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# CMSA Newsletter

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Central Marin Sanitation Agency

October 2004

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## **GENERAL**

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### **County Biosolids Presentation**

Our General Manager recently gave a biosolids presentation to Supervisor Steve Kinsey and the County's Agricultural Commissioner, Stacy Carlson. The presentation covered the biosolids management practices of Marin's sanitary districts (POTWs), the benefits of land applying biosolids, the status of the statewide County movement to ban or severely restrict land application, and the future of solids management including regional solutions.

Biosolids are currently not land applied in Marin by POTWs, however, the commissioner noted that a few small communities in West Marin land apply their biosolids. The agricultural community in Marin is primarily dairy and food crops. Class B biosolids are prohibited from being land applied to these types of crops under State's General Order. There are several thousand acres of silage planted land, where Class B material can be applied. Silage is green crops, such as hay and oats, that are stored for animal consumption during the winter months.

Supervisor Kinsey and Commissioner Carlson

brainstormed many potential areas in the County for land application including County open space in non-public accessible areas and the private flat silage land. They were both open to working with CMSA in the future to explore these and other possibilities.

### **MMWD Desalination**

The pilot desalination facility contract has been awarded to Kennedy/Jenks Engineers. The kick-off meeting is scheduled for November 1<sup>st</sup> and will include discussion on a few topics of interest to CMSA, specifically, the solids deposition issue, pretreatment sludge disposal, and bioassay analyses. MMWD has requested to dispose of the sludge from their pretreatment units either in batch loads at CMSA or directly into the SRSD collection system in a continuous manner. The bioassay will use brine discharge and our effluent to evaluate any toxicity to marine life from the combined discharge. Staff will be attending the kick-off meeting to participate in the discussions.

At the last Board meeting, staff and the Commission discussed each of our concerns related to sharing the marine outfall with MMWD. These vary from engineering and operational details to specific provisions in a potential future agreement pertaining to liability and permitting. The Commission provided input on many of the

issues and asked staff to discuss with MMWD the need to enhance communication and collaboration.

Since the Board meeting, our General Manager has met with MMWD's new GM, Paul Helliker, to review the CMSA concerns and establish a working relationship. The meeting was very positive with both parties agreeing to work together and keep communications open. Paul will provide the bi-weekly MMWD Board reports relating to desalination, and we are planning to establish a routine meeting to share information and discuss developments as the project moves forward.

### **Regionalization**

The Phase I work in nearing completion. Red Oak consulting has received and reviewed our member agency's financial, administrative, technical, and operational information and procedures, and has conducted sites visits at each district and interviewed their key staff. This information and prior CMSA information, obtained during the development of the strategic business plan, will form the basis for the assessment of our current governance structure. Red Oak will identify our JPA's inherent strengths and weaknesses.

The draft Phase I report will be submitted early next week,

and Red Oak will present their findings during the November Board meeting. The workshop with the Board to select change scenarios for analysis and comparison to the "status quo" (our JPA arrangement) is scheduled for the day after the Board meeting. We are still anticipating a completion in early January 2005.

### **Property Tax Shift**

Earlier this year, as one remedy for the State's budget crisis, the State announced it was going to shift property taxes from local governments to the ERAF (education revenue allocation fund). To gain the support from the effected cities, counties, and special districts, the Governor negotiated an agreement that called for these local governments to shift \$1.3 billion of their revenue to the ERAF for the next two fiscal years in exchange for a constitutional amendment that would prevent the State from taking local dollars in the future. By moving the money from local governments to the ERAF, the State saves the equivalent amount of its general fund money. This same type of property tax shift occurred in 1992-93 with the State never repaying local government.

CASA has followed and reported on this topic over the last year as it affects 40 of CASA's members, including our member agencies. What was thought to be the final agreement required special

districts to contribute \$350 million of the \$1.3 billion; \$225 million from enterprise special districts, such as sanitation and water agencies, and \$125 million from non-enterprise districts. There was also an understanding that if the non-enterprise districts could not raise the needed amount, the difference would be taken from enterprise districts. However, a 10% cap was established that limits the maximum amount of dollars that can be shifted to 10% of revenue.

CASA just reported that due to the West Nile Virus outbreak, mosquito abatement districts and fire districts, both being non-enterprise, have been exempted from the property tax shift. This results in even higher percentage being taken from sanitary districts. The State controller estimates that the shift will be up to 70% of property taxes for districts that rely on them as a major revenue source, and 100% loss for districts where the tax revenue is less than 10% of their total revenue. In our service area, it appears that SRSD may lose all of its property tax revenue, while SD#2 and RVSD will reach the 10% cap.

### **Composting Facility Tour**

As part of the BACWA Regional Biosolids Processing Facility - Phase II work, the Biosolids Committee, including staff from CMSA, toured the City of Santa Rosa's biosolids composting facility that is adjacent to their

regional wastewater treatment plant.

The City of Santa Rosa produces about 32,000 wet tons of biosolids annually @ an average solids content of 17% out of belt filter presses. Prior to the early 1990's disposal was at a local landfill as direct disposal. The City's Utility Board then established a policy that set a City goal for 100% reuse of biosolids. This led to several management practice changes, including exploration and eventual construction of the composting facility. Currently, 40% of the biosolids are composted, 40% are land applied on a 480 acre site near our Synagro managed site, and the remaining 20% are used as alternate daily cover at Redwood landfill. Their Board is considering moving the land application to a 1,000 acre City owned parcel in response to the current County wide trend that bans the land application of Class B biosolids.

The composting facility began operation in July 1996, has a capacity of 50 wet tons per day, and sits on a 7 acre site. The compost is a combination of biosolids and a bulking agent. Tree waste and other wood material are the preferred bulking agent. Grass is avoided due to the high water content and potential to contain herbicides. The biosolids and bulking agent are mixed to achieve a 40% solids content, which averages 4.5 parts

agent to 1 part biosolids. The compost product is about 60% solids, meets Class A pathogen and volatile organic destruction levels, and is sold to local landscape companies/contractors. They are beginning to market to vineyards. The average selling price is \$9/ton, while the net composting cost averages \$ 45/wet ton. CMSA's current costs average about \$25/ wet ton.

The composting operation utilizes the in-vessel agitated bin technology, which has a smaller footprint than aerated static pile composting, and uses less energy than thermal drying (but more area). These three technologies are being considered by BACWA in the Phase II work. The facility has 12 bins that looked to be around 200' in length and 8 feet in width. Two agitators are used to mix the material. All 12 bins are completely mixed in one 8 hour shift.

The composted material is then removed from the compost building with front end loaders and stored in piles for cooling. The compost cools for about 30 days during which pathogens die off and moisture content is reduced. Testing is done for salmonella and fecal coliform.

The air from the enclosed portion of the facility is removed, filtered, and sent to an adjacent soil bed (biofilter) that is about the size of a football field. The air is distributed through a PVC

pipng system that is below about three feet of coarse soil material. No odors were apparent outside of the compost building.

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## CAPITAL/ ENGINEERING

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### New Project Engineer

Ken Katen joined our staff on October 25. Ken is a registered civil engineer with a B.S. degree in Agricultural Engineering from Cal Poly, San Luis Obispo. He worked as a design engineer and project manager for several years at Fresno Irrigation District. Following that, he worked with the Regional Water Quality Control Board, where, for the last four years, he wrote and managed NPDES permits for Marin County, parts of Sonoma and San Mateo Counties, and the San Jose/Santa Clara Wastewater Treatment Plant. Ken has also taught hydraulics, hydrology, water supply engineering and wastewater treatment for a professional engineer examination review course. Besides managing specific engineering projects, Ken will provide technical support to several ongoing CMSA committees, and he is currently working closely with the operations and maintenance staff to develop a long-range solution to our current polymer supply concerns.

### Capacity Study

Carollo Engineers has started work on the capacity management alternative study.

The hydrograph preparation and flow modeling components of the study are being developed and work on the hydraulic analysis of the treatment plant has commenced. Staff has provided nearly all the information Carollo needs for the study, which includes hourly flow data for the past few years, process operational data, and record drawings of the treatment plant.

The study kick-off meeting was held in mid-October. We have formed an internal project team to work with Carollo during the study that is comprised our general manager, plant manager, new project engineer, and process control supervisor.

We have built into the project scope a couple meetings with our member agency managers to keep them informed of the study's findings and provide an opportunity for their comments. The first meeting has been scheduled for mid-December at the regular JPA manager meeting. By that time the process and hydraulic analyses will be completed and we should know how much influent flow to expect at the plant for 1, 5, 10, and 25 year storm events.

### Cogeneration

The load test of the new engine-generator finally did take place. The results were adequate according to our design engineer, CH2M Hill. This was the third try. We had problems with the first two tests - some real and some

imagined. The real problem involved a bad voltage relay. This item was put on order and delivered overnight. The second problem involved a mistakenly low set point on the fuel intake manifold pressure. The field technician for the engine vendor, Stewart and Stevenson, obtained the actual factory test data on the engine, which indicated a much higher pressure than had been entered as an alarm set point in the computer controller. After these problems were discovered and fixed, the third test event went relatively smoothly. The engine ran at 750 kilowatts for four hours on October 12<sup>th</sup>.

Since that time we've been trying to get our contractor to proceed with the other tests. After some hemming and hawing over the pre-parallel test dry run requirement and a threatening letter citing "actual" damages, they began to respond. We are working with their electrical sub's sub-contractor to set a date for the dry run. After we are satisfied with test results from that we will proceed with scheduling the pre-parallel test for the books.

Beyond that the contractor has been proceeding with demolition on the mechanical side. They've dismantled the old heat exchangers, heat recovery system, and complex fuel piping system and they have slowly been circling in on the old engine itself.

We understand that they will deliver a formal notification of

their intent to remove the engine. We are still working to determine if the engine has any value. There has been one offer for \$5,000, but it requires us to remove and load the engine, which weighs nearly 30,000 lbs, on the back of a truck. By the time we've done that the money is used up. The interested party explained that they would only be using it for spare parts. Scrap value is a mere \$90 per ton.

We are advertising the sale of the engine and making additional queries. If there are no better offers down the road our other option is to just let the contractor have it. Then removal and disposal becomes their problem.

The value of the engine is not what it could be. One thing that inspired us to consider replacing it was that it had never received a major overhaul. The original main bearings and engine seals are still in place after 20 years. There was also some damage to the block, which we would have addressed if we had decided to keep the engine. We had been nursing the engine along with temporary fixes over the years. Then there is the pre-stratified charge retrofit which made the fuel system one-of-a-kind. That made our engine a lean burner in compliance with air board requirements, but does not have any value in today's market as the retrofit technology has been surpassed.

We've also been grappling with a backlog of change order work and compiled a list of over 70 potential changes. Many of these may never see a change order

because they were not big enough to bother with, the cause was a gray area, or certain potential claims were perceived to be offset by a potential credit. Over 20 of them have already been incorporated into the four change orders approved to date.

There was some concern about meeting emissions testing deadlines. However, as it turns out, the 60-day time frame required by the air board for getting the emissions testing done does not start until regular operation of the engine commences.

So when will regular operation commence? The dry run PPI will take place within the next 10 days. The formal PPI can then be scheduled. PG&E requires a 2-week lead to schedule the PPI, but may be able to accommodate us sooner. Late November seems likely for operating on natural gas. Then we'll start up the digester gas fuel system and train our staff, which will take a few weeks. It will be well into December before we are operating on both fuels.

#### **Primary Clarifier Coatings**

After receiving Board acceptance of the project at the October meeting, the contractor finally tidied up by hauling away 20 tons of spent media (sand blast material) and was paid. We're happy with the result and feel that getting three clarifiers done in the time frame available was quite an accomplishment - primarily for the contractor, but

also by our staff who coordinated and made preparations for the coating work. All five primary clarifiers are back on-line with weirs restored and ready for the wet weather, which arrived a bit prematurely this year.

### **Marine Outfall Inspection**

It's time once again for the annual inspection and maintenance of our marine outfall's diffuser section. This inspection will identify any problems or needed repairs since our 2003 inspection. We have again scheduled Parker Diving Service to perform the inspection work. They have done this work for us in the past and are familiar with our outfall and requirements.

They will inspect all 176 diffusers to check for damage or missing parts, and repair or replace risers as needed with parts supplied by CMSA. They will also survey solids accumulation in the downstream half of the diffuser section by opening selected risers and sounding the solids depth under each. We will use this information to update our outfall solids tracking. They will also measure the distance between the bay floor and the bottom of each check valve, identifying any risers with less than one foot clearance. Parker Diving will extend any risers with less than one foot of clearance using extensions fabricated by our maintenance group. Lastly, they will prepare a brief report summarizing the results of their inspection, riser elevation and solids surveys,

and repair work. We expect work to begin on November 4 or 5, and to take several work days, subject to weather, currents, and water visibility.

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## **BUSINESS SERVICES**

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### **Strategic Business Plan**

The implementation phase of the Agency's Strategic Business Plan (SBP) is well underway. Strategic actions have been developed for four of the six SBP Goals. The action's responsible parties, resource needs, and tentative start and completion timelines have been established. The Agency's SBP committee has been developing the actions collaboratively, with each department sharing the draft actions with staff and soliciting their input. Red Oak has been reviewing the drafts from feasible and practical perspectives.

We are planning to bring the draft final SBP to the December Board meeting for review and comment, and the final plan to the January meeting for a hopeful adoption.

**Security** As part of an ongoing effort to improve plant security, the Agency has launched two projects to better protect Agency assets and employees during non-business hours. The first and most critical project, is to extend the perimeter fence to the front entrance gate. The perimeter fence currently in place, encloses the area around the treatment plant and the backside

of the administration building, but provides no protection to the front area of the administration building. The perimeter fence project would extend the existing fence to the front entrance gate, providing complete coverage for both the treatment plant and administrative building.

The second project is to automate the front entry gate with gate operators, card access readers, remote phone, remote camera and lock box for emergency vehicle entrance. Automating the front entrance gate will provide for a more secure environment as it eliminates the need for operations staff to manually close the gate when they 'think' day-shift employees are offsite and provide for a remote method of opening the gate during off-hours. Project documents for both projects are currently being developed.

### **Safety**

The Safety Committee started the annual Plant Safety Inspection during the third week of October, and will complete the inspection during the month of November. Our Injury & Illness Prevention Plan requires us to perform this inspection to identify and correct any unsafe conditions or practices in the workplace. This required inspection serves as a valuable supplemental tool for the Agency's ongoing commitment to safety.

The Safety Committee requests a volunteer from each of the four agency departments to

provide a comprehensive perspective in evaluating workplace conditions and practices. This year the inspection team members include the Safety Director, the Assets/Contracts Manager, the Operations Supervisor, and an Electrical/Instrumentation Technician. Any safety hazards or deficiencies identified are recorded on a tracking sheet, and will be promptly corrected based on hazard and priority.

### **Audit**

The Agency's annual financial audit commenced the first week of October, with two Auditors from Vavrinek, Trine, Day coming onsite to begin the collection and dissemination of our financial information. The financial audit is the second phase of the audit. The first phase is the internal control audit, which took place in July 2004. The objective of the audit is to present an expression of an opinion by the auditors as to whether the general purpose financial statements are fairly presented and in conformity with the generally accepted accounting principles (GAAP). The results of both the financial audit and the internal control audit, will be submitted as a draft report to the Agency in November 2004 and will be presented to the Board of Commissioners during the December 2004 Board meeting. The audit report is also incorporated into the financial section of the Agency's Comprehensive Annual Financial Report (CAFR).

### **Service Rate and Reserve Planning**

A component of the Agency's budget, the 5-year financial forecasting model, is used as a tool by staff in recommending service rates to meet our financial needs and maintain adequate cash reserves. Earlier this year, during the preparation of the two year Agency budget (FY05 & FY06), the forecast illustrated that a 4% sewer service charge (SSC) increase, each year, over the next five years, would result in our cash reserve being drawn down to approximately \$300,000 in FY09.

In addition to discovering the reserve situation, staff also identified several "critical uncertainties" that may become real within the next five years, and are not currently budgeted. The Board ultimately adopted the FY05 operating and capital budgets, and approved a 6% rate increase for the 2005 fiscal year. The decision on the FY06 budget and future rate increases was postponed to a future date. Staff was asked to research the option of financing capital projects by issuing debt.

At the October 12, 2004 Board meeting, the staff presented a recap of rate/reserve scenarios previously presented as well as providing new information in the area of debt issue to fund capital projects, and the potential impacts to the service rate. The outcome of the Board meeting included the Board approving the General Manager's recommendation to reconvene the Board budget committee to further study the issuing of debt and the resulting impact to

services rates and reserve funds. Over the next several months, the General Manager and Business Services Manager will meet with the Board budget committee to analyze various service rate, reserve fund, and debt issue scenarios. Since the Agency has never issued debt, we have enlisted a financial advisor from Public Financial Management (PFM) to provide information and guidance in the area of debt issue. PFM was chosen because of its extensive experience in the area of debt issue. PFM is also the program administrator and investment advisor for California Asset Management Program (CAMP). CAMP is a California JPA established in 1989 to provide investment management services to California public entities, including CMSA.

### **Asset Management**

The Phase 1 implementation of our asset management system, the Computerized Maintenance Management System (CMMS), continues to move forward with significant progress being made. A key milestone was achieved in mid-October as the corrective maintenance function of CMMS is now in place. All new and in-progress work orders are entered and processed via CMMS. Access to the old work order system, developed in-house and served us well for many years, has been shut off.

Work continues on the other Phase 1 milestones including the implementation of the preventive maintenance

function of CMMS, which is scheduled to be in place by December 30, 2004. Much of the work required to complete the preventive maintenance function is identifying assets and their preventive maintenance procedures, and entering the information into the CMMS system. Future asset management phases will be identified, documented and prioritized as part of the Agency's strategic business plan initiative.

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## **OPERATIONS & MAINTENANCE**

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### **LET IT RAIN**

After a timid first storm in October, the last two rains have caused us to go into wet weather mode. Operations staff has responded well and put necessary equipment on line. Flows were not high enough to have to blend (<30 MGD), but the ground is soaking up, and we are ready for the next rains and blending as required. The cooling weather has allowed us to lower our Nitrate dosing (for odor control).

### **Maintenance Position**

#### **Recruitment**

Koff Associates advertised our maintenance position on the CWEA website, in Jobs Available and in some newspapers (the IJ, Contra Costa Times and the Santa Rosa Press Democrat). Although the response was less than we expected, we

have good candidates for a full day of interviews on November 1. After the interviews, Maintenance Supervisor Joe Smith will work with Koff associates to make an offer to fill the position. This person will be a timely addition to the Maintenance Crew as we head into wet weather.

### **Primary Clarifier Retrofit**

The Maintenance department completed the overhaul of the primary sedimentation tank #4. As well as replacing all four collector chains, two in each bay. The crew also replaced all the bottom track. Each bay has two tracks on which the collector flights' shoes ride as the settled solids are scraped to the sump for removal. Supervisor Joe Smith would like to thank Operations for their help and to the Maintenance Crew on this big job, including the final work done on Tuesday, October 19, during our first big rain.

### **Asset Identification**

O&M staff are working to finish identifying equipment for inclusion in the asset list of our new CMMS. Operations is confirming all valve lists and ID numbers. The I/E crew is getting all electrical equipment information as well as all instrumentation and control system equipment information. After these steps O&M will be working on the preventive maintenance tasks for all equipment and buildings.

### **Maintenance Projects**

Maintenance purchased and installed a sludge grinder in the feed line for the centrifuges. The hardened stainless steel teeth of the "Muffin Monster" grinds up wood and plastics so the process can run smoothly. This has eliminated problems of plugging for the process pumps and piping. The Instrumentation/Electric crew installed the conduit and electric controls as well as connecting the muffin monster to the process control system. This allows Operations to monitor, control and get alarms remotely. The connection to the control system includes automation, in auto the muffin monster runs only when any of the associated three pumps is turned on.

Another project to upgrade plant operation is the new DO (dissolved oxygen) instrumentation installed in aeration tanks 1 and 2. These new style DO probes are more accurate and require significantly less maintenance than the original probes. Tanks 3 and 4 were upgraded to the new probes last year and the calibration and maintenance requirements went from approximately 1 hour a week to 1 hour in two months. This reduces our costs on system maintenance and improves process control reliability.

### **Water Environment**

**Federation - WEFTEC 2004**  
 WEFTEC, the annual Water Environment Federal

Conference, was held October 2-6 in New Orleans with attendance of 15,000 wastewater professionals from around the world. Staff attended and gathered information for various O&M improvement projects. The conference included full day workshops on the Saturday and Sunday, which included "Strategic Asset Management is the Foundation of a Sustainable Organization" which defined and discussed Asset Management. The workshop had group exercises, and examples of ongoing applications in Australia, Boston and Seattle. The Seattle application is very pertinent to our work on Asset Management as it ties it to their Strategic Business Plan.

The Sunday workshop "Strategic Operations and Maintenance Do it Right and Take Control" focused on Maintenance practices. We had an exercise in three parts simulating an operating plant with process equipment failures in which performance could be enhanced by improving maintenance. These improvements looked at shop location, stores availability, PM's, emergency response based on criticality, and crew makeup. Although the exercise was done as desk top exercise, the principles of improving maintenance were validated by better production.

The Conference Opening Session recognized both the Stockholm water prize

recipients and the junior prize contestants. Keynote speakers, Dr. Peter Glieck and Professor William Mitsch, discussed the global issues of water, worldwide impacts of lack of water and sanitation, and needed future work. The session ended with a presentation of slides of water, words from song writers and accompanying music emphasizing the very positive change of environmental awareness in the industry. Information was also gathered from the multiple football field sized equipment show and the dozen's of sessions covering all aspects of our industry.

#### **California Water Environment Association - I&C and Safety**

Supervisor Kit Groves attended the Northern Instrumentation Control and Electrical Conference in San Ramon in October. Several classes were very informative for upcoming projects at CMSA. These included information on wireless security camera systems (installation and bandwidth requirements), and wireless broadband that may prove cost effective for SCADA to remote sites. The conference included a vendor show with demonstrations of some of the camera products and the controlling software. A variable frequency drive vendor indicated that they may be able to assist us with the replacement of the bad motor control center on our aeration blower #1.

Steven Kelly of Operations attended the Northern Regional

Safety Training in Woodland in October. The day focuses on the importance of safety in the work place. A recent accident at San Francisco's Southeast Treatment Plant in which a contractor had two workers injured when their work sparked a gas explosion in the biosolids hopper. There was discussion that a good job safety analysis will ensure safe work practices and conditions for plant personnel and contractors. Classes included a Survivor Safari Style safety challenge, Fall Protection how and why, and a focus on Job Safety Analysis, JSA'S, which help identify and eliminate existing hazards in the workplace, reduce occupational injuries, illnesses and fatalities. JSA is an effective tool in the workplace to encourage teamwork, to train new employees and to help elevate safety awareness in the workplace. There was also a Vendor Hall to look at and compare safety equipment.

#### **Cogeneration Coordination**

The new Waukesha cogeneration unit is creeping closer and closer to full operation. The I/E crew continues coordinating control loop testing as required. Maintenance shutdown the air and natural gas supply lines so the contractor could remove piping to the old engine. Maintenance arranged for a crane to load the carbon media in the two siloxane filter columns. What



is siloxane? Siloxane is a contaminant present in biogas and in recent years has begun to be a problem for engines because it coats combustion parts. Gas testing showed that this will be a problem for the new engine, so a siloxane filtering system was included in the project.

To insure proper maintenance of the new cogen engine, we are sending two Maintenance mechanics to the manufacturers training school. Mike Gardea completed the one week training class at Waukesha Engine Technician school. The facility is located in Waukesha, Wisconsin and this course is called Gas Engine Technology. The course included balancing the cooling system and descriptions of the lubrication, intake and exhaust, engine protection and fuel systems adjustment. Lou is scheduled to attend the class in December.

### **Manic About Mannich - The Polymer Crisis**

As discussed in last month's newsletter, our polymer supplier, Polydyne, is closing their Bay Area facility on November 1<sup>st</sup>. This news came with a big "AND" that they do not make the mannich polymer we are using anywhere else. Usually we could just advertise, do polymer trials and bid a new contract. Unfortunately, this is a bad time to be looking at other polymers (dry or emulsion) because there is a worldwide shortage of a key

ingredient of most polymers, acrylic acid. This is limiting availability of polymers and pushing the prices up: originally ~20% now 50%+. Like other agencies facing the same dilemma, Santa Rosa, Contra Costa Central Sanitation District, and Union Sanitary, we are testing other products from Polydyne and any other interested vendor. We have had some positive process results with a few products and in November operations and business services will work together to explore options for a new contract.

Listening to the polymer "talk" indicates that the shortages of the chemical feedstock acrylic acid may be resolved within two years. We expect market competition to improve in terms of supply, unfortunately the prices will stay elevated because of energy and diesel costs.

### **Union Sanitary's Dewatering Facility**

Operator Jean St.Louis is also keeping up on other agency's dewatering facilities, he attended the Union Sanitary District open house for their new centrifuge facility at the end of September. They have ANDRITZ high speed centrifuges capable of dewatering up to 175gpm of feed sludge with motor back drives (slightly different than our hydraulic backdrives. An overview of their operational data is: Torque 70-80 %; Sludge feed rate ~150gpm with

2% solids; poly feed is 14-15gpm with .5 active solution emulsion polymer; which gives a cake of 24-26% with 97-99 % solids removal.

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## **ENVIRONMENTAL SERVICES**

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### **NPDES Testing**

The NPDES testing we performed at CMSA in October was in compliance with our permit requirements. Our September testing included special semi-annual testing required under Section 13267 of the California Water Code, in which we perform sampling of all 126 priority pollutants and some additional sampling specific to sewage treatment plant effluent dischargers. We had excellent results with only three compounds being detected. The results have been submitted to the Regional Board.

Two of the compounds are expected because they are a result of the chlorination (disinfection) process (Chloroform and Bromodichloromethane), and one common solvent (Methylene Chloride) was detected at a low level. This solvent is commonly used in commercial laboratories in many organic analytical procedures and can result in false positive sample results

### **Laboratory**

We have received the results from the contract laboratories we use to perform the NPDES testing that we do not perform at CMSA. We must submit their performance evaluation study results to our regulatory agencies (ELAP & EPA) to demonstrate that the laboratories are generating accurate data. All of the testing that was performed by the contract laboratories came back as acceptable for the analyses we send out. This is excellent news and demonstrates we are using qualified laboratories.

The CMSA laboratory also passed all of the certification samples we have tested for this year and we have one last set to finish before the year ends because it was delayed as a result of quality control problems from the sample provider.

In order to maintain certification to test wastewater, environmental laboratories must analyze performance evaluation samples of unknown concentrations. We have to find out how much of a specific compound the sample contains within narrow control limits. We are required to submit our chemical testing results to the EPA and ELAP. If we achieve the high level of accuracy required we only have to analyze one set of samples for each regulator (EPA and ELAP) a year. If we do not meet the required confidence interval, we must submit a letter with the reason

why we did not achieve the required results, what we have done to correct the problem, and re-analyze additional samples. Each classification of testing such as drinking water, wastewater, and hazardous waste requires certification testing and each field of testing requires analysis of a set of samples (including chemical, bacteriological, organic, inorganic, radiological, specialized research, in both liquid and solid matrices). For CMSA, we are certified for wastewater covering chemical analysis and bacteriological analysis. Commercial labs have sets of samples for each classification and each field of testing requiring almost a continuous certification process.

#### **Bioassay Test**

We had 100% survival of the fish in our October bioassay. Every month we are required to perform a 96-hour bioassay that runs continuously from Monday to Friday. The purpose of this test is to assess the effects of our effluent on the survival of young rainbow trout. Our permit requires that we have an 11 sample median limit of 90 percent or greater, and a 90<sup>th</sup> percent survival of at least 70 percent. This means no two samples over an 11 month period can fall below 70 percent survival to meet this limit.

#### **Biosolids**

Land application of our biosolids ended early this year due to the wet weather. We normally land apply our biosolids till October 31<sup>st</sup>, but land application ended October

18<sup>th</sup> due to the early rains. During the wet weather season we send our biosolids to Redwood Landfill where it is used for alternate daily cover. We have completed all of our regulatory reporting testing for 2004, and have reported the results to Synagro, our land application management Agency, and Redwood Landfill. Our biosolids met all of the required limits for Redwood Landfill and for our land application site.

#### **LGVSD Assistance**

We have completed the comprehensive Fats, Oil, and Grease (FOG) survey for all of the Food Service Establishments (FSE) in the LGVSD service area. The survey data will be reviewed with Las Gallinas staff and compared to areas in the collection system that are experiencing blockages caused by FOG. We are waiting for follow-up data that was requested from each FSE detailing how often they pump or clean the FOG control devices (grease traps or interceptors) they have in place to prevent FOG releases to the sanitary sewer.

We also requested documentation that the FOG waste is being removed by waste haulers, and the control device design specifications. Staff is currently researching what other cities or wastewater treatment plants require for pretreatment equipment for food service

establishments. We will then discuss the results of this survey with LGVSD to assist them in determining what requirements they will establish in their service area for FOG control devices.

### **Corte Madera Lagoons**

The swimming season for the lagoons in Corte Madera is over and the water levels were reduced the week of the 18<sup>th</sup> for the wet weather season. Every year we perform weekly bacteria testing during the swimming season and report the results along with a spreadsheet summarizing the regulatory calculations to the Town's Public Works department. The Town uses the data to monitor bacteria levels to ensure that they do not exceed the levels that are considered safe for the general public to use the lagoons for recreational purposes.

### **San Rafael Flow Data**

Every year we provide San Rafael Sanitary District with their average daily dry weather flow based on our average daily flows for the three lowest months of the year. We also provide them with their total annual flow to CMSA which is a summary of their daily averages for the 365 day calendar year. The information is requested by their liability insurance carrier CSRMA (California Sanitation Risk Management Authority). This year they requested both their average dry weather flow and their average wet weather

flow. We calculated the SRSD average dry weather flow, which was 3.4 million gallons per day for 2004, and their average daily wet weather flow of 7.1 million gallons per day, which is an average of the daily flows for December 2003-February 2004.