



NFWF

2023 San Ramon Creek Arundo Removal Project

Recipient: Contra Costa Resource Conservation District

Project Period: 06/01/2023 – 12/31/2023

Award Amount: \$84,456.00 (\$84,270.56 expended)

Matching Contributions: \$50,384.00

Project Number: # 8006.23.081438

Summary of Accomplishments

Friends of San Ramon Creek (FSRC) successfully achieved the removal of all Arundo at the Hap Magee Park site, the Ludden property site, and the Creekside Church site. Funding from NFWF and CDFW/OSPR made it possible for the project contractor Helix Environmental to remove 20,300 square feet of Arundo, far exceeding the planned amount (and contractual obligation) of 14,900 square feet. The project was completed in the expected timeframe and under budget. The funding from NFWF and CDFW/OSPR amplified our 2023 efforts to restore the health and vitality of San Ramon Creek and its surrounding environment.

Project Overview

- Helix removed all Arundo at the Hap Magee Park site, totaling approximately 19,500 square feet.
- Helix removed roughly half of the Arundo at the Ludden property site, and FSRC volunteers removed the remainder, totaling approximately 1,600 square feet.
- FSRC volunteers removed all Arundo at the Creekside Church site, totaling approximately 6,300 square feet.

Project Activities and Outcomes

The original project plan was for Helix to remove 14,900 total square feet of Arundo from 3 sites—Hap Magee Park, Ludden Property, and Creekside Church. However, the Hap Magee Park site's Arundo infestation was dramatically larger than expected—it turned out to be 19,500 square feet instead of the expected 4,800 square feet. Behind easily visible patches along the creekbank were several large, hidden patches of Arundo. FSRC directed Helix to complete the removal of all Arundo from the larger than-expected Hap Magee Park site before moving on to other locations.

After completing Arundo removal at Hap Magee Park, FSRC directed Helix to move on to the Ludden property site to remove as much Arundo as possible with the remaining contractor funding for this project. Helix was able to remove roughly half of the Arundo at the Ludden property. When Helix was done working on this

project, they had removed over 20,000 square feet of Arundo, about 33% more Arundo than the total we committed to removing in our funding agreement. So, more total Arundo was removed by Helix than was originally planned, but at two sites instead of three. FSRC volunteers removed the remainder of the Arundo at Ludden and then also removed all the Arundo at the Creekside Church site. The value of these volunteer work hours composed most of the in-kind match funding for this project.

Thanks to the grant from NFWF and CDFW/OSPR, we were able to significantly enhance our 2023 Arundo removal efforts by contracting Helix Environmental. Helix efficiently handled the removal of Arundo, including the unexpectedly large infestation at Hap Magee Park and a portion of the Arundo at the Ludden property. We are highly satisfied with the quality of the contractor's work. Initial Arundo removal and treatment kills around 90% of the Arundo at a given site, but for several years after that initial treatment, some regrowth of Arundo occurs each year. In the years to come, FSRC's dedicated Arundo maintenance team (comprised of 7 volunteer stewards) will ensure that these Arundo patches do not reestablish. The stewards revisit their patches several times each summer to apply an EPA-approved herbicide for riparian environments (Roundup Custom) to any Arundo regrowth. Based on FSRC's experience, it takes roughly 5 years of consistent treatment to completely eliminate an Arundo patch.

All herbicide treatments are consistently logged into a shared spreadsheet that includes treatment date, site location, growth observed, amount of concentrate used, wind speed, temperature, and next rain forecast. To protect any native vegetation in the Arundo removal sites, FSRC stewards spot spray directly on the Arundo and use a coarse droplet spray, both of which reduce the risk of drift. They do not treat the Arundo regrowth on windy days—this also prevents herbicide drift. The stewards do not spray when rain is forecasted within 3 days in order to minimize herbicide entering stormwater runoff. Another practice that FSRC uses to protect native vegetation in Arundo removal sites is to wait to plant native vegetation until a full season after Arundo removal, by which time the Arundo regrowth is largely under control.

Lessons Learned

We learned several things that helped us improve our Arundo removal process, including:

- It is not necessary to completely de-duff the Arundo patches that are cut. We only need to get enough of the duff off for the person spraying herbicide to be able to see the newly cut stumps (when left about 6" tall).
- The posts we had been using to support the ramps (for hauling away cut canes) are largely unnecessary and get in the way of hauling. We still need some posts to prevent longer ramps from sliding downhill. We have minimized the number of posts and still use them to help level the ramps, so that cane bundles do not slide off the side of the ramps.
- Retreating regrowth works best if the regrowth is cut to about 18" tall and sprayed with herbicide. This may require treatments as often as every 3 weeks in the early part of the season.
- In many cases, there is room above the high-water line to chip the canes onto the bank instead of into a dumpster. This reduces the amount of hauling required and returns the biomass to the area.
- It makes for a quieter working environment and less cost when we pile the cut Arundo canes and then chip them later (although this does require additional untangling of the pile and multiple handling of

the same canes).

The primary lesson we learned from this project overall concerned the size estimation of the Hap Magee Park site by the contractor. We learned that one must walk the full circumference of an infestation to be certain of its size. This was not so easy until we built a temporary pedestrian bridge to gain access and to allow carrying of cane bundles across the creek where chipper access was available.

Dissemination

FSRC produces an annual Arundo Removal Project Report including annual project goals, analysis of performance against those goals, lessons learned, volunteer hours, etc. This year's report includes the information in this NFWF programmatic report (i.e., about the project funded by NFWF and CDFW/OSPR), but it also includes information about many other Arundo removal sites and volunteer activities undertaken in 2023. That annual Arundo Removal Project Report is shared with CDFW as a condition of the CDFW Operations Letter: No Lake or Streambed Alteration Agreement Needed, Notification No. 1600-2018-0287-R3, under which FSRC performs its Arundo removal activities. The 2023 Arundo Removal Project Report has been and will continue to be shared with other community groups working on Arundo removal in Contra Costa County, including but not limited to the Walnut Creek Watershed Council (WCWC), the WCWC's sub-groups, and Friends of Alhambra Creek.

This larger report can be made available to NFWF upon request but is not being automatically included here because it provides information on Arundo removal efforts beyond the scope of the project funded by NFWF and CDFW/OSPR.

POSTING OF FINAL REPORT: *This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as "PROTECTED" and provide an explanation and complete citation to the statutory or regulatory source for such protection.*

Project Photos



Image 1: Footpath laid out with wooden planks along the ground.



Image 2: Wood planks going across San Ramon Creek and up a hill.



Image 3: San Ramon Creek with overgrown embankments.



Image 4: Removal of overgrown invasive plants along the San Ramon Creek.



Image 5: Pile of removed overgrown invasive plants along the San Ramon Creek.



Image 6: Aftermath of invasive plant removal along the San Ramon Creek.