

Clean Water Monitor

Working Together with Our Community to Prevent Water Pollution



Your Regional Wastewater Collection & Treatment Facility
VOLUME 3 ISSUE 1

Serving Coastsiders Since 1976
SPRING/SUMMER 2008

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HOT SPOT: IMPROPER PILL DISPOSAL CONTRIBUTES TO POLLUTION

In the past, patients and pharmacists were instructed to flush old medications down the toilet as the conventional means for disposing of drugs. With 45% of Americans taking at least one prescription drug, a constant flow of old and unused medications (and their metabolites that keep on working after they disappear down drains) is being transported to wastewater treatment plants and eventually into aquatic environments and waterways. Moreover, when discarded through the trash, pharmaceuticals are also entering our solid waste system at landfills where they can seep into the surrounding water table.



See *Improper Pill Disposal* continued on page 3



Got Sewer Problems?

- Check with your neighbors. Are they also experiencing problems? If so, the cause may be a main sewer line stoppage. Call SAM at (650) 726-0124 for assistance. We are on-call 24 hours a day.
- The sewer backup problem may be caused by grease or debris buildup clogging your private lateral. Simple cleaning may resolve the problem. Back up problems can also result from tree roots or a crack in your lateral that may require more extensive repairs.
- Look in the yellow pages under "Sewer Contractors" or "Plumbers" to locate a reputable sewer cleaning company or contractor if you are unable to do the job yourself. Get several opinions and free estimates. Prices do vary WIDELY for the same quality work.



Coastsiders can conveniently and properly dispose of unwanted medications at the drop box located inside the Sheriff's Coastside Substation in Moss Beach.

What You Can Do

- Join SAM in supporting the effort to reduce and prevent "pill pollution." Take advantage of the Coastside's new public disposal site designed to accept unused, expired or unwanted prescription drugs at a central location for proper disposal. From 8 am to 5 pm Monday – Friday, Coastsiders can bring expired or other legal drugs to the San Mateo County Sheriff's Coastside Substation, 500 California Avenue in Moss Beach. Medicine should be in its original container with any private information removed. The program does not accept hypodermic needles. For more information, call (650) 573-2801.
- Half Moon Bay residents can bring unwanted medications to the Half Bay police station at 537 Kelly Avenue during business hours, 8:30 am to 5 pm. Residents can also call their Dispatch Line at (650) 726-8286 for home pick up by an officer. Please note there is not a specific time when an officer can arrive to your home to pick up. Fulfilling your request will only occur after they have responded to urgent matters during the day. For more information, call (650) 726-8288.

SMART IDEA: COASTSIDE PHARMACEUTICAL TAKE BACK PROGRAM

San Mateo County Expands Its Pharmaceutical Disposal Program to the Coastside

In 2006, the County of San Mateo began a program specifically designed to provide for the convenient, environmentally-preferred disposal of drugs and medications. Established in more than 10 cities within the County, this award-

winning program recognizes the clear demand and need for the safe disposal of unused pharmaceuticals by establishing drop-off locations at law enforcement sites. The program, which expanded to include the Coastside in early 2008, is intended

to reduce pharmaceutical pollution by removing the sources of pharmaceuticals from solid waste landfills or wastewater treatment plants. For more information about the County's pharmaceutical disposal program, log onto www.samcleanswater.org

TO GRIND OR NOT TO GRIND?

Composting Kitchen Waste Takes Load Off Wastewater System

If you're seeking other ways to reduce your contribution to the waste stream, consider the alternatives to using your kitchen's garbage disposal.

While a common modern-day convenience, in-sink household garbage disposals are connected to a wastewater treatment facility, and are not the greenest way to dispose of food waste (organics). It may seem logical that ground-up waste in wastewater returns to nature's water supply to be consumed by fish and other life forms. Yet, most present-day wastewater filtration processes remove any food



value the waste might have had, and rid the outflow (effluent) of any life forms, beneficial or otherwise.

Grinding food in a garbage disposal adds more solid waste to the incoming load at

the wastewater treatment plant. The amount of energy and water resources used to process food waste disposed in the kitchen sink is counterproductive to conservation efforts. According to *Consumer Reports*, most disposals require about two gallons of water per minute adding up to 700 gallons a year per household. Organics create higher levels of "load" received and increase energy demands at the treatment plant, including the use of a required high horsepower aerobic process and the eventual hauling of the sludge by-product to the landfill. In turn, higher loads and increased demands can raise the costs to provide wastewater treatment service.

Not surprisingly, manufacturers promote disposals as recycling waste by shredding and pulping the organic material into very small particles that are flushed down the drain. Yet, combined with fats, oils and grease, food waste released down the drain can cause clogs, backups and overflows in plumbing. Ultimately, more solid waste entering the wastewater treatment plant increases the amount of water, chemicals and energy needed to treat. Manufacturers also tout that disposals reduce waste at the landfill but the sludge produced at the completion of the treatment process is disposed at the landfill.

Households can contribute to the efficiency of the waste management system by composting. Conscientious consumers should consider the

What You Can Do

- Keep organic household waste out of the landfill through the natural recycling process of composting.
- Whether you live in an apartment or house without a yard, use a simple, compact and low-maintenance way to recycle organic household waste into nutrient-rich soil through indoor worm composting (also called vermi-composting).
- When replacing or upgrading your sink, remove the disposal from the equation altogether and leave the organic waste breakdown to your compost bin.
- For more information on home composting, log onto www.compostguide.com, or <http://www.ciwmb.ca.gov/Organics/HomeCompost/#Techniques>
- Attend workshops on backyard composting, worm composting and organic gardening techniques taught by a certified master composter or organic gardener offered by San Mateo County's Recycleworks at www.recycleworks.org

Did You Know?

- Garbage disposals were brought to market in the 1930s by architect John W. Hammes of InSinkErator, and became popular in American kitchens in the 1970s and 1980s. InSinkErator has spent considerable effort persuading many U.S. cities to rescind their regulations prohibiting food waste from entering into their municipal sewage and wastewater systems.
- In Europe, few countries allow the use of garbage disposals due to the additional load placed on wastewater treatment plants. They emphasize that sewage treatment is more expensive than the composting of kitchen waste.
- Forty-seven percent of U.S. homes had disposal units in 2007, compared to 6% in the United Kingdom.
- In March 2008, the City of Raleigh, North Carolina, placed a ban on new and replacement garbage disposals in residential and commercial establishments as part of their enhanced wastewater management plan to further prevent and minimize sewer overflows. The ordinance also encourages residents and businesses with functional garbage disposals to voluntarily discontinue using their units.

"greener" solution and most environmentally-sound method for disposing of food waste by bypassing the garbage disposal in favor of composting.

Composting is all-natural recycling. The practice saves water, reuses nutrients, protects water quality, eases pressure on landfills by keeping organic material out of landfill where methane (a global warming gas) is released, reduces the burden on the wastewater treatment system and turns kitchen food waste into a useful product that can enrich soil and promote the growth of houseplants, trees, lawns, flowers and vegetable gardens.

Ultimately, the wastewater treatment system is not an environmentally-sound substitute for the trash can or a compost pile. 💧

Source: www.PlanetGreen.com; www.InSinkErator.com; [City of Raleigh North Carolina](http://CityofRaleighNorthCarolina.com); www.compostguide.com; [California Integrated Waste Management Board](http://CaliforniaIntegratedWasteManagementBoard.org)

IMPROPER PILL DISPOSAL continued from page 1

Moving full circle, pharmaceuticals have found their way into drinking water supplies in Montana and New Jersey.

While the effects of “pill pollution” on humans are currently not fully understood, several studies have identified a demonstrated, negative affect of pharmaceuticals on certain wildlife—including fish and amphibians. Measurable concentrations of prescription and nonprescription drugs, steroids, and reproductive hormones have been detected in 80% of the 139 streams across 30 states tested by the US Geological Survey (2002). Trace amounts of prescription drugs have been found to cause adverse environmental effects including increased antibiotic resistance, endocrine disruption and abnormalities in the fish reproductive cycle. Aquatic toxicology studies conducted at the University of Georgia Athens (2004) found low levels of common antidepressants (such as Prozac, Zoloft and Paxil) cause development problems in fish, and metamorphosis delays in frogs. Scientists from the Mote Marine Laboratory in Sarasota have recently identified traces of prescription antidepressants (Prozac and Zoloft), cholesterol-lowering drugs (Lipitor) and synthetic estrogens (used in birth control pills) in the blood of young bull sharks in the Caloosahatchee River on Florida’s Gulf Coast (2007).

SMART SUMMER IDEA: CAR WASH KIT

Keep Pollution Out of Our Waterways

Car wash kits keep soap and car fluid pollutants (which damage water quality and are toxic to aquatic life) out of our waterways by re-routing wastewater to a treatment facility. If you hold fundraising, community or charity car washes, call SAM at (650) 726-0124 to borrow our StreamGuard™ SudSafe™ Car Wash Kit at *no charge*.



Pharmaceutical metabolites in treated domestic wastewater are not currently regulated but are on the list of contaminants of emerging concern. According to the Environmental Protection Agency’s National Exposure Research Laboratory, “the removal rate at the treatment plant can vary from almost zero to 100 % depending upon the active pharmaceutical ingredient. While sewage treatment plants are not equipped to filter out the hundreds of different prescription drugs that are present in wastewater, more sophisticated treatments can result in higher removal rates of drugs,” referring to the agents found in personal care products such as antimicrobial triclocarban and antibacterial triclosan. Yet these agents “can lodge in fats, tend to go into biosolids, and all drugs can end up in waterways to some extent.” Regulatory agencies are currently looking at strategies to potentially regulate these pollutants, which could result in increased administrative, technology and construction costs for wastewater treatment operators to enhance their facilities with ultra filtration-type systems such as reverse osmosis.

This increasing concern of pharmaceuticals detected in surface waters is being addressed by the State of California under SB 966 signed into law in October 2007. The details of SB 966 are featured on this page. 💧

What You Can Do

- Use a professional car wash service to prevent water pollution.
- Use a car wash kit as an alternative if a professional service is not available. The kit uses a hose that connects to a toilet, sink or drain and sends the wastewater to the SAM plant. Without using the kit, water runs off the driveway, parking lot or street into storm drains and directly into our waterways.



Did You Know?

California SB 966: Reducing Pharmaceutical Pollutants in the Waste Stream

SB 966 (Simitian – 11th District) was signed into law by Governor Schwarzenegger in October 2007. The bill:

- Allows local governments, retail pharmacies and other organizations (in consultation with various state agencies) to develop take-back programs for the proper disposal of unused or expired pharmaceutical drugs.
- Initiates a statewide process to address the growing problem of improper disposal of unused and expired medications and reduce the release of pharmaceuticals in our watersheds.
- Fills a conspicuous gap in accessibility to the proper disposal of hazardous substances by creating solution-based model disposal programs in California.
- Requires retailers to implement a convenient system to ensure safe and environmentally sound return and disposal of drugs at no cost to the consumer through informational websites or literature packaged with the drug.
- Creates a statewide program expected to launch on and after July 1st (but no later than December 1, 2008) under the direction of the California Integrated Waste Management Board, Department of Toxic Substances Control, and other state agencies.



Nationwide, the **SMART DISPOSAL™** campaign is a formal public-private partnership between the U.S. Fish & Wildlife Service,

the American Pharmacists Association and the Pharmaceutical Research & Manufacturers of America to raise awareness about the potential environmental impact from improperly disposed of medications, and to provide proactive guidance through proper disposal alternatives. The goal of the campaign is to build the social will to create a national take-back program despite the bureaucratic challenges found in differing authorities handling pharmaceuticals in every state. In October 2008, the “No Drugs Down the Drain” campaign will launch statewide in California. For more information, log onto www.nodrugdownthedrain.org

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The City of Half Moon Bay, Granada Sanitary District, and Montara Water and Sanitary District are member agencies of Sewer Authority Mid-Coastside through a Joint Exercise of Powers Agreement (JPA) formed in 1976.

SAM BOARD OF DIRECTORS MEETINGS

Fourth Monday of Each Month 7:00 p.m. at the SAM Plant

Sewer Authority Mid-Coastside

1000 N. Cabrillo Highway
Half Moon Bay, CA 94019

Phone: (650) 726-0124 Fax: (650) 726-7833
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HOT SPOT: E-WASTE, HOUSEHOLD HAZARDOUS WASTE AND OUR LANDFILL

Proper Disposal Prevents Pollution

Ox Mountain Landfill (operated by Allied Waste) is currently the only municipal repository for most of San Mateo County's solid waste. To put in perspective, trash from nearly 20 cities converges daily onto this site in Half Moon Bay. All County residents should strive to reduce the amount of solid waste they generate and be particularly vigilant about the proper disposal of hazardous waste including electronic waste, or "e-waste" and household hazardous waste (HHW). These wastes contain harmful chemicals (such as mercury or pesticides), are not suitable for landfilling, can contaminate land and water, and cannot be broken down within the landfill environment. Learn why hazardous waste should not be disposed at the landfill on the "Did You Know?" section on this page. 💧

"e-waste" is all electronic equipment that is near or at the end of its useful life, and contains hazardous materials. Common household items (such as leftover paint, dead batteries, ant and roach spray, used motor oil, and weed killer) are also considered hazardous waste, which can pollute soil and water and become dangerous to people and the environment when disposed of improperly.

CLEAN WATER MONITOR is printed on processed chlorine-free 100% post consumer waste paper to reduce dioxins in the environment.
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Did You Know?

At the landfill, biodegradable waste (i.e., paper) breaks down under oxygen-free (anaerobic) conditions producing gas and soluble chemicals which combine with liquids in the waste (i.e., rainwater) to produce "leachate" that drains while heavier waste settles to the bottom of the pile. Leachate can be hazardous by virtue of the non-biodegradable, chemical or metal-containing waste (i.e., plastics, e-waste, HHW) entering the landfill, all of which has the potential to contaminate land and water. A major means of containing leachate and controlling its migration is the use of mineral and synthetic liners that create a seal against the escape of liquid and allow the use of a special collection process. Permitted under the California Integrated Waste Management Board, Ox Mountain is inspected regularly to ensure that operations are compliant with stringent permitting conditions. Operators are also required to monitor a range of parameters relating to the site operations, including the control and treatment of leachate. Ox Mountain's leachate is collected and transported to the SAM plant for treatment under stringent permitting and operational requirements.

What You Can Do

- Do not bring e-waste or HHW to the landfill under any circumstances. Contact Ox Mountain at (650) 726-4718, or log onto www.alliedwastesanmateocounty.com for proper e-waste disposal information.
- Unlimited e-waste recycling is available for FREE at Reece Computer Systems, the first "GREENspot" on the San Mateo Coastside. Bring a wide variety of e-waste to Shoreline Station (225 S. Cabrillo Hwy, Suite 103D, Half Moon Bay, 650-726-7155) Monday-Saturday, 9 am to 5 pm. For more information, visit www.reececomputers.com
- At no charge, San Mateo County residents may drop off a range of HHW during collection events throughout the County on a monthly or quarterly basis. Call the HHW Hotline (650-363-4718) for disposal options, to schedule an appointment (required to minimize wait time), or schedule online at <http://events.smhealth.org/events>. To find out the types of HHW that are and are not accepted, log onto www.smhealth.org/hhw, or contact the County's Department of Environmental Health at (650) 372-6200.
- Ocean Shore Hardware (111 Main St, Half Moon Bay, 650-726-5505) accepts certain HHW at no charge including batteries, fluorescent lamps and latex paint.
- Contact Greg Holland, recycling specialist at Strawflower Electronics (160 San Mateo Rd, Half Moon Bay, 650-726-8181) which accepts cables, computers, cell phones, and household batteries at no charge.
- Montara Water & Sanitary District and Granada Sanitary District, working with Seacoast Disposal, schedule quarterly e-waste collection days. Find dates and locations at mwsd.montara.org and www.granada.ca.gov