



2022/23 ANNUAL REPORT

And 2023/24 pre-notification

for USACE, USFWS and San Diego Regional Water Quality Control Board

USACE Regional General Permit #41:
File No. SPL-2008-01079-MLM

&

USFWS Informal Consultation:
FWS-SDG-08B0219-09I0092

File No.: R9-2019-0209
Place ID: 807511
Reg Measure ID: 434433
WDID: 9 000003503

2022/23 ANNUAL REPORT AND WORK PLAN

for the California Department of

Fish and Wildlife, Region 5

Streambed Alteration Agreement (1600):

1600-2009-0263-R5

San Diego River Watershed Invasive Non-Native Plant Control and Restoration Program

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The San Diego River Conservancy (Conservancy) and partner organizations have carried out removal and control of the invasive non-native plant *Arundo donax* (giant reed) and other target invasive non-native plant species at several sites along the San Diego River and its tributaries under the Conservancy's Watershed Invasive Non-Native Plant Control and Restoration Program (program). This report serves the dual purpose of a past year annual report as well as the pre-notification requirement for upcoming planned activities.

This report covers restoration activities carried out from summer 2022 (July 1st) through summer 2023 (June 30th) under RGP #41: **File No. SPL-2008-01079-MLM**. A summary of project activities is provided along with an outline of continuing work and anticipated project areas for fiscal year (FY) 2023/24.

The program operates under a United States Army Corp of Engineers (USACE) RGP #41 (File No. SPL-2008-01079-MLM). United States Fish and Wildlife Service (USFWS) issued an informal consultation to the USACE RGP#41 project (FWS-SDG-08B0219-09I0092). Prior to this, Conservancy obtained a Technical Assistance Letter (FWS-SD-2008B0219/2008TA0213). Both documents are consistent with each other and outline the same minimization and avoidance measures. Other permits held by the Conservancy include: California Department of Fish and Wildlife (CDFW) 1602 permit and a California Environmental Quality Act (CEQA) Mitigated Negative Declaration (MND) which has been completed for the program. CDFW has been provided a version of this permit report updating them on work completed in the 2022-2023 as well as planned activities for 2023-24.

The maps created for this report can be found on pages 16 and 17. They present current projects in purple and proposed projects in red.



Project #01: Restoration of Alvarado Creek Phases I-III, V, VII, Smoke Tree HOA, and Re-vegetation (Prop 1, 68 and Directed Grant)

Restoration of Alvarado Creek, through San Diego State University Research Foundation (SDSURF) and the Soil Ecology and Restoration Group (SERG) has received funding from various Conservancy grants to remove up to 13.8 acres invasive non-native vegetation. Most recently, award for removal of large palm trees at Adobe Falls adjacent to Interstate 8. Native desert broom and evening primrose have recruited to help stabilize the south side of the bank near the Smoke Tree HOA to reduce erosion. Approximately 1,283 outplants at appropriate densities were propagated throughout the project site. Supplemental plants were purchased from a local nursery with each plant receiving 1 gallon of water once installed.



Alvarado Creek before (left) and after (right) biomass removal.

Work completed in the past year (2022-2023) included:

- 1) Approximately 120 cubic feet of vegetation was removed and more than a thousand native propagules installed.

Work planned for the next year (2023-2024):

- 1) SDSU Phase 7 received grant funding to begin work for the 2023 cut season. SDSU anticipates maintaining this restored living learning laboratory into the future.



Project #02: Navajo Canyon Palm Removal and Restoration Project, Phase 1 (Directed Grant)

Some of the City of San Diego's canyon open spaces are infested with palm trees. San Diego Canyonlands (SDCL) "skirted" palms for the upcoming helicopter lift. Approximately 10,000 lbs. of invasive vegetation from 7 acres riparian woodlands/wetland areas and 2 acres transitional upland habitat were removed.



Marking palms for removal at Navajo Canyon

Work completed in the past year (2022-2023) included:

- 1) Hand tools were used to prepare for the upcoming helicopter lift.

Work planned for the next year (2023-2024):

- 1) Helicopter work was postponed to fall 2023 due to bird breeding season.

Project #03: Ruffin Canyon Restoration Phase I and II (Prop 1)

San Diego Canyonlands (SDCL) removed over 600 invasive trees reducing the risk of wildfire to the Serra Mesa community. Nearly 260 of those trees were mature palms removed via helicopter. An estimated 181,000 lbs. of invasives were removed from Ruffin and Sandrock Canyon. Palm seedling surveys were conducted in order to prevent the re-establishment of Mexican fan palms.



Ruffin Canyon palm removal

Work completed in the past year (2022-2023) included:

- 1) Over 15.5 acres were restored from Phase 1 and 11 acres were restored from Phase 2. Approximately 69,000 lbs. of plant material were removed manually.

Work planned for the next year (2023-2024):

- 2) Phase 2 of this project is complete. These sites will be maintained for the next 10 years.

Project #03: San Diego River Healthy Headwaters Restoration Project El Capitan Reservoir Catchment Weed Assessment (SDCWA)

Funded through a Proposition 84 grant, the San Diego County Water Authority (SDCWA) partnered with the Resource Conservation District (RCD) of Greater San Diego County to treat 35 acres invasive weeds, improve 62 acres impacted habitat and restore or stormproof approximately 10 miles of unauthorized trails. Weed management work along Chocolate Creek, a tributary to El Capitan Reservoir included spraying re-sprouts, cutting and removing vegetation.



Bundles of *Arundo* loaded in a trailer for hauling offsite

Work completed in the past year (2022-2023)

- 1) Approximately 0.015-acre re-treatments, 0.124 acres biomassed and 272 bundles of *Arundo* were extracted and disposed of in two 40-yard bins.

Work planned for the next year (2023-2024):

- 1) Final report and grant close out is expected with no more field work anticipated.

Project #04: Lindo Lake Improvements – Phase 1 East Basin (Prop 1)

Lindo Lake Restoration Phase I conducted by County of San Diego, Department of Parks and Recreation (DPR) removed approximately 12 acres invasive non-native vegetation on the east basin and re-vegetated with native trees and plants. A water conserving-irrigation system was installed to help establish container plantings and seed application areas.



Lindo Lake east basin post habitat restoration



Work completed in the past year (2022-2023) included:

- 1) County DPR maintained approximately 12 acres around Lindo Lake east basin to prevent invasive non-native annuals from taking over.

Work planned for the next year (2023-2024):

- 2) County anticipates maintaining the area in its restored condition into the future.

Project #05: Invasive Removal, Restoration and Maintenance along the San Diego River in Lakeside (Prop 1 and Directed Grant)

Lakeside's River Park Conservancy (LPRC), previously funded by the Conservancy's Proposition 1 grant program and now supported by the Directed grant program, is restoring approximately 140 acres riparian habitat along Los Coches Creek and other unnamed drainages leading to the San Diego River in Lakeside, California. *Arundo* stands are the primary species targeted for removal while a separate plan for palm removal is being established. Initial treatment of an additionally new 36 acres and restoration plantings on previously treated areas will enhance native habitat for biodiversity and wildlife corridors in east county, San Diego. Main challenges include gaining access on steep hills and restriction to private properties.



Dead *Arundo* stalks at a re-treatment site in East County

Work completed in the past year (2022-2023) included:

- 1) Site visits removed 5.25 acres of biomass and surveys of resprouts determined 28.75 acres herbicide re-treatment applied.



Work planned for the next year (2023-2024):

- 1) One big challenge for this project is renewing right-of-entry (ROE) agreements with property owners and using that opportunity to form relationships and help property owners plan their own future maintenance of the sites.

Project #06: Tierrasanta Open Space BMZ Maintenance (Wildfire Early Action Plan - Senate Bills 85 and 170)

The City of San Diego, Department of Parks and Recreation, Open Space Division owns and manages various canyons in Tierrasanta. San Diego Canyonlands (SDCL) has a commitment to maintaining Brush Management Zones (BMZ) within the canyon through annual invasive surveys, Canyonlands Outreach Program and staff-supported volunteerism. On February 10, 2020, the City of San Diego (City) Parks & Recreation Department issued a Master Right of Entry Permit to SDCL to perform enhancement, restoration, and trail maintenance activities on City-owned real property managed by the City's Parks and Recreation Department. Native vegetation within 100 feet of structures was limbed up and maintained while invasive non-native vegetation was removed.



Before (left) and after (right) fuel reduction in the Brush Management Zone (BMZ)

Work completed in the past year (2022-2023) included:

- | | |
|--|--------------------------------------|
| 1) Shepherd Canyon 15.44 acres of BMZ. | 3) Ruffin Canyon 22.21 acres of BMZ. |
| 2) Navajo Canyon 14.18 acres of BMZ. | 4) Rueda Canyon 11.57 acres of BMZ. |

Work planned for the next year (2023-2024):

- 1) Complete the remaining 16.07 acres of Rueda Canyon

Project #07: El Monte Valley Fuels Reduction Project (Wildfire Early Action Plan - Senate Bills 85 and 170)

Lakeside's River Park Conservancy (LRPC) is reducing fuel loads across 61 acres in El Monte Valley by removing invasive non-native vegetation. Targeted plants to be removed and controlled include: *Arundo donax*, Tamarisk, fountain grass, pampasgrass, tree of heaven, Mexican fan palm, tree tobacco, crystalline iceplant, Italian thistle, Russian thistle, tocalote, crown daisy, brass



buttons, stinkwort, fennel, shortpod mustard, wild radish, castor bean, blessed milkthistle, and eucalyptus.



Tamarisk removal at El Monte Valley

Work completed in the past year (2022-2023) included:

- 1) Vegetation management occurred across 11.89 acres.

Work planned for the next year (2023-2024):

- 1) Continued maintenance and weeding to prevent the site from converting back to invasive non-native cover.

Project #08: Mission Valley Preserve Invasive Removal

The City of San Diego's 51-acre Mission Valley Preserve experiences frequent occupation by homeless/transients who commonly start fires in thick brush. To reduce the potential of these wildfires spreading to nearby homes and office buildings, the San Diego River Park Foundation (SDRPF) has helped recruit and train volunteers to manage vegetation in these public open space areas. Invasive non-native vegetation was first biomassed, then treated via cut stump or foliar application with herbicide approved for uses in aquatic habitats. Lastly, hand pulling of smaller invasive recruits kept resprouts under control.



Volunteers at Mission Valley Preserve

Work completed in the past year (2022-2023) included:

- 1) Volunteer training and maintenance is expected to continue next cut season.

Work planned for the next year (2023-2024):

- 1) No work was conducted on the West portion.

Project #09: San Diego River El Capitan Reservoir and Upstream Invasive Removal

The Resource Conservation District (RCD) of Greater San Diego County partnered with the San Diego River Park Foundation (SDRPF) to control invasive non-native vegetation in and around the El Capitan catchment on City of San Diego-owned land. Funding was made possible through Proposition 84 grant funds from the San Diego County Water Authority (SDCWA).



Arundo removal at El Capitan Reservoir via boat



Work completed in the past year (2022-2023) included:

- 1) Seven different stands totaling 1.36 acres of *Arundo* were cut stumped or foliar sprayed and smaller saltcedar saplings were hand pulled.

Work planned for the next year (2022-2023):

- 2) Invasive removal work has been completed and project monitoring will commence through Summer 2024.

Project #10: San Diego *Arundo* Control Project (Mission RCD)

Funding was made available for *Arundo* removal, treatment and re-vegetation in the San Diego River watershed from a Wildlife Conservation Board (WCB) Proposition 1 grant and a SANDAG Environmental Mitigation Program (EMP) grant. Through this partnership, Nature Collective was able to re-treat and restore up to 3.1 river miles. Crews were on foot and used backpack sprayers with post emergent herbicide approved for use in aquatic habitats as foliar application marked with dye to ensure good coverage.



Arundo re-sprouts on the San Diego River banks

Work completed in the past year (2022-2023):

- 1) Work was conducted in the City of San Diego's WCB *Arundo* footprint and at Carlton Oaks Golf Course in the City of Santee.

Work planned for the next year (2022-2023):

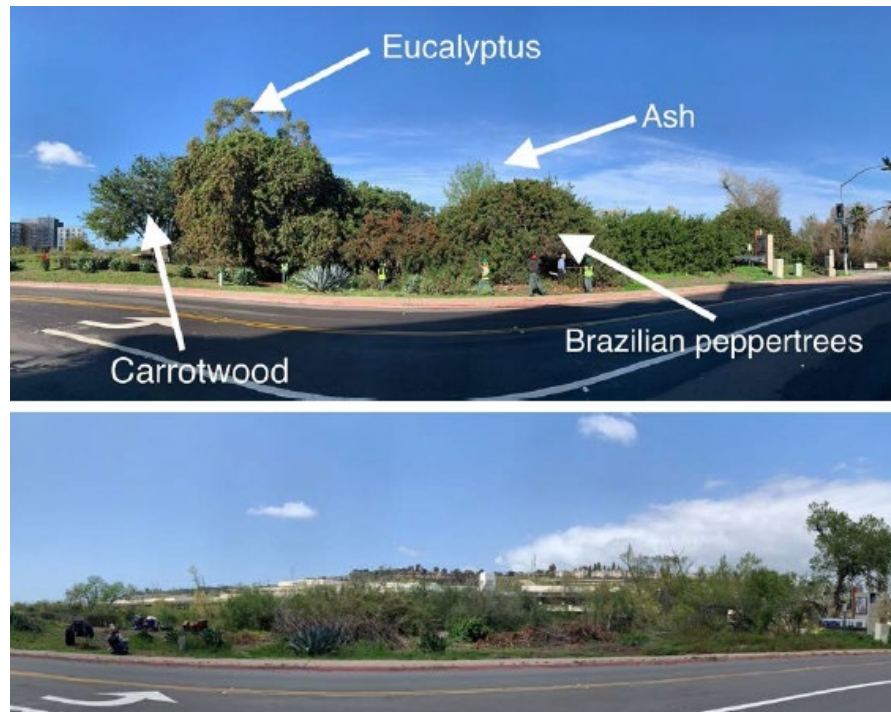
- 1) Additional control of targeted perennial non-native *Arundo* may occur in the fall of 2023. Installation of woody plant cutting is anticipated to be supported by the Conservancy's Directed Grant.

Project #11: Fashion Valley Mall Invasive Removal Project

The San Diego River Park Foundation (SDRPF) is working with Simon Property Group at the Fashion Valley Mall to remove 1.54 acres of invasive canopy. Urban Corps of San Diego County and volunteers were trained to identify and removed invasive species such as Brazilian pepper



trees, acacia, eucalyptus, Canary Island date palm, giant reed, saltcedar, Mexican fan palm, and castor bean.



Invasive Non-Native tree removal at Fashion Valley Mall

Work completed in the past year (2022-2023):

- 1) 62 tons of biomass were placed in 22 20-yard dumpsters and removed offsite.

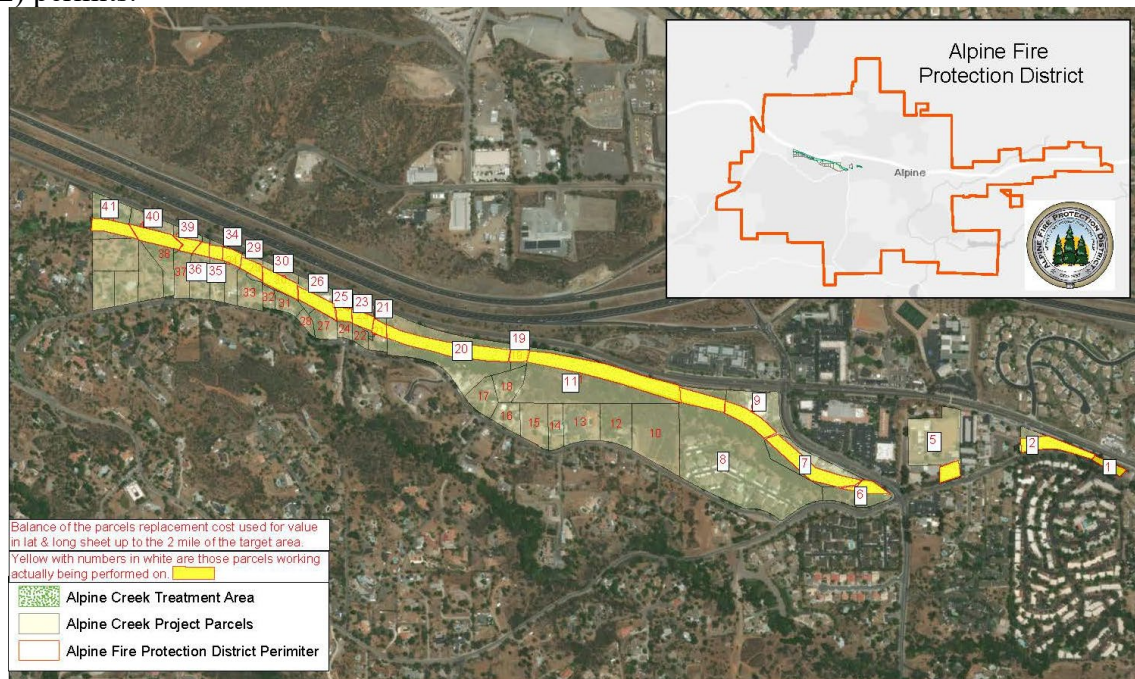
Work planned for the next year (2023-2024):

- 1) Half-acre work remains for next cut season with majority being *Arundo*.

The following are proposed projects:

Proposed Project #01: Alpine Creek Fuel Reduction (Alpine Fire Protection District)

Alpine Fire Protection District has applied to the Conservancy's Directed Grant Program for vegetation management along Alpine Creek. If approved, this work will be contracted out in order to have field crews remove vegetation and again access through property owners' right-of-entry (ROE) permits.



Project map at Alpine Creek.

Work completed in the past year (2022-2023)

- 1) No work has begun at Alpine Creek.

Work planned for the next year (2023-2024):

- 1) Remove and control up to 16 acres *Arundo* and other invasive non-native vegetation.

Proposed Project #02: Mission Trails Regional Park Fire Resiliency and Invasive Abatement Program

The Mission Trails Regional Park Foundation has applied to the Conservancy's Directed Grant Program to increase Mission Trails Regional Parks' Fire resiliency and decrease the likelihood of fire within the 8,000-acre park by removing brush and invasive vegetation from fire-prone areas. If approved, this project would also expand and improve native habitat for wildlife corridors and support biodiversity.



City of San Diego Fire-Rescue Department helicopter at Mission Trails Regional Park

Proposed Project #03: City of Santee Fire Hazard Mitigation and Natural Vegetation Restoration in Wildland Urban Interface

The City of Santee has applied to the Conservancy's Directed Grant Program to treat 415 acres of fire prone areas in the City of Santee along the San Diego River corridor. If approved, the City of Santee will emphasize the removal of non-native vegetation in order to help restore the natural flora to a healthy level. Additionally, Santee would complete the creation of defensible space around adjacent structures through the thinning of fire-prone vegetation, and the removal of fire hazard debris, which will enhance community resiliency in the project area.

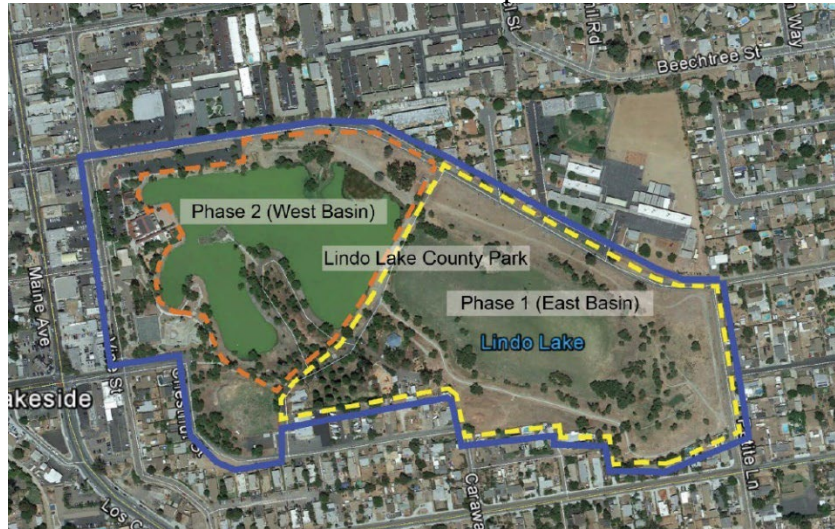


Fire break in Santee protecting homes from igniting shortly after a wildfire



Proposed Project #04: Lindo Lake Improvement Project Phase 2 – West Basin

The County of San Diego, Department of Parks and Recreation has applied for funding through the Conservancy's Directed Grant Program in order to restore the west basin, or phase 2, of Lindo Lake Improvement projects. If approved, the County intends to remove sediment to increase the basin depth to 10 feet, install natural bentonite clay liner, as well as best management practices drainage improvements and restore the terrestrial and aquatic habitat.



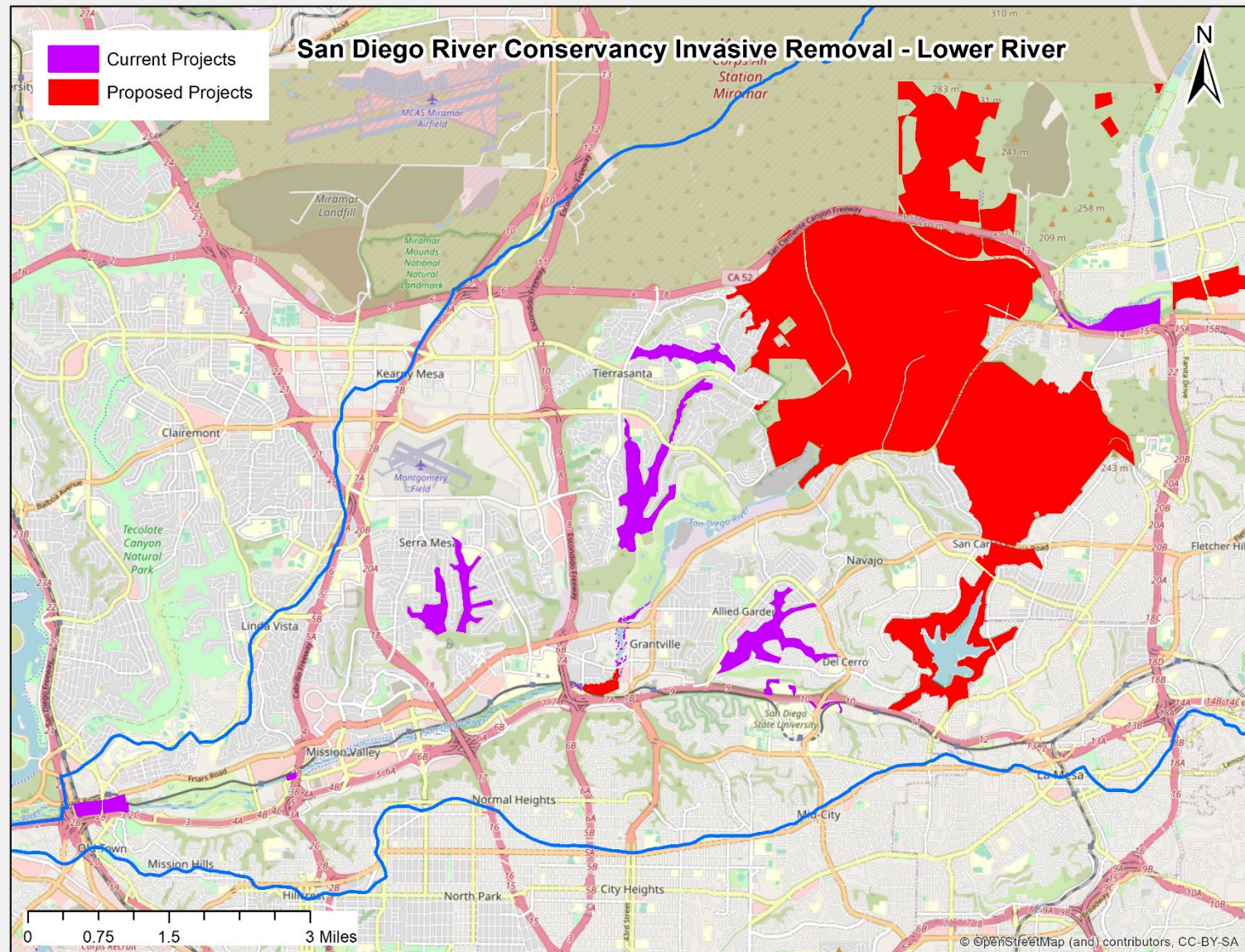
Lindo Lake Restoration Phase 2 – West Basin

Proposed Project #05: Silverwood Wildlife Sanctuary Conservation

San Diego Audubon Society has applied to the Conservancy's Directed Grant Program for vegetation management at Silverwood Wildlife Sanctuary. If approved, this project would perform fire clearance, update educational content and monitor plants and wildlife to reduce the spread and threat of wildfire.

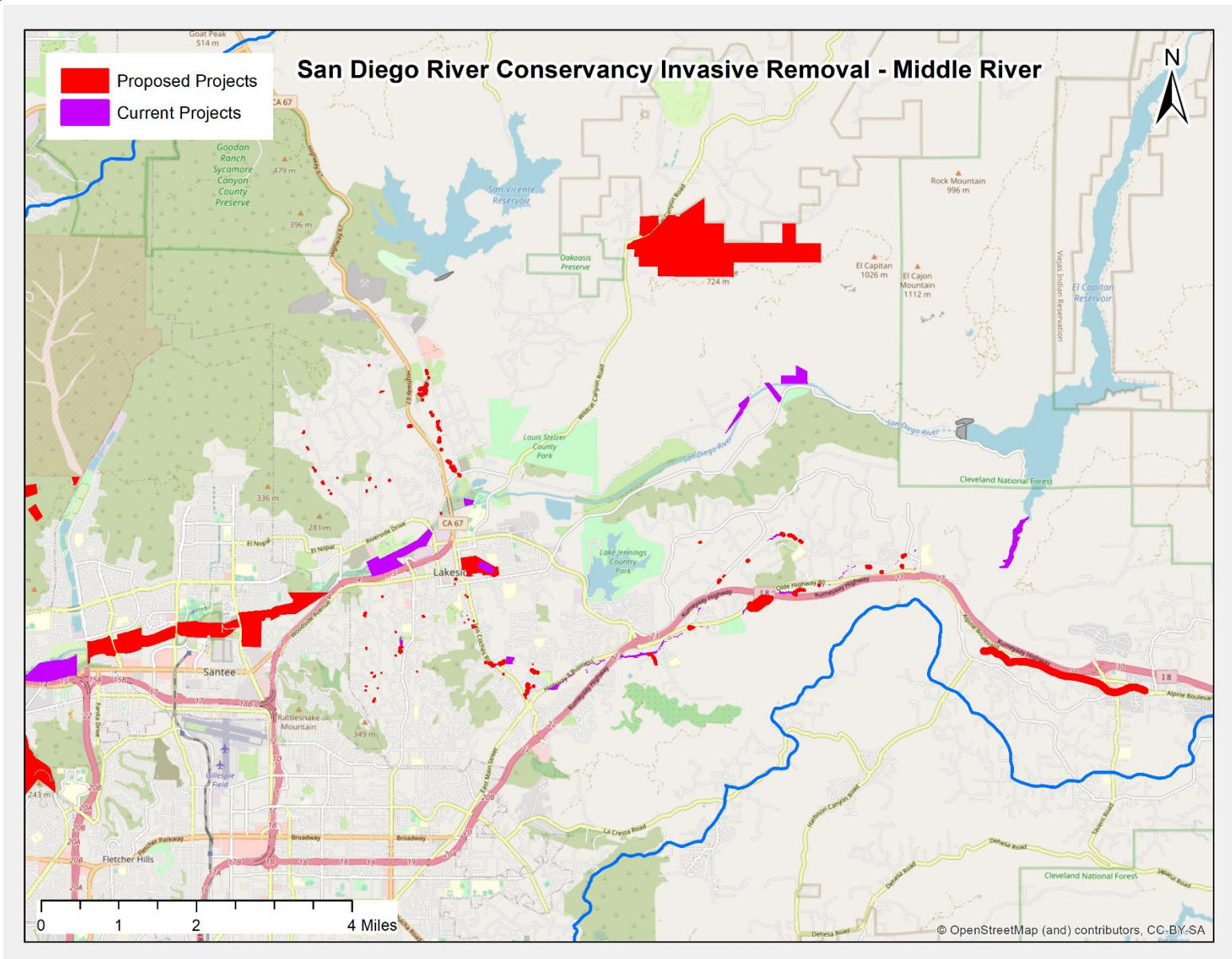


Land manager at Silverwood Wildlife Sanctuary





Map 1. San Diego River Conservancy’s Invasive Non-Native Plant Removal & Control Program FY 22/23 for the lower watershed.





Map 2. San Diego River Conservancy’s Invasive Non-Native Plant Removal & Control Program FY 22/23 for the middle watershed.