into the source water intake. The public perception of "toilet-to-tap" has thwarted many wastewater reclamation projects. A second intake location will be explored in the EIR in case the preferred is not chosen.

When MMWD began planning the size of the desal facility it was going to be 5 MGD with infrastructure in place to accommodate two additional 5 MGD expansions. It appears that sizing has slightly changed due to the water supply situation the Sonoma County Water Agency is experiencing. Now MMWD plans to start with a 10 MGD facility and expand to 15 MGD in the future. The EIR is being prepared for this scenario.

In addition to a $60 million desalination plant, the project, if moved forward, will include about $ 30-40 million in distribution system improvements, which include new pipelines and storage tanks. One storage tank will likely be located on the San Quentin ridge in San Rafael and the preferred location for the second is at Ridgecrest Street in Tiburon. Tanks are needed to provide storage and equalization during peak use periods. These distribution system costs are approximately the same as those needed for the Russian River pipeline alternative.

One of the primary concerns that we have expressed to MMWD and URS pertains to the joint use of our marine outfall and the potential to violate any of our NPDES permit requirements. URS has had preliminary conversations with the Regional Water Quality Control Board regarding this topic and the Board has stated there shouldn't be any problem with CMSA and MMWD having separate NPDES permits. The Regional Board has also stated they will require a minimum 10 to 1 dilution of the combined effluent in the receiving waters (S.F. Bay) near the vicinity of the outfall. URS has constructed a dilution computer simulation model and reports that the preliminary results show only one run out of 5000 had a dilution less than 10. The average of the runs was 190 with a high of 720. URS designed the model to use low tide conditions and maximum desalination facility output. Modeling variables include CMSA effluent flow, water depth and salinity. URS plans to improve the model and perform a probability analysis on the one low value.

Wet Weather Operating Procedures Manual

Our process control team has recently completed the development of a wet weather monitoring program. The program requires the recording of flow rates, tides, lab data, water surface elevations, and other pertinent data during wet weather rain events. This information in conjunction with the outfall hydraulic modeling data is used by operations staff to aid in managing and planning for future events and managing the plant during an event.

We have requested a proposal from CH2MHill to assist staff with the development of a Wet Weather Operating Procedures Manual. Our goal is to have a complete guidance document for operations and process control staff on how to best manage the treatment plant given treatment and hydraulic capacity limitations. The manual will contain the above wet weather monitoring program, the outfall hydraulic information, standard operating procedures based on criticality, our wet weather on-call program, and a communication procedure with our member agencies when peak events are imminent.

SD#2 Contract
We have been working with SD#2 staff on the revisions to the pump station O&M contract. The Town of Corte Madera's attorney has reviewed what we thought was a final draft document and requested many changes, most of which were modifying language to "legal speak". These changes will be incorporated into the document and we hope to bring this to the Commission in March for approval.

Security - Front Gate
The front gate that was recently installed, has been temporarily secured in the open position due to a safety issue with the gate. The 33' sliding portion of the gate is unstable in the fully closed position. During a recent storm, the wind blew the gate off its track, causing it to fall in the driveway. The installation contractor has inspected the gate and will be adding an outrigger and strengthen gate with additional bracing.

Expect the front gate to be well-lit in the near future. We recently received the light pole which is laying on its side near the front gate. Our contractor for this job, Tresch Electric, is expecting to be here on March 2nd to do the work. We've called in U-S-A (Underground Services Alert) and as it happens all of the major utilities feeding the plant skirt nearby - so we have to be careful where we install the pole.

Hillside Homeless Camp
CMSA personnel worked with Mark Hedeen from San Rafael P.D. to remove another camp from CMSA property located North of Andersen Dr. and South of CMSA's fence line. The site was monitored for one week in an attempt to notify transients of pending action and give an opportunity to remove personal possessions. The camp site was cleaned out after S.R.P.D. was unable to locate individual(s) living there.

CAPITAL/ ENGINEERING

Cogeneration Project
The 16-cylinder Waukesha internal combustion engine sitting in our driveway will soon be taken into the engine room and set in place. This past month there have been some additional 'tie-ins' with existing piping systems. Tie-in is where we are connecting new piping to old piping. Generally speaking, the new piping provides the supply for natural gas, sludge gas, hot water, cooling water etc. for the new project. Valves are put in place to isolate that work from our currently functioning cogeneration system. The objective here is to keep the old system working while we assemble the new system. This will continue to work up to a point and the incentive of saving $1,000 a day on electrical power is the reward. However, when it comes to connecting the cogeneration system to the main electrical lines coming into the plant, there will be a suspension of our cogeneration program. The

duration of that suspension is yet to be determined.

In recent weeks the contractor has made connections to our hot water supply and hot water return lines, the number three water system for supply of cooling water to the various heat exchangers, new connections to our 'day tank', and one final set of connections to the sludge gas piping. All of these connections require us to suspend use of something and require planning, especially connections on the gas side where a studied approach is warranted as lines need to be purged with nitrogen gas. We seem to have all of these supply connections to the existing system behind us now. So when the final piping for the various new systems are in place all we'll need to do is turn a valve.

With continuing falling prices of process control equipment, increases in their capabilities, and improvements in instrumentation there is a tendency for increased use of instrumentation to monitor systems such as the new cogeneration facility. We will be expanding from around 30 points monitored on the existing system to over 100 points monitored on the new system. For example, we will be gathering data on the temperature of each of the sixteen cylinders continuously. Our design firm, CH2M Hill is working with the control system vendor, Encorps, to resolve exactly what all of the instrumentation and signals will be and how the controls will ultimately work. We are fervently hoping that the vendor will meet a deadline of February 27th for coming into compliance with our specifications.

Placing the siloxane removal filter equipment pad where we did inserted a fresh barrier into the hillside drainage system. The contractor has recently poured concrete for a new V-ditch and Caltrans drain to circle around the new equipment pad and the new stormwater drains seem to be working well. The contractor also consolidated the soils in the area so that they would not get so torn up with their heavy equipment when it rains.

There is still a significant amount of piping for cooling loops and gas lines inside the boiler and engine rooms. Some of this will await equipment which will take several more weeks to deliver. The biggest question mark right now on delays in completing the project resides in the instrumentation and control areas. We as yet do not have delivery dates for heat exchangers and particulate filters. We don't have an approved switchgear submittal package, but we hope that will be resolved in a few days.

Collection System Hydraulic Model

We have requested a proposal from Nolte Engineering to develop a hydraulic model for pressure side of the CMSA collection system. Nolte prepared the 2003 Sewer System Master Plan for Sanitary District #2 , is currently designing their new main Paradise pump station and other improvements to their sewer system, and has developed a hydraulic model for the SD#2 pressure system to the treatment plant. We believe that Nolte is the best choice to develop the remaining collection system model which is an expansion of their existing model. This will provide a cost savings as compared to another consultant developing the model from scratch.

The model will be built with the pump station and forcemain systems that convey wastewater directly to CMSA. Nolte will run a few scenarios to show how much flow can be conveyed to CMSA under each and which pump stations compete with others during these events. Our primary goal is to have an understanding of how much influent can be pumped to us with the installed capacity at each of our member agencies. The model will be shared with our member agencies who can use it for their future planning activities.

BUSINESS SERVICES

Financial JPA

Staff reported at the February Commission meeting that MMWD contacted us to gauge our interest in forming a Financial Joint Powers Agency with them. The purpose of the agency would be to issue revenue bonds for

capital improvement projects. Apparently, issuing the bonds under a JPA circumvents the normal requirement of public approval and requires less reporting. Since the February meeting, we have learned that the MMWD Board decided not to investigate this option and will utilize another mechanism to issue their bonds.

BSM Resignation
Kurt Obermeyer has resigned from his position as the Agency's business services manager. An employment opportunity presented itself that Kurt chose to pursue. His last day of employment was February 11, 2004.

To fill the vacancy we have decided to use a temporary finance person that will assist us during the preparation of our new department based FY 2005 & 2006 budget and provide us the financial perspective for the Strategic Business Plan. Candidates have been interviewed and an individual, Robert Nicolai, has been selected. Robert has a B.S. in Accounting and an MBA. He will start on March 1, 2004.

Strategic Business Plan
Staff and Red Oak Consulting have prepared a detailed scope of work for the business plan development and implementation process. A professional services agreement is being written and will contain the final scope, schedule, and services fee. We anticipate bringing the agreement to the Commission at the March meeting for consideration of approval. The business plan commencement will be slightly delayed due to the resignation of our business manager.

An element that was added to the scope of work is additional focus group meetings with CMSA staff to allow their review and input at key stages during the plan development. We believe that all staff should have the opportunity to contribute to the plan which will lead to support of the goals, objectives, and strategies of the organization.

Asset Management
The Maintenance Management module database of the Asset Management program is currently being populated. The majority of the identified assets have been entered into the system. The asset has been configured in an intuitive tree structure based on the different areas of the plant and pump stations. With the asset tree over 80% completed the work collecting, collating, confirming and entering preventative maintenance tasks has begun. The PM registry is approximately 30% complete. The remaining asset tree and PM registry will be worked on concurrently until populated.

Contract Management
CMSA's ferric chloride contract will expire March 28th 2004. Five bid packages were sent out in January. The pre- bid tour was conducted February 25th. Bids received by CMSA will be opened March 3.

CMSA is currently negotiating a Biosolids Land Application Contract with Synagro West. CMSA has had a long standing contract with Synagro West, to beneficially reuse our biosolids through land application at their Lakeville Site in Sonoma County. Land application is an environmentally prudent use of our biosolids that provides an excellent soil amendment for hay crops. Land application is also an economically viable solution offering lower disposal cost over disposal at Redwood Landfill.

MAINTENANCE

Belvedere Pump Stations Telemetry Upgrade
Kit Groves, our Instrumentation System Supervisor, will assist the contractor hired by the City of Belvedere in converting the alarm system for the Belvedere Pump stations from telephone lines to radio telemetry. The conversion should be completed this spring. Currently two of the thirteen stations can now communicate with the Belvedere treatment plant. However, the phone telemetry system is still in the operational mode until the system is completely operational.

Maintenance Projects
Some of the minor projects completed this month include the replacement of two

primary sludge pumps, rebuilding three of the four bio-tower pumps, and two repairs on the collector flygts in the primary clarifiers.

The Operations and Maintenance staff have conducted several system shut downs on the cogeneration system to allow the contractor to tie in to the existing gas fuel and recycled water lines.

Lead Mechanic Recruitment
An in-house recruitment is currently under way for the vacant lead mechanic position. Interviews by an outside panel of experts is being scheduled for the second week of March. The candidate that best meets the requirements of the position will be offered the position.

We plan to hire Koff & Associates, our HR consultant, to conduct an open recruitment for a maintenance repair person. This will commence after we have completed the in-house recruitment for the lead position, and should take about 2-3 months to complete.

OPERATIONS

Performance Bench Marking
Operations and laboratory staff have completed several spreadsheets that enable staff to track and monitor treatment costs and efficiency. The spreadsheet's data includes chemicals used in the various processes, including odor control chemicals, on site and in the collections system, chemicals used for disinfection/dechlorination (sodium hypochlorite and sodium bisulfite) and polymer used in the dewatering process, as well as utility costs (electrical and natural gas). All of which are tracked daily. At the end of the month the total costs are divided into the total flows to give a cost per million gallons treated.

The new laboratory spreadsheet calculates the daily performances of each treatment processes including removal percentages of the influent loadings. As a historical data base is created for the different seasons, proposed changes to enhance the process can be tracked and compared, both by cost and performance. It would then be evident, based on the results of cost and performance, whether or not it was feasible to continue with the process change.

A new polymer evaluation spreadsheet will track the performance and cost of new products as compared to our current polymer (dewatering chemical).

Operator In Training (OIT) Recruitment
The Operations department has two new Operators In Training, Virgil Sevilla and Sandy Batis. Both have prior experience and/or training in the water/wastewater fields. With their experience they should move up the certification ladder quickly.

Operator Certification
Two of our operators, Chris Finton and Jean St.Louis, will be attempting to pass the highest attainable wastewater certificate in California, a Grade V Certificate, on April 3, 2004. Another operator, Steve Kelly, will be taking the Grade III exam on the same day. Operators with a Grade III certificate or higher have the required certification levels to be lead operators and can continue to move into supervisory positions as opportunities become available.

An issue of concern in the wastewater field is the number of retirements during the next five to ten years. It is anticipated that over half of the currently certified operators will be retiring during this time frame. Having operators with the initiative to continue to upgrade their certification levels will provide the staffing needed to fill vacancies as they occur.

LAB/ INDUSTRIAL WASTE

Laboratory
Our NPDES testing for February showed no violations. Our high flow events have been balanced by periods of high quality

effluent and extra sampling, allowing CMSA to achieve monthly average permit limits. We had 100% survival of the fish in our bioassay this month.

Robert Cole attended the Annual Biosolids Conference in Salt Lake City from February 22-25. It covered the current regulations and political climate throughout the country involving land application of biosolids and disposal options. Despite the EPA's support of land application of biosolids, it is a continuing battle to win support for biosolids and land application. "Not in my Backyard" seems to be the overall message, but there are successful public outreach programs that have won state support of the programs. Each state has different regulations governing the land application and many states allow the different counties to develop their own regulations. That is where the problem lies because the counties are inconsistent, and do not follow or are uninformed of the federal regulations resulting in lawsuits and overall confusion. This is a developing topic and will continue in the future until a positive public perception of the beneficial reuse is established or there are better defined regulations with consistent state wide or national application of these guidelines and enforcement.

Reclaimed Water

Ken Feil from MMWD and Robert Cole from CMSA inspected the Marin Sanitary Service site to discuss the possibility of providing reclaimed water for dust control. Marin Sanitary is familiar with the program and their requirements for training of the drivers of the delivery truck and appropriate warning signs. We will be meeting internally to discuss the delivery system and meeting all the laboratory requirements for reporting to the regional board.

Lab Internship

The internship from Academy X at Sir Francis Drake is going well. He is working on establishing a baseline for the testing we are doing during our high flow monitoring. With this data we will be able to identify changes in the solids and the composition of the solids during the high flow periods.

LGVSD Assistance

Bob Adamson prepared the annual Pollution Prevention Report for LGVSD for 2003. It summarized their program for the year. It was reviewed by the consulting firm they had previously used and there were very few suggestions.

Industrial Waste

We are continuing our manhole monitoring of Specification Chromium Corporation until they have permanently and completely moved out of their building. We have a compositor in the manhole 24 hours a day seven days a week taking random samples. The samples we have collected recently have appeared to be free from process waste since we plugged the discharge line in their treatment room and informed them that their discharge permit was revoked. They cannot discharge any treated or process waste, and we are working with San Rafael Fire Department who is in charge of the closing process.