

Friends of Pinole Creek Watershed

A Publication of Friends of Pinole Creek Watershed

friendsofpinolecreek.org

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< Left: A monarch butterfly larva (caterpillar); right: an adult monarch butterfly.



Photos: Carol Bray

Drought Effects on Pinole Creek Fishes

Drought conditions can be hard on a variety of fish and wildlife species. Fish populations are particularly susceptible to dry conditions resulting from extended periods of drought. In local creeks, droughts can cause poor conditions such as low dissolved oxygen levels, high temperatures and drying of some sections of the creek.



Photo: Bert Mulcahey

Pinole Creek is home to a variety of native fish species such as California roach, Sacramento sucker, three-spined stickleback and rainbow trout/steelhead. Sacramento sucker and rainbow trout/steelhead are adapted for cold water temperatures and are the most impacted by drought conditions, whereas California roach and stickleback are well adapted to the warm water temperatures and low dissolved oxygen levels brought on by drought.

Each year, East Bay Municipal Utility District (EBMUD) biologists use a technique called *electrofishing* to sample the fish populations in Pinole Creek. Electrofishing produces an electric current that temporarily stuns fish so that they can be netted, recorded and returned to the creek unharmed. This technique allows EBMUD biologists to monitor the fish in Pinole creek over time.

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Did you know?

What is a watershed?

The area surrounding and “shedding” water into a stream, river, lake, wetland or bay is a watershed. Watersheds are interconnected land-water systems.

Pinole Creek is a perennial or year-round stream.

Pinole Creek hosts spawning steelhead and salmon.

To report an issue in the creek: <https://www.ci.pinole.ca.us/cms/one>.

Bringing back the Monarchs to the Pinole Creek Watershed

Monarch and Pollinator Habitat Kit awarded to FOPCW for fall planting in the upper watershed.

In an effort to do our part to help the California Monarch butterfly—and pollinators in general—FOPCW applied for and was granted a California Monarch and Pollinator Habitat Kit through the Xerces Society. This kit contains 85 woody and herbaceous transplants (including milkweed) and native bunch grasses.

The riparian hedgerow monarch habitat kit plants will be planted on the EBMUD watershed lands near Pinole Valley Road and Castro Ranch Road.

The plants are scheduled to be planted in the fall, and FOPCW is currently arranging for exact site location(s), site preparation, and

maintenance watering next year, along with FOPCW organized work days.

We are happy to partner with Earth Team interns who will help with all the necessary preparation and maintenance. In addition, many volunteers will be needed to help with planting and watering for the three growing seasons until these plants are established. Please watch for future updates here, via email, and on our website at friendsofpinolecreek.org.

Thanks to all who helped FOPCW obtain the grant for this opportunity to bring Monarchs back to Pinole.

■ — Carol Bray

The Friends of Pinole Creek Watershed is a non-profit organization that encourages environmental conservation and community stewardship of Pinole Creek. For more information, visit friendsofpinolecreek.org.

FOPCW News and Events

Thriving Earth Exchange students reflect on their year working with FOPCW



I WAS ONCE taught that the city of Pinole was land of the tribes before us, it was cared for, but we have disturbed it. Every piece of trash I have ever thrown on the ground has impacted Pinole and

the history that lies on it. Beginning to restore these areas and seeing Pinole's progression farther into beautification has made every second of work worth it. Joining the Earth Team to restore the Pinole creek has been such an educating and loved project by my teammates and myself.

One of my favorite experiences was going into the creek for my first time. I wore waders and went waist deep into the creek. Being able

to benefit the wildlife in the creek just by picking up trash was a wake up call for me.

Another role I've had in the creek clean-up was using the marine debris tracker app. This is an app that keeps count of the amount and types of trash we collect. I really enjoyed this app because you could identify problems from the amount in each category. We found out that there is a high count for cigarettes which indicated to us that the city could use more ashtrays.

After we collect all our trash for the day, we would see how much we collected all together. Seeing the high numbers made me feel like I was making a difference in Pinole. When the team was told we were going to present in front of Pinole's city council there was a lot of confusion and worries that I had. I thought "How could kids make a difference?" and "Would adults even listen or take us seriously?"

Well, everything I thought was proven to be wrong. When we stepped in front of the city council, they looked more human than I expected. I was still nervous to present but I did it knowing that they actually wanted to hear what I wanted to say. After I presented, they actually came back to my point in later discussion which made me realize that they not only listened but took everything I said into account.

I never felt more confident in my public speaking skills than that day. It was one of those good experiences that paved the way for all my presentations to come. I stepped out of my comfort zone with caution to be there and everything turned out great. I did the same thing when I joined the Earth Team program which makes me think this was a great decision too.

■ — *Natalie Szumlas (she/her), Earth Team Intern*

AS AN EARTH TEAM INTERN for the past year, one of my favorite events was the cleanup with Ellerhorst Elementary School students on the creek trail behind their school. For the event, students got into small groups that consisted of four elementary students and two Earth Team interns.

As interns we were responsible for educating them about the Marine Debris tracker app, its purpose, the importance of preserving our environments, and the harmful effects of litter. We assisted them in keeping track of the litter they picked up and carried the garbage collected.

The cleanup was structured as a contest to

uplift motivation. The winning group got first pick on candy; every student received sweets. It was one of my favorite events because throughout the clean up the students would forget it was even a contest and expressed genuine interest in the environment and huge energy for picking up every bit a litter they saw—from the teeniest pieces of candy wrappers to discovering their own playground equipment that had gone missing.

Their excitement would jolt after being reminded they received candy. Watching their care of the planet grow (and detest for litter) was very rewarding. They were so kind and fun to work with! With the inspired

look in their eyes, I know what they learned that day would stick with them, and it creates a sense of hopefulness and reassurance within me as well as pride in being an Earth Team intern.

I am privileged with the opportunities to influence and lead these young children to advocate and protect our planet, our home.

■ — *Nicole Castillo (they/them), Earth Team Intern*

HOME TO MANY HABITATS, Pinole Creek serves as one of Pinole's largest natural attractions, flowing throughout the obscure regions of our very own city. You can find it located behind the AMF bowling alley, across Sprouts, and behind Ellerhorst Elementary and Pinole Valley High School.

Before interning for Earth Team, I had no idea an astonishing creek existed at different locations in my own community. Through my experience at Earth Team, we visited around five different locations of the creek—as a result each experience felt exciting, in the way that they all have their own unique magnificent beauty that distinctively makes each visit to the creek remarkable.



During a joint litter exploration and cleanup involving Ellerhorst Elementary students and Pinole Valley's Earth Team interns, I discovered a newfound admiration for that particular spot. Behind the fence of the school lay steep wooden steps and moss-covered trees that descend you into the sparkling stream otherwise known as our creek. Although this specific location isn't available for the public, please do not trespass behind an elementary school, there are many other areas of Pinole Creek that are available to carefully admire and walk through.

During our Coastal Cleanup event, we walked behind Sprouts to find a family of

ducks swimming through the creek. Not only was the body of water fascinating but the abundance of large green trees surrounding that area is truly captivating. You'll find a unique set of different species of trees such as eucalyptus and willow trees—which are personal sightseeing favorites of mine.

A year ago today, I didn't understand the importance of our creek, and various locations it branches out to. Being a mentee to Earth Team coordinators and members of the Friends of Pinole Creek Watershed, I now understand the value of keeping our creek alive and clear of garbage, so that it may continue to serve as a home to many habitats and remain as a glorious nature trail.

■ — *Vannapa Douangphrachanh (she/her), Earth Team Intern*



Photos: Itzel Gomez

FOPCW News Continued

Let's Talk Trash!

What does it feel like to wade into Pinole Creek in search of trash? Both wonderful and sad. Wonderful to be in the creek and sad to find distressing amounts of trash. We explored areas of the creek that we had never known existed, including hiking to the very top of the watershed in Briones Regional Park, looking west over an inspiring vista. Our goal? To answer three questions:

- How much trash is in Pinole Creek?
- What types of trash are most common?
- Where is the trash coming from?

In addressing these questions, we can understand how and where trash enters the creek, and then address its impact.

FOPCW, in collaboration with the Contra Costa Resource Conservation District, the City of Pinole, Pinole Valley High School's Earth Team, EBMUD, and Ellerhorst Elementary School, has completed its Thriving Earth Exchange Trash Assessment Project. After logging many hours of work in the creek, speaking with citizens, and crunching numbers at the computer, we can begin to answer those questions.

At the time of our assessment, Fall of 2021, we found the



equivalent of 264 thirty-five gallon trash bins of trash in the creek. Note that this does not include trash higher on the banks or on trails that will most likely eventually find its way into the water.

Not surprisingly, plastic was by far the most common type of trash we found. Food packaging items were the most abundant pieces at most sites, especially those within city limits.



On April 19, 2022, the project team presented its findings to the Pinole City Council. Scientist Win Cowger and FOPCW Board member Ann Moriarty led the presentation, relaying the finding of the assessment and leaving them with our policy "asks." Those include:

- Develop and/or update city food-packaging and cigarette ordinances
- Create a city-owned trash bin inventory.

< Left: trash gathered during a creek clean up day; below: monitoring the types of trash picked up in the creek.

Use our data to inform new trash bin locations in areas of concern

- Identify high trash areas of concern and create an action plan to address the problem
- Initiate monthly trash cleanups harnessing the power of community groups
- Institute an "Adopt-a-Street" or "Adopt-a-Spot" Program (Create Pinole Creek Allies)
- Initiate litter-awareness outreach & educational programs in schools and community
- Fund a follow-up trash assessment in 5 years

This presentation was followed by an inspiring set of comments by the Pinole Valley High School Earth Team interns who basically knocked the Council's socks off!

Next steps? Work is wrapping up on the official report of the project which will be submitted to the City and to a scientific journal for publication. In addition, Norma Martinez-Rubin is completing a report that summarizes what we learned as community scientists. That report will also be made available to assist other citizen-science projects. We are making presentations to various community groups to spur the City to action and to share what we have accomplished thus far.

Finally, we hope to initiate a campaign in the Fall called "♥ Pinole Creek".

JOIN US! Be a Pinole Creek Ally!

■ — Ann Moriarty

Drought, continued from page 1

Fish surveys this year have shown that the recent drought has caused a reduction in the number and distribution of fish in Pinole Creek. This is the result of multiple drought-related factors: significant sections of the creek have dried up completely in the past few years, resulting in a loss of habitat for rainbow trout/steelhead. Rainbow trout/steelhead spawning was observed this past winter but no rainbow trout/steelhead were collected in Pinole Creek. This does not mean that the fish are not present, and was the case in several

other local creeks this year, as well. It is likely that fish are present in smaller numbers but holding in deep water areas not sampled by biologists.

Extended periods of drought can be quite detrimental to native fish populations, but these populations have shown the ability to bounce back quickly when conditions improve.

Here is to a wet winter and a rebound of the fish populations in Pinole Creek!

■ — Bert Mulcahey, Supervising Fisheries and Wildlife Biologist, East Bay Municipal Utility District