

"Nature is ever at work building and pulling down, creating and destroying, keeping everything whirling and flowing, allowing no rest but in rhythmical motion, chasing everything in endless song out of one beautiful form into another."

- John Muir

The average person who goes to Yosemite National Park may not realize how much restoration work is actually taking place as they walk the park. From the restoration of the Ahwahnee Meadow, to the removal of trees in order to preserve the historic Yosemite views, the National Park Service is constantly making efforts to bring Yosemite National Park back to its natural state. In October, myself and members of the WGR team had the opportunity to volunteer at the Park and assist with some of the restoration efforts.



October 11, 2022: Shortly after we arrived and set up camp at the volunteers' campsite, we were met by Sam Stromberg and Ken Yamazaki (seasonal Park Service workers; and lead of plant design) with the U.S. Park Service. Prior to arriving, I wasn't quite sure how we would assist in the restoration projects, but we soon found out we would be helping plant sedges and forbs over an old access road which had been used

During October 2022, some of the members of the WGR Southwest, Inc. team (including the Monthly Dirt editor) volunteered at Yosemite National Park and assisted the U.S. National Park Service team with their restoration efforts in the Park. In this month's edition of **The Monthly Dirt**, we're going to hear from Danielle Teravskis about a day in the life of a restoration project volunteer. But before we get started, you can watch this FORGE documentary video about Yosemite National Park restoration work to help gain an big picture perspective of what is happening at the Park (use the code "**Ahwahnee**" to watch for free)!

during the restoration of the topography of a meadow in the Yosemite Valley Floor. Sadly, about a hundred years ago, many of the historic meadows in Yosemite had been filled in to make the Park less marshy and more appealing to campers. Historically, meadows were underappreciated and viewed primarily as breeding grounds for mosquitos. Today, we know that meadows are useful for purifying water and controlling flows, as well as providing habitat for plant and wildlife biodiversity.

Not long after setting up camp, we headed to Yosemite's Leidig Meadow, where we strapped on kneepads, were handed some hori horis (a knife-like spade) and got started. Our team however weren't the first ones to start restoring this section of the Park. Prior to us arriving to replant the old access road, the

location had been temporarily stabilized with repurposed fiber roll straw to help prevent erosion. Ken instructed us to plant





the sedges (grass like plants) in pods of 5 or 6 in the hopes that even if some of the plants died, the remaining living plant roots would be a strong enough network to prevent erosion. To help these young sedges have a better chance of survival, as we were planting, we had to ensure that each plant's roots were buried just below ground level and bermed (planted in the middle of a dirt formed bowl shape) to help with water retention. The repurposed straw was also used around each berm to prevent erosion until the plants are well established. After a few hours of planting, chatting with our new Yosemite Park Service friends, and enjoying the Yosemite Valley, we packed up the truck and headed back to camp.

When we arrived back at camp, we were met by the volunteer camp host. I don't think any of us had ever met a kinder or more considerate camp host in any of our individual camping

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experiences. She emphasized that her role on site was to ensure we had a great camping experience. She even had extra supplies, for just about anything you could think of, in case a camper had forgotten something or didn't come prepared enough for the brisk evenings. As she headed back to her camper, she informed us that a mama bear and her cubs had been recently seen in the area after dark. We were definitely forewarned, by word of mouth and numerous signs around the park, that it was bear season. With hibernation season approaching the bears were very active at the park looking to pack on as many calories as possible! Good thing for the rows of bear boxes for all our food!



October 12, 2022: This morning we went with Sam and Ken over to a spot called Pohono Pullouts, a sloped hillside leading down to the Merced River. Unlike the relatively flat meadow we worked at the day before, this site had varied plant indicator statuses. Different plant species fall within different indicator categories based on what environments they thrive in. The site we would be working on restoring today would require facultative (meaning having the capacity to live under more than one specific set of environmental conditions) wetland plants, facultative plants, and facultative upland plants. All of these plants could be naturally found in varying degrees in either or both wetland (wetlands are places in which the land is covered by water either seasonally or permanently) or

upland (uplands are land areas lying above the elevation where flooding generally occurs) areas. Some of the species we were given to plant were sedges, yarrow, maple, dogwood, and spicebush. It was interesting to note that at this site, we used pine duff rather than straw to stabilize the exposed soil.



Over the course of the day, we learned that all the plants we were planting had actually been grown from seeds collected at Yosemite National Park. There are whole teams dedicated to collecting seeds all over Yosemite and shipping those seeds to a nursery to be grown for future restoration projects. I was very impressed how the Yosemite Park Service intentionally uses the resources they already have in the Park to continue to preserve the Park (for instance the repurposing of fiber roll straw). This piece of the Yosemite Restoration Project is just a part of the bigger goal in restoring the meadows and river channels in the Park. By restoring the land to its natural state (using maps and photos from the early 1900s for historical reference) they are giving the land the power to restore the Yosemite water table and continue to propagate native plants and animals which depend on it. This delicate balance within an ecosystem was a big topic of discussion with Sam who has seen for himself the devastating effects of disregarding that balance. He told us about how the Cuyahoga River, the very river that inspired the Clean Water Act, still faces ecological challenges nearly 50 years after the Clean Water Act was passed.

October 13, 2022: Today is our last day in Yosemite. And since we had to pack up camp and head home, today's schedule looked a little different. Instead of more planting, Sam showed us the Sugar Pine flood plain restoration project which WGR Southwest, Inc. and the U.S. Park Service have been partnering on. The site used to be a campground which was built on old overflow channels for the Merced River. Twenty years ago, Yosemite experience a 100-year flood which wiped out the old campground, and rather than restoring the campground, the Park Service decided to restore the overflow channels to allow the normal high levels of the Merced River to inundate it. The restoration team has designed the project to provide more



habitat for native animal species. At this site, a creative spin on sediment and erosion controls is being implemented - branches, fallen trees, and pine duff were all being used in unique ways as natural sediment and erosion controls. According to John Teravskis the project's QSD, "these natural BMPs will become part of the permanent habitat. Just like what is done for post-fire sediment control, fallen trees and limbs can be used to stop the flow and capture sediment. Plus, they don't need to be removed like temporary BMPs but will become part of the habitat as long-term sediment control which in turn often becomes habitat for wildlife."



Over the course of 2 workdays, we planted over 550 plants at restoration sites. Sam informed us that at the Sugar Pine restoration project, which is currently under construction, they will have 3,000 plants to install to stabilize stream banks. They are going to need an army of volunteers to install all those plants! We had a fantastic experience (and workout) volunteering with the Park Service and definitely would like to go back and assist in a similar capacity in future years. If you or your company would like to volunteer with these restoration efforts, you can find out more from the <u>Yosemite Conservancy</u>.

Please contact us if you have any questions ...

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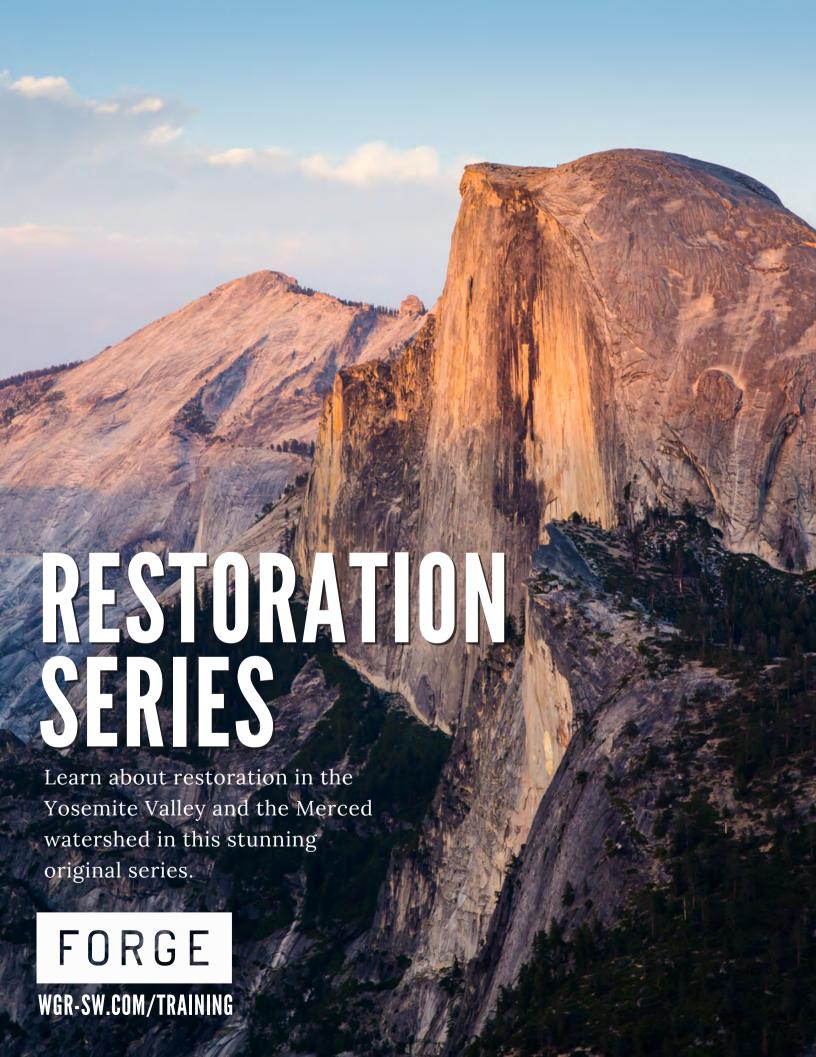
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