



#### COUNTY MAINTAINED DISTRICTS:

Burlingame Hills Sewer Maintenance District  
Crystal Springs County Sanitation District  
Devonshire County Sanitation District  
Edgewood Sewer Maintenance District  
Emerald Lake Heights Sewer Maintenance District  
Fair Oaks Sewer Maintenance District  
Harbor Industrial Sewer Maintenance District  
Kensington Square Sewer Maintenance District  
Oak Knoll Sewer Maintenance District  
Scenic Heights County Sanitation District

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For more information, contact the Public Works Department at (650) 363-4100, between 8 a.m. and 5 p.m. Monday through Friday, or go to [www.co.sanmateo.ca.us/sewers](http://www.co.sanmateo.ca.us/sewers)

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## Understanding Your Sewer System and What You Pay For

Para obtener una copia de este folleto en Español, favor de llamar al (650) 599-1443



### What Is a Sanitation/Sewer District?

A sanitation/sewer district is a Special District formed for a specific area to provide sewer service to the properties within the district boundary. Each sanitation/sewer district has its own budget with money collected from the district and spent within the district. While the Board of Supervisors serves as the Governing Board for the sanitation/sewer districts operated by the County of San Mateo, the districts are separate legal entities from the County of San Mateo.



### What Is Sewer Services?

Sewer service includes sewer system operation and maintenance, emergency response, construction of new sewer pipes or replacement of sewer pipes within the districts, and complying with regulatory requirements. The districts are also responsible for paying its share for sewage treatment and disposal, construction projects that carry sewage from the districts to the wastewater treatment plant and construction projects at the treatment plants. The wastewater generated from properties with the district is carried in the district sewer pipes to the sewer pipes maintained by the downstream agency, and travels to the wastewater treatment plant.

This information is being provided to inform you of the importance of a reliable sewage system. Proper maintenance of the sewer system helps protect the environment, minimizes the chances of sewer backups or service disruptions, and minimizes overall sewer system costs.



## Why Is This Important to Me?

- You pay for sewer service
- Sewage systems protect public health and the environment (bay, beach, and aquatic life)
- Your habits can affect the environment and how much you pay for sewer service
- Sewer service charge rates have been driven upwards by a variety of factors, including more stringent state and federal water quality requirements and aging sewer systems.



## What Is the District's Role?

The County of San Mateo manages 10 sewer districts that include approximately 150 miles of sewer pipes. Shown below in parenthesis is the approximate number of miles of sewer pipes maintained per district.

- 1) Burlingame Hills Sewer Maintenance District – (7.2 miles)
- 2) Crystal Springs County Sanitation District – (18.9 miles)
- 3) Devonshire County Sanitation District – (4.5 miles)
- 4) Edgewood Sewer Maintenance District – (0.3 miles)
- 5) Emerald Lake Heights Sewer Maintenance District – (29.0 miles)
- 6) Fair Oaks Sewer Maintenance District – (81.3 miles)
- 7) Harbor Industrial Sewer Maintenance District – (1.3 miles)
- 8) Kensington Square Sewer Maintenance District – (0.8 miles)
- 9) Oak Knoll Sewer Maintenance District – (1.5 miles)
- 10) Scenic Heights County Sanitation District – (2.5 miles)

The district contracts with the neighboring cities or towns (also called downstream agencies) for the use of their pipes to transport sewage to the wastewater treatment plants. The County does not own, operate, and maintain sewer laterals or wastewater treatment plants.

To see a map of the 10 districts, go to [www.co.sanmateo.ca.us/sewers](http://www.co.sanmateo.ca.us/sewers)



## What Happens After You Wash the Dishes, Take a Shower, or Flush the Toilet?

The wastewater goes through the pipes in your house or business, then flows into a sewer lateral and drains into the district sewer pipes (typically located in the street or an easement). It travels from the district sewer pipes to the pipes maintained by the city or town located between the district and the treatment plant. Eventually, the wastewater flows into a wastewater treatment plant to be cleaned before being discharged into the Bay.

See Image #1.

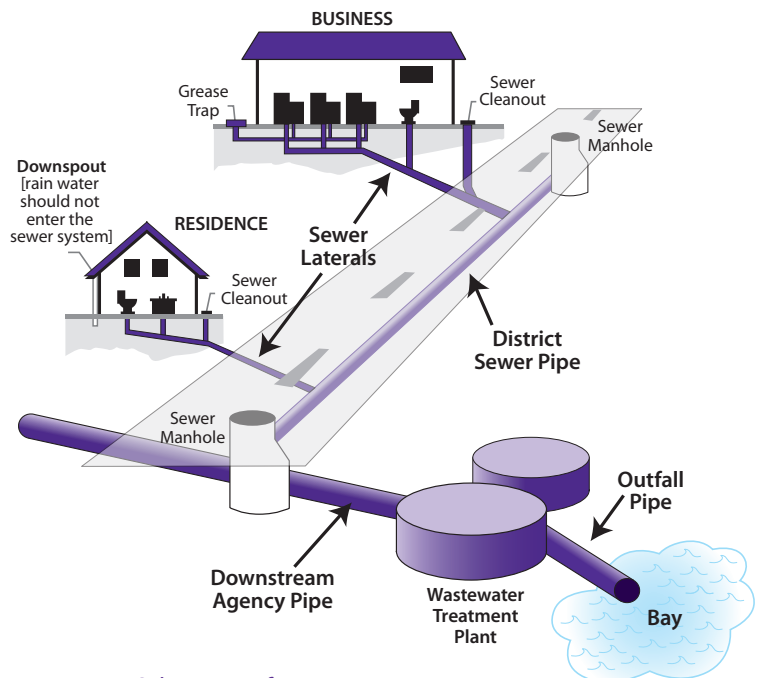


Image #1 – Schematic of a sewer system



### What Is a Wastewater Treatment Plant?

A wastewater treatment plant is a facility that receives sewage from the surrounding communities and uses a series of treatment stages to clean the water so that it can be safely released into the Bay. A typical wastewater treatment plant treats millions of gallons of wastewater per day. The plant operates 24 hours a day and 365 days per year. On average, a drop of wastewater will spend about 15 hours traveling through the plant while undergoing treatment.

To learn more about the treatment process, check out the following websites. These websites contain interactive graphics and brief descriptions of stages the wastewater goes through during the treatment process.

<http://www.wef.org/apps/gowithflow/theflow.htm>  
(from Water Environment Federation)

<http://www.cityofsanmateo.org/dept/wwtp/howitworks.html>  
(from City of San Mateo)

[http://www.ebmud.com/wastewater/online\\_tour/](http://www.ebmud.com/wastewater/online_tour/)  
(from East Bay Municipal Utility District)



### Why Does the System Work This Way?

Raw sewage is carried to the treatment plant in sewer pipes to prevent contact with humans or animals. Raw sewage contains harmful bacteria and viruses (fecal coliform, e-coli, etc.) that can cause diseases such as, hepatitis, giardiasis, and gastroenteritis. The purpose of keeping raw sewage in the sewer pipes and adequately treating it is to protect public health and the environment.



### What Happens Next?

Sewage from all districts flows through the downstream agency's pipes to the wastewater treatment plant. All districts have agreements with the downstream agencies to pay for the use of their pipes and treatment. These costs are based on flow rates from the districts or per connection based on usage type. The table below summarizes the corresponding downstream agency and treatment facility for all districts:

DISTRICT	DOWNSTREAM AGENCY	TREATMENT PLANT OWNER
Burlingame Hills Sewer Maintenance District	City of Burlingame	City of Burlingame
Crystal Springs County Sanitation District	Town of Hillsborough and City of San Mateo	City of San Mateo
Devonshire County Sanitation District Harbor Industrial Sewer Maintenance District Scenic Heights County Sanitation District	City of San Carlos	South Bayside System Authority (located in Redwood Shores)
Edgewood Sewer Maintenance District Fair Oaks Sewer Maintenance District Kensington Square Sewer Maintenance District Oak Knoll Sewer Maintenance District	City of Redwood City	
Emerald Lake Heights Sewer Maintenance District (Zone 1 and 2)	City of San Carlos and City of Redwood City	



## What Causes Sewer Overflows?

### FATS, OILS, AND GREASE

Fats, oils, and grease aren't just bad for your arteries; they are also bad for your sewer pipes. One of the causes of sewer overflows is a sewer pipe blocked by grease. Fats, oils and grease get into the sewer pipes when washed into the plumbing system from kitchen sinks as well as from poorly maintained grease traps in restaurants and other businesses. Fats, oils and grease stick to the insides of sewer laterals and sewer pipes. Over time, fats, oils and grease can build up and block the entire pipe.

See Image #3, #4.

Fats, oils, and grease are commonly found in:

- Meat fats
- Food scraps
- Baking goods
- Lard
- Butter and margarine
- Sauces
- Cooking oil
- Shortening
- Dairy products



## What Are Some of the Risks As the Sewage Travels Along Its Way?

As the sewage travels from your home or business to the treatment plant, sanitary sewer overflows can occur, see Image #2. In an overflow, raw sewage leaves the sewer pipe and flows on the ground surface. If not captured, sewer overflows can flow into storm water systems, which collect storm water from streets and roof gutters that flow directly to the Bay without any treatment. Sewer overflows can cause health hazards, damage to private property, pollution to the environment, and violate the Federal Clean Water Act.



Image #2 – Wastewater flowing out of a sewer manhole cover



Image #3 – Grease inside of sewer pipe



## Why Should You Care About Sewer Overflows?

Sewer overflows are messy and costly to cleanup. They are a source of pollution to surface water (creeks, lakes, bay, etc.) that can threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. In addition, the district may have to pay fines if raw sewage is released to the environment and these costs will be passed along to you.



Image #4 – Grease stuck to the inside of sewer pipe

### ROOTS

Tree roots can cause sewer overflows. Hair-like roots can get inside the sewer pipes through small cracks or openings in the pipes in search of water. Once inside a sewer pipe, roots have an ideal environment in which to grow, and can fill and block the pipe. *See Image #5, #6.*

Roots damage sewer pipes in the same way that they can lift and break sidewalks. They can separate and crack sewer pipes. This damage to sewer pipes is difficult to detect and expensive to repair.

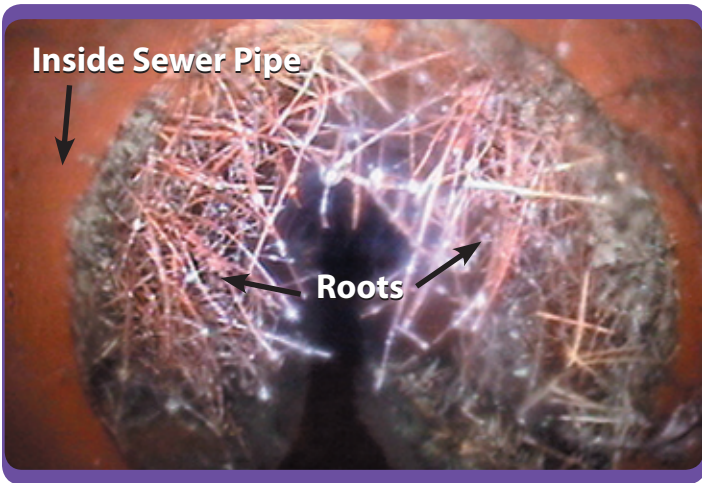


Image #5 – Roots partially blocking sewer pipe

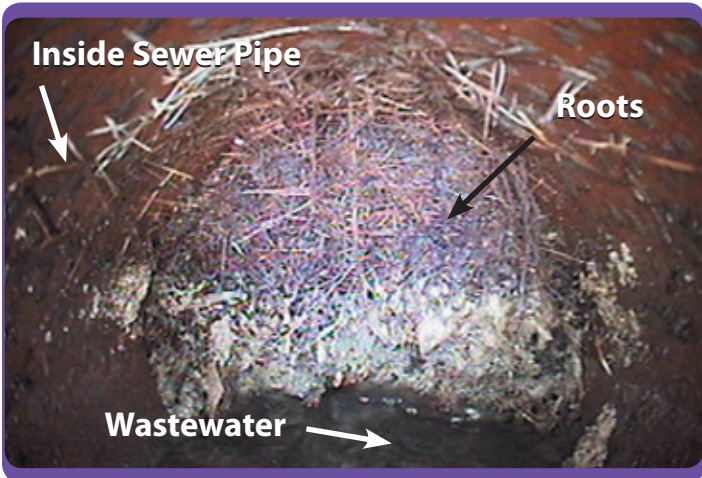


Image #6 – Roots blocking the entire sewer pipe

### INFLOW

The sewer system is designed to carry sewage, not storm water. Inflow occurs when storm water or rainwater enters the sewer pipes through illegal plumbing connections and defects. Illegal plumbing connections can be roof downspouts, sump pumps, and outdoor floor drains connected to the sewer lateral. Defects include missing or broken cleanout caps and broken cleanouts. When there is too much water in sewer pipes, sewer overflows can occur.

Inflow also overloads the treatment plant with extra water to treat, resulting in higher treatment costs, which, in turn, results in higher sewer service charge rates.

### DETERIORATING PIPES

The average age of the district sewer pipes is over 60 years. These aging sewer pipes have cracks and openings that allow groundwater to enter the sewer system, also called infiltration. *See Image #7.* Similar to inflow, infiltration also contributes excess water to the sewer pipes and can cause sewer overflows.

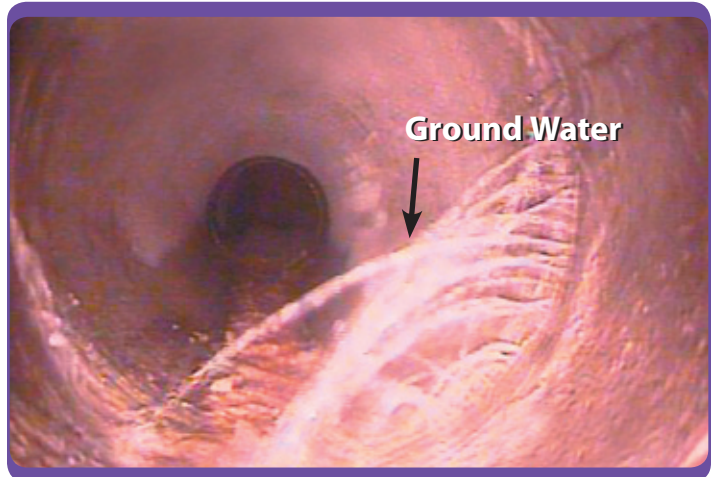


Image #7 – Groundwater entering a sewer pipe through cracks



## What Can I Do to Help Prevent Overflows?

Here is a list of Do's and Don'ts to keep the sewer pipes working properly.

### DO:

- Collect grease in a container; let it solidify and dispose of it in the garbage. Used cooking oil can be recycled. For more information, visit the County RecycleWorks website at: <http://www.recycleworks.org> or call 888-442-2666.
- Place food scraps in the garbage.
- Place a wastebasket in the bathroom to dispose of trash.
- Plant trees away from sewer pipes.
- Disconnect roof downspouts, sump pumps, and outdoor floor drains from sewer laterals.
- Notify the County immediately at (650) 363-4100 if you see any Sewer Overflows. *See Image #10.*

Sewer pipe defects such as broken and collapsed pipes can block the sewage from flowing and cause sewer overflows. *See Image #8.*

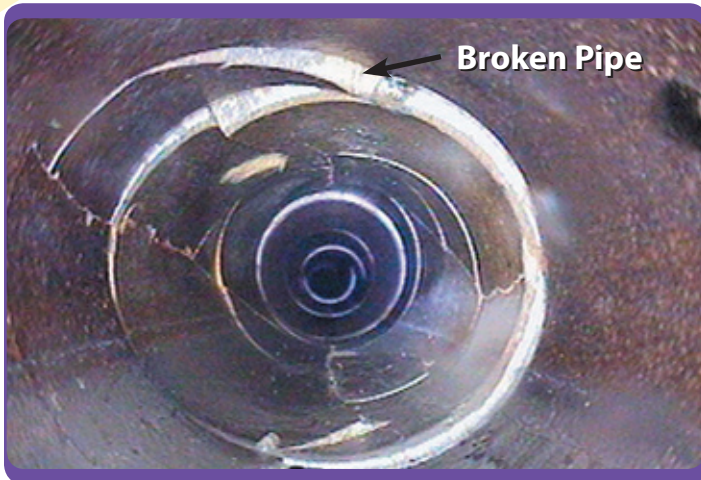


Image #8 – Broken pipe

### FOREIGN OBJECTS

Sewer systems are designed to handle three types of wastes: wastewater, human body waste, and toilet paper. Sewer Overflows can be caused by foreign objects such as facial tissue, baby wipes, paper towels, feminine products, rags, diapers, wood, toys, plastic objects, gravel, grass cuttings, and other items that do not belong in the sewer pipes. *See Image #9.*



Image #9 – Debris removed from a sewer pipe



Image #10 – Sewer overflow at sewer manhole

### DON'T:

- Pour fats, oils and grease from cooking down the drain.
- Use the sewer to dispose of food scraps.
- Use the toilet as a wastebasket for trash.
- Plant trees with shallow, spreading root systems near your sewer lateral.
- Connect roof downspouts, sump pumps, and outdoor floor drains to your sewer lateral.
- Let facial tissue, baby wipes, paper towels, feminine products, rags, diapers, wood, toys, plastic objects, gravel, grass cuttings, and other items go down the drain. These materials can cause sewer overflows and damage treatment plant's machinery, causing breakdowns or loss of treatment efficiency.



## ***What Is the District Doing to Prevent Sewer Overflows?***

The County performs routine preventative maintenance on the sewer pipes to keep the raw sewage flowing and protect the environment. The district work includes:

- Cleaning pipes
- Removing roots
- Responding to emergencies (overflows and backups)
- Repairing and rebuilding the sewer system
- Providing customer service
- Evaluating pipeline condition
- Maintaining records

The district provides staff 24-hours a day, seven days a week to respond to Sewer Overflows. If you see or suspect an overflow, call (650) 363-4100 to report it.



## ***What Else Is the District Required to Do?***

The State Water Resources Control Board (State Water Board) and the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) has mandated that agencies operating and maintaining sewer pipes prepare a Sewer System Management Plan. The Plan must describe what the agencies are doing to effectively manage their sewer systems. To see the elements of the Plan, go to [www.co.sanmateo.ca.us/sewers](http://www.co.sanmateo.ca.us/sewers)

The State Water Board and Regional Water Board also require agencies to report and keep track of all sewer overflows.

The district is working to comply with all the new requirements of the State. Non-compliance may result in fines and lawsuits against the district. Recent lawsuits brought by environmental groups against the City of Richmond and West County Wastewater District resulted in over \$1 Million in legal fees. The Regional Water Board imposed a \$516,000 fine to the City of South San Francisco in 2006, for sewer overflows and a \$626,000 administrative civil liability to the City and County of San Francisco in an impending order. Your district seeks to avoid such penalties.



## ***What Are the Downstream Agencies Doing to Maintain the System?***

The downstream agencies own separate sewer systems that carry sewage from their communities to the treatment plant. They are also performing work to maintain, repair, and replace their sewer pipes to comply with the State Water Board and Regional Water Board mandates.



## ***How Do the Activities of the Downstream Agencies and Treatment Plants Impact My Sewer Bill?***

The district's agreements with the downstream agencies require that the district pay for the use of their facilities to transport and treat the district's sewage. These costs include operations and maintenance, and capital improvements on the sewer systems and wastewater treatment plants.





## Other Ways You Can Help Protect the Environment

### DON'T DUMP YOUR MEDICINES DOWN THE DRAIN!

Treatment plants are designed to remove biological waste, not pharmaceuticals.

Rather than dumping unwanted drugs down the toilet or sink, drop them off at any of the locations shown on *Image #11*. You can also leave them in their original containers and tightly seal the safety caps. Then place them in the garbage.

**STOP!**  
**Don't flush your old medications!**

- Protect the environment!
- Prevent overdoses & errors!
- Keep drugs away from children!

Find confidential drop-off containers at Police Departments in:

- Atherton
- Belmont
- Burlingame
- Daly City
- Hillsborough
- Pacifica
- San Bruno
- San Mateo
- South San Francisco

and the  
**San Mateo County Sheriff's Office**

For more information, please call the Office of Supervisor Adrienne J. Tissier, (650) 363-4572

Image #11 – Locations to drop-off medications

### DON'T DUMP TOXIC OR HAZARDOUS MATERIALS DOWN THE DRAIN!

Whatever goes down the sewer pipes end up at the treatment plant. Treatment plants are not designed to remove certain chemicals and metals. So, when toxic or hazardous materials are dumped or rinsed down household drains, they pass through the treatment plant untreated and end up in the Bay where they may threaten aquatic life.

In addition, toxic or hazardous materials can kill the living microorganisms that the treatment plant relies on to treat sewage. Toxic or hazardous materials also affect the disposal costs for the treatment plant.



## Other Sewer Information

Here are some fun websites to learn more about sewers and protecting the environment for children and adults:

- <http://www.sandiego.gov/mwwd/kids/index.shtml>
- <http://www.metrocouncil.org/environment/Kids/>
- <http://www.wef.org/apps/av/aqua.html>
- <http://www.epa.gov/kids/>
- <http://www.sacstormwater.org/KidsPage/KidsPage.htm>



## How Am I Paying For Sewer Service?

You pay for sewer service through a sewer service charge. The districts levy the charges on your tax bills. It is NOT a tax, but a fee that you pay for the service just like your other utility bills. The property tax bill is a cost effective way to collect these fees. The fees collected by the district and not spent remain with the district, as each district is a separate "stand alone" district with separate budgets.



## What Does Your Sewer Service Charges Go Toward?

- Sewer system operation and maintenance
- Emergency response 24 hours a day, 7 days a week
- Sewage treatment and disposal
- Construction of new sewer pipes and treatment facilities
- Compliance with new regulatory requirements
- Improved public health
- A cleaner environment
- The ability to preserve our water resources for future generations.



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