115 Years

CAWD Connections

CONSUMER NEWS FROM YOUR CARMEL AREA WASTEWATER DISTRICT

FALL/WINTER 2026

CARMEL AREA WASTEWATER DISTRICT • SINCE 1908 •

"Protecting your health and the environment since 1908"

Internship program update

Building our future workforce

CAWD continues to work with local schools to build career pathways for students, and help ensure a new generation of wastewater industry professionals to serve our communities. This year we hosted seven summer interns, four from Carmel High School and one each from California State University Monterey Bay (CSUMB), Monterey Peninsula College (MPC), and Stanford University. All received real-world experience working up to 30 hours each week. They shadowed employees in all departments: engineering, maintenance and operations, IT, collections, and the CAWD laboratory.

"It's hard to find tech internships that offer more than simple tasks like setting up desktops," said MPC intern Jessica Reclusado. Jessica will be studying data science at UC Berkeley come January. "At CAWD there is never a dull moment. I'm learning how to use GIS mapping and SCADA systems, and working with staff members behind the scenes. I was amazed to see how much data is collected every second of the day to monitor the treatment plant. The work here is super important for the community!"



Intern Jessica Reclusado prepares to check the parameters on a water quality controller at CAWD's water reclamation facility, with support from Laboratory Analyst Ray DeOcampo.

Partnering to build careers

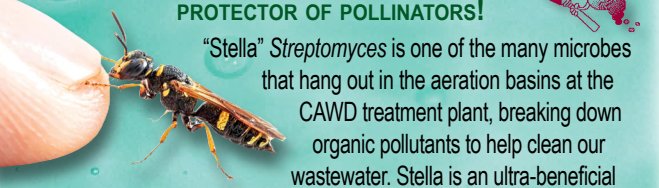
Ivonne Glenn, Director of College and Career Readiness at Carmel Unified School District, has been a partner with our internship program since it began in 2024.

"Schools need more industry partners to help students enter the rapidly evolving workforce," said Ivonne. "Thanks to CAWD, our students are able to explore job opportunities and develop the professional skills and confidence they need to succeed–all while making a significant contribution to their own hometown."

"This is our third year hosting interns, and I love it," said *(Cont. on flip side)*

MICROORGANISM OF THE MONTH

"STELLA" *STREPTOMYCES*, PROTECTOR OF POLLINATORS!



Humans and beewolf wasps both use antibiotics produced by *Streptomyces* bacteria to combat life-threatening disease and infections.
Photo by Sloan Tomlinson

"Stella" *Streptomyces* is one of the many microbes that hang out in the aeration basins at the CAWD treatment plant, breaking down organic pollutants to help clean our wastewater. Stella is an ultra-beneficial bacteria found everywhere in soil, water, and plants. She is famous in pharmacology for being the source of 75 percent of all natural antibiotics in use today, which has saved countless lives.

Yet humans are not the only ones who employ Stella to fight disease. The female beewolf, a nectar-eating, predatory wasp, has been using *Streptomyces* to protect its young for millions of years. But the *(Cont. on flip side)*



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.*

Carmel Area Wastewater District
3945 Rio Road
Carmel, CA 93923
831/624-1248

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No rate increase in four years!

Did you know? According to the US Department of Energy, national wastewater utility rates rise by an average of 3.3% to 5% annually. With rising prices everywhere you look these days, it's nice to know that your local Carmel Area Wastewater District has not raised rates in over four years.

"Practicing careful stewardship of the public's money is a job we take very seriously–that is how we've been able to hold the line on rates," said CAWD General Manager Barbara Buikema. "Employees in all our departments know that managing costs and making the most of each ratepayer dollar is an agency-wide priority."

Rate increases are an inevitable fact of life, especially with the current cost increases for fuel, power, and chemicals. While we can't currently predict when increases might be necessary, we will continue to tightly control fiscal management to provide the best value for customers.

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: last Thursday of the month Jan-Oct, and third Thursday of the month Nov-Dec, at 9:00 am at the CAWD office.

Board of Directors

Suzanne Cole
Robert Siegfried
Kevan Urquhart
Elise Weiland
Ken White

General Manager
Barbara Buikema

"Bug of the Month" © Anne Muraski 2001-2026

Workforce *(Cont. from page 1)*

Chris Foley, CAWD Facilities Manager. "Our interns bring a lot to the table. They grew up as digital natives and are very creative with problem-solving. It's rewarding and energizing to mentor them and pass down our knowledge!"



CAWD Facilities Manager Chris Foley with interns (from left) Bradley Lander, Carmel High School; Angel Vazquez, MPC graduate currently at Stanford; and Emiliano Ramirez Martinez, CSUMB.

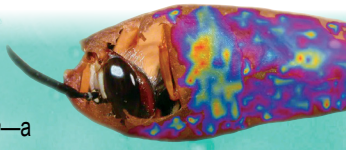
Wastewater industry faces staffing shortages

Like many other sectors, water-related industries are facing a lack of qualified candidates to replace their retiring workforce. In response, CAWD has started a pilot Operator in Training (OIT) program: a full-time, two-year position that offers hands-on training with the goal of permanent employment in the industry. The response has been overwhelming, with 40 excellent candidates applying for the post. Upon completion of the program, the chosen trainee will have the technical knowledge to obtain state certifications such as the Wastewater Operator license.

"CAWD's outreach programs are attracting a talented new generation who are looking for meaningful careers at the forefront of technology and environmental sustainability," said CAWD General Manager Barbara Buikema. "These collaborations help ensure that our communities will continue to have the skilled professionals they need to provide vital wastewater treatment services."

Microorganism *(Cont. from front page)*

beewolf does not need a laboratory and petri dishes to make medicine; instead, she uses specialized reservoirs in her antennae to host *Candidatus Streptomyces philanthi*—a symbiotic *Streptomyces* species that is found nowhere else. In exchange for a safe home and nutrients supplied from the wasp's hemolymph (insect blood), the bacteria produces a powerful mixture of antibiotic, antifungal, and antiparasitic compounds.

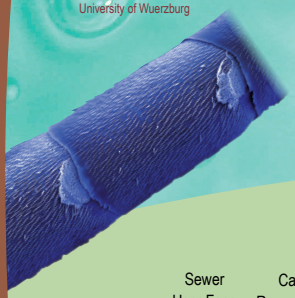


Researchers used a special imaging technique to colorize the many different antibiotics on the surface of this hatching beewolf cocoon.
Photo: Johannes Kroiss and Martin Kaltenpoth, Max Planck Institute for Chemical Ecology

Beewolf nurseries are a pharmaceutical fortress

When ready to lay eggs, the beewolf mom excavates an underground chamber and deposits multiple paralyzed bees to feed its larvae (thankfully, the bees remain unconscious). Then the beewolf smears white anti-bacterial paste from its antennae onto the walls and ceiling before laying a single egg and sealing the compartment. The hatched larva incorporates the antibacterial paste into its cocoon for protection against mold, fungus, and pathogens. When the adult emerges in spring, the bacteria are already residing in its antennae to protect the next generation of beewolves.

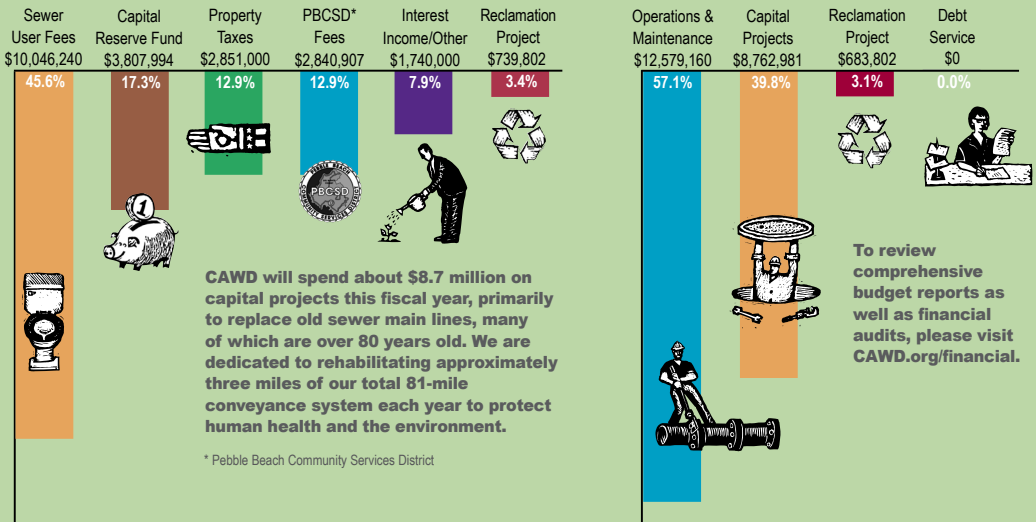
Modern medicine began using two or three drugs in combination (i.e. "combination prophylaxis") in the 1990s to combat HIV and antibiotic resistance. In comparison, beewolves and *Streptomyces* produce a cocktail of up to 45 different medicinal compounds—a feat they've been accomplishing for approximately 68 million years.



This scanning electron micrograph shows a beewolf antennae secreting symbiotic bacteria.
Photo: Wolfgang Goettler, University of Wuerzburg

Carmel Area Wastewater District Budget

July 1, 2026 - June 30, 2027



CAWD will spend about $8.7 million on capital projects this fiscal year, primarily to replace old sewer main lines, many of which are over 80 years old. We are dedicated to rehabilitating approximately three miles of our total 81-mile conveyance system each year to protect human health and the environment.

* Pebble Beach Community Services District

To review comprehensive budget reports as well as financial audits, please visit CAWD.org/financial.