

110 Years

CAWD Connections



"Protecting your health and the environment since 1908"

CONSUMER NEWS FROM YOUR CARMEL AREA WASTEWATER DISTRICT

FALL/WINTER 2019

CAWD news roundup

Keeping our system safe and efficient

Your Carmel Area Wastewater District (CAWD) is dedicated to maintaining our community's treatment plant and collection system in the most efficient, safe, and cost-effective manner possible. We achieve this by adhering to best practices for operations, maintenance, management, and transparency. Here are just a few updates on our ongoing mission to protect human health and the environment, while keeping user fees as low as possible.

Grant safeguards Hatton Canyon

We're happy to report that CAWD has secured a sizable flood mitigation grant to upgrade infrastructure in Hatton Canyon and protect it from creek overflows during the rainy season. The \$1,050,000 grant will pay for 75 percent of the project, which otherwise would have to be covered by sewer user fees. CAWD will replace 5,500 feet of old clay sewer mainline with a closed, seamless HDPE high density polyethylene plastic pipeline anchored into upgraded manholes for the entire length of the canyon. The project will protect the pine forest, grassland, and wetland meadow along the popular Hatton Canyon Trail.



MICROORGANISM OF THE MONTH

MEET "EUGENE" *EUGLENA!*

It's a plant! It's an animal! Actually nobody can agree, so "Eugene" *Euglena* is currently classified as a "protist," along with the thousands of other life forms that don't fit our convenient taxonomic labels. Eugene makes his own food through photosynthesis like a plant, but like an animal he also eats other microbes to get nutrients.

Multitudes of *Euglena* spiral through lakes, ponds, puddles, and the clarifiers at the CAWD treatment plant, propelled by their whip-like flagella. At the plant, Eugene is one of the countless microorganisms who propagate in our biological system, cleaning our wastewater. They eat algae, amoebas,

paramecia and other microbes, which in turn eat the bacteria in the wastewater we flush from our homes. (Cont. on flip side)

***Euglena*, often called an algae, has chloroplasts (the green oblongs) to photosynthesize food like a plant; but it also hunts and eats other microbes like an animal.**

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Sewer system audit underway

CAWD is continually developing and refining processes and practices to improve management of our wastewater collection system, comprised of 83 miles of main lines and seven pump stations. In accordance with California State Water Resources Control Board regulations, we self-audit our Sewer System Management Plan (SSMP) biennially, and perform a comprehensive update every five years. Currently, we have hired Causey Consulting to perform our five-year audit, which evaluates management goals, emergency response plans, design and construction standards, employee training, our fats, oils, and grease (FOG) control program, and much more.

Our SSMP ensures (Cont. on flip side)

CONTINUAL QUALITY CONTROL
CAWD inspectors Mark Napier (foreground) and Robert Bowman check a pump station on Scenic Drive in Carmel. Staff perform on-site inspections of all seven CAWD pump stations multiple times per week, in addition to our continual remote monitoring of sewage flow, wet wells, and pump data.

WE'VE GOT YOUR BACK

Free inspections: call CAWD first!

The sewer relief valve in your yard prevents backups from entering your home. Keep it in good working order and clear of debris. For peace of mind, call us for a free inspection—we're happy to help!

If you have a backup, call us immediately, day or night. We're here for you 24 hours a day, seven days a week. Phone 624-1248, or 624-6403 after-hours, and our friendly, professional staff will determine if the problem is in the main line (our problem) or the lateral line (your responsibility).



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Job share is a win-win for all

Meet Domine Barringer (left) and Kristina Pacheco, who now share CAWD's Administrative Assistant/Board Clerk job position. Job sharing has been known to increase productivity and employee retention, and at CAWD it is proving to be a win-win for everyone by providing scheduling flexibility, built-in quality control, coverage for emergencies and vacations, and overall improved work satisfaction.

"I love working with Kristina—we are a good partnership," said Domine. "We feel that the public and staff are well taken care of with both of us on deck."

"The job share is perfect for me," said Kristina. "My husband does not have flexibility in his job, so it's important to me to be there for my 13-year-old son."

Both Domine and Kristina have extensive career experience supervising support services for governmental agencies.

"My favorite part of working for CAWD is learning about the plant and how important it is for our community and environment," said Kristina.

"It's great to work at a place where everyone appreciates everyone else," said Domine. "All the staff members here are committed to doing an excellent job."



Carmel Area Wastewater District

3945 Rio Road, Carmel, CA 93923
831 . 624 . 1248
cawd.org

Free 24-hour sewer back-up service:
If water is backing up in your tub or toilet call us immediately: 624-1248, or 624-6403 after-hours.

CAWD is a special district dedicated to protecting public health and the environment with the cost-effective collection and treatment of wastewater and the return of clean water to the environment.

We invite the public to attend CAWD board meetings, held the last Thursday of each month at 9:00 am at the CAWD office.

Board of Directors

Greg D'Ambrosio Charlotte Townsend
Michael Rachel Ken White
Robert Siegfried

General Manager
Barbara Buikema

"Bug of the Month" © Anne Muraski 2001-2019

Roundup (Cont. from page one)

reliable, cost-effective service now and into the future, and includes prioritized, ongoing cleaning and rehabilitation projects which prevent sewer overflows, ensure reliability during peak flows, and maintain the integrity of our complex infrastructure. Our updated SSMP will be available for public viewing on our website by the end of the year, after it is approved by the CAWD Board of Directors.



MEET AND GREET Your friendly CAWD crew were on hand at the Monterey County Fair this summer, advising residents and handing out helpful information to protect homes, property, and the environment.

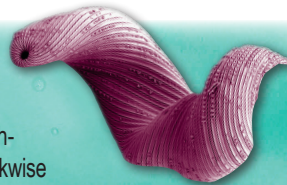
Plumbing ordinance update

We all depend on each other to maintain our privately owned lateral lines, which effect the integrity of the wastewater system as a whole. Each lateral line is connected to CAWD's main line, as well as all other sewer user lines in our community's shared system. To that end, our elected District Board of Directors recently passed a new ordinance to comply with updates in the State Uniform Plumbing Code. As of May 2019, existing laterals must be inspected via video by a licensed plumbing contractor whenever a property is sold, undergoes a substantial remodel, or has a history of overflows. (The requirement can be waived if the lateral was replaced in the last ten years.) A CAWD engineer will review inspection reports free of charge. The ordinance will help protect our collection system and the environment by reducing rainwater infiltration, and preventing sewer overflows, blockages, and backups.

Microorganism (Cont. page one)

Euglena uses its eyespot to sense light levels, and veers off-course to avoid harsh sunlight. Recently, Stanford researchers were amazed to discover that the microbe uses mathematical patterns to quickly locate a desirable environment, tracing out elaborate counterclockwise polygons, triangles, squares, and pentagons. Bioengineers are studying these movements to help them build tiny swimming robots that can maneuver through the human bloodstream to deliver medication to targeted areas.

Instead of having a cell wall, many *Euglena* species are enclosed by protein strips that spiral around the cell. The strips slide over one another, and can contract and expand thanks to attached microtubules. Imagine if you were boneless, and instead of skin you were covered with elastic strips connected to hydraulic motors. You would be able to selectively deform your surface like some kind of fantastic comic book hero, just like Eugene! In confined spaces, highly flexible *Euglena* switches from swimming to crawling, using swift and efficient peristalsis-like contractions which do not displace the surrounding fluid. These fantastic contortions have led scientists to dub *Euglena* an engineering marvel, and the fastest crawling cell of any type.

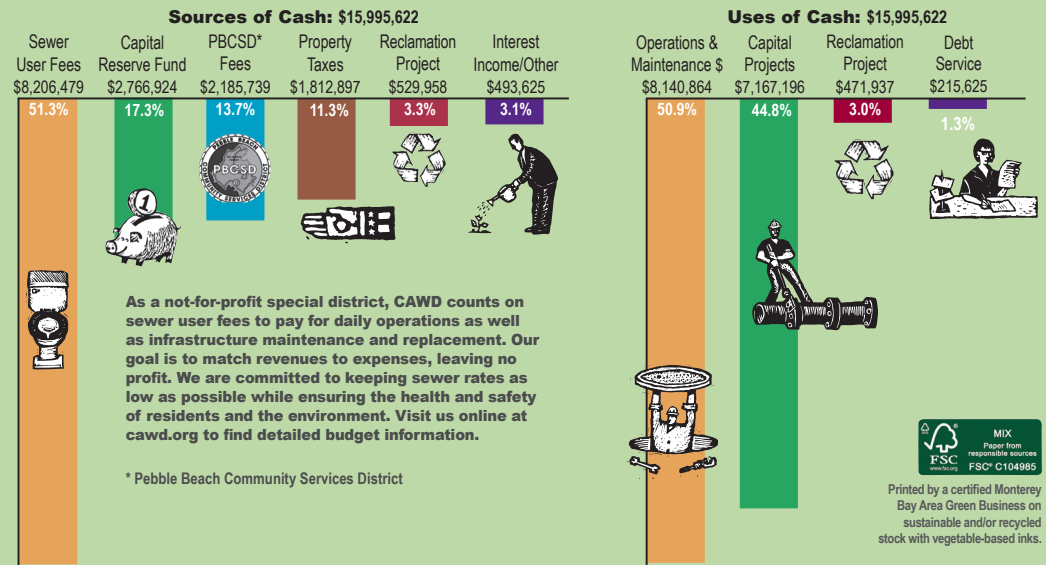


GRACEFUL SHAPESHIFTER
An electron microscope reveals the flexible overlapping protein strips which encase *Euglena*, allowing it to perform elegant coordinated movements. Left: Two consecutive images show *Euglena*'s amazing wavelike crawling action.

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CARMEL AREA WASTEWATER DISTRICT BUDGET

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