

Montara Water & Sanitary District  
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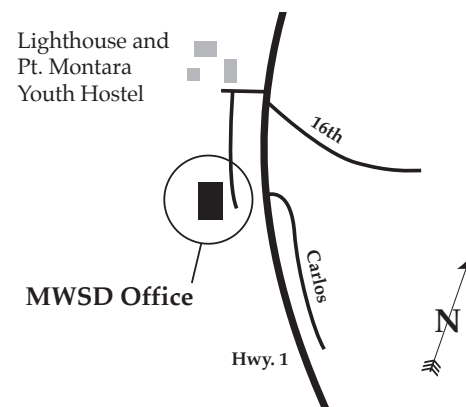
Montara, CA 94037

Board meetings are held the first and third Thursday of each month at 7:30 p.m. at the District Office at 8888 Cabrillo Highway, Montara, CA

## STAFF SPOTLIGHT

### STEVE CLARK

A New Jersey native, Steve comes to AMWS D with 20 years of experience in the construction and management of water systems. He is a certified treatment and distribution operator. Steve is very fond of the variety of responsibilities he is tasked with. From distribution to treatment to system repairs to customer service, he has a hand in all aspects of keeping our water system running smoothly. His favorite part of his job? The people he works with. Thanks Steve!



# The Lens

Issue Number 19 Fall 2011

## Montara Water and Sanitary District

### NEW WATER AVAILABILITY AND REPEAL OF MORATORIUM

**M**WSD is now accepting applications for water service connections to both existing homes and new construction.

Since the District acquired the water system in late 2003, the District has made significant efforts to reduce consumption and unaccounted-for-water within the system. MWSD has employed strategies aligned with the California Urban Water Conservation Council (CUWCC) Best Management Practices (BMPs) to achieve high levels of conservation over the past seven years. MWSD was able to reduce demand by 21% as a result of system improvements and customer conservation.

In February 2011 the Board received and adopted the first Master Plan Update that considers 6 years of operational data showing well production and water demand under MWSD ownership. The Master Plan Update determined that the District has reliable supply sufficient to meet peak day water demands and further shows significant achievements in water conservation. The District's water availability has changed favorably so that, for the first time in over 30 years, connections to the District's water system could be considered. Therefore

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*Directors Slater-Carter, Harvey, Ptacek, Boyd, and Perkovic initiate the Schoolhouse Tank project*

### SCHOOLHOUSE TANK REPLACEMENT PROJECT

**O**ne very important feature of a community water system is its ability to provide reliable pressure and quantity for both domestic use and fire flow demands. The most effective means of achieving these two factors are by the usage of water storage tanks. These water storage tanks have varying lifespans depending upon which type of materials they are constructed of and how well they are maintained over the years.

The existing Schoolhouse Tank—located at the northwest end of Buena Vista in Moss Beach—has been in service for nearly six decades. The roof of this existing tank has deteriorated over time and was found in 2003 to be in poor condition. Supports were installed by the District's predecessor to retain the structural integrity of the roof, but serve only as a temporary solution. Replacement of the tank is necessary to protect and assure the long term needs of the community it serves.

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## MWSD SETTLES LAW SUIT WITH SAN MATEO COUNTY LAFCO AND NCCWD OVER DEVIL'S SLIDE TUNNEL

MWSD's Board Members have long been supportive of the Devil's Slide bypass tunnel. In fact, some of the Directors devoted many hours of their own time (not as Board Members) to advocate the tunnel as part of the best solution for coastside traffic problems. However, in order to protect the bonds that MWSD issued to acquire its water system, MWSD filed a lawsuit against North Coast County Water District (NCCWD) and the San Mateo County Local Agency Formation Commission (LAFCo) when they ignored MWSD's request that NCCWD seek MWSD's permission under the law to serve the tunnel and the associated service building and vista facilities, which are located in MWSD's territory.

The southern portion of the tunnel and the California Department of Transportation (CalTrans) facilities are located within MWSD's jurisdiction, while the northern portion of the tunnel is in NCCWD's territory. NCCWD serves Pacifica and during the tunnel the planning phase NCCWD was selected as the water provider for the tunnel's fire protection system and for general service to the CalTrans facilities, since MWSD has no existing infrastructure in the areas to be served.

The property involved is subject to the general obligation bonds that MWSD issued to acquire and improve its water system. The California Water Code requires that when one water district desires to serve property within the territory of another water district that is subject to the tax lien that provides bond security, the district proposing to provide the service must obtain the permission of the district that issued the bonds. That allows the bond-issuing district to provide conditions that will protect the bond security, i.e., recover the taxes or other income that would be used to secure payments of bond interest and principal lost to the "outside" district.

MWSD had notified NCCWD at least as far back as 2006 about the need for permission and had raised the issue several times since then. Unfortunately, NCCWD never responded positively. When NCCWD applied to LAFCo for its permission under the LAFCo law to provide extraterritorial service, LAFCo failed to notify MWSD of the application. MWSD found out about the LAFCo meeting on the application from other sources and participated at the hearing, requesting LAFCo to condition its permit to NCCWD on NCCWD's compliance with the Water Code. However, LAFCo ignored MWSD's request and approved the application without any conditions. So as not to delay the tunnel project, our District immediately filed a lawsuit against both LAFCo and NCCWD to uphold the Water Code requirement.

The suit was recently settled by agreement among all parties. MWSD Director Scott Boyd, who was a local key supporter for the tunnel said, "I am thrilled about the positive outcome". MWSD received the sum of \$20,000, which approximates the tax revenue for the bonds on the agriculturally-zoned property that could have been lost, and granted permission to NCCWD to serve the area involved.

## WATER SAVINGS TIPS

Since MWSD acquired the water system in 2003, the District has made significant efforts to improve water conservation and system efficiencies while reducing system leaks. MWSD voluntarily implemented multiple water conservation methods including a customer rebate program, leak detection, repairs, District and consumer water audits, along with public information and educational activities. Based on the District's water supply sources to produce the same volume of high quality water and the recent conservation measures, additional supply has been made available for potential new customer connections.

What can you, the customer, do to support these water saving efforts that the District has implemented over the past 7 years?

- Take shorter showers. Each minute you cut saves 2.5-gallons.
- Run your dishwasher and washing machine with full loads only.
- Install faucet-aerators and low-flow shower heads throughout your home – available at the District office.
- Perform a home leak audit. The Orion Water Meter monitor (for rent or purchase from the District) receives a radio broadcast from your domestic meter and will alert you if there has been constant consumption over a 24-hour period – indicating a leak.
- Replace the largest water user in your home – the old toilet. Low flush toilets use less than 1.3 gallons per flush. For information on the District's rebate program visit [mwsd.montara.org](http://mwsd.montara.org).

- Replace the second largest water user in your home – the washing machine. High-efficiency washing machines can reduce water and energy by 40%. For information on the District's rebate program visit [mwsd.montara.org](http://mwsd.montara.org).

- Use a broom to clean your sidewalks and driveway instead of a hose. You can save up to 26-gallons of water.

- Consider planting drought tolerant plants in your yard or garden.

- If necessary, water your yard early in the morning, before 6 am. Avoid watering on windy days or midday when evaporation is high.

By employing these methods, you will:

### Save Money

By reducing water usage, you will reduce water and utility bills, sewer and septic costs, and state and local taxes.

### Save Energy

By reducing hot water usage and use during high demand, you will save energy costs to heat and pump your water.

### Save the Environment

By using less water, you help to ease the burden on local water supplies.

## DISTRICT BONDS UPGRADED

On October 4th, 2011, Fitch Ratings upgraded its rating for Montara Water and Sanitary District's general obligation bonds from 'AA-' to 'AA'.

This upgrade is based on an improvement in the overall performance of the water system, consistency of the District's financial performance and management, moderate debt levels, and the stability and affluence of the customer base.

Improvement in the district's water supply position allowed MWSD to lift a moratorium on new water connections that was in place from 1984 until the spring of 2011. The end of the moratorium will allow the district to offer service to a significant segment of the local population that previously lacked municipal water services, providing gradual growth in the district's water sales and increased connection fee revenues.

MWSD's water supply position has improved significantly since the district took over the utility due to conservation and acquisition of new supplies. MWSD has encouraged conservation by steepening its tiered rate structure. It increased supplies by drilling a new well that raised production capacity about 20%.

## SEWAGE OVERFLOWS

Sanitary sewage overflows (SSOs) are unintentional spills caused by blocked or restricted wastewater lines. The buildup of fats, oils and grease (FOG) roots, debris, and improperly-disposed objects into the system reduces normal water flow causing a back up in the pipe. Wastewater escapes from manholes or other outlets such as a drain in your home or business. On the Coastside, sanitary sewer lines transport wastewater and are independent of the storm drain system which carries rainfall. SSOs can occur from the sudden increase of water into sewer lines caused by a moderate-to-heavy wet weather event. SSOs can also occur from illegally-connected downspouts draining rainwater from rooftops (known as infiltration and inflow, or I&I) that adds additional water to the sanitary sewer system which would otherwise enter the storm drain system and can contribute to overflows. The risk of SSOs, as well as the conveyance and treatment costs, can also be lowered by minimizing I&I. You can prevent SSOs by regularly cleaning out pipes and maintaining your plumbing system at home. When backups or overflows occur, SAM responds immediately ~ 24 hours a day.

### What You Can Do

- Prevent FOG and by-products of cooking (including meat, lard, shortening, butter, margarine, food scraps, sauces, and dairy) from entering your drain and toilet. FOG combines with sand, grit and other debris to form grease balls. FOG can also disrupt operations and increase maintenance costs at the wastewater treatment plant.
- Keep trash and debris out of your drains and pipes. They are designed to only receive human wastes and toilet tissue. Improperly-disposed items in any toilet, sink or drain can block pipes and contribute to SSOs.
- Compost biodegradable food scraps including coffee grounds and eggshells. Minimize garbage disposal use. Install sink and shower drain strainers.
- Place a wastebasket in the bathroom to dispose of items such as disposable diapers and personal hygiene products.
- Disconnect rain gutters, downspouts, and outdoor drains from the sewer line. Large amounts of water from these connections, which are illegal and in violation of plumbing code, can cause SSOs. Redirect water onto your lawn or to the storm drain.
- Clean out your sewer lateral (a small access pipe about 4" in diameter outside your home). Replace missing or damaged caps. Check for cracks, separated joints, or sags that could cause entry of rainwater or clogging problems – particularly if you live in a low area with a high water table, and/or experience settlement on your property.
- Roots seek water sources. Avoid planting trees and shrubs with shallow, spreading root systems over or near your sewer lateral and any sewer mains located in yard easements. Root intrusion damages pipes, allows groundwater and rainwater to enter the sewer, and can cause costly ongoing backups and SSOs.
- Never try to drain flooding areas by removing sewer manhole covers in the street or covers from your cleanouts. The increased flow that would enter the sewer system will cause a problem downstream. Notify SAM at (650) 726-0124 if you observe someone doing this.
- Hire a licensed plumber to evaluate your plumbing and sewer line (lateral) for FOG, debris, root intrusion, defects, damage, improper connections or other hidden problems.

compounded by confusion over 'disposable' versus 'flushable' product claims (leading to improper disposal) has elevated the need to regularly unclog mounds of wipes from pumps and pipelines to allow wastewater to flow properly. In response, wastewater utilities are launching public education initiatives in an effort to wipe out the widespread misconception that flushing wipes down the toilet causes little harm. Without the aid of more-informed consumers, increased use coupled with improper disposal creates the potential for escalating rate fees to cover repair costs, as well as other undesirable consequences such as raw sewage overflows into homes and the environment.

Wastewater professionals agree that cloth-like wipes are indestructible. They are synthetic in nature derived from nonwoven polymers, sometimes mixed with wood pulp unlike toilet paper which dissolves quickly when wet. Because they are designed to remain intact with some of the same manufacturing properties used to produce strength and absorbency in paper towels, they are not readily biodegradable and do not break down in time to pass through the treatment process. Once flushed, wipes enter the waste stream in a compact mass that can snag and build up in pipes and equipment. Wipes are elevating costs for repairs, replacement parts, removal, additional maintenance and overtime for crews responding to slow or overflow conditions or emergencies to address clogged or blocked pipelines. While filters can catch wipes, wastewater systems are simply not designed to accept them. Wipes that slip through filters have to be removed and sent off to landfills at a cost to rate payers. The costs associated with removing wipes from SAM's treatment system can average \$200 or more per incident.

Avoid a backup in your home and protect our community's wastewater system—never flush any consumer item that is not toilet paper into the sewer system, regardless of what the packaging promises. Toss them in proper waste containers (trash, recycling or composting), and not in the toilet or down drains to protect your home, our environment, water quality, and public health, as well as to prevent the waste of water and energy resources associated with improper wipe disposal.

## KEEP WIPES OUT OF PIPES

Wastewater treatment facilities are facing an epidemic growing largely unnoticed by consumers seeking quick, easy methods for household cleaning and personal hygiene.

Over the last decade, increased introduction of single-use cloth-like wipe products in the marketplace promising 'time-saving' convenience has elevated disposable wipes to the single largest item in the "use-and-toss" trend sweeping the home-cleaning industry. Marketed as 'disposable,' or 'flushable,' wipes are a multibillion-dollar industry available for a variety of purposes from disinfecting counter tops, applying medication and keeping baby tidy with new products (such as disposable toilet brush heads on plastic wands) emerging at a rate of about 3% each year. Many are touted as safe for sewers and septic systems. Yet, their growing popularity is creating a quantifiable mess of their own.

The convenience-cloth craze is becoming a liability for wastewater systems putting a strain on treatment facilities around the world. Our "flush it and forget it" consumer habits



## REPEAL OF MORATORIUM

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The Board approved revisions of the District code that repeal the moratorium on new water connections. The timing of the repeal follows the time line laid out in the 2003 Master Plan. "Even though it seemed impossible at the time, we knew that the community support would help us to achieve this goal" Board President Slater Carter stated.

The origins of the existing water system go back to the early 20th century. In fact there are some parts of the water system that have been in operation for about 100 years. In the first 50 years of water distribution to the community, a variety of small private and public systems were created that grew together over time. However, none of these systems was engineered to serve the entire community. In addition, local geography and geology made the engineering difficult. Drastic differences in elevation, for example, pose problems to any system in a mountainous region that can be solved if the system is designed properly from the beginning. Due to elevation differences the MWSD system has to date seven major different pressure zones. Combining individual neighboring systems without the addition of correct engineering solutions was creating deficiencies that were to be solved in the future. Other complications are bordering on the Pacific Ocean, as well as the fact that, even though some areas have good water bearing underlying aquifers, others are almost completely dry or difficult to access.

In the past 50 years of development on the Coastside, MWSD's predecessors were large privately owned companies. These companies were faced with all the same challenges. Even though local staff did what they could to keep the water flowing and alert company managers of the desperate situation, the large investments that were needed to fix the system without chances of good return were difficult to justify for any investor owned company. This led to the deterioration of an already old system and eventually to significant water shortages during dry periods in the 70's. A moratorium on new connections that was voluntary and sporadic in the late 70's was mandated by the regulatory agency of the private company, the California Public Utilities Commission, in the early 1980's. Since the moratorium was established, little money and effort was put into bringing the system up to standard. The available resources were needed for urgent repairs and the rising cost of maintenance had to be recovered from the rate payers.

The Montara and Moss Beach Water Improvement Association took the lead to initiate the transfer of the water system into the hands of the public. With the assistance of State Senator Quentin Kopp, special legislation granted water powers to Montara Sanitary District. A following series of ownership transfers of the water system from Citizens Utilities to California American Water Company to Rheinisch Westfaelische Energy Consortium was the final trigger for the community to take matters in their own hands. With over 80% approval rate, the citizens agreed to a bond measure that allowed the purchase of the water system by the Montara Sanitary District, now the Montara Water and Sanitary District. The District took control over the Water System in August 2003.

By then, the system was in a state of great disrepair and needed immediate and continuing attention. A number of improvements have been made in the past 7 years; Some obvious, like the replacements of leaky pipes and the fixing of existing sources; other improvements were more technical and difficult to grasp, like system flow improvements that allow for a better distribution of water within the different pressure zones or allow sources to run longer and, therefore, produce more water. Parallel with these initial improvements, long term plans had to be developed and financing solutions considered.

In the meantime the citizens of Montara and Moss Beach did not lose interest in the local water supply situation. The change from private to public ownership created a long lasting high awareness for the general water supply situation. An astonishing decline in water usage was the result. The District received the Silicon Valley Water Conservation Award for its efforts in water conservation. This award essentially honored the community for its low daily per capita consumption of 69 gpc/d. The average consumption in California is more than double of that number. "Each individual customer that saves water has helped to lift the moratorium. It is a joy to work for a community that is responsive and appreciates our work" says General Manager Heldmaier.

To further allow new development in the District, San Mateo County, as the responsible planning agency, bypassed the local water supply shortage and issued permits to develop private wells in the urban and rural zones. This led to an unique proliferation of closely spaced private wells on the Midcoast. It is estimated that around 1000 private wells are located in the area, including El Granada and Princeton. MWSD provides sewer service to over 300 homes in

the District that are served by private wells. The problems with this well density have been long known and equally long not addressed by the responsible agency, San Mateo County. Every well in the community poses a danger for neighboring wells. Overdraft in one well can affect the entire aquifer. A well is a direct pathway into the aquifer and the contamination of one well can make an entire aquifer unusable. The drilling of new wells creates pathways for groundwater zones that previously were separated by impermeable zones. This can lead to the lowering of groundwater levels and water quality changes through cross contamination of previously separated aquifers. The immediate danger to the community through the water supply shortage was temporarily solved through the mandatory moratorium on new connections. It has been a long time since the existing water customers were affected by the water shortage. However, that danger to the community has been slowly substituted by risks resulting from the addition of more and more private wells. As the community's water provider the District has had a high priority on watershed protection in the past and has done everything possible to allow other agencies to stop endangering the community by further allowing private wells in the system. Now that MWSD is offering water connections no new private well needs to be put in service and existing ones can be abandoned.

Application Packets are available at the District offices or <http://mwsd.montara.org/>

## SCHOOLHOUSE TANK

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The Schoolhouse Tank Replacement Project portion of the Public Works Plan started on August 22nd and is well underway. This project has two phases. Phase 1 of the Schoolhouse Tank replacement project will focus on the replacement of the existing 100,000 gallon water storage tank along with the replacement of some older existing pipelines that have come to the end of their service life. Phase 2 of the project will add an additional 100,000 gallon water storage tank which will not only increase capacity for fire flow and consumer demand, but will also give our water system the flexibility needed to properly maintain these tanks.

Both new water tanks will conform to all current American Water-Works Association design and construction specifications among them being sized and constructed for seismic events. The first tank is expected to be completed by the end of this calendar year.

## RECENT WATER QUALITY IMPROVEMENTS

MWSD is served by groundwater sources from local aquifers and surface water from the Montara Creek. Drinking water treatment technologies used in the water system include conventional coagulation, filtration, ion exchange and disinfection. We test the drinking water quality for many constituents as required by State and Federal regulations. We are pleased to report the continued compliance of your local water with all federal and state drinking water regulations, as demonstrated by the Consumer Confidence Report for 2010. Over the past 6 years, the District has employed several water quality improvement projects.

An Ion Exchange System was installed at the North Airport Well for nitrate treatment. The system uses a pair of ion exchange vessels that treat the well raw water effluent using nitrate-selective resin.

A cover for the raw water tank, located at the Alta Vista Water Treatment Plant, has been replaced with a new aluminum structured cover. The tank stores untreated water from Montara Creek Diversion, which is then conveyed to the treatment plant. The new cover protects raw water from any sources of contamination from the surrounding area and sunlight, which may cause algae problems affecting water quality

A new production well was installed near the Alta Vista Water Treatment Plant. This well provides approximately 150 gallons per minute of high-quality drinking water.

System-wide main flushing is done throughout the year for multiple pressure zones in the MWSD water system. Flushing helps to maintain water quality by removing any sediment in the mains and by removing "stale" water caused by dead ends in the system.



## WATER QUALITY FLUSHING, AN IMPORTANT NECESSITY

People who live in Moss Beach have received bi-annual notification that water quality flushing of the Schoolhouse pressure zone distribution system will be taking place. Other water distribution zones get flushed on less frequent schedules. The Schoolhouse pressure zone (which runs alongside Cabrillo Highway in Moss Beach) is fed by the Airport Wells, which contain manganese. Manganese is a non-toxic mineral that can cause discoloration of fixtures and therefore needs to be removed from the system on a regular basis. Most of the water's manganese content precipitates at the well head. That means that instead of remaining in the water it forms small harmless crystals that sink to the bottom of the water main and remain there until they are removed by fast flowing water. Because of this, it is necessary to conduct fire hydrant and end of line flushing twice a year within this zone to maintain water quality.

On the outside this procedure may look wasteful and contrary to our conservation philosophy, but in actuality it is an important component to maintaining the high drinking water standards required by the California Department of Public Health. Flushing the water system regularly serves two basic purposes: removing sediment from water-lines to keep the distribution system fresh, and to test fire hydrants in order to check their functionality. Because the State requires the addition of chlorine to keep the water free of bacteriological contamination, it is necessary to de-chlorinate the discharge of the water being flushed.

When maintenance is performed, residents in the immediate vicinity of the work may experience temporary discoloration of their water. This discoloration consists primarily of harmless manganese silt and other minerals and does not affect the safety of the water. It is necessary however, to avoid washing light colored garments at this time. If you experience discoloration in your water after crews have been flushing in your neighborhood, clear the pipes in your own home by running all water faucets, starting with faucets outside first, for a minute or two.

This same idea of water line preventive maintenance is one that you should use in your own home. Your home's water heater should be drained and flushed at least once a year to keep it working efficiently and to protect the quality of water inside your home. Also, if you go out of town and there is no water use in your home for a week or more, when you return it's always a good idea to run all your faucets for a minute or so before using the water. This ensures that you do not use any stagnant water that may have developed in your home's pipes while you were away.

So the next time that you see the MWSD crew flushing in your area, please know that they are hard at work improving the water quality of our community.

## WATER QUALITY FOR EVERYONE

As some of you may know, MWSD tests its water sources and distribution system quite thoroughly. Well over one thousand samples are taken every year to insure the safety of the public drinking water supply.

However, there is a large part of our community that is not protected by our efforts. The more than 300 private well owners within our district are left to their own devices. They have no requirement for water quality monitoring, and usually don't do any testing. A recent study conducted by the United States Geological Survey (USGS) included sampling of 2,100 wells over a period of 13 years and shows that "a large number of people may be unknowingly affected" by contamination, said Matt Larsen, USGS associate director for water.

The most common contaminants found at levels above public health thresholds were nitrate (10.5 percent of wells), arsenic (14 percent), boron (8.8 percent) and uranium (16.7 percent). The District has received reports about nitrate, hydrocarbon, hydrogen sulfite, iron, and manganese contaminated private wells in Montara and Moss Beach.

In the interest of water quality for all, MWSD has decided to extend our testing services to private well owners within our community, regardless of whether they are a MWSD customer or not. Laboratory fees would have to be absorbed by the well owner although they would receive a 15% discount when the test order is sent through MWSD's Lab account. The gathering of the samples and the overnight shipping costs would also be handled by MWSD.

Please contact our operations department with any questions @ 650-728-1054.