WALNUT CREEK OPEN SPACE FOUNDATION

FALL-WINTER 2025

The Battle of Fossil Hill

Most regular visitors to the Fossil Hill Project have noticed some access changes which started last year with the addition of a split-rail fence to the front and sides of the project. This year, locked gates were added to the fence, and signs posted limiting access to the walkways to volunteer workers only.

For the hundreds of people in the community who visited the site to walk among the wildflowers in the Spring, arriving and not having access was a source of disappointment and frustration. We thought we owed an explanation to our members and supporters about why we felt we needed to restrict access to this wonderful site.

Two years ago, we saw a good wet winter which caused the spring bloom to be especially abundant. It also caused a significant increase in casual visitors — people who appeared to be interested primarily in "posing" for group photographs using the flowers as a back-drop for their graduation, prom, or wedding pictures. Unfortunately, most of these groups ignored signs and paths and trampled the plantings. With help from youth volunteers, we marked the paths, hoping to encourage visitors to stay on them and not cause damage to the flora.

Photo by Linda Post

The split-rail fence was added to guide visitors onto the paths, which visitors often seemed to ignore.

The following year, we had a second wet winter which helped maintain the exceptional bloom. By then, unfortunately, the display had captured the attention of the internet and social media. Weekend parking and traffic in the neighborhood near the Sutherland entrance during March and April became difficult for both visitors and residents. At one point a bus arrived with a tour group!

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Project Updates

Bayberry Pond

From its beginning in 2008, Bayberry has had a creek running through it with 3-4 riparian plant species along it. Three or four years ago, the Regional Water Board announced that they would no longer accept off-site, cash mitigation for projects built in central county; developers would have to look for a site to benefit locally. Accordingly, the WC Watershed Council, of which the WCOSF is a member, evaluated a number of sites in the Open Space. Bayberry was on the list and was chosen as a project site. As a result, it was evident that we would need a wider variety of riparian plants. But Lime Ridge is very dry and there were no others. In September we applied to our own Restoration Committee to change our policy and allow riparian plants from anywhere in the Walnut Creek watershed. It took until February, but we got approval and planted 3-4 species from Shell Ridge to see how they did. So far, so good.

The Bayberry Pond Project volunteers meet Tuesday mornings at 9:00 am. The meeting place varies occasionally. Please check ahead of time by emailing lesleyh@wcosf.org to be certain you do not miss the day's activity.

Indian Creek and Indian Valley Pond Restoration

This year, we collaborated with the City of Walnut Creek to complete the Indian Creek Restoration project. Its twin goals were to make Indian Trail passable in winter and improve Indian Creek's habitat. The project also created two seasonal wetlands above Indian Valley Pond, hardened crossings to prevent creek erosion and maintain the trail's integrity.

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The Battle of Fossil Hill

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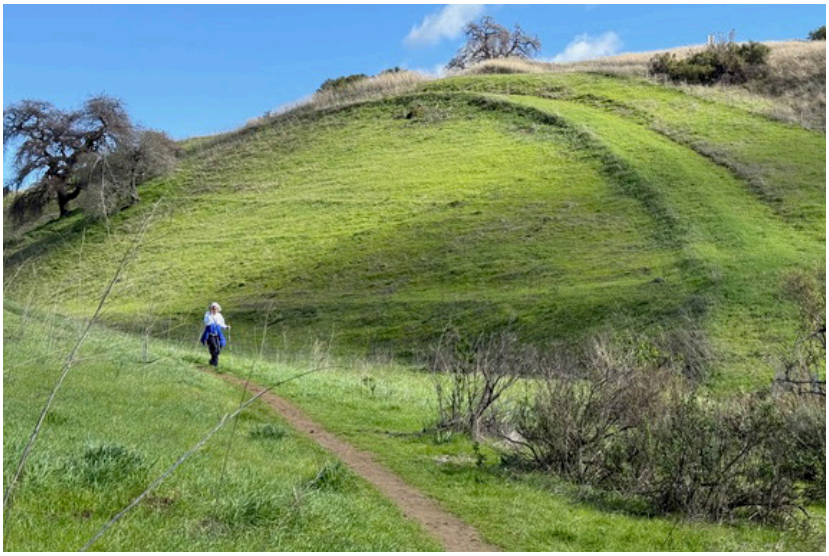
During one weekend, the traffic difficulty culminated in a gridlock situation in the neighborhood, which could have prevented emergency fire or medical vehicles to have access to homes in that area.

A complicating factor is that the neighborhood affected is in an unincorporated area of Contra Costa County; the city has no jurisdiction over traffic or parking. Thus, finding a path to a solution required the cooperation of the City, the County, and the Foundation working with neighborhood representatives. The City Open Space Division took the lead in making meetings with all parties present possible. In the end, each party agreed to do what was within their power to help minimize traffic issues during the height of the wildflower season this year.

This spring, our combined efforts were put to the test. The county supported the effort to limit parking on the two area streets with barricades. The city provided electronic informational signage, installed a means to block off the small parking lot at the end of the street, and purchased and installed the lockable gates in our split-rail fence. The Foundation purchased vests to identify volunteer workers, changed maintenance routines, found solutions for parking for our Saturday volunteer workers (thanks to supportive neighbors!), and updated our website in multiple areas to indicate the restrictions.

The good news is that the results *this* year were very positive. The spokesperson for the neighborhood committee reported, "the streets were clear of congestion from visitor traffic."

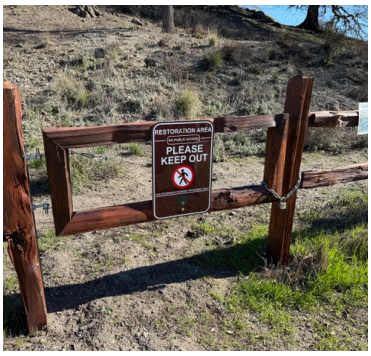
We are still learning how to balance the various measures in order to come up with a reasonable solution for everyone.



Hiker on the Bayberry Scenic trail.

We felt that restricting access to the project area would discourage groups and casual visitors from adding to the traffic. We also agreed, in good faith, to pause further expansion of the project until we could see if the combined efforts would result in a reasonable and safe traffic flow on the weekends.

Hopefully, the county can pull back on the number of days the parking is restricted and not use the electronic sign. To help restore up-close access to the wildflowers during spring, the *Foundation* is in the process of setting up escorted and guided tours. If you would like to be a volunteer guide or escort for a group, please let us know!



Access restricted to escorted tours.

Our sincere thanks to the county for their support, and especial thanks to The City of Walnut Creek who made a solution possible through their sponsorship and leadership of group meetings, as well as the changes to the infrastructure needed to support the effort.

Going Green:

Electronic Newsletter Available

You can view our newsletter on your favorite mobile device or computer. We post it on our website (wcosf.org), and we'll be happy to send you a pdf version as well. For the pdf, just send an email to newsletter@wcosf.org.

Our Landing Page

We have a convenient page on the web which has links to our social media, volunteering links, and photos. It's an easy way to find us on the web.

Point your phone's camera at the symbol to the left and click the link.

https://bio.site/wcosf

Project Updates

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Both users and the creek's surroundings benefited.

The project has been very successful, and many people have commented about what a great improvement the trail work and restoration has made. At the same time, the WCOSF has worked with many individual volunteers as well as several groups to help plant trees, grasses, and flowers along the creek and wetlands. Planted trees include California buckeye, valley oak, and blue oak. Other native vegetation planted includes, mugwort, California rose, yarrow, milkweed, soap root, creeping wild rye, purple needle grass, and blue wild rye.

Just downstream from the Indian Creek project, the Indian Valley Pond restoration project has worked for many years to increase native vegetation and provide habitat for wildlife. Much of the focus has been on protecting existing oaks from deer, as well as planting elderberry and buckeyes around the pond. Closer to the pond, we have been adding willows, grasses, sedges, and rushes, while removing mustard, thistles, and other non-native, invasive plants.

Indian Valley Pond and Indian Creek restoration projects are currently separate, but we plan to merge them into a continuous band of restored habitats, linking the pond, grasslands, seasonal wetlands, surrounding oak woodland, and riparian vegetation.

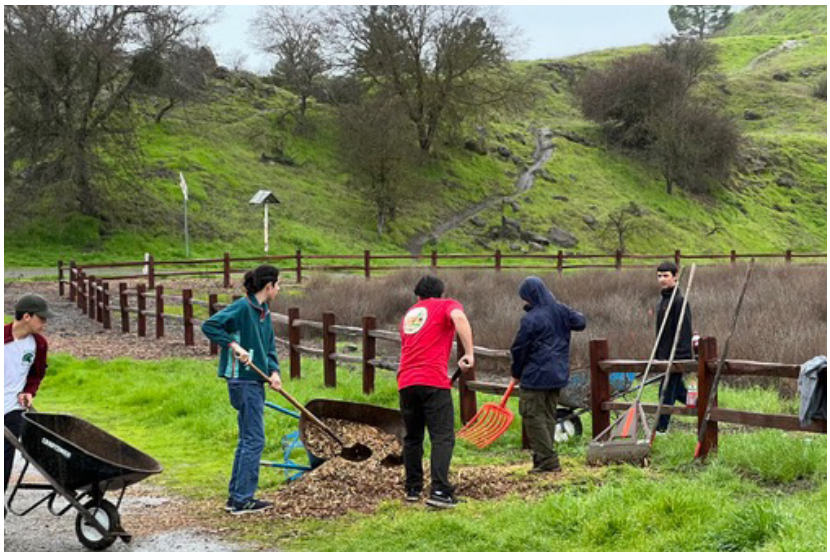
—Sean Micallef

Fossil Hill Native Plant Restoration Project

The Fossil Hill Project has successfully established 139 non-poppy native plant species, including some which have become rare. While the project has faced challenges from large weekend crowds, including trampling and parking issues, authorized paths and a fence have been installed to guide visitors. Despite the project's success, access has been limited to authorized volunteers to address these issues.

We saw Poppies, Goldfields, and other annuals thrive. Though people forget, this project benefits birds and bees, not just humans. Nature's ability to bring life to the ecosystem also provides humans with great beauty.

A most successful introduction has been the native thistle, Cirsium occidentale. It is quite rare in this county. However, it has adapted to certain areas of our site quite well. In addition to being attractive, it is one of the few flowering plants that support



All volunteers welcome!

2025 Student Grant Award

The WCOSF Grant Program is open to college-level students pursuing academic research sponsored by an accredited academic research institution. Successful undergraduate applicants are pursuing a senior project or similar study. Graduate students are also eligible. Priority is given to studies of particular interest to the WCOSF. The WCOS Grant Award is our primary grant and is awarded to qualified individuals who are selected through our grant application process. These projects may include Open Space Ecology, Management, Land Use and Planning or other relevant topics.

This year's WCOSF Grant Award recipient is Cori Floum, a third-year student at Oregon State University, currently pursuing an Honors Bachelor of Science in Environmental Science with a focus in Ecology and a minor in Biochemistry and Molecular Biology.

This spring, she provided a project draft to the Foundation's Grant Director, Sean Micallef, for this summer's project. She plans to study the health of ponds in the Open Space, focusing on Shell Ridge and Lime Ridge, supporting her Senior-Year Honors Thesis.

This summer, she collected soil and water samples to analyze microplastics, water quality, and macroinvertebrates, comparing them to adjacent ponds.

The samples will be taken back to the university, analyzed, and she will present her findings. We expect to receive a copy of her paper later this year. Further information about the Foundation's Grant Award Program may be found on our website.

Project Updates
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hummingbirds early in the season.

William Brewer, a Yale botanist, reported that all the hills north of Kirker Pass were covered top to bottom with Goldfields in 1862. I am proud to also report that we were able to establish several stands of Goldfields, Lasthenia californica, an annual that is establishing itself, with our help.

WCOSF funds contributed to the installation of permanent underground water lines that extend east and west from the front entrance. We do very minimal watering of plantings. We do, however, need water to fill our tank sprayers and to hydrate nursery-grown seedlings waiting to be planted. The City and WCOSF also split the cost of providing EBMUD water to our Nursery at Shadelands to resolve losses of some difficult-to-grow plants due to well water issues.

A phenomenon currently being seen all over the world, social media has heightened the public's interest in wildflowers, particularly poppies, which resulted in weekend crowds carelessly trampling the plantings. To address this, we started with laying out authorized paths.

Thanks to Xander Richards and volunteer Scouts of Troop 405, we had a remarkable Eagle Scout Project that laid out mulch on hundreds of feet of paths to help delineate these authorized paths. Additionally, the Foundation funded the materials for a Division Staff-installed split rail fence enclosing the project at the Sutherland Entrance. The fence was intended to create openings that guided visitors to authorized paths.

Unfortunately, the crowds also eventually created parking and traffic problems in the neighborhood on weekends. City staff and the Foundation, in negotiations with the adjacent neighborhood, decided to limit access to the Fossil Hill fenced area to authorized volunteers only, to discourage high-volume visitation. This was done by adding locked gates to the new fence.

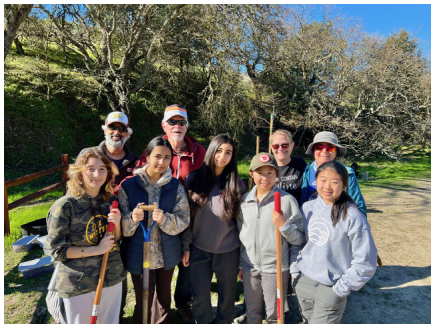
I find it a bit sad that the Project is so cutoff. While rude visitation will be much curtailed, there are many people who are interested in the 139 other species besides Poppies and the ecosystem that it represents. Next Spring, we are hoping to provide the public with supervised tours to help partially restore the experience of close-up viewing.

Thank you, WCOSF members, for your support!

—Phil Johnson

Family Oak Project

The Family Oak project is one of several sponsored by the Walnut Creek Open Space Foundation in association with the City's Open Space Division. The primary purpose of the project is to preserve, protect, and restore Oak Woodland habitats in Shell Ridge. It also aims to provide opportunities for families to support this process through Saturday group events. This specific project has been conducted over many years near the Sutherland entrance to Shell Ridge.



Our main goal is to plant oak and buckeye seeds to expand the existing oak woodlands in this area. We're also looking for oak seedlings that were started by squirrels and scrub-jays. We'll protect these seedlings from critters by putting up wire mesh screens around the planting sites. Furthermore, we'll also remove grass and brush around the sites and water them regularly during the hot and dry periods. It turns out that the very young plants rarely survive without regular watering.

We rely on conservation-minded families from the surrounding communities to help us with this effort. Most of the work sessions are on Saturday mornings starting at 9:30 a.m. near the Sutherland gate and generally last about 2 hours.

—Mark Curtis

Oak Habitat Restoration

Last year, we started watering the trees in the swale enclosure every week with a gallon of water from early April to late September. We did this because the trees needed more water than they were getting from the rain. The trees are spaced 6 to 15 feet apart because some of them will die, and the more robust survivors will grow to complete the woodland area.

In the fall of 2024, we had a fungal blight that affected about one-third of the trees in the enclosure. We were able to fix it with copper sulfite, however. The trees grew really fast, which was gratifying, but we needed to untangle them from their protective hardware-cloth cylinders earlier than expected. The oak saplings are now in good growing condition, with most of them more than three feet tall.

Because we watered the trees every week during the dry season, the oak seedlings survived and grew really well. But there are still some challenges, like predators (gophers), weeds, and rising temperatures. We're working on ways to deal with these challenges by using gopher repellant, mulching, and keeping the area as weed-free as possible.

Next year, we're planning to do some things differently. The trees in the swale area are now several years old and should be self-sufficient enough to only need water occasionally. We have collected seeds from chaparral and coyote brush and planted them in areas with exotic grasses. We have also received a modest number of seedlings from the Foundation's native plant nursery, which we will plant as well. The new plantings will need regular weeding and watering.

Please consider joining us on Wednesday Mornings!

—Gary Muerle

Project Updates
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Wildlife Habitat Restoration

We are in the process of ramping up an old project which has recently been dormant: the Wildlife Habitat Restoration project. It is different from the other projects in that the emphasis will be on restoration of fauna rather than flora.

For example, we are planning to restore habitat for cavity-nesting birds by ensuring that nest boxes deployed in the WCOS are maintained per accepted standards. So far, we have three bluebird nest box trails deployed for a total of over *25* boxes, with volunteers committed to monitor and maintain the boxes for a year. We also have discovered that a legacy nest box, designed for screech owl use, had a *Kestrel* (Sparrow Hawk) nesting in it this year!

We also expect to plan, build, and maintain brush piles to supply shelter for other types of birds, rabbits, and other small animals in the WCOS. We have four brush piles in the North Lime Area and one near Indian Valley Pond in Shell Ridge.

The Foundation's Restoration Committee has agreed that the project should be a part of the approval process they administer for the Foundation. This will make it possible for project activities between restoration groups to be coordinated and for project goals to support each other. It will also ensure that ecologically sound decisions will be made and approved practices used by volunteers implementing the restoration efforts.

If you would like to join us, or if you have suggestions for improving the wildlife habitat, please contact us at wildlife@wcosf.org. We would love to hear from you.

We look forward to the success of this new initiative!

The Poop on the Trails

Horses were crucial for progress since early history.

They carried men and supplies, plowed fields, and were the primary transportation for settling the American West. They served as early tractors on farms and vehicles to town for supplies. Many of today's trails were created by people riding horses to reach their destinations. These trails are now essential parts of open spaces and parks, providing a shared means to access nature.

The modern horse is generally confined to a barn or small (5 acres or fewer) pasture area and used for pleasure riding. Due to the lack of proximity to horses, many trail users have no experience with them.

The number of horses on the trails has rapidly diminished in the past 100 years, while the number of hikers and bike riders has increased exponentially.

Unfortunately, the increase in trail use and the lack of horse experience have created a new conflict between users – horse manure on the trail. Hikers and bikers see a wet pile of "poop" on the trail. Modern urban society does not like poop; we learn that it is something unpleasant and possibly dangerous. So why do equestrians think it is okay to leave horse poop on the trail? Especially since dog owners have to pick up dog poop!

Mammals may be grouped by the types of food they eat: herbivores (e.g., deer, cattle, horses) eat plants; carnivores (dogs, cats) eat meat; omnivores (pigs, bears, humans) eat both plants and meat. This makes for very different digestive systems and very different by-products of digestion.

Horses and other herbivores have a complex system to break down plant material as they eat. Horses are considered grazers, meaning they eat mainly grasses.

Bacteria in their stomach break down the cellulose in the plants, which releases the nutrients. The horse absorbs the nutrients, and the partially digested grasses become manure. When deposited, it is wet, but it dries quickly. When it's dry, it is like grass on the trail.

Being carnivores, dogs eat mainly meat, although we feed them food that contains broken-down plant products. Their digestive system extracts the nutrients with enzymes and some bacteria. The by-products of this digestion are likely to have undigested meat and possibly pathogenic bacteria, which means a smellier and less environmentally friendly "poop."

Carnivores and omnivores share similar digestive methods, making them more susceptible to zoonotic diseases. Zoonoses are naturally transmissible illnesses between vertebrates and humans, caused by bacteria, parasites, fungi, and viruses. Dogs and cats, carnivores, have stomach bacteria that may include harmful ones to humans, like toxoplasmosis. Reducing zoonosis risk is crucial, but it's challenging due to human- animal interactions. Picking up after dogs is essential.

But what about horse manure? Very few pathogenic bacteria are in the horse gut, and most of those (probably 99%) do not affect humans. In the past 100 years, there have been very few reported cases of horse-caused zoonosis; of these, most were not serious. Contact with horse manure on the trail will not cause disease.

While it may be inconvenient on the trail, horse poop is not dangerous and does not cause disease or grow weeds. Cooperation, education, and communication with other users are always helpful in reducing conflict on the trails.

— Lyndall Erb, PhD.

WALNUT CREEK OPEN SPACE FOUNDATION

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I WOULD LIKE TO VOLUNTEER TO: ☐ MAINTAIN OAKS ☐ PLANT NATIVES ☐ CREATE WILDLIFE CORRIDORS ☐ HELP WITH OUTREACH

Walnut Creek Open Space Foundation Newsletter

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