

District “Detectives” Seek Evidence to Protect Water Quality

When it comes to accomplishing the District’s mission of protecting public health and the environment, some serious detective work is involved. If pollutants are allowed to slip through our treatment processes unnoticed, there could be significant consequences, including damage to the water environment and violations of our Regional Water Quality Control Board-issued permit and local water quality regulations.

Fortunately, we have our own team of talented “detective” scientists—they are the “CSI” of CCCSD! They perform hundreds of tests each day at our award-winning Environmental Laboratory to ensure the treated wastewater we ultimately discharge into Suisun Bay is environmentally safe and complies with all state and federal requirements for water quality.

The Regional Water Quality Control Board requires that we carefully monitor 126 different pollutants. Of these pollutants, 13 are metals such as mercury, lead, copper and zinc; the rest are organics and chemicals such as pesticides, dioxins and solvents.

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CCCSD Environmental Laboratory

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District “Detectives” Seek Evidence to Protect Water Quality *(Continued from page 1)*



Wastewater from the collection system is sampled before it reaches the treatment plant. CCCSD employees place a device that automatically collects water samples from the sewer every 15 minutes over a 24-hour period. The samples are tested at the laboratory for metals (such as mercury, copper, and lead), oil and grease.

Very minute traces of some pollutants, such as those found in pesticides and toxic cleaning products, can kill sensitive marine organisms in Suisun Bay and cause harm to the entire food chain.

Our chemists combine their scientific knowledge with the latest high-tech instrumentation to detect impurities in the wastewater at extremely low levels. Current water quality standards require detection levels for some pollutants at the parts-per-quadrillion range. That's like trying to find something as small as a bacterium in the distance from the earth to the moon!

As you can imagine, the laboratory instruments used to conduct these water quality tests are very sensitive. “Someone with a mercury dental filling can contaminate a sample being tested for mercury just by breathing nearby,” said Laboratory Superintendent Bhupinder Dhaliwal.

Analyses are performed on wastewater before it enters the treatment plant, at every stage of the treatment process, and after the treatment process is complete—including samples from Suisun Bay.



1 This chemist is checking the conductivity of final effluent (wastewater that has gone through the treatment process); an important measure that must be monitored during acute toxicity testing.



2 A chemist analyzes process control samples for total suspended solids as one index of the water's quality and the effectiveness of the treatment process.

“We have three main functions,” said Bhupinder. “First, we monitor the quality of wastewater being received from various industrial dischargers. Second, we do process monitoring work each day so we can determine how well the treatment processes are performing. Third, and most important, we monitor the treated water leaving the plant to ensure it complies with all state and federal requirements for water quality,” he said.

To achieve this important goal, our laboratory staff performs nearly 35,000 tests annually to quantify the amount of various constituents in the wastewater. They also conduct toxicity testing on sensitive marine species to ensure there are no harmful effects. The results of these tests provide an added measure of protection for public health and Suisun Bay.

Our “water detectives” also generate some revenue for the District by doing laboratory work for other agencies. These include Contra Costa County, Mt. View Sanitary District, and the Contra

Final effluent is analyzed for volatile organics such as benzene, chloroform, tri-halomethanes, acetone and 2-butanone.



Costa County Clean Water Program. In addition, we participate in local studies for the San Francisco Estuary Institute Regional Monitoring Program.

Another important aspect of the lab’s mission is research and development.

“What I find very rewarding is that we do a lot of research and development (R&D) at the laboratory,” Bhupinder said, “then share that information with others around the country. Our lab has an excellent reputation for R&D and is making a very big impact in our industry. It’s very fulfilling when we learn something important and then can share it with our peers.

“We’re helping not just our local environment, but the environment as a whole.”

“We’re helping not just our local environment, but the environment as a whole.”

Samples are collected of water exposed to ultraviolet light during the final phase of the treatment process and tested for enterococci bacteria to ensure successful disinfection prior to the water’s release into Suisun Bay.



Samples are collected monthly from Suisun Bay and tested for total coliform, salinity, ammonia, enterococci bacteria, and other constituents.

Infrastructure Improvements

Central Contra Costa Sanitary District regularly maintains, repairs or replaces sewer lines and other elements of our 1,500-mile wastewater collection system to ensure continuous, trouble-free service for our 462,000 customers. We do our best to minimize the inconveniences our projects cause and appreciate your understanding.

Here's a brief summary of ongoing and future major construction projects:

Diablo/Danville

Diablo Sewer Renovation Project, Phase 1, is replacing or renovating 9,500 feet of sewers in Diablo and 2,000 feet of sewers in Danville. Expected completion: February 2011.

Martinez

Martinez Sewer Renovation Project, Phase 3, is replacing or renovating 5,500 feet of sewers in Martinez. Expected completion: January 2011

Walnut Creek

The Collection System Operations Department (CSOD) Administration, Crew and Warehouse Facility Project is redeveloping the District's site at 1250 Springbrook Road. The project includes demolishing two structures, constructing a new building, and making site improvements such as grading, paving and landscaping. Expected completion: August 2011

For More Info...

Detailed maps for our projects are sent to affected residents and posted on our website, www.centralsan.org (check the links in the "Construction Zone" box in the right column of the home page).

For more information about these or other construction projects, please contact Community Affairs Representative Chris Carpenter at (925) 229-7200 or ccarp@centralsan.org.



Looking for a Sustainable Career?

It's expected that close to 50 percent of all water and wastewater treatment plant operators in the U.S. will retire within the next few years. To attract new people to the industry and help replace that retiring workforce, the Central Contra Costa Sanitary District and several other Bay Area wastewater and water agencies developed a wastewater/water operator training program that offers a Certificate of Achievement in Water/Wastewater Technology through Solano Community College and prepares students for the State-administered operator tests.

Assessment Testing Now Underway

Math assessment testing is required prior to enrollment and will be conducted for the January 2011 semester in Martinez, Pleasanton and Union City. Testing is going on now through early December. Classroom space is limited. Please register online through the Bay Area Consortium of Water and Wastewater Education (BACWWE) website, <http://www.bacwwe.org>.

Note: This is not a job placement program; the sponsors cannot guarantee students who complete the program a job as a water/wastewater treatment plant operator.

For more information, visit <http://www.bacwwe.org> or call (925) 335-7728.

FAQs

This is a new column to answer frequently asked questions about Central Contra Costa Sanitary District (CCCSD) and protecting the environment. If you have a question you'd like answered here, please let us know (see the last answer).

Q: How much does it cost to produce this newsletter?

A: The CCCSD *Pipeline* newsletter costs about 46 cents per copy to print and deliver to all residences and businesses in central Contra Costa County. We keep costs down by: having each issue written and designed by in-house staff (who also perform many other duties); having it printed by the lowest bidder; paying a service to label and mail it to all addresses in our service area at the cheapest rate (presorted bulk mail). This newsletter is

our primary mode of sharing important information and pollution prevention messages. Pollution prevention outreach is required by our National Pollutant Discharge Elimination System permit. The *Pipeline* helps us achieve our mission.

Q: Why don't you save paper and money by sending this newsletter electronically?

A: We're always seeking ways to conserve resources and save money. But because many of our customers do not use email or the Internet, sending it electronically would not work for everyone. Creating and constantly updating two separate lists (those who want it sent electronically and those who do not), and being unable to use the less-expensive "shotgun" bulk mailing service, would actually raise our costs instead of lowering them.

Q: How do I know if there's a sewer easement on my property?

A: Consult the Title Report you received when purchasing your property. Or call (925) 229-7371 and leave a message with your name, address, parcel number (if available), and phone number. Our staff will look it up and get back to you.

Q: Is it OK to rinse my paint brushes in the sink?

A: It depends on the type of paint. For latex paint, it's okay for water used to clean rollers and brushes to go down the drain. But for oil-based paint, it's not okay. Clean the brushes with turpentine; bring the turpentine (and unused paint) to the Household Hazardous Waste Collection Facility.

Q: How do I submit a question for this column?

A: Call (925) 229-7313 or send an email to blowe@centralsan.org.

Dioxin: A Pervasive Pollutant Threatening Public Health and the Environment

According to the Bay Area Air Quality Management District, wood smoke is the largest source of wintertime air pollution in the Bay Area. Did you know that burning wood in your fireplace, or trash in a burn barrel, can create smoke full of toxic contaminants such as carbon monoxide, benzene, formaldehyde, and dioxin?

It's bad enough that these pollutants get into the air we breathe, but they also get into local waters when they eventually settle back down to earth.

Dioxins are of particular concern. They have been characterized by the EPA as likely human carcinogens that increase the risk of cancer.

Dioxins are not intentionally produced: they are waste by-products of chemical manufacturing (particularly organochlorines), paper bleaching, and incineration.

You can help to reduce dioxins in the environment in these ways:

- Never burn holiday wrapping paper, glossy paper, or painted wood in your fireplace.
- Consider using manufactured logs (such as Duraflame and Java Logs) in your fireplace. They burn cleaner than wood, with substantially lower emissions of numerous air pollutants. **Note:** Follow instructions on the logs. They may not be suitable for wood stoves or fireplace inserts.

- If you must burn wood, make sure it is completely dry (wet wood burns less efficiently and causes more pollution).



Is It Time to Repair or Replace Your Sewer Pipe?

You probably don't think about your sewer line until something goes wrong: your toilet or another drain backs up, or a smelly sinkhole appears in your yard. These are signs that your sewer pipe may be clogged or broken.

Property owners are responsible for the sewer pipe (called a lateral) that goes from their house or building to the public sewer. The Central Contra Costa Sanitary District (CCCSD) is responsible for the public sewer only.

Why Do Sewer Pipes Fail?

Nothing lasts forever, and a sewer pipe is no exception. The older the lateral is, the more likely you're going to have problems with it.

Although properly installed PVC laterals can generally last for 100 years or more, older ones are usually made from clay, cast iron, or some other material with a life expectancy of less than 50 years. If

you live in a house built before the early 1970s, there's a good chance your sewer lateral is a clay pipe.

The most common sewer problem is root intrusion. Tree roots will squeeze their way into the tiniest cracks in a pipe or joint. The moisture and nutrients within the pipe enable the roots to grow so densely and matted that they can completely plug up the line; they can even cause a clay pipe to break.

Sewer pipes can also get clogged by an accumulation of grease and debris (such as disposable wipes).

Many other factors can cause sewer pipes to clog, break, collapse, or rot away.

When Does a Sewer Pipe Need to be Repaired or Replaced?

If you have a sewage backup, replacement of the whole lateral may not be needed. There may simply be a clog

that can be easily removed by cleaning the pipe, or perhaps only one or two pipe segments are broken and can be inexpensively repaired.

If you smell sewage, if there are patches in your yard that are always wet, or you see a wet sinkhole, you probably need to repair or replace your lateral.

A professional plumbing contractor can usually determine whether your lateral can be repaired or should be replaced. A video inspection of the inside of the pipe by the plumber, after cleaning to remove clogs, is the surest way to find out if the pipe joints are cracked, broken or offset, or if the pipe itself is cracked or broken.

How Much Will it Cost?

The cost to repair or replace your lateral depends on several factors. Repair or replacement could cost anywhere from \$500 to \$20,000, or more. Factors like location, accessibility, length of pipe to be

repaired or replaced, depth of the pipe, cause of failure, type of pipe material, and the number of connections or fittings all play a role in determining the cost of the project.

Permits May Be Required

Apart from routine cleaning, all other work done on a sewer pipe outside a house or building requires a permit from CCCSD before the work begins. This includes any repair, alteration, extension, or replacement of your lateral—even if the person doing the work has a building or plumbing permit from the city or county.

When the work requires excavation in a public street, an encroachment permit from the city or county will also be needed.

A licensed plumbing contractor will know what permits are required. Be sure to ask before work begins.

Do not hire a contractor who says the work can be done without a permit!

How to Hire a Professional to Do the Work

There are usually several solutions available when you have sewer problems. Most licensed plumbing contractors can repair or replace a sewer pipe; however, you should always get an estimate from at least three contractors.

It's also best to ask friends or family to recommend contractors, if possible. This is not just about choosing the lowest bidder. Replacing a lateral can be a big job, and you don't want to hand it over to just anyone. Interviewing each contractor will give you a feel for their knowledge and competence. Be sure to ask for references, and check them.

Once you have selected a contractor and the contractor has obtained a CCCSD permit, our inspectors will ensure that the job is done in compliance with CCCSD's Standard Specifications. (You



Pipe-bursting minimizes digging to repair laterals.

can review these specifications and CCCSD's Approved Materials List at www.centralesan.org under the "Residents" tab.)

Be sure to read the contractor's proposal carefully. Make sure that it clearly states all of the following: 1) a detailed description of the work to be done; 2) that all required permits will be obtained; 3) who is responsible for the cost of permits; 4) that the work will be completed in compliance with the CCCSD Standard Specifications; and 5) that the site will be cleaned up and restored.

Look for an outline of payment terms, as well. While a deposit may be required, you should never pay the balance until the job is complete. State law limits deposits to ten percent of the proposed cost of the work, or \$1,000—whichever is lower.

Repair Methods

Lateral repairs are typically performed using either the "open-cut" or "trenchless" method.

For open-cut repairs, digging by hand or with a backhoe is done to open a trench to

expose the damaged portion of the pipe. If the lateral is being replaced, the trench will run the length of the pipe from your house to the sewer main. Once the work is completed, the trench is filled in.

Pipe-bursting and lateral-lining are two forms of "trenchless" repair methods that typically cause less damage (to landscaping, pavement, etc.) than open-cut repair techniques.

With pipe-bursting, an expanding device is introduced into the defective lateral. As it travels through the pipe, it breaks it apart, pushing the pieces into the surrounding soil. A new pipe is attached to the back of the device, replacing the line immediately.

The lateral-lining method introduces a resin-soaked fiber lining into the lateral, which hardens to form a new pipe inside the old pipe.

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Do You Have an Overflow Protection Device?

The best way to prevent sewage from backing up into your home or business—from a blockage in the private sewer pipe (lateral) on your property or from the public sewer main—is to have an Overflow Protection Device which diverts the sewage onto the ground outside.

With an Overflow Protection Device installed on your lateral, if sewage ever backs up in the pipe from the direction of the sewer main, it will be released through the device into your yard rather than through drains inside your home or business.

For more information, call the CCCSD staff at (925) 229-7371.

(Not To Scale)

The property owner maintains this portion of the sewer connection

Maintained by CCCSD

Green Tips for the Holidays

Take reusable bags when you go shopping

Single-use bags, whether paper or plastic, are a waste of resources (trees for paper, fossil fuels for plastic). They can contribute to water pollution during production and landfill overload at disposal. Reusable bags reduce these problems.

Purchase reusable cloth bags, and remember to take them with you to the store by keeping your shopping list in them, hanging them by the door, or keeping them in your vehicle.

Send Greener Seasons Greetings

'Tis the season for greeting cards. But all those cards can add up to a lot of waste.

Consider sending e-cards instead of paper cards to spread holiday cheer. If you do send paper cards, look for ones made from recycled paper.

Avoid buying cards that play music or make sounds. They contain a small battery and should be treated as household hazardous waste.

For cards you receive, recycle them (except those with batteries) or reuse them to make decorations for next year.

Be Natural & Creative

Just say "No" to plastic tinsel and other non-recyclable decorations and use natural items instead: deck the halls with holly, evergreen clippings, or pine cones; use colorful fruit and veggies as centerpieces.

Get creative by recycling old calendars, posters or comics as gift wrap. Or wrap presents in reusable gift bags or items such as kitchen towels, Christmas stockings, or baskets.

When you unwrap gifts, save and reuse as much as you can.

What To Do If You Have a Sewer Problem

Although the Central Contra Costa Sanitary District (CCCSD) stays very busy maintaining approximately 1,500 miles of its public sewer lines, most sewer problems happen in the laterals—the privately owned sewer pipes (for which property owners are responsible) that connect houses and other buildings to public sewer lines. On rare occasions, a problem in the public sewer may cause an overflow inside your house—if you don't have a properly installed Overflow Protection Device (see page 6).

You don't need to know the source of the problem before calling for professional help. You have a couple of choices:

- **Call a professional plumbing or drain-cleaning service of your choice.** They will determine whether the problem is in the public sewer or your lateral. If it's in your lateral, they'll fix it. If the problem is in

the public sewer, they will contact CCCSD and our crew will respond immediately to fix the problem. In this case, CCCSD will reimburse you for the response fee charged by your plumber (up to one hour's fee).

- **Call CCCSD at (925) 933-0955 or 933-0990.** Our crew will respond immediately to determine whether

the problem is in the public sewer or your lateral. If it's in the public sewer, they'll fix it. If it's in your lateral, they'll ask you to call a plumbing service to take care of it.

If you have any questions about sewer maintenance, call (925) 933-0955. If you have questions about fee reimbursement, call (925) 229-7320.



New Device Warns of Possible Overflows

Wouldn't it be great if there were early warning systems that could somehow notify our crews of clogs inside sewer pipes before a back-up occurs?

Oh wait, there are!

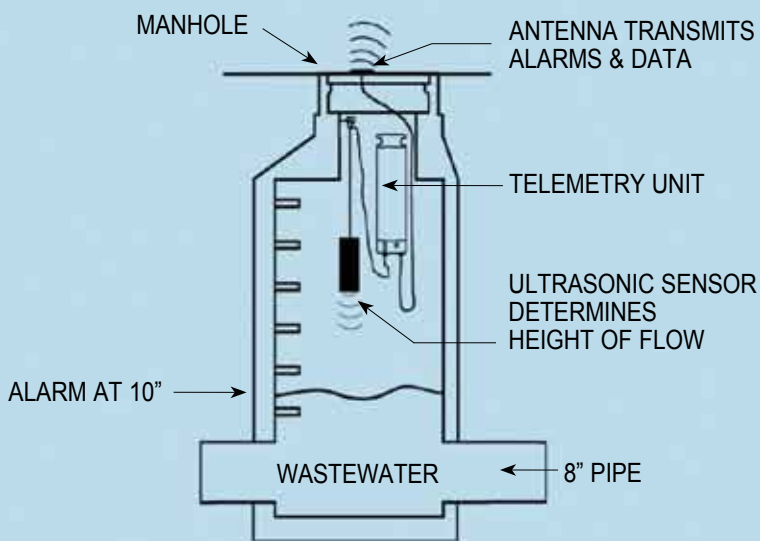
They're called remote telemetry units and are attached to the underside of manhole covers. These new high-tech devices use sonar or ultrasonic sensors to constantly monitor the water level in the sewer. If the water rises above normal conditions, the device will automatically send out an alert via text message to appropriate staff, who can then respond before an overflow occurs.

The Central Contra Costa Sanitary District recently installed six of these devices, which range in price from

about \$3,000 to \$5,000, at various locations within our collection system as part of a year-long pilot program to test their effectiveness.

On the morning of October 1, one of those devices proved just how effective they can be. It sent an alert from a sewer line in San Ramon clogged with grease and disposable wipes, enabling our crew to respond in time to clear the blockage and prevent what could have been a serious overflow into a nearby storm drain and stream.

Thanks to the device, our crew spent a few minutes clearing a blockage rather than hours cleaning up a sewer spill -- and the neighborhood and environment were protected from a sewage overflow.



Need a Guest Speaker for Your Group?

If your audience would be interested in hearing about wastewater collection and treatment, water pollution prevention, household hazardous waste disposal, or similar topics, we may be able to help! Call our Public InfoLine at (925) 335-7702 and leave a message with details about your event, and we'll do our best to provide a speaker for you (free of charge, of course).

(continued from page 7)

Is It Time...

Be sure to ask the contractor about the alternatives available for your situation.

Questions?

If you have questions about repairing or replacing your lateral, please contact the CCCSD Permit Staff at (925) 229-7371.

Don't Get Cheated!

Be aware that there are unscrupulous and unethical contractors marketing sewer lateral replacements.

They sometimes approach residents by offering to replace their sewer when the city or county is repaving, or when CCCSD or another utility is working on their street, as "part of that project." While doing NEEDED sewer replacement before a paving project is often a good idea, CCCSD never grants exclusive marketing rights for private work to any contractor.

Other times some contractors may try to pressure you into signing a contract and waiving your right to a three-day cooling off period by telling you the situation is an emergency, or that CCCSD will penalize you for not acting quickly. These statements are almost always untrue.

To avoid paperwork, they may tell homeowners not to contact CCCSD.

Always get references and multiple estimates for any sewer repair or replacement work.

If you have questions about the need for or urgency of sewer work, please call CCCSD's Inspection Supervisor at (925) 766-2433 or (925) 766-2417.

Put Your Waste Cooking Oil to Good Use!

Pouring used cooking oil or grease down a drain is wrong for two reasons:



1. It clogs up drains and sewers and can cause overflows that might damage property or harm the environment.
2. It contains unused energy which we cannot afford to waste!

Each year, the Household Hazardous Waste Collection Facility receives about 3,000 gallons of used cooking oil and grease from people who know better than to pour it down a drain. Those conscientious people are doing more than just preventing sewer clogs and overflows—they're contributing

to the production of sustainable, low-emission biofuels!

The cooking oil and grease received at the facility are provided to a Bay Area refiner for the production of biofuels.

When you have used cooking oil or grease left over after deep-frying your Thanksgiving turkey or trying to make the world's best French fries, bring it to our facility for free disposal so its energy value will live on in biofuels. Your sewer pipes and the planet will thank you.

Where to Safely Dispose of Unwanted Medications

Please DO NOT flush your drugs!

Bring unwanted medications to one of these collection sites for safe disposal:

- City of Clayton Police Dept.
6000 Heritage Trail, Clayton
- City of Orinda Police Dept.
22 Orinda Way, Orinda
- City of Concord Police Dept.
1350 Galindo St., Concord
- City of Pleasant Hill Police Dept.
330 Civic Dr., Pleasant Hill
- Sheriff's Field Operations Building
1980 Muir Rd., Martinez
- City of San Ramon Police Dept.
17011 Bollinger Canyon Rd.,
San Ramon
- Contra Costa Reg. Med. Center
Sheriff's Substation
(check with deputy on duty)
2500 Alhambra Ave., Martinez
- Walnut Creek City Hall
1666 North Main St., Walnut Creek
- Town of Danville Police Dept.
510 La Gonda Way, Danville
- City of Martinez Police Dept.
525 Henrietta St., Martinez
- Town of Moraga Police Dept.
329 Rheem Blvd., Moraga

To ensure privacy, transfer pills to a sealable plastic bag before depositing. Leave liquid medications in original bottles and place in a sealed plastic bag to prevent spills.



Please do NOT deposit medical sharps or other wastes into the collection bin. For more information about safe pharmaceutical disposal, call 1-800-646-1431 or visit www.centralsan.org.

Thank you...

For keeping hazardous wastes out of the environment!

Since it opened in 1997, residents and small businesses have made more than 290,000 trips to our Household Hazardous Waste Collection Facility, bringing in more than 22 million pounds of hazardous waste for safe disposal or recycling!

During fiscal year 2009-2010 alone, the facility took in 1,925,636 pounds of hazardous waste. This included:

- 2,227 mercury-containing thermometers
- 270,026 feet of fluorescent lamps
- 94,581 pounds of car batteries
- 60,044 pounds of household batteries
- About 100,000 gallons of paint

In addition, more than 12,000 pounds of unwanted medications were safely disposed of since February 2009 via the Pharmaceutical Disposal Program and its 11 collection sites throughout our service area (see locations on page 10).

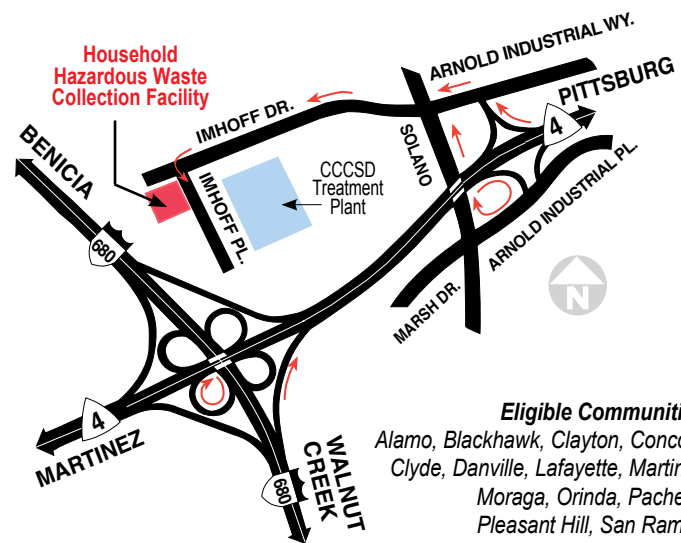


Household Hazardous Waste Collection Facility
4797 Imhoff Place, Martinez, CA 94553-4392

HOURS

Residents: Monday – Saturday, 9 a.m. - 4 p.m.
(Reuse Room closes at 3:30 p.m.)

Businesses: Monday – Saturday, *by appointment only*



Eligible Communities:

Alamo, Blackhawk, Clayton, Concord,
Clyde, Danville, Lafayette, Martinez,
Moraga, Orinda, Pacheco,
Pleasant Hill, San Ramon,
Walnut Creek and unincorporated
Central County areas.

- From Hwy. 4 take the Solano Way exit.
- From I-680 take Hwy. 4 East to Solano Way exit.





800-646-1431

About CCCSD

Our mission as a Special District is to protect public health and the environment. We do this by collecting and treating wastewater, providing recycled water, and promoting pollution prevention. Our treatment plant in Martinez collects, treats, and disinfects an average of 45 million gallons of wastewater every day. Some treated wastewater is recycled (treated further) for irrigation use on golf courses and parks; the rest is released into Suisun Bay. We also operate a Household Hazardous Waste Collection Facility.



CCCSD serves 462,000 customers within its 140-square-mile service area.

-  Sewage collection and wastewater treatment (and HHW collection service) for 326,600 people
-  Wastewater treatment for 135,380 residents in Concord and Clayton by contract and HHW collection service
-  HHW disposal only
-  CCCSD's Headquarters, treatment plant, CSO Division, and HHW Collection Facility are located in Martinez

Where to Call...

General information	(925) 228-9500 or www.centralsan.org
Sewer overflows	(925) 933-0955 or 933-0990
Treatment Plant InfoLine (Report Odors)	(925) 335-7703
Household Hazardous Waste InfoLine	(800) 646-1431
Sewer connection permits/Permit Counter	(925) 229-7371
To report illegal discharges into sewer system	(925) 229-7288 (during business hours) (925) 229-7214 (after hours)
Source Control	(925) 229-7288
Job Hotline	(925) 229-7109 or www.centralsan.org
Student Education Programs	(925) 229-7310 or www.centralsan.org
Public InfoLine	(925) 335-7702 or www.centralsan.org

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Board meetings are open to the public and are held on the 1st and 3rd Thursday of each month at 2 p.m. in the CCCSD Board Room, 5019 Imhoff Place, Martinez.
James M. Kelly, General Manager


The Central Contra Costa Sanitary District PIPELINE

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Michael Scahill, Editor • **Bonnie Lowe**, Writer
Son Nguyen, Graphic Designer

View archived issues online at www.centralsan.org

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