THE MT. VIEW MONITOR

MVSD

SEPTEMBER 2018

Take a Peek Inside the MVSD Lab!

Did you know that our treatment plant treats an average of more than 1.5 million gallons of wastewater daily? This treated wastewater must meet stringent state and federal water quality standards before we release it to Moorhen Marsh. To ensure that all standards are met, we operate a laboratory that monitors wastewater throughout the treatment process including incoming sewage, the final cleaned and disinfected discharge, and the marshes and slough that receive our discharge.

Jane Rachapaetayakom working in the MVSD Lab.

Sampling and laboratory analysis is performed to collect the information we need to complete routine reporting requirements to the Regional Water Quality Control Board and the U.S. Environmental Protection Agency. The MVSD laboratory also monitors our process to ensure all treatment units are operating efficiently and to provide information to support decisions about adjustments to the treatment process. The receiving waters are monitored to safeguard those waters and confirm that our discharge is beneficial to both the human environment and fish and wildlife habitats.

The laboratory collects nearly 7,000 samples to monitor for more than 200 parameters each year. Parameters describe a discrete chemical or microbiological entity that can be assigned a value and are constituents that MVSD is required to monitor. Some parameters are monitored continuously, daily or weekly, while others are examined monthly, quarterly, semiannually or even annually. Increased monitoring is required to support pilot studies and capital improvements in the treatment plant. Constituents monitored include heavy metals, toxic organic compounds, and pathogens. Other parameters include toxicity to aquatic life, turbidity, solids, biochemical oxygen demand and ammonia.

The District laboratory is certified by the state Environmental Laboratory Accreditation Program. Maintenance of this certification requires implementation of a Quality Assurance Program, collection and retention of quality control data, maintenance of Standard Operating Procedures and periodic state inspections.

Other tasks performed by our laboratory analyst include: data entry, writing reports and supporting pollution prevention and source control efforts.

Moorhen Marsh Western Pond Turtle Enhancement Project Making Progress

MVSD is making tremendous progress on the Moorhen Marsh Western Pond Turtle Habitat Enhancement Project. Phase A is essentially complete.

Phase B began in May and construction is well underway. By early September, all the Phase B ponds will be fully de-vegetated and dewatered. This work is performed under the careful supervision of biologists who rescue fish, turtles, snakes and other animals, and keep a watchful eye on a variety of bird nests in or near the work area. Once the water and vegetation is removed, the contractor dries the soil. This is primarily accomplished by the hot summer sun and winds, with help from heavy equipment (bulldozers and excavators) that "flip" the soil, much like rototilling a garden, just on a much larger scale. Once the soil is dried, the contractor will rebuild the levees and construct the board walk, viewing platform and new dip netting areas. Construction work will continue through the remainder of 2018. For project updates visit our website at: **www.mvsd.org**.

The contractor here is fusing HDPE bypass pipe for Peyton Slough.

Installing piles in pond A2 – These piles will support the boardwalk and viewing platform.

Construction Costs Rise

Construction costs are on the rise, and this trend appears likely to continue in the near future. The national economy is strong and steel and other building material prices are increasing. Recent events in Northern California, including the reconstruction efforts spurred by the 2017 Sonoma and Napa wildfires are putting a heavy demand on construction labor and materials, also increasing costs. Not surprisingly, bids for public works construction have increased markedly and **the 2018 summer wildfires will undoubtedly impact costs further down the road**. Our project manager will continue to keep a close eye on the budget for all our construction projects and will work hard to control costs wherever possible.

Property Tax Postponement Program Available

Some utilities, such as phone service providers, are often able to provide their low income customers with what is known as a "Lifeline" rate. These are rates charged by a utility company for low income and disadvantaged residents as well as senior citizens. The rates provide a discount for minimum necessary utilities. These rates are generally lower than those paid by the majority of customers and are subsidized by other rate payers. However, not all utilities are able to offer this type of subsidized rate to low income or disadvantaged customers, and this is true for MVSD. Under Proposition 218 we are prohibited from treating any user differently than others.

Senior citizens in need of financial relief do have another option. The state of California has a property tax deferment program available for qualifying seniors. Those who qualify can apply for a deferment of all charges collected on the tax roll, including the Sewer Service Charge at the County Assessor's office.

The State Controller's Property Tax Postponement Program allows senior, disabled, or blind homeowners to defer current-year property taxes on their principal residence if they meet certain criteria, including 40 percent equity in their home and an annual household income of $35,500 or less.

Applications for 2018-19 will be available in September 2018. If you might qualify for this assistance, please call **(800) 952-5661** or email **postponement@sco.ca.gov** for more information about the State Controller's Property Tax Postponement Program.

Biotower Rehabilitation Project Nears Final Completion

MVSD staff has been making progress toward the rehabilitation of the Biotower since fall of 2015, and expects to finish the Biotower Rehabilitation Project before the end of summer 2018. The Biotower has been in service since 1988 and was in need of rehabilitation. This important component to the wastewater treatment system had a main bearing, distributor arms, and Motor Control Center (MCC) that needed replacement due to age and corrosion. The rehabilitation work had to be carefully planned so as to provide continuous compliance with discharge requirements and avoid damage to the media. The Biotower process was kept in service as much as feasible while the rehabilitation work was underway.

So what is a Biotower? The Biotower is a 100-foot diameter by 27-foot high cast-in-place concrete structure with cement masonry unit (CMU) walls. The Biotower is fitted with plastic media that is 22-feet deep and supported on precast concrete support beams tied into the base slab. The media consists of plastic material that provides substrate for the different "bugs" that are ultimately responsible for removing ammonia from the wastewater. Effluent flow from the Biofilter and the recycle flow from the Biotower are distributed over the media by rotating distributor arms. A 4 foot square by 22 feet-high cast-in-place concrete pedestal provides vertical and lateral support for the influent distributor mechanism. Both the Biotower and Biofilter are trickling filters that provide removal of Total Suspended Solids and Biochemical Oxygen Demand. The crucial function of the Biotower is ammonia oxidation, or "nitrification," which is ultimately the removal of ammonia. The bugs oxidize or change ammonia to nitrite and nitrate, thereby reducing the toxicity of the water.

New center column and distributor arms spreading wastewater over media.

Plumbers Can Help Keep Copper Out!

Copper is a commonly used metal in everyday items, including household plumbing. While copper plumbing is almost always harmless, it is possible for copper to corrode and contaminate water and that water can make its way into the wastewater we treat every day. If you need to call a plumber for repairs or a new installation please consider using a certified plumber that uses best management practices to minimize copper leakage into the wastewater stream.

Certified plumbers are taught best management practices related to system design, plumbing theories, system layouts, and tools of the trade. They also learn safety procedures, pipe identification, and trade terminology.

Copper toxicity, also called copperiedus, is a type of metal poisoning caused by an excess of copper in the body. Copperiedus can occur from eating acidic foods cooked in uncoated copper cookware, or from exposure to excess copper in drinking water or other environmental sources. Copper is also toxic to aquatic organisms at higher concentrations. At MVSD, we want to do everything we can to keep our waterways safe because they are vital to our ecosystem. This includes ensuring that our incoming wastewater is not overly contaminated with copper.

In fact, we are required by our National Pollutant Discharge Elimination System (NPDES) permit to monitor copper levels in our treatment plant discharge. MVSD's treatment process removes approximately 85% of copper from wastewater before discharging to Moorhen Marsh. Please help us keep our discharge low in copper by only using certified plumbers!

Don't Flush Those Wipes!

Did you know that "flushable" wipes are more durable than toilet paper and take much longer to break down in water? These wipes can clog sewer pipes and trap other materials, like grease and congealed cooking oil, inside pipes, causing sewer back-ups that can require expensive repairs. Sometimes these back-ups end up inside of homes! Please help keep our sewer system safe from this problem by never flushing anything but toilet paper.

September 17-23 is National Pollution Prevention (P2) Week

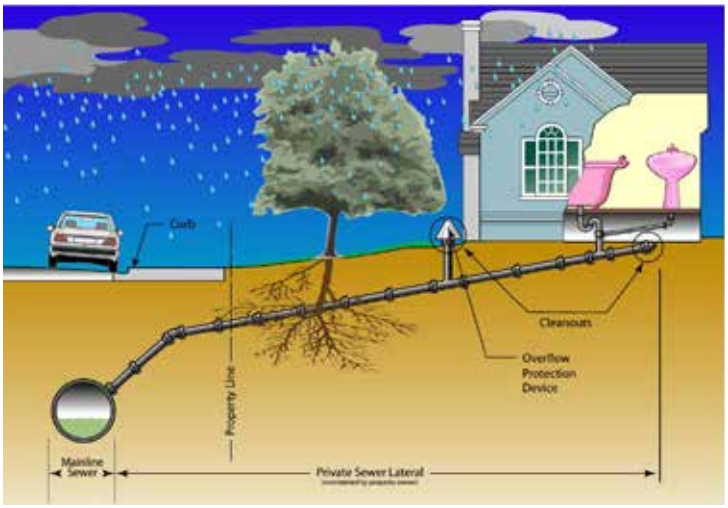
Have you seen the MVSD Pollution Prevention Billboard along I-680?

Pollution Prevention, also known as "P2", means reducing or eliminating sources of pollution, to prevent damage to the environment. Recognizing the importance of preventing pollution, MVSD partners with other agencies to promote awareness of this annual event, which focuses on reducing Household Hazardous Waste (HHW) and preventing clogs from Fats, Oil and Grease (FOG). MVSD is committed to sharing information about pollution prevention (P2) with our customers and using best practices to improve the quality of our environment. Check out our Facebook page (www.facebook.com/mtviewsd) to get the latest on P2 tips throughout the year.

Reminder To Check Your Private Sewer Laterals

If you're thinking of buying or selling a home, it's a good idea to have the private sewer laterals inspected. These pipes carry wastewater away from homes and businesses and must be properly maintained to avoid blockages that contribute to Sanitary Sewer Overflows (SSOs). The entire private sewer lateral (both upper and lower laterals) is owned by and must be maintained by the property owner. MVSD encourages homeowners to get a lateral inspection every five to ten years or whenever the ownership of a property is transferred.

The original sewer laterals in many older homes have become cracked or damaged with leaks that allow the inflow of groundwater into the public sewer main, increasing wastewater flow and the potential for SSOs. During times of drought, tree roots seek entrance into laterals often aggravating cracks and blocking flow. Nasty overflows can damage private property and require expensive repairs, so remember to schedule an inspection before you buy or sell a home.



Do you know where your private sewer lateral is?

MVSD Provides New Environmental Education Opportunities for Students

This pair of Western Pond Turtles is basking on one of the newly installed Phase A basking sites in Moorhen Marsh. (image courtesy of Patti Ransdell)

Fieldtrip Programs to Moorhen Marsh will be scheduled February – May 2019, but teachers don't have to wait for a field trip to have students participate in a quality environmental education program. Like last year, MVSD will be partnering with the Lindsay Wildlife Experience to offer one-hour classroom presentations for 3rd, 4th, and 5th graders in Contra Costa County. The presentations will be scheduled for October 2018 – January 2019 and teachers can choose from three different wetland and pollution prevention themed programs:

- **Craft a Wetland Critter**
- **Water Quality for Life**
- **Wetland Wonders**

For more information or to schedule a presentation, please contact Stephanie Seregin at **sseregin@mvsd.org**.

Canada Geese and other wildlife have returned to the recently completed Phase A construction area of Moorhen Marsh. (image courtesy of Patti Ransdell)

Get to Know the Belted Kingfisher and the Three-spined Stickleback!

The belted kingfisher is a stocky, top-heavy bird with a distinctive silhouette and rattling call. It patrols creeks, sloughs, and shorelines as it hunts for fish and crustaceans. These shy, ragged-crested birds sport a slate blue plumage; males have one blue band across a white breast, while the more colorful females display a blue and a chestnut band.

Belted kingfishers hunt over clear water that allows them to see prey below the surface. Some of their most common habitats include creeks, rivers, ponds, and wetlands. A kingfisher frequently hunts from a perch that overhangs a water body; a tree branch or telephone line works well. When it spots a fish such as a three-spined stickleback near the surface, it takes flight, dives head first, and grabs the prey in its bill with a pincer-like motion. Returning with its prize, it pounds the prey against the perch before swallowing it head first. These behaviors ensure that any spines or other sharp parts are smoothed or scraped off before swallowing.

The three-spined stickleback is native to most inland coastal waters in California. Many populations are anadromous, living in salt water systems but returning to breed in fresh or brackish water. They are very tolerant of changes in salinity and inhabit estuarine systems including McNabney Marsh. Perhaps its biggest claim to fame, though, is its elaborate breeding behavior. Males will defend a territory, build a nest to attract a female, and after she lays eggs, remain at the nest to defend the eggs and fry (larval fish). Unsurprisingly, the stickleback is a popular subject for animal behaviorists!

Both the belted kingfisher and three-spined stickleback make their home in Moorhen Marsh. Although kingfishers have been scarce since the start of construction activities for the Enhancement Project, our team of biological monitors released, into Phase A ponds, tens of thousands of sticklebacks that were rescued during the dewatering of Phase B ponds earlier this year.

In the avian world, males are usually more colorful than females but the belted kingfisher is an exception. This female is showing off her extra chestnut-colored "belt" that the males lack. (image courtesy of Tim Hopwood)

A male three-spined stickleback in nuptial colors building a nest.

Did You Know?

According to Home Advisor © the average cost for a homeowner to unplug a sewer line in our service area is $266, but it can range up to $950. Want to avoid that unnecessary expense? NEVER flush anything except toilet paper down the toilet and don't let fats, oil or grease go down the drain—these simple actions can help prevent clogged sewer lines!

MVSD

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