https://www.coastsidenews.com/community/pacifica-volunteers-go-up-the-creek-after-city-efforts-fail-to-clean-linda-mar-beach/article_7f9ecd14-a995-4cda-9057-d816ad09fdeb.html

Pacifica volunteers go up the creek after city efforts fail to clean Linda Mar Beach

For years, San Pedro Creek has carried dangerous bacteria into the surf. A small group of locals is trying to uncover why.

By Kathryn Wheeler
Nov 19, 2025

John Keener tests creek waters on Linda Mar Beach

Kathryn Wheeler/Coastside News

Each year, like clockwork, Pacifica's Linda Mar Beach receives a flunking grade.

Every May, the Surfrider Foundation's annual Clean Water Report ranks the beach, which is popular with both first-time surfers and sun-weathered beachgoers, among the top ten most polluted beaches in the country.

San Pedro Creek, where it feeds into the ocean at the southern end of the beach, is to thank for its high levels of bacteria. The bacteria, some of which indicates harmful pathogens from fecal matter carried downstream, puts those swimming or surfing nearby at risk of contracting potentially serious illnesses.

John Keener tests pH levels at the creek behind a resident's property

By Kathryn Wheeler

But for many visitors and residents, the poor reputation of the beach doesn't raise concerns. Surfers continue to gather each day near the mouth of the river to ride the waves at one of the most popular destinations to surf in the Bay Area. At the beach, dogs run through the gentle waters of the creek's outlet, and kids splash in its shallow pools.

As the city makes little progress addressing the creek's pollution, a small group of local environmentalists and surfers are embarking on their own journey to amass data far beyond the scope of the studies the city has conducted. They believe that with extensive data that shows clear patterns and sources of the pollution, the city will be compelled to take action to address the problem.

Their work has also shed light on the city's priorities, and raised questions about the city's use of funds to address an issue that after a decade, and hundreds of thousands of dollars spent, has yet to be resolved.

In July of 2024, the Linda Mar Water Quality Coalition, a volunteer group led by John Keener focused on cleaning up the beach, began collecting thousands of samples to provide the data they believe the city won't be able to ignore, and which they hope will lead to action.

Every Monday morning, Keener grabs a handful of test tubes, syringes, and his boots, and hops into his Subaru to pick up other locals. On a foggy morning in early September, Hillary Timm, a former chemist and stay at home mom, joined Keener in his weekly visit to collect water samples at four spots along San Pedro Creek.

Sun burned through the fog as the two trekked through forest to reach the creek in the backyard of a resident who gives volunteers access to his property for weekly sampling. At another location, Timm extended a long pole with a test tube attached over the edge of a bridge, sampling water 20

feet below. From the sandy bank of the creek, the water was clear enough to see minnows swimming by as Keener bent down to fill a tube of what looked to be crystal clear liquid.
The apparently clear liquid, Keener said, holds far more than the naked eye can see.

San Pedro Creek is part of the broader San Pedro Watershed. The watershed's spider web of streams drain from the surrounding ridges of the city in every direction, eventually merging into a 2.5 mile stretch of creek that winds through the developed Linda Mar neighborhood.

John Keener walks a wooded path to the creek
By Kathryn Wheeler

The San Pedro Creek watershed

Courtesy San Pedro Creek Watershed Coalition

As it reaches urban development, the creek picks up bacteria and pollutants, and lots of them. During the dry season, that bacteria is often two or three times what is deemed safe for humans. When winter hits and the rain comes in droves, bacteria reaches levels 10 to 20 times the recommended limit for public safety.

Understanding why the creek is a hotbed of pollutants has been nagging Keener for decades. He originally became especially interested in what was killing the creek's once abundant Northern California steelhead trout population. Keener holds a doctorate in microbiology, and examining the root causes of biological issues "is within my professional purview," he said.

In 1998, a group of citizens formed the San Pedro Creek Watershed Coalition and invited representatives from the city of Pacifica, San Mateo County Parks, the North Coast County Water District, the Regional Water Quality Control Board, the Environmental Protection Agency, local scientists from nearby universities, and residents of the area to lead an "extensive multi-disciplinary investigation" of San Pedro Creek, according to the SPCWC website.

Hillary Timm collects a water sample

Kathryn Wheeler/Coastside News

The team set out to study the trout and coho salmon that populated the river as recently as 1950, as well as the erosion of the creek's banks, flooding that seemed to be increasing as the area became more developed, and the harmful bacteria that the creek became known for.

Despite the long-term efforts of multiple coalitions, in collaboration with organizations like Surfrider and Salted Roots, the creek is as polluted as ever.

In the early 2010s, San Pedro Creek was first identified as having high enough bacteria levels to harm those in direct contact with creek waters. Linda Mar Beach made the state's list of impaired waters due to the presence of animal and human fecal bacteria that can cause gastrointestinal

illness and skin, ear and eye infections.

San Pedro Creek winds through vegetation within the Linda Mar neighborhood

Kathryn Wheeler/Coastside News

In order to comply with local water quality standards, the San Francisco Bay Regional Water Quality Control Board required the city to form a plan to monitor and lower the high bacteria levels. The city's plan was approved by the water board in 2013. Part of that plan involved setting a total maximum daily load for bacteria levels, which the city must aim to meet through mitigation efforts and close monitoring.

Since 25% of the drainage basin of the creek is under the county's jurisdiction, it was also on the hook for paying for the creek's monitoring services. In 2016, the city and county approved an interagency agreement to share costs for the San Mateo Resource Conservation District to monitor the water. The RCD is a 85-year-old non-regulatory public agency that provides often confidential technical, financial, and educational assistance to local landowners, agencies, and communities to conserve land and environmental resources within the county.

Since the agreement with the RCD was signed, the city and county have collectively spent more than $650,000 for monitoring services through the RCD. The latest contribution came this past August, when the city approved nearly $176,000 to continue the monitoring program through 2028. That money comes from the city's stormwater program funding supported in part by an annual parcel-based stormwater fee, and from wastewater funds, which includes a sewer service charge that appears as a line item on annual property tax bills.

Pacifica must meet appropriate bacteria levels for San Pedro Creek by August 2028, according to directives from the water board. The city was required to do the same at Linda Mar Beach by August of 2021 but did not meet its goal. It must continue monitoring services until it does.

Even with nearly 10 years of data, the RCD, according to its most recent city council presentation, said it is still seeking the answers to key questions. Specifically, the RCD intends to find out what areas of the Linda Mar neighborhood are contributing the most to pollution, what those pollutants are, and what multi-year trends show.

The agency anticipates getting those answers by analyzing E.coli and bacteria levels throughout the year using data from San Mateo County Public Health, which tests two areas along the creek and beach weekly and posts that data publicly. According to the RCD budget, sampling fees cost roughly $20,000 per year, and the work of two water quality analysts for the project cost the city and county, through the interagency agreement, nearly $100,000.

Over nearly a decade of genetic testing, the RCD said it has determined that the main sources of bacteria in the water—deemed within the city's control—are likely coming from the sanitary sewer system, horse facilities, stormwater runoff, and the flow of wastewater during the dry season. But the patterns of when bacteria are higher versus lower, and the exact areas those bacteria are coming from, have not been enough to steer direct action. In an August resolution to greenlight more testing, a letter from RCD stated that "to date, the exact source or sources related to the sanitary sewer system have not been identified."

Despite efforts that include public engagement at local events such as Fog Fest and Eco Fest, direct mailers, print advertisements, local television advertisements, sewer lateral grants and various social media posts, the RCD wrote that "Unfortunately, these efforts have not significantly reduced the bacteria in San Pedro Creek and Pacifica State Beach."

Kellyx Nelson, the executive director of RCD, did not respond to multiple requests for an interview by the time of this article's publication.

Volunteers at the Linda Mar Water Quality Coalition believe this kind of monitoring can be done much more effectively.

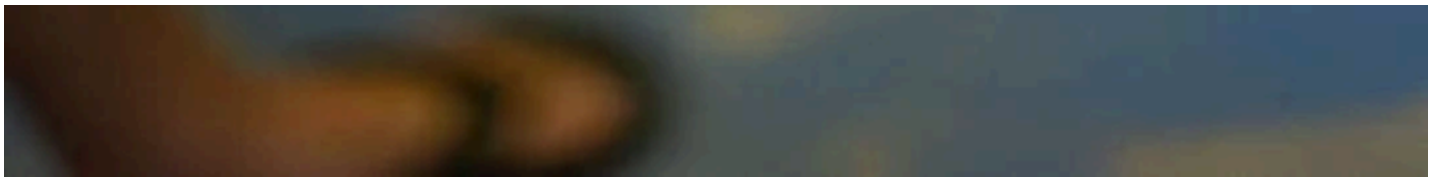
From left: Volunteers Mitchell Milligan, John Keener, and Hillary Timm

Kathryn Wheeler/Coastside News

After Keener and Timm finished collecting samples, they drove the clinking glass tubes to Mitchell Milligan's home nearby. Milligan takes the samples to Surfrider's makeshift laboratory in Princeton, where he processes them for bacteria. If fecal matter is present, the sample will glow yellow under a blue light; Milligan, a volunteer with Surfrider, records the glowing samples to add to data. It costs the team $10 to $20 for each sample.

So far, the group has discovered similar findings to the RCD: animal and human feces are major contributors to the creek's pollution. When heavy rains hit, the creek becomes a catch-all for runoff, including dog poop, horse manure, wild animal feces, and sewage from leaky sewers. Similar to the RCD, the group wants to go further, understanding exactly how the time of year contributes to pollutants, and narrowing down pollutants based on type and location.

The group is also using a form of test called PCR that Keener hopes will provide clearer answers to the sources of pollution. A PCR test can distinguish what kind of animal (including humans) are causing pollution within the sample. That level of specificity isn't possible through regular bacterial testing in the local lab.



A test sheet shows signs of creek bacteria in yellow

Kathryn Wheeler/Coastside News

Small grants help provide funding for the volunteer sampling. Lately that grant money has been funneled to a lab in San Diego, where volunteers are sending samples to undergo PCR testing at a cost of more than $800 per test.

Milligan, an engineer and vice chair of Surfrider's San Mateo County chapter, believes that comprehensive data, on a scale far beyond what has ever been collected, speaks for itself. Compelling data, Milligan said, will allow the group to say, "Hey, city, what are we doing? We haven't touched the pump houses or any of this infrastructure since the 80s. It's time, and we have years of data to back that."

Even if the RCD and volunteer groups can pinpoint the sources of pollution, addressing the issue will come down to whether the city is financially able, and willing to invest in its infrastructure.

Pacifica has a torrid history with its most vital infrastructure. In 2008, the city's neglect of its critical infrastructure came to a head when heavy rains led to more than 100,000 gallons of raw sewage spewed from sewer pipes and manholes. During that same period, blockages in the sewer system caused 6.9 million gallons of partially treated sewage to discharge into local waters.

Following those events, the San Francisco branch of the California Regional Water Quality Control Board gave Pacifica a "cease and desist order" demanding that the city stop violating state and federal water-quality laws and take immediate corrective actions to remediate the failing sewage system.

The water board cited multiple system overflows between 2004 and 2009, chronic blockages, tree roots invading sewer pipes, and deteriorating pipes. The board attributed this to failures in adequately monitoring and correcting the system over years, which the board claimed could've

prevented catastrophic events. The water board sued the city for $2.3 million, although that number was whittled down to $1.7 million in negotiations. The city was forced to completely overhaul its system as a result.

County signs warn of high bacteria levels

Kathryn Wheeler/Coastside News

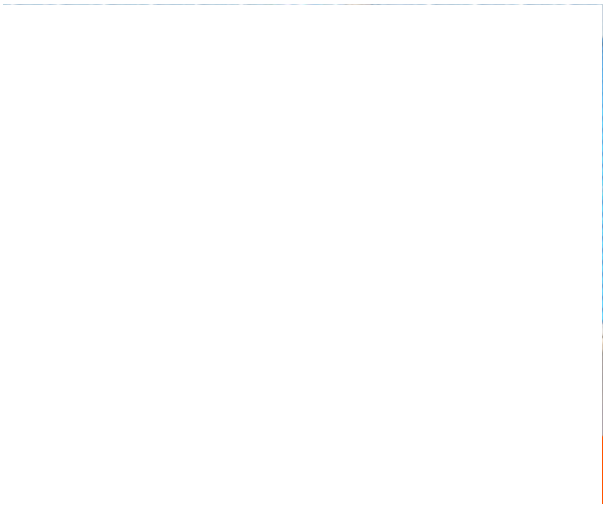
Louis Sun, the city's deputy director of wastewater, said the city fulfilled its obligation to that cease and desist order. He added that it has "completed all these projects that we promised we were going to do." To manage sewage during heavy rain events, the city was required to build an equalization basin at a cost of more than $19 million. Completed in 2020, the basin temporarily holds excess sewage and storm-infiltrated wastewater during heavy rain events.

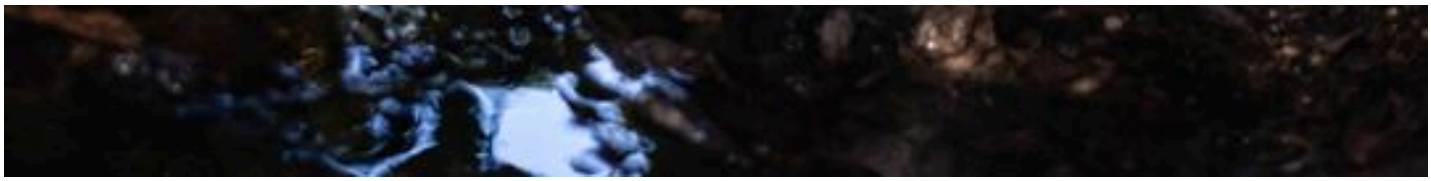
Aging sewer laterals, a home's connection to the municipal sewer system, have also been the basis of concern in the Linda Mar neighborhood. Sun said that in an inspection three years ago of 3,000 homes, only 33 had problems with their sewer laterals. Sun believes that the wastewater present in the creek is not coming from faulty sewer system, but rather surface water that is polluted with waste from owners of recreational vehicles that are illegally dumping in the streets, and other contaminated surface water.

Even after the equalization basin was built, however, storms have still caused major sewage leakages. A large storm in 2021 caused 44,000 gallons of storm water and sewer wastewater mixture to spew from a manhole on Peralta Road. Another 2.93 million gallons of storm water and sewer wastewater mixture made its way to the ocean at Linda Mar Beach. According to a memo from City Manager Kevin Woodhouse, the leaking sewage was curbed dramatically thanks to the equalization basin, but the incident was reported to the water board.

Leaky sewer laterals are a homeowners responsibility, and are often only discovered to be problematic if routinely inspected. Many of the sewer laterals in the Linda Mar neighborhood are far beyond the age at which they should be replaced. The city only inspects laterals when a property changes ownership.

City incentives, introduced as part of the city's agreement with the water board, attempt to encourage more homeowners to replace their sewer laterals in areas where many date back to when the neighborhoods were built. Called the "Lateral Grant Program," the incentive provides a $2,000 payment to anyone who replaces their sewer lateral. The cost of replacement, though, can exceed $50,000. In lower Linda Mar, where construction has been underway, the city has offered residents the opportunity to have their sewer lateral replaced at roughly a third of the typical cost of doing it independently. In the 10 years since the incentives were introduced, just 29% of the sewer laterals in the Linda Mar neighborhood have been replaced.





Minnows swim by Keener as he tests pH levels in the creek

Kathryn Wheeler/Coastside News

Both the RCD and the local water board have stated that sewer laterals are a likely source of pollution. Amending leaky laterals would "likely reduce bacteria inputs to San Pedro Creek and Pacifica State Beach," the water board stated in communication with the city in the late 2010s.

Sun said the issue comes down to "awareness and getting people to understand the importance of your lateral and that it does need to be looked at."

As the city and its residents juggle priorities, from increasing costs of living, and even more dire infrastructure elsewhere, incentives seem to have little effect thus far.

Councilmember Christine Boles said the pollution at San Pedro Creek is complicated. "Everybody's looking for a smoking gun," she said, but "it's a combination of things." In working with the RCD, "the city feels like they're doing what they can," Boles said.

As Keener and his small team return to the creek weekly, they believe that in three years they have the data to pinpoint exactly the source of pollution. Whether or not that data will mean anything, comes down to how many problems a city has, said Milligan, and who's putting the most focus on what. "I think if we have a better way of drawing attention, I don't think it would be hard for people to vote for it," Milligan said.

But Milligan said it remains a matter of what's best for a homeowner versus what's best for the coast and where the city puts its focus when addressing pernicious problems. Without achieving a balance, nothing will change. The creek, after all, will always remain a reflection of what surrounds it.

Tags

Cost Of Living | Combined Sewer | Sanitary Sewer | San Pedro Creek | Water Pollution | Stormwater | Water Quality | Sewage | Surfing | Beach | Hydraulic Engineering | Refrigerants | Water And The Environment | Liquid Dielectrics | Hydroxides | Sustainability And Environmental Management | Lubricants | Fresh Water | Environmental Science | Hydrology | Water | Environmental Engineering | Water Supply | Earth Sciences | Environmental Technology | Water Chemistry | Environmental Issues With Water | Stream | Pacifica, California | California State Water Resources Control Board | Environment | Transparent Materials | Pollution | Sanitation | Solvents | Natural Environment

Kathryn Wheeler

Staff Writer

Kathryn has reported for newspapers on both coasts, including The Red Hook Daily Catch, The Seattle Times, The Salish Current, and The Journal of the San Juan Islands. She has worked as a staff writer, freelancer, and photographer. She graduated from Wesleyan University, majoring in "Science in Society". She has also been a teacher and communications director.