

115 Years

CAWD Connections

CONSUMER NEWS FROM YOUR CARMEL AREA WASTEWATER DISTRICT

FALL/WINTER 2023



"Protecting your health and the environment since 1908"

And now for some good news . . .

Your sewer rates are lower this year!

Rate update: the 2023-2024 sewer rates sent to all customers in our early May newsletter will actually be lower than those listed. In fact, rates will be even lower than last fiscal year for nearly all customer categories. Regulatory delays and ongoing supply chain issues have slowed the construction timeline on multiple projects in CAWD's capital improvement plan, leaving a 2023-2024 budget overallocation of approximately \$1 million. In addition, recent federal changes in interest rates have increased our anticipated interest revenue for this fiscal year.

"As a not-for-profit agency, CAWD's goal is to match revenues to expenses, leaving no profit," said CAWD General Manager Barbara Buikema. "While capital projects still need to be completed, we will be spending less money than anticipated this fiscal year, while earning more interest income. As a result, the CAWD Board of Directors has decided to refund the budget excess back to customers instead of

holding the money for future use."

The updated 2023-2024 sewer fees range from 9.9 to 11.9 percent lower than first reported, with a 10.2 percent average reduction over all customer categories. In fact, the new fees are even lower than last fiscal year by an average of 10.3 percent.

For residential customers, our largest customer category, the initial annual rate was reported as \$1068.96, but instead homeowners will now pay \$952.82, a decrease of 10.9 percent. This new amount is also 5.3 percent lower than the previous year's rate of \$1,005.94.

For a complete listing of sewer rates for all customer categories, please visit CAWD.org, or call us at 831-624-1248.



Construction of a sewer main extension under Carmel Valley Road slowed traffic from May to June, but will benefit many in the community, including existing CAWD customers. (See related article, page two sidebar.)

MICROORGANISM OF THE MONTH

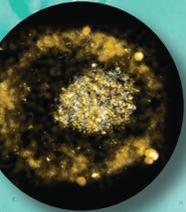
MEET "MIDAS" *C. METALLIDURANS*, THE MICROBE THAT POOPS GOLD!



No other life form but humble, single-celled bacteria can claim to thrive in virtually every environment on the planet. Bacteria at the CAWD treatment plant remove organic nutrients to clean our wastewater, and, as it turns out, some microbes like *Cupriavidas metallidurans*, (aka "Midas,") can even clean up toxic sites.

Midas is commonly found at contaminated mines where other microorganisms could not survive. The microbe ingests toxic gold compounds and uses its special enzymes to convert them into

a safe metallic form—in essence, it poops nanoparticles of pure gold! Microbiologists have even found bacteria cells completely encased in gold shells. It is likely that (Cont. on flip side)



Cupriavidas metallidurans with excreted gold nanoparticles on its surface.

Photo: American Society for Microbiology

See a spill? Call CAWD immediately!



We count on the public to be our eyes and ears out in the community. If you see water flowing out of a manhole cover, in the street, through cracks in the road or sidewalk, or coming out of the sewer relief valve in your yard, it is a serious emergency!

Please contact CAWD at once. We respond to emergencies seven days a week, 24 hours a day, so don't hesitate to call us at 624-1248. After 5 pm, please call Carmel Police at 624-6403, and they will activate a CAWD response.

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New customers to share costs

A sewer improvement project spearheaded by CAWD and funded by Carmel Valley Manor is connecting the retirement community to the CAWD collections and wastewater treatment system, providing more customers to share operating costs. A new stretch of main sewer line under Carmel Valley Road extending south from Quail Lodge to the Manor will allow them to abandon their failing septic system.

"The new main line is a great benefit for the community, providing the opportunity for developments and businesses along Carmel Valley Road to upgrade from septic to a more environmentally friendly sewage system," said CAWD Principal Engineer Rachel Lather. "In addition, the new wastewater will be recycled through our sophisticated microfiltration/reverse osmosis system so it can be used for local irrigation, thereby reducing drawdown of the Carmel River and decreasing discharge of treated water into Carmel Bay."

The project is scheduled to come online in February 2024. For more information on upgrading from septic to the CAWD system, please contact Rachel at 624-1248.



Carmel Area Wastewater District

3945 Rio Road, Carmel, CA 93923
(831) 624-1248 ■ CAWD.org

Free 24-hour sewer back-up service: Call 624-1248; after 5 pm, please call Carmel Police Department at 624-6403. If water is backing up into your tub or toilet, it is an emergency. Call us immediately, day or night!

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 via the zoom link on our home page at CAWD.org. Please join us on the last Thursday of the month at 9:00 am.

Board of Directors

Greg D'Ambrosio Kevan Urquhart
Michael Rachel Ken White
Robert Siegfried

General Manager
Barbara Buikema

"Bug of the Month" © Anne Muraski 2023

Property owners may now be liable for spills

As of June 5, new state wastewater regulations have increased requirements for wastewater agencies, and, for the first time, made private property owners subject to liability for sewage spills.

"Agencies have always been mandated to report their spills, but now private lateral spills can be subject to enforcement actions from the State Water Resources Control Board [SWRCB]," said CAWD Principal Engineer Rachel Lather. "The new safeguards are meant to reduce contaminants entering state waterways, groundwater, and the ocean."

Under the new rules, SWRCB can require private property owners to obtain wastewater discharge permits, and can levy fines against them for violations. This applies to homeowner lateral lines that connect to the main sewer line under the street, as well as other laterals and collection systems from businesses, apartments, retirement communities, etc. The new regulations also require wastewater agencies to identify at-risk components in their systems, such as sewer lines on steep terrain and other infrastructure that is vulnerable to impacts of climate change.

"The old, degraded, clay lateral lines in some areas of Carmel are especially vulnerable to root intrusion, grease buildup, and spills," said Rachel. "If you have frequent backups, a toilet that gurgles, slow running drains, a sewage smell in or around the house, a spot that is always wet in your yard, or other lateral issues, now is the time to get an inspection, before the winter rains."



HAVE A BACKUP? CALL US FIRST, DAY OR NIGHT! We will deploy our line-cleaning truck (shown here) to determine whether the blockage is in our main line or your private lateral line, so you don't pay an unnecessary plumbing bill. If your line is blocked, we can advise you on next steps. We are at your service 24 hours a day, 365 days a year (see sidebar).

Microorganism (Cont. from page one)

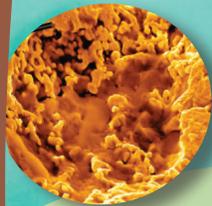
C. metallidurans is the source of some of the earth's younger, "secondary gold," which is transported to the surface by groundwater, like the panned gold that lured thousands to California during the Gold Rush. Yet mountains and rivers are not the only places to find gold.

One university study found that a city of 1 million people flushes up to \$13 million worth of precious metals into the sewage system each year, including \$2.3 million in gold and silver.

A sewage plant in Japan with nearby heavy industry reportedly collected nearly 2 kilograms of gold per metric ton of burned sludge, richer in gold than the ore of many mines.

Heavy metals in sewage come from industry, construction, vehicle exhaust, and brake linings, as well as from some shampoos, detergents, and even clothing made with deodorizing metal nanoparticles. These toxic metals end up in sewage biosolids, making it problematic to use biosolids as fertilizer. Microbes like *Midas* offer hope that through bioremediation we can introduce metal-munching bacteria to contaminated areas like mines and agricultural fields to speed up the breakdown of toxins and restore the land.

This scanning electron microscope image shows bacteria-shaped structures on a gold nugget.

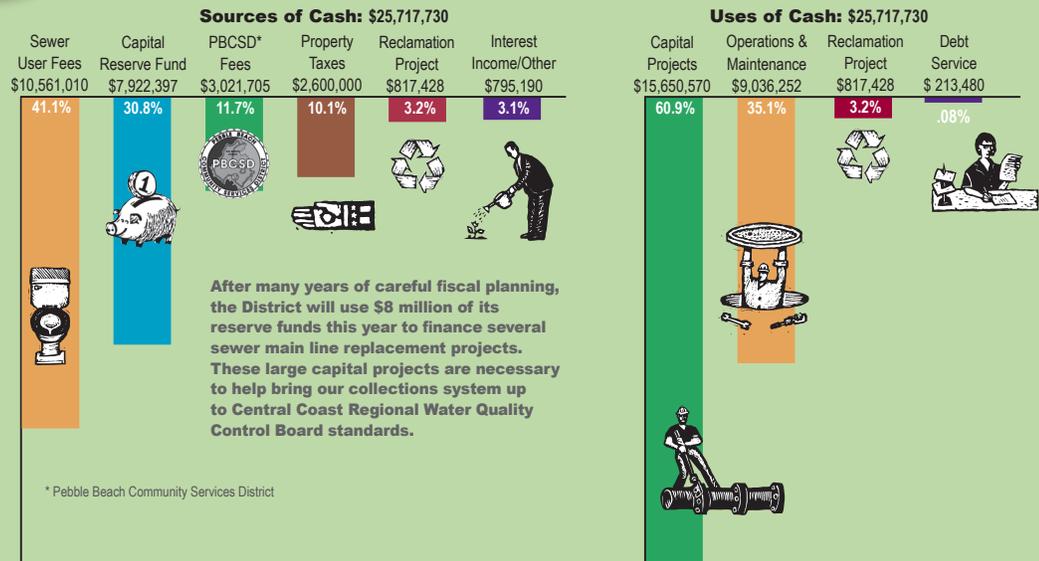


Gold and silver are among the heavy metals that can be found in sewage sludge.

Graphic by Michael Northrop/BioDesign Institute/ASU

CARMEL AREA WASTEWATER DISTRICT BUDGET

July 1, 2023 - June 30, 2024



* Pebble Beach Community Services District