

**DRAFT**

# **Nature Reserve of Orange County**

**County of Orange  
Central/Coastal NCCP/HCP**

## **2022 ANNUAL REPORT**



**Natural Communities Coalition  
13042 Old Myford Road  
Irvine, CA 92602**

[www.occonservation.org](http://www.occonservation.org)

# **NATURE RESERVE OF ORANGE COUNTY**

## **ANNUAL REPORT 2022**

### **Table of Contents**

<b>BACKGROUND AND INTRODUCTION .....</b>	<b>1</b>
<b>RESERVE MAPS .....</b>	<b>1</b>
Coastal Reserve Map .....	2
Central Reserve Map .....	3
<b>1.0 ORGANIZATIONAL GOVERNANCE AND ANNUAL REPORT OVERVIEW .....</b>	<b>4</b>
1.1 Board of Directors Milestones in 2022 .....	4
<b>2.0 SCIENTIFIC PROGRAM STATUS AND WORK PLAN 2022-23 .....</b>	<b>5</b>
2.1 Introduction .....	5
2.2 Work Plan Table .....	7
2.3 Project Descriptions .....	9
2.4 Habitat Restoration and Enhancement Summary Tables .....	36
<b>3.0 CONSERVATION CUSTODIAL FUNDS.....</b>	<b>37</b>
3.1 2022 Pacific Pocket Mouse Custodial Fund.....	37
3.2 2022 Cowbird Fund .....	37
<b>4.0 RESERVE MANAGEMENT PLANS AND POLICIES .....</b>	<b>37</b>
4.1 Wildland Fire Management Plan.....	37
4.2 Habitat Restoration and Enhancement Plan.....	42
4.3 Recreation Management Plan.....	42
4.4 Grazing Management Plan.....	43

<b>5.0</b>	<b>IMPACTS TO COASTAL SAGE SCRUB HABITAT .....</b>	<b>43</b>
5.1	Authorized Take in the Reserve System by Participating Landowners as Reported to NCC in 2022.....	43
5.2	Take by Non-Participating Landowners – In-Lieu and Other Mitigation Fee Options .....	54
<b>6.0</b>	<b>ACCOUNTING OF FUNDS RECEIVED AND DISPERSED.....</b>	<b>54</b>
<b>7.0</b>	<b>BOUNDARY CHANGES/MINOR AMENDMENTS .....</b>	<b>54</b>
<b>8.0</b>	<b>LANDOWNER/MANAGER PROGRESS REPORTS AND WORK PLANS .....</b>	<b>55</b>
8.1	California Department of Fish and Wildlife Coal Canyon Ecological Reserve .....	55
	Laguna Laurel Ecological Reserve .....	62
	Upper Newport Bay Ecological Reserve.....	70
8.2	California Department of Parks and Recreation Crystal Cove State Park.....	81
8.3	Orange County Parks Aliso and Wood Canyons Wilderness Park .....	96
	Irvine Ranch Open Space .....	109
	Irvine Regional Park.....	124
	Laguna Coast Wilderness Park .....	133
	Peters Canyon Regional Park .....	142
	Santiago Oaks Regional Park.....	151
	Talbert Regional Park .....	160
	Upper Newport Bay Nature Preserve .....	168
	Whiting Ranch Wilderness Park .....	176
8.4	Orange County Public Works/OC Flood Control District Orange County Public Works Projects .....	184

<b>8.5</b>	<b>Orange County Waste and Recycling</b>	
	Orange County Waste and Recycling .....	<b>196</b>
<b>8.6</b>	<b>City of Irvine</b>	
	Open Space Preserve .....	<b>208</b>
<b>8.7</b>	<b>City of Newport Beach</b>	
	Buck Gully Reserve .....	<b>217</b>
<b>8.8</b>	<b>Irvine Company</b>	
	Irvine Company .....	<b>227</b>
<b>8.9</b>	<b>University of California, Irvine</b>	
	Ecological Preserve .....	<b>234</b>
<b>8.10</b>	<b>Irvine Ranch Water District</b>	
	San Joaquin Reservoir.....	<b>244</b>
	Syphon Reservoir Preserve .....	<b>250</b>
<b>8.11</b>	<b>Transportation Corridor Agencies</b>	
	Bonita Creek.....	<b>256</b>
	Coyote Canyon .....	<b>262</b>
<b>8.12</b>	<b>Southwest Resource Management Association</b>	
	Portola South .....	<b>268</b>

### **Acknowledgements**

*The Natural Communities Coalition appreciates and thanks the reserve landowners and land managers whose hard work and collaboration makes a significant contribution to the health of the Reserve and this Annual Report.*

### **Cover Photo**

*The view is looking south towards Crystal Cove Beach. The coastal cliffs at Crystal Cove State Park serve as important habitat for many rare plant species, several of which are covered in the NCCP/HCP. Photo by James Bailey.*

## **BACKGROUND**

*The Implementation Agreement for the County of Orange NCCP/HCP Central and Coastal Subregion specifies that an Annual Report be prepared each year to describe activities of the non-profit management corporation and of landowners and land managers within the reserve system. The annual report contains a progress report for the preceding year and a work plan for the following year. This report is being submitted to the US Fish and Wildlife Service and California Department of Fish and Wildlife to fulfill that requirement for the years 2022/2023. Guidelines provided by the Wildlife Agencies were used in the preparation of this report.*

## **INTRODUCTION**

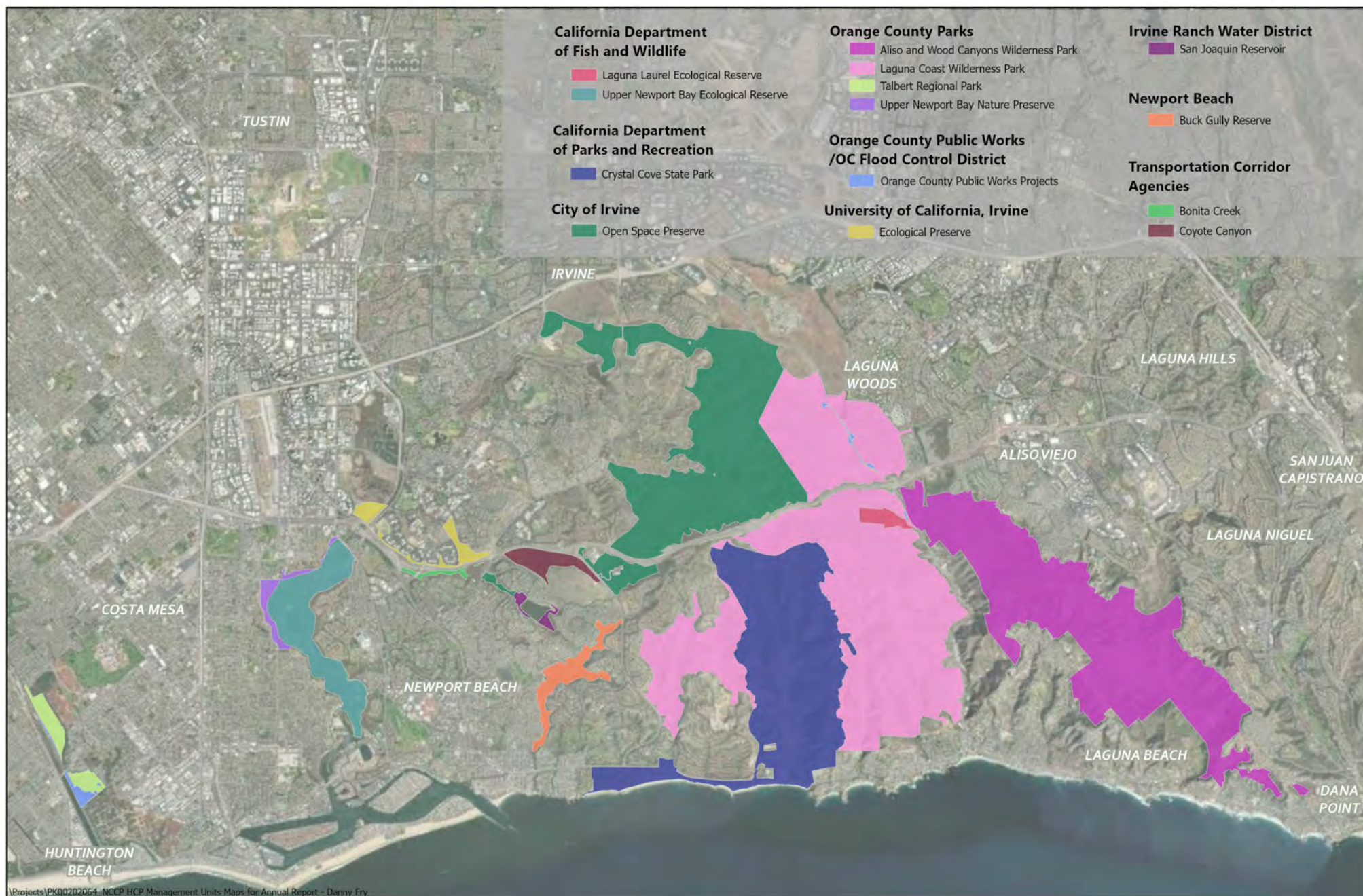
The Natural Communities Coalition is the 501(c)(3) non-profit corporation that was formed to manage the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) for the Central and Coastal Subregion of Orange County. Its mission is to “*Coordinate with landowners, managers and other partners to ensure the persistence of the Reserve’s natural communities, including the full spectrum of native plant and animal species, through protection, study and restoration of native habitats and natural processes*”. Thirty-nine sensitive species are protected, including nine plant and thirty animal species. The primary vegetation type in the Reserve is coastal sage scrub, coexisting in an intricate mosaic of oak woodland, native grassland, chaparral, Tecate cypress and riparian communities.

NCC helps coordinate science and land management activities of reserve landowners and managers in the nearly 38,000-acre reserve system. Additionally, it conducts biological research and monitoring, and implements habitat restoration and enhancement programs in coordination with landowners and managers. The overall biological goal of the Reserve program is to conserve healthy, functioning ecosystems at a landscape level. This is accomplished through adaptive management, a flexible approach that is open to change based on new scientific information.

## **RESERVE MAPS**

Two maps of the Reserve system, Coastal Subarea and Central Subarea, by ownership, have been included in this annual report for easy reference.





Projects\PK00202064\_NCCP HCP Management Units Maps for Annual Report - Danny Fry

**DESIGNED AND PRODUCED BY:**

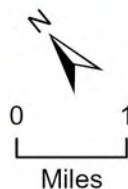
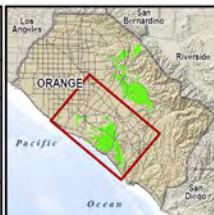
OCPR  
OC Parks GIS

**DATA SOURCE:**

- OC Parks; OCPR; Earthstar Geographics (Aerial Imagery)

The County of Orange and OCPR/OC Parks/Survey/GIS/LIS make no representations or warranties regarding the registration or accuracy of the data from which this map was derived. Neither the County nor OCPR/OC Parks/Survey/GIS/LIS shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

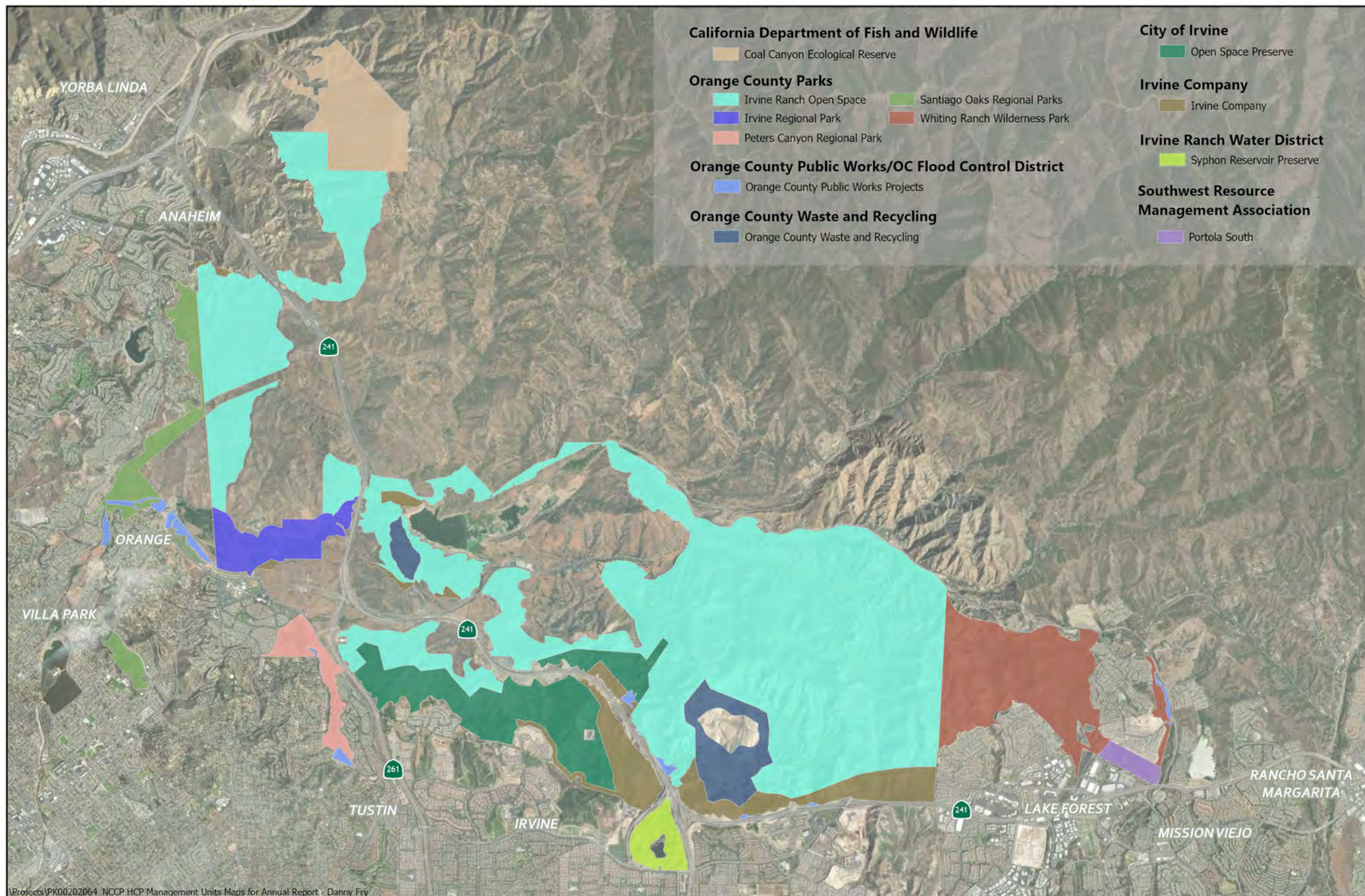
**DATE:** February 6, 2023



# **Nature Reserve of Orange County Management Units** *Coastal Reserve*

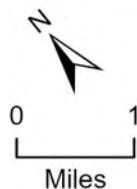
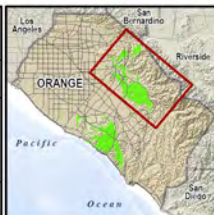






Projects\PK00202064\_NCCP HCP Management Units Maps for Annual Report - Danny Fry

<b>DESIGNED AND PRODUCED BY:</b> OCOR OC Parks GIS
<b>DATA SOURCE:</b> - OC Parks; OCPW; Earthstar Geographics (Aerial Imagery)
The County of Orange and OCOR/OC Parks/Survey/GIS/LIS make no representations or warranties regarding the registration or accuracy of the data from which this map was derived. Neither the County nor OCOR/OC Parks/Survey/GIS/LIS shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.
<b>DATE:</b> February 6, 2023



## Nature Reserve of Orange County Management Units

Central Reserve





## **1.0 NCC ORGANIZATIONAL GOVERNANCE AND ANNUAL REPORT OVERVIEW**

### **1.1 Board of Directors Milestones in 2022**

#### **March**

- NCC Board of Directors held a facilitated strategic planning workshop with partners, directors and alternates.
- The tax returns for the October 1, 2020, through September 30, 2021, fiscal year were reviewed and accepted by the board.
- NCC Board of Directors held elections for Public At-Large Directors and Alternates representing Business, Environment, and Recreational interests.
- Board of Directors unanimously approved the NROC 2021 Annual Report and 2022 Work Plan for submission to the Wildlife Agencies.

#### **June**

- NCC Board of Directors approved a new audit and tax firm and a three-year engagement.

#### **September**

- Board of Directors reviewed and approved the NCC 2022 - 2024 Strategic Plan.
- Board of Directors approved the 2022-23, fiscal year budget.

#### **December**

- NCC Board of Directors approved the September 30, 2022, audited financial statement as presented by CliftonLarsonAllen.
- NCC Board of Directors approved a revised In-Lieu Mitigation Fee that is consistent with the fee authorized as part of the South County HCP.

## **2.0 NCC SCIENTIFIC PROGRAM STATUS AND WORK PLAN 2022 - 2023**

### **2.1 Introduction**

The primary responsibility of NCC is to facilitate implementation of an effective management program that maintains the long-term net habitat value of the coastal sage scrub habitat mosaic within the Central-Coastal Subregion. Through its biological monitoring and research program, NCC gathers key information on the status and trends of the biological resources and operation of natural systems found within the Reserve. Knowledge gained from these activities informs development of the Reserve's science-based management program implemented by the signatories of the NCCP/HCP, with support from NCC, in an adaptive framework.

Habitat restoration and enhancement is critical to maintaining and enhancing the long-term viability and function of the habitat within the Reserve and serves a key role in the Reserve's management program. As defined by the NCCP/HCP, any activity designed to enhance existing biological functions, or restore biological functions that were present historically but no longer are present within the Reserve is treated as a restoration or enhancement activity. Traditionally, the focus of NCC's habitat restoration program has been on the restoration of the conditions that support the target species and habitat, however, the program has the flexibility to be expanded to include the enhancement or restoration of the full range of habitats included within the Reserve, as well as the monitoring and associated adaptive management of ongoing operation and maintenance activities, public access and recreation uses, and fire management programs.

The Work Plan Table (Section 2.2) and accompanying Project Descriptions (Section 2.3) provide updates on the progress and accomplishments of twenty projects sponsored by NCC during the 2022 calendar year. One project is now recognized as complete pending a final report. All others are ongoing or new projects scheduled to be implemented in 2023. Project Descriptions were written to facilitate development of a project database that allows for the standardization of tracking project status, cost, matching contributions, landowner involvement, and accomplishments. In addition, the information provided in the summary table allows projects to be directly linked to project reports, GIS data, and contracts, as well as assigns projects to different program classes and areas, and by resource.

The total approved Work Program budget for FY2023 is \$2,351,889. Consistent with the NCC Strategic Plan, the budget for FY2023 includes funding for multi-year science and land management initiatives developed to support a broad-based ecosystem approach to the protection and long-term management of biological diversity present within the Reserve. Multi-year initiatives are organized across the six focus areas of wildland fire, recreation, habitat restoration, invasive species, wildlife management, and biological monitoring.

Following discussions with members of the NCC Board, Technical Advisory Committee, key partners and stakeholders, the importance of identified multi-year initiatives was ultimately recognized and seconded by participants of the Science Integration Meeting hosted by NCC in early 2016 and then again by NCC board members and key partners in the NCC 2022 - 2024 Strategic Planning Workshop held in March 2022.

Multi-year initiatives supported by the present-year budget include several resource management and monitoring activities in direct support of the mission of the Reserve. These include: a partnership among OCFA, UCCE, OC Parks, State Parks, and IRC, to monitor and treat invasive beetles threatening oak and riparian woodlands; partnership with UC Irvine on development of strategies for monitoring changes in the coastal sage scrub habitat mosaic and habitat restoration; a NCC staff led initiative to work with partners and experts on creation of dashboard metrics of relevance to partners, the public, and elected officials concerning the health of the Reserve; continue development of management strategies to improve breeding opportunities for western spadefoot; and partner-supported, repeat, region-wide surveys for Cactus Wren and California Gnatcatcher.

The budget continues to support empowerment of reserve partners as they direct implementation of a coordinated, unified approach to the management of invasive plants with support from the California Invasive Plant Council under contract with NCC. With respect to recreation management, the budget allows NCC staff to continue to engage national leaders in the field of recreation ecology from Utah State University and Oregon State University to work with partners on development of a long-term recreation management plan for the Reserve, providing the much-needed balance between human-use and resource protection within the Reserve.

Lastly, the budget affords NCC staff the opportunity to continue implementing key elements of the Wildland Fire Management Plan. Such elements include limiting fire spread and rates of ignitions along the wildland-urban interface and roadsides, implementing the Fuel Management Standards, and other fire management activities associated with natural resource protection. Considering some of these elements fall outside of the Reserve, progress will require partner and contractor-based training, and establishment of new partnerships with other agencies, such as Caltrans, through implementation of priority initiatives identified by COAST and the county-wide Community Wildfire Protection Plan.

Multi-year initiatives supported by the budget reach further than previously funded activities as they create a partner-based collaborative supporting science-based decision making and novel communication processes. Through implementation of the initiatives identified in the new fiscal budget, a foundation is set in place providing stability in terms of the direction of the science program and partners with access to a diverse and talented team of natural resource management professionals and scientists working on focus areas of highest priority to the Reserve.



## 2.2 2022-2023 NCC Work Plan Table

	Project Name	Project Status†	Project Progression*	Fund**	Matching Funds Secured	FY2022	FY2023	Orange County Parks	Orange County Waste and Recycling	City of Irvine	Crystal Cove State Park	CA Dept. of Fish and Wildlife	City of Newport Beach	University of California, Irvine	Irvine Ranch Water District	Transportation Corridor Agencies	The Irvine Company	Metropolitan Water District
1	Orange-throated whiptail	N		R	Y	--	\$60,000											
2	Invasive Plant Program Mgmt	O		R		\$82,943	\$136,622	X		X	X	X	X	X				
3	Invasive Plant Control	O		R		\$75,388	\$120,000	X		X	X	X	X	X				
4	Cowbird Trapping	O		C		\$46,000	\$47,500	X		X	X				X			
5	Mountain Lion Project	O		E		\$10,000	\$10,000	X	X	X		X			X	X	X	
6	NCC Database Mgmt	O		E		\$8,973	\$30,815	X	X	X	X	X	X	X	X	X	X	X
7	Target Bird Monitoring	O		E	Y	--	\$260,000	X	X	X	X	X	X	X	X	X	X	X
8	Cactus Salvage Portola/Orchard Hills	C		R		\$5,203	\$5,940	X		X	X						X	
9	Land Manager Training	P		E		--	\$71,500	X	X	X	X	X	X	X	X	X	X	X
10	Western Spadefoot Mgmt	O		R	Y	\$161,122	\$125,000	X	X	X	X	X	X	X	X	X	X	X
11	Rec Mgmt & Human Valuation	O		R		\$80,082	\$160,000	X		X	X	X	X	X		X	X	
12	Vegetation Classification Update	N		E	Y	--	\$173,000											
13	Vegetation Monitoring & Communication	O		E	Y	\$192,646	\$134,000	X	X	X	X	X	X	X	X	X	X	X
14	Trail Use Study	O		R		\$36,092	\$29,186	X		X	X	X	X	X			X	
15	NDVI Fuels Map	O		E	Y	\$5,802	\$18,198	X										
16	Whiting Ranch Mtn Lion Study	P		R		\$74,667	--	X										
17	Laguna Canyon Fuels Mod	O		R	Y	\$2,500	\$2,500	X		X								
18	Health Assessment	O		E		\$60,405	\$184,025	X	X	X	X	X	X	X	X	X	X	X

	Project Name	Project Status†	Project Progression*	Fund**	Matching Funds Secured	FY2022	FY2023	Orange County Parks	Orange County Waste and Recycling	City of Irvine	Crystal Cove State Park	CA Dept. of Fish and Wildlife	City of Newport Beach	University of California, Irvine	Irvine Ranch Water District	Transportation Corridor Agencies	The Irvine Company	Metropolitan Water District
19	Native Seed Partnership	O		R		\$63,042	\$272,173	X	X	X	X	X	X	X	X	X	X	X
20	Grazing Plan – Pilot Study	O		R		\$59,259	\$511,430	X										
					Endowment:	\$277,826	\$881,538											
					Restoration:	\$640,298	\$1,422,851											
					Cowbird:	\$46,000	\$47,500											
					<b>Total:</b>	<b>\$964,124</b>	<b>\$2,351,889</b>											

\* Green = Project is on or ahead of schedule; Yellow = Project requires additional attention by NCC staff and/or contractors; Red = Project requires substantial attention by NCC staff and/or contractors, White = Project is approved, but not initiated

\*\* R = Restoration & Acquisition Fund; E = Endowment Fund; C = Cowbird Fund

† C = Complete; O = Ongoing; N = New; P = Postponed

## **2.3 Project Descriptions**

### **List of Acronyms**

BMPs = Best Management Practices  
CCSP = Crystal Cove State Park  
CDFW = California Department of Fish and Wildlife  
CEB = Center for Environmental Biology  
CMT = Core Management Team  
CNB = City of Newport Beach  
CNPS = California Native Plant Society  
COAST = County of Orange Area Safety Taskforce  
COI = City of Irvine  
EEMP = Environmental Enhancement Management Program  
HCP = Habitat Conservation Plan  
HREP = Habitat Restoration and Enhancement Plan  
IC = Irvine Company  
IRC = Irvine Ranch Conservancy  
IRWD = Irvine Ranch Water District  
LAG = Local Assistance Grant  
LCF = Laguna Canyon Foundation  
LCWP = Laguna Coast Wilderness Park  
MOU = Memorandum of Understanding  
MWD = Metropolitan Water District  
NCC = Natural Communities Coalition  
NCCP = Natural Community Conservation Plan  
NROC = Nature Reserve of Orange County  
OCFA = Orange County Fire Authority  
OCP = Orange County Parks  
OCTA = Orange County Transportation Authority  
OCWR = Orange County Waste and Recycling  
SDMMP = San Diego Management and Monitoring Program  
TAC = Technical Advisory Committee  
TCA = Transportation Corridor Agencies  
TNC = The Nature Conservancy  
UCI = University of California, Irvine  
UCLA = University of California, Los Angeles  
UNB = Upper Newport Bay  
USDA = US Department of Agriculture  
USFWS = US Fish and Wildlife Service  
USGS = US Geological Survey  
VegCAMP = Vegetation Classification and Mapping Program  
WCS = Wildlands Conservation Science



## Reporting Template for NCCP-related Science and Land Management Projects

Project Title	Abbreviated project title limited to 100 characters
Contractor(s)/Researcher	Contractors or researchers associated with the project
Time Period	Years project has been active and current project end date
Total Project Cost	Total project costs since start date (NCC + matching funds)
Amount Budgeted	NCC FY2022 spent and FY2023 budgeted
Fund	Endowment, Restoration, or Cowbird Funds (NCC-specific category)
Matching Contribution(s)	Agency (Dollar Amount)
Landowner Involvement	Landowners whose land is accessed for purposes of conducting the project
Project Status	Project may be Complete, Ongoing, or New
Project Progression	Project is on or ahead of schedule (Green), Project requires additional attention by staff and/or contractors (Yellow), Project requires substantial attention by staff and/or contractors, project is in jeopardy of not progressing (Red), Project is approved, but not initiated (White)
Program Class	Identify program class from the following categories: Monitoring/Research, Land Management, Planning, Education/Training, Database Management
Program Area	Identify program area from the following categories: Wildland Fire, Weed Control, Habitat Restoration, Recreation, Sensitive Biological Resources, Invasive Wildlife Control
Resource	Natural resource benefiting from project implementation
Project Purpose	Brief description limited to 50 words
Available Report(s)	Project reports associated with the project (project description linked to associated reports in online library)
Available GIS Product(s)	GIS data associated with the project (project description linked to associated GIS files in online library)
Overview	Project background limited to 1000 words (static between years)
Progress	Progress made to date (includes a description of past-year activities as well as activities to be achieved in the new calendar year)
Key Milestones Schedule	Project milestones (with due dates identified): Date milestone achieved
Key Findings	Updated each year as applicable
Notes	Updated each year as applicable

## 1. Orange-throated Whiptail

Project Title	Orange-throated Whiptail
Contractor(s)/Researcher	USGS
Time Period	2023-2024
Total Project Cost	--
Amount Budgeted*	FY2023: \$60,000
Fund	Restoration
Matching Contribution(s)	CDFW-LAG: \$91,138; USGS: \$40,000
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CNB, UCI, IRWD, TCA, IC, MWD
Project Status	New
Project Progression	--
Program Class	Monitoring/Research
Program Area	Invasive Wildlife Control
Resource	Sensitive Species
Project Purpose	Assess abundance and determine potential impact of introduced whiptail on NCCP/HCP covered whiptail species in the reserve.
Available Report(s)	--
Available GIS Product(s)	--

### Overview

The orange throated whiptail (*Aspidoscelis hyperythra*) (OTW) is one of three primary species driving the NCCP Program development in southern California, along with the California gnatcatcher and the coastal cactus wren. It is a covered species in the Coastal/Central NCCP/HCP in Orange County. Threats initially identified for future evaluation of this species include further habitat fragmentation and potential impacts from wildfires (Thomson et al. 2016), but no credible threats were identified from invasive species. In 2016, Winkelman and Backlin published the first observations of the invasive parthenogenetic (asexual), Sonoran spotted whiptail (*Aspidoscelis sonora*) (SSW) from urban central Orange County and subsequent reports indicated the species was present as early as 2010. These records were the first observations for an invasive whiptail species in the state and highlighted a series of potential concerns regarding threats this species might cause to both the OTW and coastal western whiptail in southern California. The origin of the SSW in the region is unknown but could be tied to plant nurseries.

Some potential threats could include direct predation on OTW from SSW, competition, and perhaps hybridization. Other parthenogenetic whiptails have hybridized with sexual species and produced triploid (or higher ploidy) offspring. Due to the relatedness between the native and invasive species it might be that hybridization could be unlikely. But the coastal western whiptail (*Aspidoscelis tigris stejnegeri*) (CWW), which is also a covered species found on the Reserve, is more likely to hybridize with the invasive SSW and could possibly produce offspring lineages. The objective of this work will be to establish if the SSW is a true threat to the OTW (and also the CWW) and what the source of that threat is to these species. The project will focus on various elements of the biology of the SSW and will target spatial occupancy.

## 2. Invasive Plant Program Mgmt

Project Title	Invasive Plant Program Mgmt
Contractor(s)/Researcher	Hamilton Biological, Calflora, Cal-IPC, IRC, CNPS
Time Period	2004-2023
Total Project Cost	\$1,010,528
Amount Budgeted*	FY2022: \$82,943; FY2023: \$136,622
Fund	Restoration
Matching Contribution(s)	--
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CNB, UCI, IRWD, TCA, IC, MWD
Project Status	Ongoing
Project Progression	On schedule
Program Class	Land Management/Planning
Program Area	Weed Control
Resource	All
Project Purpose	Management (i.e., mapping, coordination, and reporting) of NCC and partner-sponsored weed control activities
Available Report(s)	<p>Five-year Invasive Plant Management Plan for the Coastal Portion of the County of Orange Central &amp; Coastal Subregion NCCP/HCP. Prepared by California Invasive Plant Council. Jan. 2017.</p> <p>Five-year Invasive Plant Management Plan for the Central Portion of the County of Orange Central &amp; Coastal Subregion NCCP/HCP. Prepared by California Invasive Plant Council. Feb. 2019.</p> <p>2022 Early Detection/Rapid Response Survey Report Coastal Orange County NCCP/HCP Reserve. Prepared by Hamilton Biological. Dec. 2022.</p>
Available GIS Product(s)	<i>Calflora Weed Manager</i> ( <a href="http://www.calflora.org">www.calflora.org</a> )

\*Change in budget from 2020 annual report reflects a rearrangement in content of tasks within invasive plant management program. See project #3 for tasks related to invasive plant control.

### Overview

Implementation of NCC's invasive plant control program requires multi-agency coordination and collaboration. With the creation of the Core Management Team (CMT) in 2016, consisting of representatives from State Parks, OC Parks, and the IRC, coupled with advanced planning conducted under the guidance of the California Invasive Plant Council (Cal-IPC), NCC is focused on facilitating the Subregion-wide planning and implementation of the invasive plant program over the course of the next decade. To this end, NCC has contracted with the Cal-IPC to develop a coordinated, unified approach to prioritizing invasive plant control efforts across the Reserve.



## *Progress*

As of early 2015, Cal-IPC had completed the planning phase of the project, determining the next steps in developing expert recommendations for: (1) strategic prioritization for invasive plant management; and (2) early detection/rapid response protocol for new invasive plant populations. The CMT and Cal-IPC are facilitating the update to the 2017/2019 five-year management plan for the coastal and central reserve. Together these provide detailed guidance and recommendations for land managers on the weed management priorities in specified management units. Updates to the plans will continue in 2023.

In 2017, members of the CMT began use of Calflora's Weed Manager to archive and report control and mapping activities across the lands under their management. Activities reported include the early detection surveys. Each organization affiliated with the CMT has created their own group to organize activities under their management in one central place for purposes of reporting and sharing observations, treatment history and other program features with members, prior to making information associated with new records available to all Calflora users. In 2021, CDFW and UCI was added, as members, to the Calflora's Weed Manager under the OC Coordinating Group.

Several ongoing needs remain, with updates, as described below.

1. Reporting on each year's work – At the end of each season, partners report on that year's work in the NROC annual report. The summary of invasive plant management activities will be produced primarily through Calflora, and is aggregated into a single report to NCC. Challenges continue with consistency in recording the data and a mechanism to consolidate and summarize it into a report. *Need:* Improving on the consistency in which the data is submitted and aggregating the information into a report for NCC. Focus for 2023 includes the development of a custom reporting tool through Calflora, with CalIPC is assisting NCC in using the reporting tool to produce an annual report and individual users will be able to generate their own customized report.
2. Assessing species – New species need to be assessed to characterize impact, which is used in prioritizing management. Cal-IPC uses a Plant Assessment Form (PAF) for species already having an observable impact, and a Plant Risk Evaluation (PRE) for species suspected of being problematic. In 2022, OC Parks led the development of a BMPs reference book for treatment of weed species.
3. Planning each season's work – Each November-February the Core Management Team (CMT) should meet to set a plan for the next year's management and EDRR (Early Detection and Rapid Response) activities. This involves reviewing the management plans for the subregion and using that framework for setting priorities based on previous years, the results of treatment in previous years, and funding that is available. *Need:* Better coordination among the CMT in designing annual work plans is needed. *Update:* NCC coordinates annual planning meeting(s) to update the species priority list, the EDRR survey plan, and review work assignments. Challenges include documenting this planning effort for each partner's unique landscape and invasive plant management issues.

4. Configuring Calflora – CMT partners are using Calflora’s Weed Manager as a shared data platform. The tools are still evolving, and the CMT collaboration will benefit from working with Calflora and like-minded collaborations (e.g., One Tam) to help Weed Manager’s features best serve their needs. Needed features in development in 2023-2024 include: improved record keeping (e.g., functionality of apps and linking records from same populations); being able to print maps; and having appropriate reports (e.g., custom report generator). Update: Coordinating communications with regional partnerships occurs through periodic meeting updates led by Calflora and Orange County Watershed Management Area (OCWMA). Updates include advancements on database tools and trainings, led by OC Parks (e.g., video tutorials for tools, plant ID trainings), and made available to users.

In 2023, contractors will again be working in tandem to implement the early detection surveys in both coastal and inland areas of the Subregion. Calflora’s Weed Manager is again to be made available for another 12-month period to the member organizations of the Core Management Team to help track and share information tied to invasive plant management activities. IRC will again be under contract to serve as GIS support for partners on use of Weed Manager in 2023.

#### *Key Milestones*

1. Prepare and Submit Final Five-year Management for Coastal Reserve (Due: 30 September 2016): *Completed in Jan., 2017—To be updated in 2023.*
2. Prepare and Submit Final Five-year Management Plan for Central Reserve (Due: 31 December 2017): *Completed Feb., 2019—To be updated in 2023-24.*
3. Complete and Submit FINAL Annual Reports for Early Detection Surveys (Due: 31 December): *Completed annually by Hamilton Biological.*

### **3. Invasive Plant Control**

Project Title	Invasive Plant Control
Contractor(s)/Researcher	Nakae & Associates; Laguna Canyon Foundation (LCF)
Time Period	2000-2023
Total Project Cost	\$3,284,338
Amount Budgeted*	FY2022: \$75,388; FY2023: \$120,000
Fund	Restoration
Matching Contribution(s)	--
Landowner Involvement	OCP, COI, CCSP, CNB, CLB, UCI, CDFW
Project Status	Ongoing
Project Progression	On schedule
Program Class	Land Management
Program Area	Weed Control
Resource	Coastal Sage Scrub Mosaic
Project Purpose	Implementation of top weed control priorities identified in the HREP and 5-year invasive plant management plans for the NROC.
Available Report(s)	Fifth Year Treatment Completion Report for Canary Island St. John’s Wort Project, City of Laguna Beach, County of Orange,

	California. Prepared by LCF, Jun. 2022.
Available GIS Product(s)	<i>Calflora Weed Manager</i> ( <a href="http://www.calflora.org">www.calflora.org</a> )

\*Change in budget from 2020 annual report reflects a rearrangement in content of tasks within invasive plant management program. See project #2 for tasks related to invasive plant management.

### *Overview*

NCC is actively working with partners and contractors to control invasive plant species populations according to a collaboratively developed management plan. This project is progressing in conjunction with the invasive plant program management activities described in project #2.

### *Progress*

Starting in 2017, the CMT formalized the Early Detection - Rapid Response Program covering the Coastal Reserve, which has now been expanded to cover most of the NROC. Trails were prioritized by potential risk of invasion and are surveyed periodically according to that risk. Ensuring a rapid response is available following early detections of emergent invasive plant species provides the greatest likelihood of successful containment of otherwise problematic invasive plant populations.

Since 2018, NCC contracted with Sage Environmental Group to revisit and treat populations of high-priority emergent invasive plant species discovered in 2017-19 during the early detection field surveys conducted in coastal and inland portions of the Subregion, respectively. Populations of high-priority species requiring immediate treatment following their discovery were treated. Similar to years past, Nakae and Sage Environmental will continue treating high-priority species as identified through the EDRR surveys as well as existing populations.

Laguna Canyon Foundation continues to treat St. John's wort in Laguna Beach. The fourth year of treatment summary report is listed in the above table.

### *Key Milestones*

1. Coordinate with group on Field Schedule (Due: March each year): *Completed*
2. Complete and Submit Report for Early Detection Invasive Plant Survey (Due: 31 December each year): *Completed*

### *Notes*

With increased usage of Calflora's Weed Manager, greater efficiencies in information sharing are being experienced by partners leading to increased coordination among land managers and consultants searching for and treating invasive plant populations of management concern (see Project #2).

#### 4. Cowbird Trapping

Project Title	Cowbird Trapping
Contractor(s)/Researcher	Leatherman Bioconsulting, Inc.
Time Period	1999-2023
Total Project Cost	\$854,500
Amount Budgeted	FY2022: \$46,000; FY2023: \$47,500
Fund	Cowbird
Matching Contribution(s)	--
Landowner Involvement	OCP, COI, IC, CCSP
Project Status	Ongoing
Project Progression	On schedule
Program Class	Land Management
Program Area	Invasive Wildlife Control
Resource	Least Bell's Vireo
Project Purpose	Reduce incidence of cowbird nest parasitism for sensitive bird species, specifically California Gnatcatcher and Least Bell's Vireo
Available Report(s)	2022 San Joaquin Hills Transportation Corridor Brown-Headed Cowbird Trapping Program Report. Prepared by Leatherman Bioconsulting, Inc. Nov. 2022.
Available GIS Product(s)	--

##### *Overview*

Per an agreement between the Transportation Corridor Agencies (TCA), USFWS, CDFW, and NCC, the responsibility of implementing the San Joaquin Hills Transportation Corridor Brown-headed Cowbird (BHCB) Trapping Program was transferred from TCA to NCC in 1999. As part of this agreement, TCA also provided an endowment to NCC to cover the costs of implementing the program. The trapping methodology is modified, as needed, through evaluation of prior year trapping success and the annual performance of the endowment. Additional funds, independent of the original program endowment, from the County of Orange and the Irvine Company have provided for the deployment of three to four traps a year during this time period.

##### *Progress*

Approximately 5,110 BHCBs have been captured and removed from the local population over the last 20+ years of implementing the program. Throughout the program, the number of traps used in a season has ranged from 7 to 24. In 2017, in accordance with the 2016-18 Strategic Plan for the NCC, staff reviewed and identified potential changes in the management program for the BHCB. In addition to reviewing program logistics and capture history for both the San Joaquin Hills and the Eastern Transportation Corridor, in 2017 staff discussed modifications with the USFWS, CDFW, researchers, contractors, and partnering organizations who are familiar with BHCB trapping efforts both locally and across the region.

For the 2022 season, the budget was increased to include time for scouting new trapping locations. Creation of a vision for reorganization of the program was initiated in 2018 and is the discussion is anticipated to continue in 2023. NCC and the Wildlife Agencies will convene a workshop with partners and BHCO experts to discuss the current program and possible

alternative approaches to evaluating the effectiveness and improving the efficiency of the existing program.

## 5. Mountain Lion Project

Project Title	Mountain Lion Project
Contractor(s)/Researcher	UC Davis (Vickers)
Time Period	2011-2023
Total Project Cost	\$135,000
Amount Budgeted	FY2022: \$10,000; FY2023: \$10,000
Fund	Endowment
Matching Contribution(s)	--
Landowner Involvement	OCP, OCWR, COI, IC, CDFW, IRWD, TCA
Project Status	Ongoing
Project Progression	On schedule
Program Class	Monitoring/Research
Program Area	Sensitive Biological Resources
Resource	Mammalian Carnivores
Project Purpose	Inform land management strategies around: (1) landscape connectivity and conservation; (2) health and disease; and (3) minimizing conflicts between cougars and people.
Available Report(s)	See below
Available GIS Product(s)	--

### Overview

The ongoing study of the mountain lion (*Puma concolor*) in southern California is headed by Dr. Walter Boyce and Dr. Winston Vickers of the Wildlife Health Center at UC Davis. Dr. Vickers is the field lead for the project. This mountain lion or cougar research focuses on: (1) landscape connectivity and wildland conservation, including road crossings and the effects of fire; (2) genetics, health, and disease, especially focused on diseases transmitted between cougars and other species, exposure to rodenticides, and genetic assessment of the population; (3) minimizing conflicts between cougars and people; (4) and predation on bighorn sheep and interactions with deer in the Peninsular Mountain Ranges. The study area encompasses Orange, Riverside, and San Diego Counties. Cougars have been captured, sampled, and GPS-collared over a wide portion of these counties. Cougars from the study have utilized lands as far north as the Highway 91 and 241 Toll Road junction in the northern Santa Ana Mountains in Orange County and approximately 50 miles south of the border in Mexico.

### Progress

To address the goals of the third phase of the study, the researchers continued field efforts to complete capturing, sampling, and GPS collaring of cougars. In addition, researchers conducted extensive camera monitoring of wildlife corridors and crossings in the Santa Ana Mountains. Included in this list of areas are all of the major wildlife crossings along the studied sections of the 241 Toll Road in Orange County.



## Key Findings

The mortality data collected during the study suggests that cougars throughout southern California face significant, and likely increasing, threats secondary to habitat loss and fragmentation, continued expansion of the human population, roads, and development. Genetic and corridor analyses completed in 2016 highlight the importance of male lions as genetic dispersers, with home ranges averaging approximately 145 square miles in size. The isolating nature of urban development and creation of major state highways has isolated extant populations of mountain lions.

Publications in peer-reviewed scientific literature resulting from the work include the following:

Benson JF, Mahoney PJ, Vickers TW, Sikich JA, Beier P, Riley SPD, Ernest HB, Boyce WM. 2019. Extinction vortex dynamics of top predators isolated by urbanization. *Ecol App* 29:3. <https://doi.org/10.1002/eap.1868>

Gustafson KD, Vickers TW, Boyce WM, Ernest HB. A single migrant enhances genetic diversity of an inbred puma population. *Royal Society Open Science* (2017) 4:170115. <http://dx.doi.org/10.1098/rsos.170115>

Zeller KA, Vickers TW, Ernest, HB, Boyce WM. Multi-level, multi-scale resource selection functions and resistance surfaces for conservation planning: Pumas as a case study. *PLoS ONE* (2017) 12(6): e0179570. <https://doi.org/10.1371/journal.pone.0179570>

Zeller KA, McGarigal K, Cushman SA, Beier P, Vickers TW, Boyce WM. 2017. Sensitivity of resource selection and connectivity models to landscape definition. *Landscape Ecol* (2017) 32:835. <https://doi.org/10.1007/s10980-017-0489-8>

Vickers TW, Sanchez JN, Johnson CK, Morrison SA, Botta R, Smith T, Cohen BS, Huber PR, Ernest HB, Boyce WM. 2015. Survival and mortality of Pumas (*Puma concolor*) in a fragmented, urbanizing landscape. *PLOS 1* 10:7. doi: [10.1371/journal.pone.0131490](https://doi.org/10.1371/journal.pone.0131490)

## Notes

The project is a collaborative effort with many partners assisting in funding and logistics. NCC was a minor financial contributor to the project in 2011 (\$25,000) and 2012-2022 (\$10,000 each year). In 2023, NCC will again make a contribution (\$10,000) to UC Davis in support of the project. Over the years, NCC funding has allowed the principal investigators to expand analyses, spend extra time on capture or camera work, and replace equipment not otherwise covered by other funding.

## 6. NCC Database Mgmt

Project Title	NCC Database Mgmt
Contractor(s)/Researcher	ESRI, Vestra, Map the Point
Time Period	2014-2023
Total Project Cost	\$167,366
Amount Budgeted	FY2022: \$8,973; FY2023: \$30,815

Fund	Endowment
Matching Contribution(s)	TNC: \$75,323
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CNP, UCI, IRWD, TCA, IC, MWD
Project Status	Ongoing-delayed
Project Progression	Resuming after postponement due to changes in direction and NCC/partner staffing
Program Class	Database Management
Program Area	Multiple
Resource	Multiple
Project Purpose	Develop a coordinated approach to the long-term management of ecological data within the NCCP/HCP Reserve that focuses on system integration, interoperability, and user efficiency
Available Report(s)	--
Available GIS Product(s)	<a href="https://nroc.maps.arcgis.com">https://nroc.maps.arcgis.com</a>

### *Overview*

For NCC to effectively use science to inform adaptive resource management, the integration of data collection, processing, analysis, storage, retrieval and sharing is paramount among participants in the NCCP/HCP. While every partner in the NCCP/HCP operates independent systems for storage and access to data relevant to the Reserve, the integration of these tools and long-term coordination and management of the collaborative process is critical to NCC's mission to coordinate effective management of the natural resources present within the Reserve.

### *Progress*

The County, as the signatory responsible for hosting and managing the spatial data (GIS) associated with implementation of the NCCP/HCP, is to receive and archive all reports, data, and meta-data, and share spatial data and models generated by NCC-funded projects. Because of the high level of complexity of the data in general and the variation of data collected, and methodologies used across all the studies, NCC, in the designed schema employed by the County's contractor in 2014-15 (Vestra Resources), chose to organize ecological data archived with the County into a two-tiered hierarchy. The highest level is a set of point feature classes organized into taxonomical types, and the second, or detailed, level is organized based on NCC projects. In 2023, NCC staff will continue to engage ESRI, Map the Point, and OC Parks staff to further develop ArcGIS online database.

## **7. Target Bird Monitoring**

Project Title	Target Bird Monitoring
Contractor(s)/Researcher	USGS; SDMMMP; Leatherman BioConsulting, Inc.
Time Period	2014-2024
Total Project Cost	\$762,000
Amount Budgeted	FY2022: --; FY2023: \$260,000
Fund	Endowment

Matching Contribution(s)	TNC: \$197,000
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CNB, UCI, IRWD, TCA, IC, MWD
Project Status	Ongoing
Project Progression	On schedule
Program Class	Monitoring/Research
Program Area	Sensitive Biological Resources
Resource	Target Bird Species – California Gnatcatcher and Cactus Wren
Project Purpose	Develop a comprehensive monitoring program for both the California Gnatcatcher and Cactus Wren
Available Report(s)	--
Available GIS Product(s)	--

### *Overview*

In support of development and implementation of NCC's long-term Target Bird Species monitoring program, NCC has launched a collaborative planning project with the US Geological Survey (USGS), San Diego Management Monitoring Program (SDMMP), The Nature Conservancy (TNC), and Colorado State University (CSU), focused on identifying goals, strategies, and objectives, in support of the long-term management and assessment of the NCCP/HCP Program in supporting conservation of the two target species. In the development of the plans, emphasis is to be placed on the identification of robust, but cost-efficient, monitoring strategies that are well-coordinated with other southern California NCCP/HCPs.

### *Progress*

At the California Gnatcatcher Regional Monitoring Workshop, in addition to discussing the results of the 2016 surveys and estimates, revisions to the underlying habitat suitability model were presented by Dr. Kris Preston (SDMMP). Regional surveys for the California gnatcatcher were completed in 2020 and are tentatively scheduled to be repeated in 2024. The reports for the surveys conducted in NROC are archived on the NCC website library.

NCC partnered with TNC to survey all mapped habitat across the Coastal and Central Subregion for the presence of cactus wren in 2018. Field surveys were designed to include surveys in areas recently burned in the Canyon 2 Fire (October 2017), providing the first assessment of the impact of the fire on cactus wren. A repeat survey is anticipated in 2023, both for mapping the approximately 1,600 cactus scrub patches and 870 point surveys.

## **8. Cactus Salvage Portola/Orchard Hills**

Project Title	Cactus Salvage Portola/Orchard Hills
Contractor(s)/Researcher	Land IQ; Nakae; Stice Company
Time Period	2014-2022
Total Project Cost	\$1,283,535
Amount Budgeted	FY2022: \$5,203; FY2023: \$5,940
Fund	Restoration
Matching Contribution(s)	--

Landowner Involvement	OCP, COI, CCSP, IC
Project Status	Completed Pending Final Report
Project Progression	On schedule
Program Class	Land Management
Program Area	Habitat Restoration
Resource	Coastal Sage Scrub
Project Purpose	Salvage topsoil and cactus material from development sites for use in the restoration of coastal sage scrub and cactus scrub within the NROC.
Available Report(s)	2022 Performance Monitoring Report Year 7 – Crystal Cove State Park Cactus Salvage and Cactus Scrub Restoration Project. Prepared by Land IQ. <i>Expected in early 2023.</i>
Available GIS Product(s)	--

### Overview

Separate opportunities emerged in 2014 and 2015 to work with partnering organizations to salvage topsoil and cactus from future development sites located outside of the NROC for use in the restoration of coastal sage scrub and cactus scrub within the NROC. Working together with IRC, TNC, contractors, and the landowners, topsoil and cactus were salvaged from the Portola Hills development sites for restoration of 9.7 acres at CCSP and 5.7 acres at WRWP.

### Progress

For a portion of the CCSP restoration site, one more year of monitoring in 2022 was conducted to evaluate the effectiveness of hand seeding vs. one-step hydroseeding in a non-irrigated setting. The purpose is to determine if the development of the hand-seeded areas, which may be a cost-effective method in some settings, performs comparably to hydroseeding. The results are expected in early 2023 and will inform future restoration efforts.

## 9. Land Manager Training

Project Title	Land Manager Training
Contractor(s)/Researcher	Land IQ, Nakae & Associates
Time Period	2014-2023
Total Project Cost	\$70,000
Amount Budgeted	FY2022: --; FY2023: \$71,500
Fund	Endowment
Matching Contribution(s)	--
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CONB, UCI, IRWD, TCA, IC, MWD
Project Status	Ongoing-Postponed
Project Progression	Delayed due to COVID-19 and changes in staffing
Program Class	Education/Training
Program Area	Habitat Restoration
Resource	Coastal Sage Scrub
Project Purpose	Provide land manager training in the field of habitat restoration and fuels management

Available Report(s)	--
Available GIS Product(s)	--

### *Overview*

The land manager training program is to provide both classroom and field-based training in the field of habitat restoration and fuels management. As envisioned, training would involve site visits to active habitat restoration sites and fuel modification zones both within and outside the NCCP/HCP Reserve, demonstration projects, as well as field and lab-based lectures on pertinent restoration and fuel management topics, including, but not limited to: soils, mycorrhizae, site selection, site preparation, seed collection, use of topsoil, seed and planting, irrigation, vegetation thinning, and site maintenance. The training program would be offered to land managers, landowners, and key partners involved with the Central/Coastal OC NCCP/HCP.

### *Progress*

The first expression of the program providing land managers with training on priority natural resource issues is now considered to be complete. Consistent with the new strategic plan for NCC, a second expression of the program is scheduled to be initiated in 2023.

In 2014, NCC, together with Land IQ, sponsored a two-day training workshop on the role of soils in habitat restoration for land managers, researchers, and conservation practitioners. The workshop featured the soil scientist, David Kelley, and was structured to offer a morning in-class lecture experience followed by an afternoon field program on both days. The relationship between soils and southern California plant communities was highlighted, as well as techniques in soil assessment and habitat restoration methodologies.

In the spring of 2015, NCC, together with Land IQ, sponsored a second workshop on soils and restoration in partnership with CCSP. The two-day training workshop was designed to highlight two long-running restoration projects on the bluffs at CCSP and San Onofre State Beach. The two projects emphasize the role of soil compaction and microbes in the restoration of coastal sage scrub. Over the course two-days in April, participants, together with David Kelley and the team from Land IQ, explored both restorations and discussed the specific strategies used to overcome the unique challenges presented by each site.

In May 2017, following approval of the Wildland Fire Management Plan (WMP; restructured as the Stakeholder Implementation Guide), NCC staff hosted a workshop for landowners and stakeholders discussing the evolution and important components of the WMP. Contractors, Michael Huff (Dudek) and Carol Rice (Wildland Res Mgt), involved with development of the plan and individual stakeholder guides, participated in the meeting, addressing questions, and providing the audience with an overview of the process involved with plan development.

Following finalization of the Habitat Restoration and Enhancement Plan update, NCC is planning to host multiple training sessions highlighting the utility of the plan in aiding and designing landscape-scale restoration within the reserve. In 2023, NCC staff, with feedback



from the Land Management Committee, will develop training sessions structured through field trips coupled with a demonstration restoration project implementing the HREP.

#### *Key Milestones*

1. Organize and Host Soils Workshop (Due: 31 December 2014): *Completed Nov. 2014*
2. Organize and Host Soils Workshop II (Due: 15 May 2015): *Completed Feb. 2015*
3. Organize and Host Training Session on Habitat Restoration and Enhancement Plan  
Update: *Delayed*

### **10. Western Spadefoot Mgmt**

Project Title	Western Spadefoot Mgmt
Contractor(s)/Researcher	UCLA, USGS, Land IQ, Nakae & Associates
Time Period	2016-2023
Total Project Cost	\$1,448,697
Amount Budgeted	FY2022: \$161,122, FY2023: \$125,000
Fund	Restoration
Matching Contribution(s)	\$757,000 (Wildlife Conservation Board)
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CNB, UCI, IRWD, TCA, IC, MWD
Project Status	Ongoing
Project Progression	On schedule
Program Class	Research/Monitoring
Program Area	Sensitive Biological Resources
Resource	Western Spadefoot
Project Purpose	Identify movement corridors or hotspots of genetic diversity for purposes of directing the location and informing the restoration strategy for construction of new breeding pools to augment the viability of the Western Spadefoot in Central-Coastal OC
Available Report(s)	2021 Western Spadefoot Toad Habitat Restoration Monitoring Report. Prepared by Land IQ Mar. 2022.
Available GIS Product(s)	--

#### *Overview*

Initial funding covers a two-year study conducting cutting-edge genetic analysis of western spadefoot breeding sites within and around the NROC. The work is to include analysis of comprehensive historical specimens sampled over the last two decades from throughout southern California, and new samples to be non-destructively collected in 2016 and 2017 breeding seasons. Collectively, this effort will use population and landscape genetics methods to: quantify population size and connectivity as it has existed across the region historically, and in present-day; evaluate whether current, relatively passive management has led to healthy and stable populations; and, identify regions within the migratory capacity of the species where newly constructed vernal pool breeding sites stand the best chance of augmenting the viability of the species across Orange County, focusing on Central-Coastal.

The second phase of work is centered on construction of seasonal pools and upland restoration in select areas of the San Joaquin Hills utilized by western spadefoot for breeding. Creation of new breeding sites and restoration of adjoining upland habitat in the coastal subarea is recognized as essential to the long-term conservation of western spadefoot in the Subregion. Increasing breeding opportunities for spadefoot toads in the San Joaquin Hills is expected to both contribute to increases in overall population size and long-term persistence of metapopulation dynamics appearing to be present along the coast.

### *Progress*

Lab work conducted in 2016 at UCLA included DNA extraction, preparation of DNA libraries, and submission of completed libraries for sequencing. Results of the work indicated *S. hammondi* is comprised of two genetically and ecologically distinct northern and southern clusters that, pending further analysis, may be recommended for recognition as unique species. In 2018, results of the work on the conservation genomics of the species were shared by UCLA with project team members and communicated by NCC staff to the NCC Executive Committee.

The project team spear-headed pursuit of grant-funding tied to the Local Assistance Grant program new funding made available through the Wildlife Conservation Board tied to Proposition 68. In total, requested funding allows the project team to complete approximately 15 acres of restoration, focusing the work in 5 sites, and construction of 12 seasonal pools of various sizes (consistent with what spadefoot toads are known to use in other areas). Uprooting, transportation, and planting of 125-150 mature, 3 ft tall clumps of salvaged prickly pear cactus (presently growing in a NCC cactus farm in the reserve) along with 2,000 salvaged cactus pads were planted at five of the restoration sites along Moro Ridge and Bommer Ridge. Funding from the state (together with matching funds from NCC) will cover described activities through March 2022, facilitating the seasonal pools two-years post construction and associated upland restoration through planting and seeding, and three full years of site maintenance. NCC is committed to additional maintenance and monitoring of the upland restoration and created pools through 2025, three-years beyond the limits of the grant period.

### *Key Milestones*

1. Siting and Pool Design Report (Due: 31 December 2019): *Completed*
2. Production of Restoration Plan (Due: 31 December 2019): *Completed*
3. Production of Installation Memo (Due: 30 June 2020): *Completed*
4. First-Year Restoration Monitoring Report (Due: 31 Mar 2021): *Completed*
5. Second-Year Upland Restoration and Completion of Seasonal Pool Construction (Due: 15 March 2022): *Completed*
6. Final Monitoring Report - Habitat Restoration (Due: 15 March 2022): *Completed*

## **11. Recreation Mgmt & Human Valuation**

Project Title	Recreation Mgmt & Human Valuation
Contractor(s)/Researcher	Utah State University; Oregon State University
Time Period	2017-2023

Total Project Cost	\$684,182
Amount Budgeted	FY2022: \$80,082; FY2023: \$160,000
Fund	Restoration
Matching Contribution(s)	--
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CONB, UCI, IRWD, TCA, IC, MWD
Project Status	Ongoing
Project Progression	Delayed due to COVID-19
Program Class	Planning
Program Area	Recreation
Resource	Coastal Sage Scrub; Target Species
Project Purpose	Identify highest ranking recreation management priorities related to natural resource protection present within the NCCP-Reserve
Available Report(s)	<i>2021 Research and Findings Summary. By USU Research Team. Presentation to NCC Partners. Dec. 2021.</i>
Available GIS Product(s)	--

### Overview

Managers of urban-proximate wildland settings must often strike a careful balance with providing nature-based recreation experiences with the maintenance of ecological integrity. With over 3 million residents within a 30-minute drive of the natural areas of central and coastal Orange County, the demand for recreation experiences is ever present, and increasing. Equally important is the increasing need and desire for the conservation of natural resources and preservation of the rich natural heritage of an iconic area of the California coast.

The Natural Communities Coalition has partnered with national leaders in the field of recreation ecology from Utah State University and Oregon State University to implement a multi-year project designed to address ecological aspects, human benefits and values, and contemporary management approaches tied to recreation within the region. The research project, as designed, is to have four overall dimensions: 1) a determination of visitor use levels and spatial distributions; 2) an assessment of biophysical resource conditions; 3) an understanding of visitor perceptions, values and judgements; and 4) providing scientific expertise in park planning and management.

### Progress

In December, 2017 and 2018, Chris Monz (Utah State University) and his team presented their results at working sessions organized for members of the TAC, representatives of landowning agencies, and land managers. Their analysis of responses was from close to 2,000 interviews of park visitors conducted and movement data collected from over 1,200 park visitors during the same time period.

Due to factors associated the COVID-19 pandemic, field sampling was postponed in 2020. Field work was delayed but resumed in 2021. In December 2021, Dr. Monz and his team presented their findings at a NCC partner meeting. Analysis and write up of the 2021 data is ongoing and will be provided to the partners and posted to the NCC website library and [project site](#), once it is complete.

## Key Findings

The survey provided a reliable measurement tool to evaluate visitor motivations. Following analysis of the results of hundreds of completed surveys, the primary motivations of visitors were found to be solitude and escape, learning about and experiencing nature, and spiritual renewal. Motivations differed across areas by visitor type. Almost two to one, park visitors could be described as more nature-oriented than exercise-oriented visitors. Visitors reported a strong attachment to place, poor understanding of conservation history of visited parks, and belief in the importance of conservation, but still wanting to be a participant in the story and have the chance to experience the land.

## 12. Vegetation Classification Update

Project Title	Vegetation Classification Update
Contractor(s)/Researcher	AIS, CNPS
Time Period	2023-2024
Total Project Cost	--
Amount Budgeted	FY2023: \$173,000
Fund	Endowment
Matching Contribution(s)	\$30,000 (TNC)
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CONB, UCI, IRWD, TCA, IC, MWD
Project Status	New
Project Progression	-
Program Class	Monitoring/Research
Program Area	Sensitive Biological Resources
Resource	Vegetation
Project Purpose	Identify and classify vegetation group by plant alliance, and provide update from previous survey (2014)
Available Report(s)	--
Available GIS Product(s)	--

## Overview

NCC is partnering with Aerial Information Systems, Inc. (AIS) and CNPS to complete an update (NAIP 2022 base imagery) to the existing vegetation delineations and interpretations (2012 base imagery) previously produced by AIS in 2015. The proposed study area is the same as the original mapping effort consisting of 85,705 acres of natural vegetation, urban/developed areas, agriculture, and water, which will be updated using the most current available digital orthophotography covering the study area. The update will follow the same mapping protocols as the original vegetation map and update attributes as necessary.

The newly interpreted vegetation unit updates will be combined with the existing ArcGIS vegetation database for the same geographic area producing a composite geodatabase containing both eras (2012 and 2022) enabling the end user to create displays of the older vegetation units together with the updated information thus providing a useful analysis tool for resource managers.

### 13. Vegetation Monitoring & Communication

Project Title	Vegetation Monitoring & Communication
Contractor(s)/Researcher	UCI, Conservation Biology Institute, WildSpring Ecology
Time Period	2017-2023
Total Project Cost	\$1,041,646
Amount Budgeted	FY2022: \$192,646; FY2023: \$134,000
Fund	Endowment
Matching Contribution(s)	Voth Family Foundation (\$150,000); The Nature Conservancy (\$361,250)
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CNB, UCI, IRWD, TCA, TIC, MWD
Project Status	Ongoing
Project Progression	Delayed due to COVID-19
Program Class	Monitoring/Research
Program Area	Sensitive Biological Resources
Resource	Coastal Sage Scrub
Project Purpose	Monitor landscape-level change in vegetative composition and structure through time and create dashboard metrics concerning the health of the Reserve
Available Report(s)	Updated Vegetation Monitoring Program. Prepared by WildSpring Ecology. Dec. 2022.  Vegetation Community Monitoring: Goals and Objectives. Prepared by CBI. Mar. 2020.
Available GIS Product(s)	--

#### *Overview*

Discussed collectively among partnering agencies and organizations over the last several years, development of an effective vegetation monitoring program for the Reserve is being led by UC Irvine's Center for Environmental Biology (CEB), Conservation Biology Institute, and WildSpring Ecology. The program, as presently outlined, will provide defensible, objective measures of the extent and quality of coastal sage scrub and associated habitats within the Reserve and adjacent conservation lands. Collected information is to capture changes in vegetative community composition, structure, and dynamics over time, promoting a shared understanding of the vegetative response to drivers and informing decisions related to management.

#### *Progress*

In 2017, CEB completed a multi-year assessment of change in the cover of coastal sage scrub based on analysis of transect data collected within the Subregion over the last ten years by San Diego State University and UC Irvine. The analysis resulted in publication in 2018. In 2019, NCC contracted with Conservation Biology Institute (CBI) and WildSpring Ecology to review and propose changes to sampling and response design, and revision of program goals and objectives. Contracted work in 2020-21 includes running appropriate analyses to provide greater spatial coverage of the coastal subarea, as well as ensure the program is well-positioned to answer prominent questions tied to the recovery of shrublands following repeat fire and short,

long-term effects of drought, habitat recovery following restoration, and sustained treatment of invasive species.

#### *Key Milestones*

1. Refinement of Vegetation Monitoring (Due: 15 December 2017): *Completed*
2. Delivery of Vegetation Data with Relevant Meta-data (Due: each year): *Ongoing*
3. Delivery of Vegetation Data Report (Due: each year): *Ongoing*
4. Delivery of Oak Monitoring Data with Relevant Meta-data (Due: each year): *Ongoing*
5. Delivery of Oak Monitoring Report (Due: each year): *Ongoing*
6. Submission of a Final Goals and Objectives Report by CBI (Due: 31 December 2019): *Completed*
7. Submission of a Veg Monitoring Sampling Design Final Report (Due: 31 December 2021): *Delayed, Completed*

#### *Notes*

The vegetation monitoring work performed by CEB in 2022 is funded at a nearly 50:50 cost share between TNC and NCC. The complementary work by Conservation Biology Institute/WildSpring Ecology focused on (1) revising goals and objectives and (2) updating sampling and response design. The revised plot sampling design was given to UCI and the adjusted sampling scheme is being implemented in 2021 and 2022. Following the implementation phase of the new design, detailed reports will be submitted every three years, but data collected will be provided annually. A report on goals and objectives was finalized at the beginning of 2020. The final write up for design update was completed at the end of 2022.

#### **14. Trail Use Study**

Project Title	Trail Use Study
Contractor(s)/Researcher	Utah State University
Time Period	2021-2023
Total Project Cost	\$45,851
Amount Budgeted	FY2022: \$36,092; FY2023: \$29,186
Fund	Restoration
Matching Contribution(s)	--
Landowner Involvement	OC Parks
Project Status	On Schedule
Project Progression	Ongoing
Program Class	Monitoring
Program Area	Recreation
Resource	Coastal Sage Scrub; Target Species
Project Purpose	Identify human-use patterns through change in trails use type in the NCCP/HCP Reserve
Available Report(s)	<i>Orange County Parks Trail Use Designation Pilot Project, by Monz et al., Sep. 2022.</i>
Available GIS Product(s)	--



## Overview

Parks and open space in close proximity to population centers are often highly desirable as people in our increasingly urban society seek opportunities to experience nature for exercise and renewal on a regular basis. This demand has increased, in some cases dramatically, with the recent COVID-19 pandemic since outdoor recreation is viewed as a relatively safe activity. These trends raise concerns as to whether other protected area goals are being compromised, such as the conservation of habitat for plant and wildlife species.

Trails are focal aspects of the visitor experience in parks and natural areas and thus trail use and trail condition quality can have a significant effect on visitor's overall experience. OC Parks will be employing direct management strategies on select trail segments in order to provide access to a wide range of recreation activities, maintain a safe and enjoyable experience, and assure that visitor use and associated behaviors are not resulting in resource (ecological) damage. This study will work closely with OC Parks to study the short term (6 month to 1 year) ecological and social consequences of various trail management strategies under consideration and based on these findings, will develop longer-term monitoring approaches and recommendations.

The survey will collect data about visitor demographics, experience-use history, knowledge, and evaluative questions on the trail management, resource conditions and social conditions experienced. Perceptions of trail safety and conflict between activity types will be explored as well as potential tradeoffs between recreation use, conservation goals and safety.

Visitor use levels on treatment and control trail segments will be determined using automated trail counting techniques to document temporal patterns of visitor use on a continuous basis for the study period. Extensive trail characteristics will be measured and monitored including trail slope, aspect, type of trail tread, elevation variation (i.e., tread rugosity).

## Progress

Initial visitor surveys and trail condition mapping were conducted in spring 2021 prior to any changes in management strategies on trail use. Post-treatment surveys and mapping were completed in late summer following the end of the experiment change. Analysis and write up of visitor survey data was completed in fall 2022. An assessment of any changes to the biophysical resources of trails as a result of the experiment will be delivered in early spring 2023.

## 15. NDVI Fuels Map

Project Title	NDVI Fuels Map
Contractor(s)/Researcher	Eagle Aerial/Quantum Spatial, OCFA
Time Period	2019-2023
Total Project Cost	\$5,802
Amount Budgeted	FY2022: \$5,802; FY2023: \$18,198
Fund	Endowment

Matching Contribution(s)	CalFire Fire Prevention Grant ~\$5,000,000
Landowner Involvement	All, OCFA
Project Status	Ongoing
Project Progression	On schedule
Program Class	Fire Management/Invasive Spp. Management
Program Area	Monitoring, Restoration
Resource	Oak Woodland, Riparian
Project Purpose	Map existing GSOB/ISHB infested areas, identify likely new areas to be invaded, support treatments to reduce GSOB/ISHB spread
Available Report(s)	OCFA NDVI Vegetation Analysis, by Eagle Aerial & NV5 Geospatial. Mar 2022.
Available GIS Product(s)	<a href="#">OCFA Imagery Grid Map</a> & <a href="#">OCFA Imagery Cache</a>

### *Overview*

The Normalized Differenced Vegetation Index (NDVI) is considered a reliable indicator of plant biomass and vegetation primary productivity and time series have been routinely used to measure vegetation dynamics and ecosystem phenology over large geographic areas. Important variables include the magnitude of greening, peak activity, and drying phases of vegetation, providing information on key aspects of vegetation functionality, such as seasonality, productivity, and inter-annual variability. These factors are critical for fire resource and management planning since the phenological status of vegetation represents the main driver affecting fuel availability and moisture content.

Originally, the goal of the project was to explore the appropriate spatial and temporal scale and fuel moisture variable (NDVI vs. other similar derived variable) in mapping the condition of fuels. The recent progression of GSOB/ISHB in Orange County resulted in a realignment of the goals and focus the mapping through the OCFA GSOB/ISHB fire prevention grant. In 2018 OCFA was awarded a CalFire Fire Prevention Grant to monitor and remove heavily infested GSOB/ISHB trees throughout the State Responsibility Area. NDVI mapping and spread modeling will be used to identify areas of weakened trees and to facilitate identification of potentially new infested areas and monitor for changes following treatments.

### *Progress*

Eagle Aerial (EA), partnering with Quantum Spatial (now NV5 Geospatial), used imagery from 2010-2019 to segment the tree canopy within the wildlands and classify segments by species or species groups. GSOB/ISHB monitoring data collected by OC Parks, State Parks, and others were used in the modeling of tree health and vulnerability due to infection levels. The results highlight potential ISHB and GSOB infestation but also the impact of drought or fires on tree health in the region. Datasets created by this project will provide information that can support planning for pest management and to some degree fire management within the study area. The report is available in the link above.

OCFA is developing the archive of the imagery produced in the report and other imagery that was acquired as part of the project. The imagery (NDVI, RGB) covers most of the county with

the intent of sharing the database with our partners (the link to imagery products is in the above table).

## 16. Whiting Ranch Mountain Lion Study

Project Title	Whiting Ranch Mountain Lion Study
Contractor(s)/Researcher	UC Davis
Time Period	2021-2023
Total Project Cost	\$74,667
Amount Budgeted	FY2022: \$74,667; FY2023: --
Fund	Endowment
Matching Contribution(s)	OC Parks: \$75,000
Landowner Involvement	OC Parks
Project Status	Postponed
Project Progression	--
Program Class	Monitoring
Program Area	Biological Resources
Resource	Wildlife
Project Purpose	Monitor mountain lion activity in Whiting Ranch Park
Available Report(s)	2022 UCD mtn lion annual report_Final, Annual Rep, Appendix B
Available GIS Product(s)	--

### Overview

The UC Davis Wildlife Health Center (UCD-WHC) has been researching mountain lions in the region for the last 20 years. Thanks to the cooperation of OC Parks with the UCD-WHC mountain lion study in the past, GPS collar data has provided a basic understanding of how several mountain lions have used the central reserve. However, no extensive data exists on human patterns of use, how mountain lions are currently using the park, and where those patterns of use may overlap spatially and temporally.

This study will examine use of the trail system by pumas and humans, similar to a study led by UCD-WHC team in Cuyamaca State Park in San Diego County, which had similar goals and objectives (i.e., evaluating increased human interactions with mountain lions including attacks).

### Progress

The project is postponed pending funds contributed by OC Parks. Reports listed above are archived on the NCC website library. Using camera data and historic and current GPS data, determine spatial and temporal patterns of human and mountain lion use of trails, with a goal of determining if "hotspots" exist spatially or temporally where encounters between the two are more likely.

## 17. Laguna Canyon Fuels Mod

Project Title	Laguna Canyon Roadside Hardening
Contractor(s)/Researcher	OCFA, Sage Environmental
Time Period	2018-2023
Total Project Cost	\$5,000

Amount Budgeted	FY2022: \$2,500; FY2023: \$2,500
Fund	Restoration
Matching Contribution(s)	CalFire Fire Prevention Grant \$3,676,400; OCFA, CoLB
Landowner Involvement	OCP
Project Status	Ongoing
Project Progression	On schedule
Program Class	Restoration
Program Area	Biological Resources
Resource	Native Habitat
Project Purpose	Harden roadside strip from annual grassland to cactus-dominated vegetation to reduce fire spread potential from roadside ignitions and improve habitat.
Available Report(s)	--
Available GIS Product(s)	--

### *Overview*

Through the city fire department, Laguna Beach (LBFD) was awarded a grant from the CalFire Fire Prevention Fund to reduce the fire hazard and improve the native habitat in Laguna Canyon. The project consists of hazardous fuels reduction in the urban community-wildland interface along Laguna Canyon Road and restoration in Laguna Coast Wilderness Park. Restoration was included in the project to fulfill the California Climate Investments carbon sequestration requirement of the grant program. NCC will contribute staff time and funding to the project, focusing on planting cactus along Laguna Canyon Road as an experimental approach to reduce the potential for fire spread into the Reserve from roadside ignitions.

### *Progress*

In 2020, site preparation was completed using crews from OCFA and the CA Conservations Corps. Ongoing maintenance will be conducted by OCFA hand crews and supplemented by contractors when needed. Approximately 2,500 cactus pads were planted in the early spring. Several weed maintenance and cactus pad watering events were conducted in the spring and early summer. Due to herbivory and less than normal rainfall, approximately 500 pads were planted in winter 2021 to replace pads that were either eaten or dried up. Weed maintenance and watering, as needed, will continue in the spring 2023.

## **18. Ecological Health Assessment**

Project Title	Reserve Health Assessment
Contractor(s)/Researcher	O'Herron Consulting, UCI
Time Period	2019-2023
Total Project Cost	\$63,875
Amount Budgeted	FY2022: \$60,450; FY2023: \$184,025
Fund	Endowment
Matching Contribution(s)	--
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CONB, UCI, IRWD, TCA, IC, MWD
Project Status	Ongoing

Project Progression	On track for completion in Summer, 2023
Program Class	Monitoring
Program Area	Sensitive Biological Resources
Resource	All
Project Purpose	Creation of suite of indicators and associated metrics of relevance to partners, the public, and elected officials reporting on the health of the reserve
Available Report(s)	--
Available GIS Product(s)	--

### *Overview*

The project is intended to improve the ability of NCC and NCCP/HCP participants to report on the ecological health of the Habitat Reserve that informs the NCC Board of Directors, reserve landowners, managers, State and Federal wildlife agencies and the public.

Ecological health assessments involve collecting and synthesizing an array of information to try to understand the condition of complex natural systems and the processes driving conditions. Ecological health concepts provide valuable information for assessing ecosystem condition and management effectiveness and are an important component of ecologically based monitoring. The ecological health [assessment](#) of Mt. Tamalpais and the San Diego Management and Monitoring State of the Regional Preserve System [Report](#) are models and we continued to contract with O'Herron Consulting to help inform and lead our effort.

### *Progress*

In 2022, NCC staff and a team of participants representing Reserve landowners and managers established the foundational elements necessary to assess the status and trends of target species, select covered species and habitat types. Teams of scientists and land managers have been assembled to complete the assessment in 2023. The outcome, in addition to assessing current ecological health, will be a robust suite of indicators and associated metrics that can monitored into the future and utilized to complete future assessments.

## **19. Native Seed Partnership**

Project Title	Orange County Native Seed Partnership
Contractor(s)/Researcher	Sapsucker Consulting, AECOM
Time Period	2020-2023
Total Project Cost	\$73,025
Amount Budgeted	FY2022: \$63,042; FY2023: \$272,173
Fund	Restoration
Matching Contribution(s)	\$4,540 (TNC)
Landowner Involvement	OCP, OCWR, COI, CCSP, CDFW, CONB, UCI, IRWD, TCA, IC, MWD
Project Status	Ongoing
Project Progression	Draft Strategic Plan expected in April, 2023
Program Class	Land Management
Program Area	Habitat Restoration

Resource	All
Project Purpose	Support habitat restoration through development of locally sourced native seed and plant material
Available Report(s)	--
Available GIS Product(s)	--

### *Overview*

The sourcing of native seed used for restoration projects within NROC is generally left to the discretion of restoration practitioners. Seed available from commercial growers is not necessarily ideal for widespread use within NROC depending upon seed source and collection practices utilized. Seed collected from ecologically distant populations may risk being maladapted to restoration sites, causing restoration failures over time. Seed lots collected exclusively from small or isolated populations risk a loss of genetic diversity, potentially reducing the resilience of restored populations in the future. Genetically appropriate seed and adequate genotypic diversity are important factors in the success of restoration projects—especially in fragmented landscapes (Bischoff et al. 2010; Gann et al. 2019). Moreover, the species diversity available from commercial growers may fall short of the desired diversity for a restoration project.

Custom native seed collection for specific restoration projects is often expensive and time-intensive, compared to the commercially available counterpart (Smith 2017). Timelines for building genetically appropriate seed at the desired quantities vary and may take up to 3 years or more to obtain (Armstrong et al. 2017, as cited in Erickson and Halford 2020), which is difficult to accommodate for most restoration projects within NROC.

Access to high-quality, genetically appropriate native seed in adequate quantities is a ubiquitous challenge faced by restoration practitioners in NROC and elsewhere (Cross et al. 2020). Consistent with the 2019-2021 strategic plan, the 2019 HREP suggests this may be addressed by a coordinated native seed effort within NROC. NCC and the various signatories to the Central-Coastal Subregion NCCP/HCP, have formed the Orange County Native Seed Partnership.

### *Progress*

NCC staff has met with partners and local and regional experts along with consultants monthly through 2022 to discuss the details of establishing a native seed enterprise capable of supplying native seed at quantities necessary to meet the restoration and enhancement needs of partners with the appropriate genetic quality to establish and flourish successfully in the Orange County ecoregion. This information has been compiled into a draft strategic plan with the help of Sapsucker Consulting and AECOM and will be available for review by our partners in early 2023.



## 20. Grazing Plan – Best Practices

Project Title	Conservation Grazing Pilot
Contractor(s)/Researcher	Land IQ
Time Period	2021-27
Total Project Cost	\$88,329
Amount Budgeted	FY2022: \$59,259; FY2023: \$511,430*
Fund	Restoration
Matching Contribution(s)	--
Landowner Involvement	OC Parks
Project Status	Ongoing
Project Progression	Delayed due to development of goals/objectives
Program Class	Land Management
Program Area	Habitat Restoration
Resource	All
Project Purpose	Evaluation of cattle as a landscape scale (100s-1000s of acres) tool to control weeds and decrease thatch for improving degraded non-native grasslands and reduce wildfire intensity.
Available Report(s)	2019 Sage Associates Summary Report
Available GIS Product(s)	--

\*Funding for other project tasks (e.g., infrastructure, baseline monitoring, etc.) will be reviewed by the NCC Executive Committee once consensus is reached on project goals and design.

### *Overview*

The HREP 2019 Update describes a landscape-scale approach to using adaptive weed management that focuses predominantly on long-term weed management using chemical and/or mechanical control followed by the addition of native seed at scales of 10-100s of acres. Chemical and mechanical control methods at 100s – 1000s of acres become impractical or impossible, primarily due to scale and timing. Consistent with the NCC 2019-2022 Strategic Plan, the NCC staff continues to work with Land IQ on development of a grazing management plan and pilot grazing study in Weir Canyon to provide a tool that land managers can deploy to remove thatch, control weeds, and reduce wildfire intensity at scales of 100s to 1000s of acres thus aiding habitat restoration and improvement. Goals and objectives for the project are being developed through the TAC and targeted monitoring studies will be developed to determine grazing success. The pilot project is expected to last 5 years and if deemed successful, transitioned to OC Parks management and further implemented in additional locations within the Reserve.

### *Progress*

Infrastructure (e.g., fencing, water troughs, loading/unloading ramps and corrals, etc.) solutions including estimated costs have been determined and a grazing partner (Cal Poly Pomona) has been identified. A draft Conservation Grazing and Monitoring Plan (GMP) is under development, but we are currently working with the Technical Advisory Committee (TAC) to fine tune goals and objectives. Once approved, NCC will work with the TAC to develop an experimental design to assess project outcomes and complete the GMP including scientific studies working with local universities. Project implementation could begin in late summer or early fall, 2023.

## 2.4 Habitat Restoration and Enhancement Summary Table

Total acres of new, ongoing, and completed upland habitat restoration sponsored by NCC in 2022 organized by management area.

Land Area	New	Ongoing	Completed	Total
<b>Laguna Coast Wilderness Park (OCP)</b>	--			<b>14.2</b>
-Elderberry Enhancement		8	3.7	
-WST Restoration			1.0	
-Cactus Salvage (Glass Creek)			1.5	
-CACW Linkage				
<b>Whiting Ranch Wilderness Park (OCP)</b>	--	--		<b>9.7</b>
-Cactus Salvage (Glass Creek)			4	
-TBD			5.7	
<b>Crystal Cove State Park</b>	--			<b>20.7</b>
-CSS Restoration		7	9.7	
-WST Restoration			2.0	
-TBD			2.0	
- Cactus Salvage (Glass Creek)				
<b>San Diego Creek (OCFCD)</b>	--	--	0.2	<b>0.2</b>
<b>Bonita Canyon (TCA)</b>	--	--	0.6	<b>0.6</b>
<b>Coyote Canyon Landfill (OCWR)</b>	--	--	0.3	<b>0.3</b>
<b>UC Irvine Ecological Preserve</b>	--	--		<b>12.5</b>
-EEMP			4	
-Measure M			8.5	
<b>Irvine Ranch Open Space (OCP)</b>	--	4.3	--	<b>4.3</b>
<b>City of Irvine Open Space**</b>	--	--	2.9	<b>2.9</b>
<b>Total</b>	--	19.3	46.1	<b>65.4</b>

OCP = Orange County Parks

OCFCD = Orange County Flood Control District

TCA = Transportation Corridor Agencies

OCWR = Orange County Waste & Recycling

\*\*Portola Staging Site

### **3.0 NROC CONSERVATION CUSTODIAL FUNDS**

#### **3.1 2022 Pacific Pocket Mouse Custodial Fund**

Pursuant to a Letter of Agreement between the US Fish and Wildlife Service, the California Department of Fish and Wildlife, and the Natural Communities Coalition, a fund was created in 1998 to support research, recovery and enhancement efforts for the Pacific pocket mouse.

The agreement originally obligated Chandis Sherman (now Headlands Reserve LLC) to deposit funds annually for seven years into a segregated custodial account held by NCC, for a total of \$350,000. All funding has been received. Funds are dispersed at the direction of USFWS and CDFW for projects in support of pocket mouse research, recovery and enhancement.

The Pacific Pocket Mouse Custodial Fund Investment Account started the 2022 calendar year with a balance of \$135,009.78. The custodial fund on December 31, 2022 had a balance of \$1118,124.85. The \$13,619.23 decrease was attributable to a downturn in the stock market and not the result of expenditures in support of the Pacific pocket mouse recovery effort.

#### **3.2 2022 Cowbird Fund**

The beginning balance of the Cowbird Fund January 1, 2022, was \$2,393,442.39, and the ending balance on December 31, 2022, was \$2,119,845.87. A total of \$45,969.30, was spent on the Brown-headed cowbird management program in 2022. The results are summarized in project descriptions (Section 2.0) above.

### **4.0 NCCP/HCP RESERVE MANAGEMENT PLANS & POLICIES**

#### **4.1 Wildland Fire Management Plan**

The work plan for 2023 includes fire management activities listed in the 2022-2024 NCC Strategic Plan, which was completed in 2022. Working with partners on the implementation of the Wildland Fire Management Plan (WFMP) and other activities in support of the NCCP/HCP is an ongoing priority. Key elements include educate land owners/managers on the theory, science, and implementation of actions specified in the plan; assessment of the status and condition of vegetation management along fuel modification zones; and coordinating management activities with our partners. One focus of the work plan will be an update to the WFMP. Some elements of the update will be identifying fuel management zones in the reserve, and updating pre-fire management priorities. Important 2022 milestones and activities for 2023 are described below.

- County of Orange Area Safety Taskforce (COAST)/Emerging Tree Pests of Orange County (EMTPOC): two working groups composed of representatives from fire departments, public utilities, transportation agencies, natural resource management agencies, landowners, non-profit groups, and other community members from across

the county. The focus of COAST is to jointly identify problems and propose solutions for wildfire prevention. EMTPOC is an information sharing group that reviews the current status of tree pests including species infestations, new detections, and best management practices on treating infected areas. NCC's Wildland Fire Management Coordinator (WFMC) will continue participating in the working groups to discuss, plan, and implement initiatives aimed at decreasing fire risk and increasing fire safety, and managing tree pest infestations throughout the county. Main activities for 2023 include participating on working groups and supporting new staff acquired by IRC through grant funding to implement COAST's goals.

- **Roadside Ignition Reduction Strategic Plan:** the COAST Roadside Subcommittee is anticipated to resume following new support staff and grant funding to implement fire initiatives. The WFMC is coordinating with city of Laguna Beach and OCFA on the cactus fire barrier pilot project as part of the larger defensible space fuel reduction grant. In spring of 2021, *Opuntia littoralis* pads were planted along Laguna Canyon Road adjacent the Caltrans ROW. The goal of the project is to replace the non-native annual grass with cactus to "harden" the road shoulder against fire spreading into the wilderness from roadside ignitions.
- **County-Wide Community Wildfire Protection Plan (CWPP):** Through COAST, the plan was completed and signed in mid-2017. Several grants have been submitted and awarded over the past several years, including the tree beetle monitoring and treatment grant led by OCFA. The grants will fulfill strategies listed in the CWPP. The CWPP was updated in 2021, which included a revision to the priority project table. Assisting our partners in fire and fuels management project development and submission to grant programs will continue in 2023. Participating on project implementation will help strengthen professional relationships, and benefit the Reserve by providing more opportunities for collaboration on fire and fuels management.
- **Assessment and Monitoring of Fuel Modification Areas:** Working with partners, improve the condition, monitoring, and reporting on fuel management activities within and adjacent the Reserve. Information relevant to the Reserve will be incorporated into the revision of the NROC WFMP.
- **Fire Resource Advisory (READ) Information and Contact Protocol:** Updating the fire resource and tactical advisory maps for use during wildfires is a continuous effort. These maps are important reference documents to inform fire suppression tactical response during a wildfire in the Reserve. Activities for 2023 include support of fire training for park managers, continued participation in the OC Parks READ working group, review and update resource maps with park managers and OCFA, update and improve the geodatabase of sensitive species location data, improve file sharing of resource data to partners, and increase situational awareness and communication between fire responders and resource managers.

### Fire Incidents

In California, wildfire activity in 2022 was relatively quiet compared to the record-setting season in 2021. Approximately 363,940 acres burned in nearly 7,670 fires. Fortunately, the fire season in the county was very low with only 20 recorded vegetation fires. The largest was approximately 557 acres in the Cleveland National Forest. There were three wildfires in and adjacent the Reserve summarized in Table 1. Human activity continues to be the main cause of ignitions.

Table 1. Fire statistics for the NROC in 2022. FMU, Fire Management Unit.

Date	FMU	Fire Name; Area	Cause	Total Acres	Acres in NROC
02/10	2.05, 2.07	Emerald, CCSP/LCWP	Unk	154.6	152.0
3/12	11.02	Coal Mine, IROS	Unk, roadside	0.4	0
05/05	1.02-1.03	Coastal, AWCWP	Powerline	202.1	107.9
Total					259.9

### Fire Management

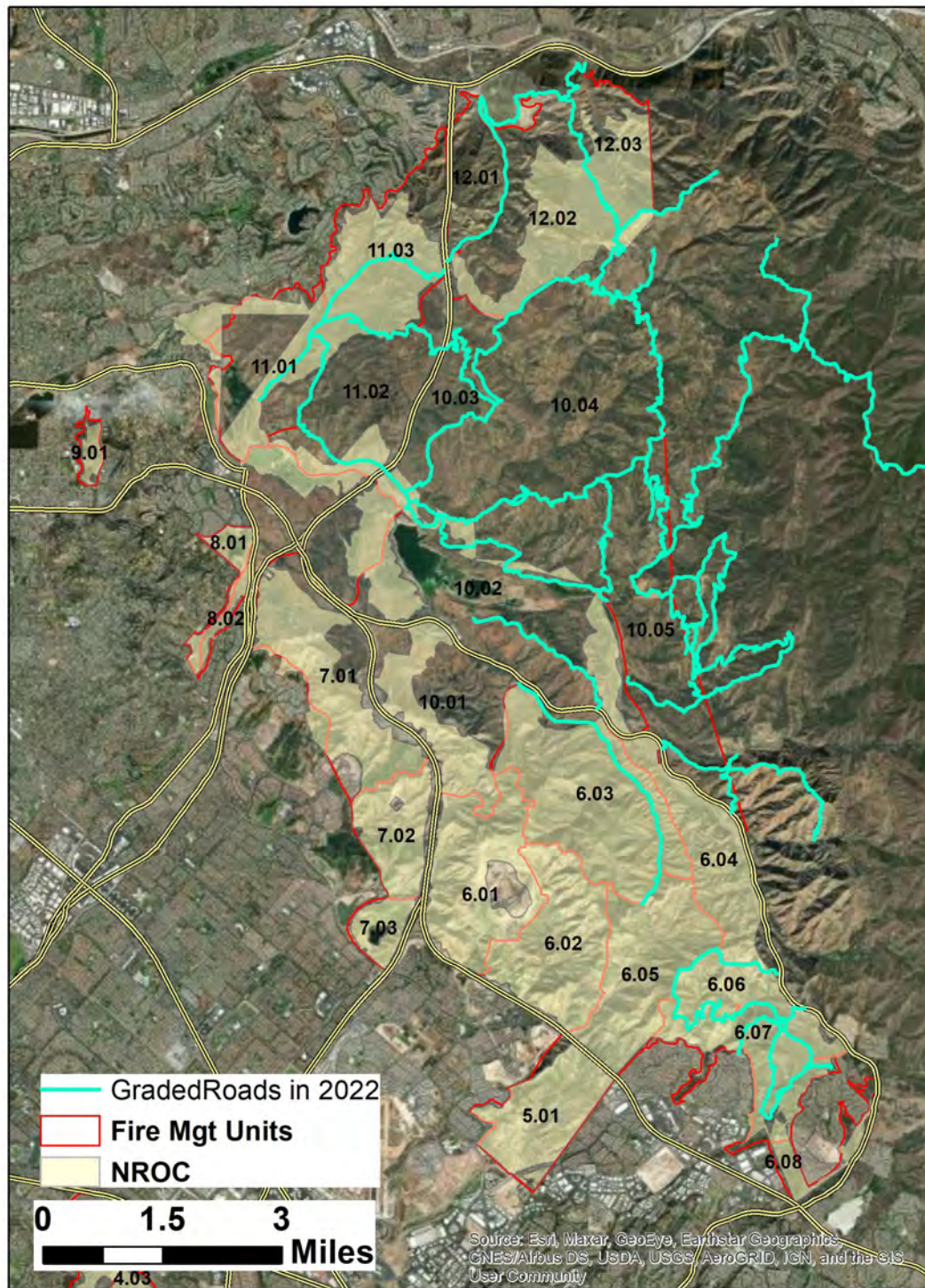
Interior Road Management: OCFA is often contracted by SCE and landowners to perform secondary road (dirt roads and trails within and adjacent the NROC) maintenance which may include reducing overgrown vegetation along the road edge. For 2022, there was road grading conducted throughout the reserve shown in the table and maps below.

Estimated miles of roads graded by landowner/management unit.

Park Management Unit	Miles Treated
IROS-Gypsum/Limestone Canyons	6.2
IROS-Weir Canyon	5.1
CDFW- Coal Canyon ER	2.8
Whiting Ranch WP	9.8
Crystal Cove SP	1.8
Aliso & Wood Canyons WP	2.5
Total	28.2

Note- Vegetation treatments were not performed with the road grading operations.

Figure 2. Road maintenance locations in 2022 on the Coastal and Central Reserve. Numbers correspond to fire management units (red lines) identified in the Wildland Fire Management Plan.









#### **4.2 Habitat Restoration & Enhancement Plan (HREP)**

The first HREP was completed and approved by the NCC Board of Directors in 2003, and has periodically been reviewed but not updated since that time. In September, 2015, NCC engaged Land IQ, a consulting firm specializing in habitat restoration, in a three-year effort to review and revise the plan, and propose a list of prioritized sites within the Reserve for specific restoration actions. Key themes being addressed over the course of the project include: landscape-scale restoration actions; sources of uncertainty tied to climate change, fire, seedbank condition; adaptive management; cost-effect methods; natural rainfall driven restoration; maximization of return of investment; integration of planning efforts; measure of success; and stakeholder and resource agency engagement.

Land IQ has developed GIS-based models supporting identification of site-specific ecologically appropriate vegetation community restoration targets, advanced development of Best Management Practices based on lessons learned from active and historic restoration projects and practitioner expertise, and finalized a generalized, adaptive management approach for landscape-scale habitat restoration across the Reserve. The finalized, updated HREP was submitted to the NCC Board of Directors and Wildlife Agencies for approval in March 2019.

A land manager training project, with reviews of the key points of the HREP has been postponed until 2023-24. The project will assist the land managers in incorporating the plan into their land management activities that focus on restoration.

#### **4.3 Recreation Management Plan**

In support of a long-term recreation management program for the NROC, NCC partnered with national leaders in the field of recreation ecology from Utah State University and Oregon State University in 2016 to plan and implement a multi-year research project. As designed, the project is to have four overall dimensions focused on: (1) determining visitor use levels and spatial distributions; (2) assessment of biophysical resource conditions; (3) understanding of visitor perceptions, values, and judgments; and (4) providing of scientific expertise in park planning and management.

Working with signatories of the NCCP/HCP and other partners, the project leads identified fourteen management units within the Nature Reserve of Orange County as high priority for assessment and monitoring of recreation use. The project employed both continuous assessment and sampling approaches to establish baseline conditions. Tasks included field assessment of the location and condition of trails, sites, and other areas of visitor use, determination of the spatial distribution of use, and an assessment of visitor attributes and preferences, demographics, motivations, values and judgments of resource and social conditions.

Tasks focused on dimensions 1-3 listed above were conducted in two distinct phases. The first phase was three years in duration, with social and biophysical field sampling which ended in 2019. A series of presentations and reports were provided to our partners. The second phase, focused on informing management and conservation goals, includes development of visitor

norm curves, thresholds of acceptability, and mapping tied to resource condition. Field surveys were completed in 2021 and a presentation and summary report, as well as recreation management workshop, was completed in summer 2022 (for reports, see our [recreation management project page](#)).

To address the fourth dimension listed above, in 2023-2024, the recreation ecology team will lead a focus group on the development of monitoring indicators and protocols that are suitable for the diversity of management units present within the NROC. The monitoring will be centered on estimating park visitation levels and associated impacts to biological resources.

#### **4.4 Grazing Management Plan**

Though a Grazing Management Plan was adopted, large scale grazing in the reserve ceased in 2002. In 2021 NCC staff began exploring a cattle-focused conservation grazing pilot project coordinating with the Wildlife Agencies and OC Parks. Staff expanded the coordination efforts to include a grazing management contractor, the NCC Technical Advisory Committee, ecologists specializing in grassland species covered by the NCCP/HCP, and a potential university grazing operator. The pilot project is being designed to effectively monitor pre-grazing and post-grazing vegetation conditions and impacts of the effort on vertebrate species. The pilot study will also evaluate the costs of conservation cattle grazing and compare it to other methods used in other habitat restoration and fuel management efforts.

The evaluation of the potential pilot plan, cost assessments and ecological monitoring protocols continued through 2022. It is the expectation that NCC will have a plan that is acceptable to the Wildlife Agencies, landowner and NCC Board of Directors sometime during the next calendar year.

### **5.0 IMPACTS TO COASTAL SAGE SCRUB HABITAT IN THE COUNTY OF ORANGE CENTRAL/COASTAL SUBREGION NCCP/HCP 2022**

#### **5.1 Authorized Take in the Reserve System by Participating Landowners as Reported to NCC in 2022**

Since 2018, the NROC Annual Report has tracked in tabular form impacts to coastal sage scrub habitat within the boundary of the Central and Coastal Subregion of Orange County. The table below is an updated accounting resulting from Wildlife Agencies records and reporting of signatories to the Central and Coastal Subregion NCCP/HCP of Orange County Implementation Agreement for the 2022 calendar year.

As in 2018, the University of California Regents are not included in the table because they have not utilized any of the credits authorized in the Implementation Agreement for the Central and Coastal Subregion NCCP/HCP for Orange County. The figures in the table are based on Wildlife Agencies' archives, records from past Annual Reports, input from landowning signatories in response to the Wildlife Agencies' March 7, 2017 letter, and subsequent written communication from signatories in subsequent years to NCC. The Wildlife Agencies provided additional updates to the Take accounting tables in their comments on the 2019 NROC Annual Report. Those values are reflected in the following table along with comments.

In 2020 Metropolitan Water District reported its first use of Take credits under the Central and Subregion NCCP/HCP as part of a Section 7 Consultation. Orange County Waste & Recycling reported the use of Take credits in 2021 and again in 2022. Both were communicated in writing to the Wildlife Agencies and NCC.

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
12/01/96	OC Parks	Laguna Coast Wilderness Park (LCWP) Riding & Hiking Trail	0.1	394.9	Yes	
03/05/98	OC Parks	Laguna Cyn Rd Emergency Repair	0	394.9	Yes	
01/01/98	OC Parks	LCWP: Camarillo Trail	0.01	394.89	Yes	
03/05/98	OC Parks	Laguna Cyn Rd Emergency Repair	0	394.89	Yes	
12/01/98	OC Parks	Santiago Oaks Regional Park – Suncal Encroachment	0	394.89	Yes	Boundary Amendment approved in 1999
12/01/98	OCW&R	Phase V-A Liner Project at Frank R. Bowerman Landfill (FRB)	16.5	378.39	Yes	
12/01/99	OCW&R	Phase V-B/C Liner Project at FRB Landfill	13.1	365.29	Yes	
12/08/00	OCW&R	Phase V-D at FRB Landfill	16.0	349.29	Yes	
01/01/02	OC Parks	Upper Newport Bay Interpretive Center	2.7	346.59	Yes	
02/01/02	OC Parks	El Modena Orange Oak Acres Mutual Water Company waterline, Santiago Oaks	0	346.59	Yes	

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
12/01/02	OCW&R	FRB Landfill Emergency Landslide Remediation	13.04	333.55	Yes	
12/01/02	OCW&R	FRB Landfill Phase VII-A	5.2	328.35	Yes	
12/01/03	OCW&R	FRB Desilting Basin	2.4	325.95		Take reported by CDFW
01/01/04	OC Parks	LCWP: Nix Nature Center	0.35	325.6	No	Constructed after NCCP/HCP. To be reviewed by County and Wildlife Agencies in 2019
12/01/04	OCW&R	FRB Landfill Phase V-D Stockpile	1.19	324.41	Yes	
12/01/05	OCW&R	FRB Landfill Fuel Mod. Program	0.48	323.93	Yes	
12/01/05	OCW&R	Canyon II Stockpile	1.56	322.37	Yes	
12/01/05	OCW&R	FRB Landfill Phase VII-B	13.85	308.52	Yes	
12/01/07	OCPW	Laguna Cyn Rd.	21.51	287.01	No	Unable to locate final accounting of impacts. Will assume 21.51 from BO unless documentation stating otherwise can be submitted.
12/01/07	OCW&R	FRB Landslide Back-cut Project	19.68	267.33	Yes	
01/01/08	OCPW	San Diego Creek Maintenance Project	1.6	265.73	Yes	
12/01/08	OCW&R	Drainage 1	6.04	259.69	Yes	
01/01/10	OCPW	Alton Pkwy	0	259.69	Yes	
12/01/10	OC Parks	Aliso and Wood Cyns Wilderness Park (AWCWP) Car Wreck Trail	0.03	259.66		Take source: CDFW based on aerial photograph

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
12/01/10	OC Parks	Santiago Oaks Regional Park: Bumblebee, Chutes and Weir Cyn Trails Improvements	0	259.66	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/10	OCW&R	FBR Landfill Phase VIII-C	7.2	252.46	Yes	
12/01/11	OC Parks	AWCWP: Mentally Sensitive Trail	0	252.46	Yes	Wildlife Agencies recommend coordination with NCC on future trail project
12/01/11	OC Parks	AWCWP: Wood Cyn Trail Bank, Wood Creek Dip Crossing and Valido & Mathis Cyn Trails	0	252.46	Yes	Mathis Cyn Trail added by CDFW
12/01/13	OC Parks	Irvine Ranch Open Space: Limestone Ridge Trail	0	252.46	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/13	OC Parks	Irvine Ranch Open Space: Marel Spur Trail	0	252.46	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/13	OC Parks	AWCWP: Cholla Trail	0	252.46	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/13	OC Parks	LCWP: Los Trancos Trail	0	252.46	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/13	OC Parks	AWCWP: Hillcrest HOA Drainage	0	252.46	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
12/01/13	OC Parks	LCWP: Ridge Park Road Trail	0	252.46	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/13	OC Parks	Whiting Ranch Wilderness Park: Cactus Hill Trail	0	252.46	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/13	OCW&R	FRB Landfill: South Basin/Wetland Basin	0.32	252.14	Yes	
12/01/13	OCW&R	FRB Landfill: WCR	0.72 4.9	246.52		4.9 ac Take source: CDFW
12/01/13	OCW&R	FRB Landfill: East Flank Landslide Remediation	8.96	237.56	Yes	
12/01/14	OC Parks	LCWP: Marijuana Grove	0	237.56	Yes	Wildlife Agencies recommend coordination with NCC on future projects of this nature
12/01/14	OC Parks	AWCWP: Cholla Trail	0	237.56	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/14	OC Parks	LCWP: Lizards Trail	0.7	236.86	Yes	
12/01/14	OC Parks	LCWP: Emerald Cyn Bridges and Trail Improvements	0	236.86	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/14	OC Parks	Little Sycamore Bridge and Trail Improvements	0	236.86	Yes	Wildlife Agencies recommend coordination with NCC on future trail projects
12/01/14	OCW&R	FRB Landfill: Phase VIII-C	1.5	235.36	Yes	
12/01/14	OCW&R	East Loma Landslide	2.22	233.14	Yes	



Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
12/01/14	OCW&R	FRB Landfill: East Flank Landslide Remediation	5.44	227.7	Yes	
12/01/15	OC Parks	AWCWP: Main Entrance Facility Improvements	0.79	226.91	Yes	
12/01/15	OCW&R	FRB Landfill: Office Facility Expansion	1.3	225.61	Yes	
12/01/15	OCW&R	FRB Landfill: Phase VIII-B1	1.91	223.7	Yes	
01/01/17	OCW&R	FRB Landfill: Phase VII-B2	8.72	214.98	Yes	
2018	OC Parks	Whiting Ranch WP	0.06	214.92		
12/03/21	OCW&R	Closed Santiago Cyn Landfill	0.40	214.52	Yes	Communicated in writing to Wildlife Agencies/NCC
11/01/22	OCW&R	FRB Landfill: Phase VIII A-1	6.70	207.82	Yes	Communicated in writing to Wildlife Agencies/NCC
<b>County of Orange</b>			<b>Total Take 187.18</b>	<b>Beginning Balance 395</b>		

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
07/1997	Irvine Company	Laidlaw Gasline	0.07	1.93	Yes	
06/1999	Irvine Company	Tustin Ranch Estates	0.16	1.77	Yes	
01/2001	Irvine Company	Chambord Entry Wall	0.07	1.7	Yes	
10/2002	Irvine Company	Coyote Cyn Gas Probes	0.0001	1.6959	Yes	
02/2003	Irvine Company	Bommer Cyn East Fork Ranch Road	0.094	1.6019	Yes	
06/2008	Irvine Company	Santiago Hills Phase II: Infrastructure Improvements-Irvine Regional Park and Peters Canyon Reservoir	0.5484	1.0535	Yes	
<b>Irvine Company</b>			<b>Total Take 0.9465</b>	<b>Beginning Balance 2</b>		

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
02/13/97	Irvine Ranch Water District (IRWD)	Allen-McColloch Pipeline	0.005	59.995	Yes	
02/14/97	IRWD	Parcel 4 Sewer and Cart Path north of Spillway	0.18	59.815	Yes	
07/27/99	IRWD	Shady Cyn Reservoir & Pipeline	1.6	58.215	Yes	
09/19/00	IRWD	Shady Cyn Sewer	0.14	57.825	Yes	
12/01/14	IRWD	Baker Water Plant/ Serrano Creek Outlet	0	45.375	Yes	Utilized In-Lieu Mitigation Fee Program
12/01/14	IRWD	Baker Raw Water Pump Station and Pipeline Project	0	45.375	Yes	
12/01/15	IRWD	Serrano Summit	0	45.375	Yes	Utilized In-Lieu Mitigation Fee Program
	IRWD	Siphon Reservoir Interim Facilities	0.04	45.335	Yes	CDFW Records. No date
	IRWD	Irvine Lake Pipeline North Conversion Project	0.96	44.375	Yes	CDFW Records. No date
<b>Irvine Ranch Water District</b>			<b>Total Take 15.625</b>	<b>Beginning Balance 60</b>		

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
2003	Southern California Edison (SCE)	Shady Cyn Special Linkage: Convert Overhead 66kV to Underground (Santiago-Crown-Morro 66kV)	1	1.4	Yes	
2003	SCE	Santiago-Coygen-Crown Project	1	0.4		Take source: USFWS
<b>Southern California Edison</b>			<b>Total Take 2.0</b>	<b>Beginning Balance 2.4</b>		

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
08/01/03	Crystal Cove State Park (CCSP)	El Morro Conversion Sewer Project	0.04	17.92		
08/04/03	CCSP	Historic District Cottages and Infrastructure Project (PPUP implementation)	2.48	12.96		
<b>Crystal Cove State Park</b>			<b>Total Take 2.52</b>	<b>Beginning Balance 12.96</b>		

Date	Participating Landowner	Location and/or Project Name	CSS Impacts By Project (acres)	Remaining Authorized Take (acres)	Take Accounting Concurrence Between Wildlife Agencies & Landowner	Comment
01/10/20	Metropolitan Water District (MWD)	Orange County Feeder Blow-Off Structure Rehabilitation Project (CM-2)	0.23	45.07		Section 7 Consultation
<b>Metropolitan Water District</b>			<b>Total Take 0.23</b>	<b>Beginning Balance 45.3</b>		

## **5.2 Take by Non-Participating and Participating Landowners – In-Lieu and Other Mitigation Fee Options**

The US Fish and Wildlife Service, and the California Department of Fish and Wildlife neither received nor approved any Non-Participating Landowner projects to utilize the In-Lieu Mitigation Fee Option in 2022.

## **6.0 ACCOUNTING OF FUNDS RECEIVED AND DISPERSED BY NCC**

No funds were dispersed to NCCP/HCP participants. However, NCC provided in-kind contributions, and science and land management services through its contracts to landowners in the form of invasive plant eradication, habitat restoration on reserve lands and specifically funded a recreation trail use pilot project and a portion of a mountain lion study requested by OC Parks. For a detailed breakdown of expenditures and success of the program in 2022, see Section 2 above.

## **7.0 BOUNDARY CHANGES/MINOR AMENDMENTS IN THE RESERVE SYSTEM**

There were neither Boundary Amendment requests considered by the NCC Boundary Amendment and Acquisition Committee nor requests approved by the Natural Communities Coalition Board of Directors in 2022.

## 8.1 California Department of Fish and Wildlife

### Coal Canyon Ecological Reserve



**Land Manager Name**

Ca Dept Fish Wildlife

**Reporting Year**

2022

**Park, open space or management unit**

Coal Canyon ER

**Website**

<https://wildlife.ca.gov/Lands/Places-to-Visit/Coal-Canyon-ER>

**Land owning entity:**

California Department of Fish and Wildlife

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

During 2022, fences and trails were routinely monitored and no major impacts to the habitat were observed beyond what has been documented in previous years. There has been consistent unauthorized and off-trail use by motorized vehicles, notably motor bikes and small trucks. To help minimize unauthorized use, the California Department of Fish and Wildlife (CDFW) plans to replace the gates and install bollards at the Chino Hills State Park and U.S. Forest Service boundaries in 2023. This project is currently going through the CEQA process. Two trail cameras that were vandalized or stolen will be replaced to continue monitoring of unauthorized activities. Nonnative annual vegetation within and along the road margins will continue to be surveyed and managed. CDFW is also exploring the possibility of having the Coal Canyon ER access road serve as a modified fuel break, but no work is anticipated for 2023.

Additionally, two high priority invasive species exist in or adjacent to Coal Canyon ER, *Centaurea solstitialis* (yellow star thistle) and *Brassica tournefortii* (Sahara mustard). Efforts to monitor and control these populations by CDFW and partners will occur in 2022. Additional interagency coordination will be performed to efficiently manage populations across jurisdictional boundaries.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**



**Description of closure conditions and procedures.**

According to Title 14, Sections 550 and 630, closures can occur for resource protection and other reasons deemed appropriate by CDFW and with approval from the Regional Manager.

**ii. Has the policy been officially modified since the previous year's annual report?**

Yes

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
NA	NA	NA	NA

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[20-21-waterfowl-upland-lands-regs-tagged-2.pdf](#)

**Description of special events use for the property.**

According to Title 14, section 550, "an activity, use, event or gathering on department land...may be allowed with written authorization from the department, typically in the form of a Special Use Permit. When allowed, special uses occur on a limited basis as defined in the Special Use Permit or other authorizing document. An authorized special use on department land shall not conflict with the normal uses, purposes or management of the department land."

**ii. Has the policy been officially modified since the previous year's annual report?**

Yes

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Reserve Manager	1	0.07
Habitat Assistant	1	0.1
Scientific Aids	1	0.07

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Amanda Swanson	Reserve Manager	Amanda.Swanson@Wildlife.ca.gov	949-402-4339

## B. Visitation

### b. What method(s) is/are used to estimate visitation? Summarize in the box below.

The trail cameras that were originally installed at Coal Canyon ER were stolen or vandalized. As such, we do not have an estimate for 2022. New trail cameras will be installed in 2023.

### c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.

2022 Not available  
2021 Not Available  
2020 - 2,920  
2019 Not Available  
2018 Not Available

### d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.

No new types of park users were observed within the past year, although there is evidence that use of unauthorized motor vehicles (i.e. trucks, motorized bikes) has continued to occur. For this reason, CDFW is working on replacing two gates (boundaries with Chino Hills State Park and Cleveland National Forest) and installing bollards to curtail unauthorized use of the trails in 2023, pending funding and CEQA compliance. CDFW has also coordinated with the U.S. Forest Service on fixing or replacing the gate at the boundary with Cleveland National Forest. As the locking mechanism no longer functions, CDFW staff welded a chain to temporarily allow the gate to be locked until the entire gate can be replaced. Unfortunately, the chain has been cut multiple times and staff has been required to continually repair it.

### e. Were there any special events held for which special use permits were issued for the property?

No

### f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
NA	No significant impacts to habitat were observed from unauthorized property uses	NA	NA

## C. Monitoring Performed by Land Owner or Land Manager

### a. Does land owner or its land managing representative monitor trail conditions annually?

Yes

### i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.

Access roads and trails into Coal Canyon ER are routinely monitored by CDFW staff. Maintenance of access roads is performed on an annual or biannual basis by Southern California Edison (SCE). To-date, the roads have not been maintained since 2019. CDFW is working with SCE on maintenance of the roads as there are locations along the

road that are experiencing erosion issues, especially around some of the culverts. CDFW is working with SCE on the possibility of replacing the culvert structures as well.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

**III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

**IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

**V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

No

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

In April 2021, UC Cooperative Extension in collaboration with CDFW and OCFA placed ISHB traps near the entrance of a riparian corridor to determine whether ISHB existed within the area. For much of the year, no ISHB were observed, but in the fall of 2021, two beetles were found on one sticky trap within Coal Canyon ER. To date-no other beetles have been detected.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of**

**actions taken in the space provided and/or upload a specific attachment below:**

While two beetles were found on one sticky trap in fall 2021, no additional invasive beetle occurrences were identified in 2022.

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

## **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

Staff will continue to monitor and manage high priority species *Brassica tournefortii* (Sahara mustard) and *Centaurea solstitialis* (yellow star thistle) populations in Coal Canyon ER. Since these species are also found on adjacent properties, interagency communication will be conducted to share information and coordinate management.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No

## 8.1 California Department of Fish and Wildlife

### Laguna Laurel Ecological Reserve



**Land Manager Name**

Ca Dept Fish Wildlife

**Reporting Year**

2022

**Park, open space or management unit**

Laguna Laurel ER

**Website**

<https://wildlife.ca.gov/Lands/Places-to-Visit/Laguna-Laurel-ER>

**Land owning entity:**

California Department of Fish and Wildlife

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

During 2022, monitoring of trail conditions, fencing, and signage was routinely performed.

A report of poaching of *Dudleya stolonifera*, a federally listed species, was reported in late December 2022 following a survey of the species. California Department of Fish and Wildlife (CDFW), Orange County Parks, and CNPS conducted a site visit of the poached population. CDFW wardens were also notified and will visit the site in January 2023. Bi-weekly checks of the population will take place in 2023 and trail cameras will be installed at two locations to monitor unauthorized activities around the population. An adjacent ~2.75-acre enhancement project that is currently in the planning phase will also consider plant palette and fencing options that may reduce trespass and minimize access to the *Dudleya stolonifera* population.

CA Department of Fish and Wildlife (CDFW) will continue to work with Orange County Parks to improve monitoring and management of high priority weeds and trail maintenance within Laguna Laurel ER. As the County owns Laguna Coast Wilderness Park, which surrounds Laguna Laurel ER, CDFW will coordinate closely with the County for weed management, trail monitoring, and obtaining visitor estimates in the future. Signage, trail conditions and fencing will also be regularly surveyed and maintained as necessary.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**Description of closure conditions and procedures.**

According to Title 14, Sections 550 and 630, closures can occur for resource protection and other reasons deemed appropriate by CDFW and with approval from the Regional Manager.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
NA	NA	NA	NA

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[20-21-waterfowl-upland-lands-regs-tagged.pdf](#)

**Description of special events use for the property.**

According to Title 14, section 550, "an activity, use, event or gathering on department land...may be allowed with written authorization from the department, typically in the form of a Special Use Permit. When allowed, special uses occur on a limited basis as defined in the Special Use Permit or other authorizing document. An authorized special use on department land shall not conflict with the normal uses, purposes or management of the department land."

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Reserve Manager	1	0.07
Habitat Assistant	1	0.1
Scientific Aids	1	0.07

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Amanda Swanson	Reserve Manager	Amanda.Swanson@Wildlife.ca.gov	949-402-4339



## B. Visitation

### b. What method(s) is/are used to estimate visitation? Summarize in the box below.

While the public did visit Laguna Laurel ER, CDFW still does not currently have a method in place for estimating public visitation at Laguna Laurel ER. Estimates provided by Orange County Parks are for all of Laguna Coast Wilderness and would be an inaccurate overestimate for Laguna Laurel ER.

### c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.

2021 Not Available

2020 Not Available

2019 Not Available

2018 Not Available

### d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.

No new types of park users or uses were observed in the park during 2022.

### e. Were there any special events held for which special use permits were issued for the property?

No

### f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
2022/12/22	Poaching of federally listed plant species, <i>Dudleya stolonifera</i>	rocky outcropping	NA - less than 0.01 acres

## C. Monitoring Performed by Land Owner or Land Manager

### a. Does land owner or its land managing representative monitor trail conditions annually?

Yes

### i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.

Trails are routinely monitored by CDFW staff. Only major incidents of degradation are documented and there was no evidence of trail degradation observed in Laguna Laurel ER during 2022.

### ii. Are notes, photographs or other documentation of the monitoring performed archived?

No

## III. Recreation Facility Construction and Maintenance

Did any recreational facility construction or maintenance occur or do such facilities occur on the property?

No

#### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

#### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

#### **VI. Invasive Species Control**

##### **A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

##### **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

No

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Due to minimal CDFW staff capacity and resources during 2022, follow-up surveys for invasive beetles were not conducted. From previous surveys, only two trees were found to be infected with polyphagous shot hole borer near the boundary with Orange County Parks property. CDFW will work with partners to better strategize monitor infested trees in 2023.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
California Sycamore	Invasive Shot Hole Borer	within ~1 acre	3

**iii. Did active management for invasive beetles occur on the property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In July 2020, surveys were conducted in Laguna Coast Wilderness by UC Cooperative Extension for OC Parks. Based on the map provided by OC Parks, Laguna Laurel ER was also surveyed and a small cluster of 2-3 trees with low infestation level were observed near the southern boundary. Based on the map and some details, the species are likely to be California Sycamore (*Platanus racemosa*). The report provided by OC Parks likely covers survey results within Laguna Laurel ER as well.

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

No

## **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

Yes

**If yes, please fill out the following**

<b>Project Name</b>	<b>Habitat Type</b>	<b>Approximate Location</b>	<b>Area (acres)</b>
Laguna Laurel Enhancement for Wildfire Resiliency	currently exotic grasses and forbs	33°35'5.33"N, 117°45'48.07"W	2.75

### **Additional Information:**

The Laguna Laurel Enhancement for Wildfire Resiliency Project is a relatively small 2.75-acre project located in the middle of Laguna Laurel ER where there is an existing patch of nonnative grasses and forbs. On the periphery of the project area are various transitional habitats including oak woodland, some chaparral and coastal sage scrub. There are also rocky outcroppings that harbor *Dudleya stolonifera*, a federally listed plant. This project has undergone CEQA and has received a Categorical Exemption. We are now working on executing a contract with the Laguna Canyon Foundation for implementation. We are also working with Orange County Parks and CalTrans on access to the site from Laguna Canyon Road. We are collaborating with Orange County Parks on other aspects of the project including plant palette, protection of the *Dudleya stolonifera* population, and archaeological and paleontological surveys. We are also currently in the process of contacting the tribal authority for the project area to ensure that the appropriate cultural surveys and tribal consultation is carried out. The project is expected to begin in 2023.

## **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

In addition to the previously described projects, CDFW will monitor high priority weeds in collaboration with Orange County Parks and manage as necessary. No Priority 1 weeds have been previously documented in Laguna Laurel ER thus far, but Priority 2 species include artichoke thistle (*Cynara cardunculus*), perennial veldt grass (*Ehrharta*

calycina), Arundo donax and black locust (Robinia pseudoacacia). Sahara mustard (Brassica tournefortii) has not been documented in Laguna Laurel ER, but populations exist nearby within Laguna Coast Wilderness Park.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

**Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

Staff will work with partners including Orange County Parks, Orange County Fire Authority, and NCC on how to best survey and treat, if needed, trees infested with invasive beetles.

**Other invasive species (please describe):**

If other high priority invasive species are identified, CDFW will also work with neighboring land owners and partners to develop a survey and treatment strategy.

**Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

The Laguna Laurel Trail Fuel Reduction is in the early phases of planning as we are still working on the CEQA process for the project. The project includes maintenance of the ~0.74 mile trail that runs through Laguna Laurel ER, including mowing of nonnative species, trimming shrubs back, limbing up trees, and removing dead plant material along the trail. Small patches of nonnative annual vegetation along the trail will also be treated. The project also includes mowing of a ~5.1-acre nonnative grassland area opposite the creek to the Laguna Laurel Enhancement project; the posts and barbed wire of a remnant fence will also be removed. We anticipate that it will also receive a Categorical Exemption. The same biological, archaeological/paleontological, and cultural surveys will need to be performed for this project as with the Laguna Laurel Enhancement. This project will be carried out by CDFW staff and the hope is that implementation will commence in fall 2023.

**Maintenance of existing fuel management to be undertaken within the reserve?**

No

# 8.1 California Department of Fish and Wildlife

## Upper Newport Bay Ecological Reserve



**Land Manager Name**

Ca Dept Fish Wildlife

**Reporting Year**

2022

**Park, open space or management unit**

Upper Newport Bay ER

**Website**

<https://wildlife.ca.gov/Lands/Places-to-Visit/Upper-Newport-Bay-ER>

**Land owning entity:**

California Department of Fish and Wildlife

**I. Executive Summary****Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

During 2022, several efforts were made to manage and survey multiple invasive species including high priority weeds *Limonium ramosissimum* (Algerian sea lavender), European sea lavender (*Limonium duriusculum*), and Sahara mustard (*Brassica tournefortii*). California Department of Fish and Wildlife (CDFW) staff have also been involved with monitoring for *Volutaria tubuliflora* and attend biweekly meetings during the growing season; staff assist with treating as needed. Additionally, monitoring efforts occurred to assess populations of two state and federally listed species, the Ridgway's rail and the California Least tern.

There are also multiple ongoing restoration projects in various stages. Planning and permitting for the Big Canyon Habitat Restoration and Adaptation-Phase 3 (previously 2B/2C) began in early 2021 and is still ongoing; nearly all permit applications have been submitted and the design is currently at 60%. Implementation could start as early as fall 2023, depending on permit issuance and funding. Additionally, the Upper Newport Bay Ecosystem Restoration Project, which was completed in 2010, was scheduled to have its 10 year monitoring campaign occur in 2020; however, due to COVID-19 restrictions, three of the four quarters of the fish surveys, avian surveys and water quality assessments were conducted in 2021. The remaining fourth quarter survey occurred February-March 2022. CDFW has also been included in discussions with the County of Orange Public Works on the Santa Ana-Delhi Channel Improvement Project; planning and permitting for the project continued in 2022 and is ongoing.

Vegetation monitoring and multiple targeted invasive control efforts will continue into 2023. Additionally, two small invasive plant removal projects are anticipated, including removal of a few Brazilian peppertrees (*Schinus terebinthifolia*), which are a site of illegal activities and pose a threat to neighboring homeowners, and removal of several small patches of *Arundo donax*. While no new restoration projects are currently planned for implementation over the next year, CDFW continues to be involved in the Big Canyon Habitat Restoration and Adaptation Project-Phase 2, which was completed in early 2021 and is currently in its monitoring and maintenance phase; as stated above, planning and permitting of subsequent phase (Phase 3) within Upper Newport Bay ER is ongoing.

In 2022, one kiosk was replaced just outside of the Back Bay Science Center. CDFW is also working with the City of Newport Beach, County of Orange, and the Newport Bay Conservancy on refurbishing the gazebo and updating interpretive panels just outside of the Back Bay Science Center gate. During 2022, CDFW also designed several interpretive panels, some in collaboration with the Newport Bay Conservancy and the Orange County MPA

Collaborative, for installation at Big Canyon and at other locations throughout the Reserve. In 2023, the Big Canyon kiosk will be refurbished and the new interpretive panels will be installed.

There has been an increase in unauthorized use of certain illegal trails, drones, and e-bikes. A trail camera was installed at Big Canyon and is monitored biweekly. CDFW staff has designed signage to help address some of these issues which will be installed in 2023. In December 2022, a split-rail fence was installed along the bluff just below Constellation Road (adjacent to OC Parks property), to reduce public use of two heavily used unauthorized trails.

## II. Use Policies, Monitoring and Management

### A. Use Policies, Procedures and Oversight

#### 1. Use Policies and Procedures

##### a. Public Access Description for the Property

Both Open and Hosted Limited Access

##### b. Is there an official written policy governing property closure conditions and procedures?

Yes

##### i. If yes, attach a PDF of the policy in the space below or provide a brief written summary

[19-20-Waterfowl-Upland-Lands-Regs-final2\\_09.12.19-4.pdf](#)

##### Description of closure conditions and procedures.

According to Title 14, under Sections 550 and 630, closures can occur for resource protection and other reasons deemed appropriate by CDFW and with approval from the Regional Manager.

##### ii. Has the policy been officially modified since the previous year's annual report?

Yes

##### c. In the table provided below please identify the number of times the property was closed and the circumstances

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
NA	NA	NA	NA

##### d. Is there an official written policy governing special events use of the property?

Yes

##### i. If yes, attach a PDF of the policy or provide a brief written summary in the space below

[20-21-waterfowl-upland-lands-regs-tagged-3.pdf](#)

##### Description of special events use for the property.

According to Title 14, under section 550, "an activity, use, event or gathering on department land...may be allowed with written authorization from the department, typically in the form of a Special Use Permit. When allowed, special uses occur on a limited basis as defined in the Special Use Permit or other authorizing document. An authorized special use on department land shall not conflict with the normal uses, purposes or management of the department land."

##### ii. Has the policy been officially modified since the previous year's annual report?



No

## 2. Oversight: Property Dedicated Staffing by Position

Position Title	Number of Positions	FTE
Reserve Manager	1	0.8
Habitat Assistant	1	0.5
Scientific Aids	1	0.8

## 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Amanda Swanson	Reserve Manager	Amanda.Swanson@Wildlife.ca.gov	949-402-4339

## B. Visitation

### a. Total number of public visitors to the property based on land owner's estimate:

8813

### b. What method(s) is/are used to estimate visitation? Summarize in the box below.

CDFW hosts several educational programs and collaborates with multiple partners including the County of Orange and the Newport Bay Conservancy at the Back Bay Science Center and elsewhere around Upper Newport Bay ER. The above estimate is determined by combining the total number of individuals participating in each program or event hosted by both CDFW as well as by other partners conducting programs within the Reserve. While, some programs gradually opened up, due to COVID-19 these numbers continued to be lower in 2022 compared to previous years.

The above number also likely underestimates the number of individuals that visited the Upper Newport Bay ER during 2022 as we do not currently have a consistent, accurate method of calculating all the visitors who use trails or participate in water activities. While educational and outreach programs were cancelled, observations by CDFW staff and other partners indicate that there continued to be an increase in public activities on water and trails during 2022, especially during the summer months.

### c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.

2021- 1,296 visitors

2020-3,505 visitors

2019-17,448 visitors

2018- 10,553 visitors

### d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new

**visitor policy? Please list new users and/or uses below.**

An increase in drone use and e-bikes was observed. Signs were designed and ordered and are expected to be installed in 2023. Additionally, more individuals were observed feeding wildlife for which signs will also be installed in 2023.

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
11/6/2022	Newport Dune Triathlon	1000

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
NA	No significant impacts to habitat were observed from unauthorized property uses	NA	NA

### **C. Monitoring Performed by Land Owner or Land Manager**

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Staff are routinely walk each trail to assess trail, fence, and sign conditions and to determine whether maintenance is required. Trail surveys are conducted on a weekly basis and only major maintenance issues are documented. Two unauthorized trails have been continually getting worse and receive more use on the east side of the Reserve on the bluff just south of the public trails within the OC Parks Upper Newport Bay Nature Preserve. To reduce usage of these illegal trails, a split rail fence was installed in December 2022 and coordinated collaboratively with OC Parks. The fenceline and trails are being monitored and potential for habitat enhancement to reinforce closure of illegal trails at this location in the future is being explored with the Newport Bay Conservancy. Additional signs will be installed in 2023. Other minor issues with trail conditions, fencing, and signage were routinely addressed during 2022 in Upper Newport Bay ER.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

#### IV. Infrastructure Facility Construction and Maintenance

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

#### V. Habitat Restoration and Enhancement

**Did any habitat restoration or enhancement occur on the property?**

No

#### VI. Invasive Species Control

##### A. Plants

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Partially

**i. If no or partially, please complete the table below:**

<b>Treatment Methodology</b>	<b>Invasive Plant Name</b>	<b>Habitat(s) Impacted</b>	<b>Area of Treatment (Square Meters)</b>
Synthetic Herbicide	Melilotus alba (white sweetclover)	dune-sandy nesting island	4,856 (gross area)
Synthetic Herbicide	Erodium cicutarium	dune-sandy nesting island	1,214 (gross area)
Hand-pulling	Invasive Limonium (ramossisimum and duriusculum)	saltmarsh	22,946 (gross area)
Other	Invasive Limonium (ramossisimum and duriusculum)	saltmarsh	1,394 (gross area)

##### B. Beetles

**1. Were active surveys conducted on the property for invasive beetles?**

No

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Due to limitations in staff capacity, no surveys were conducted for invasive beetles. However, surveys will be conducted in Big Canyon prior to implementation of the Phase 3 of the restoration project to ensure any infested plant material is kept on site and treated appropriately.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
Platanus racemosa	ISHB	Big Canyon Nature Park	5
Salix lasiolepis	ISHB	Big Canyon Nature Park	NA

**iii. Did active management for invasive beetles occur on the property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

One informal survey was conducted by the Newport Bay Conservancy in September 2019 within the Reserve boundary. However, due to limitations in resources and personnel during 2022, follow up in Big Canyon and new additional surveys did not take place. As part of the Big Canyon Habitat Restoration - Phase 3 project, surveys and management of invasive beetles in will be done in coordination with the Newport Bay Conservancy, City of Newport Beach, County of Orange, the Natural Communities Coalition and the Emerging Tree Pest Task Force.

While treatment did not occur within the Upper Newport Bay ER boundary, all trees that were infested with ISHB were treated or removed within the upstream Phase 2 area of the Big Canyon Habitat Restoration and Adaptation project.

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

The following ongoing research projects are taking place in the Upper Newport Bay ER:

-Since about 2010, the eelgrass and oyster restoration project has been ongoing and led by Orange County Coastkeeper, Cal State Fullerton, and Cal State Long Beach. This project continues to explore methods for successful oyster bed and eelgrass restoration through experimental plots established in Upper Newport Bay ER. OC Coastkeeper assesses eelgrass densities, area and growth, water quality, shoreline elevation, oyster bed subsidence and wave attenuation. Data collected by CSUF includes measures of oyster settlement, recruitment, densities, percent shell cover, adult sizes, sedimentation, and bird use of the habitat. Work performed by CSULB includes assessments of infaunal and fish communities and analyses of oyster tissue and sediment for contamination. In 2022, CSULB continued to perform a survey of their sites via UAV (unmanned aerial vehicle) to assess whether oyster and eelgrass restoration is contributing to shoreline stabilization. The same team conducting these surveys is also part of the program developing standard methods for assessing Marine Protected Areas in California and Upper Newport Bay ER is a pilot site.

-Call counts of Ridgway's rails are conducted annually to assess population dynamics. Monitoring is provided under a Memorandum of Understanding (MOU) with Dick Zembal. The MOU allows for annual nest searches and egg collection to the breeding program at Sea World. Surveys were conducted during the start of the breeding season. The survey data is provided as part of a final annual report submitted to CDFW. In 2022, only 44 pairs were identified, a 25% decline from 2021, which had 59 pairs counted. The Ridgway's Rail population at UNBER has drastically been declining since 2018, likely due to habitat loss; cordgrass cover decreased dramatically during 2016 and minimal recovery has been observed. Additionally, we began working with a master's student from CSU Long Beach on assessing Ridgway's rail use of platforms for nesting and refuge; cameras are deployed and monitored and she has been collecting data on vegetation and abiotic characteristics of her field sites.

-Surveys of Belding's savannah sparrow were conducted in 2020 and no formal surveys were conducted in 2022. Territories are concentrated in dense pickleweed (*Salicornia* sp.) in the mid marsh, often on elevated hummocks likely to avoid frequent tidal inundation. However, this makes the population more vulnerable to human and pet trespass, mammalian predators, stands of Algerian sea lavender (*Limonium ramosissimum*), and competition with song sparrows in adjacent habitats. Management efforts for 2022 will continue to focus on controlling Algerian sea lavender and reducing human trespass.

-The California Least tern population at Upper Newport Bay ER will continue to be monitored during the 2023 nesting season. During 2022, only two nests were counted, both of which were degraded by corvids within days of them being found. Like previous years, two scarecrows were placed on the island to alleviate harassment by Black Skimmers; the presence of the scarecrows creates a zone with little Black Skimmer activity, providing additional

space for nesting CA Least terns. However this year, no black skimmers were observed nesting on the island; typically there are 300 to 400 black skimmers nesting on the island each year. In 2021, 184 black skimmer nests were counted. Even though black skimmers have been documented to harass and compete CA Least terns, they may also provide some level of protection from corvids and other predators when they are present and actively nesting. As in previous years, scarecrows and trail cameras will be deployed in April before CA Least terns arrive on-site in 2023. Additional predator control efforts to try to reduce depredation and harassment by crows will be conducted, included sentinels to deter coyotes and crow effigies. CDFW is also exploring the possibility of trapping crows as another form of predator control. As in previous years, the majority of monitoring will be performed remotely from the adjacent bluff to minimize impact, but on-site nest surveys will be done weekly to verify nest locations and maintain trail cameras using the least time-intensive approach.

-In 2010, the Upper Newport Bay Ecosystem Restoration Project was implemented. Bathymetry and vegetation surveys were completed in 2020. To meet the remaining monitoring requirements for the project, the fourth quarter of fish, avian, and water quality monitoring was completed in February-March of 2022.

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

Yes

**If yes, please fill out the following**

<b>Project Name</b>	<b>Habitat Type</b>	<b>Approximate Location</b>	<b>Area (acres)</b>
Big Canyon Habitat Restoration and Adaptatio Project - Phase 3	freshwater marsh (pond), riparian, transitional upland/CSS	33°37'55.78"N, 117°53'1.64"W	~16

### **Additional Information:**

The project will restore and enhance approximately 16 acres of degraded habitat that have impacted by past placement of dredged material, nonnative plants and selenium impacted dry weather flows. Restoration of historical saltmarsh, alkali meadow habitat, a continuous riparian corridor, and upland transitional following removal of invasive and nonnative plants will take place. To support restored marsh areas, tidal flow and extent will be expanded. To address the selenium issue, realignment of the riparian corridor and expansion of tidal flows will promote continuous flow to eliminate ponding of dry weather flows. Promotion of continuous flow will also help to alleviate vector control issues, as the current pond provides mosquito breeding habitat and is considered a

Significant Vector Source by the Orange County Mosquito and Vector Control District. The project also takes into account forecasted sea level rise and the design integrates an adaptive approach to best ensure the project area is resilient to future environmental conditions. Invasive shot hole borer is also within the project footprint; surveys will be conducted and infested plan material will be chipped and treated on-site.

While the project is still in the planning (60%) and permitting phase (permit applications submitted December 2022 and January 2023), it's possible that implementation may start as early as fall 2023 depending on permit issuance and funding.

## **Invasive Species Control**

### **Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

#### **Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

Key high priority species at Upper Newport Bay ER include invasive Limonium (NCC priority 2) and Brassica tournefortii (NCC Sahara mustard; priority 2) all of which will be surveyed and treated to the best of CDFW's capacity and in collaboration with the Newport Bay Conservancy (NBC) and other partners. While only a few plants of Volutaria tubuliflora (Egyptian knapweed; NCC priority 1) and Lepidium latifolium (perennial pepperweed; NCC priority 1) have been observed on CDFW property within the past several years, CDFW staff with NBC will continue to monitor high risk locations within the Reserve.

Other high priority species that the CDFW would like to treat, as feasible, include Arundo donax and various iceplant species due to their presence in highly sensitive riparian, saltmarsh, and dune habitats.

### **Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

#### **Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

CDFW will work with local partners including the Newport Bay Conservancy, City of Newport Beach, County of Orange, the Natural Communities Coalition and the Emergent Tree Pest Task Force to coordinate monitoring and treatment of invasive beetles in UNBER. Additional surveys will take place in the remainder of Big Canyon and efforts will be taken to conduct surveys at other high risk locations throughout Upper Newport Bay ER.

#### **Other invasive species (please describe):**

Other high priority species that have been reported within or directly adjacent to the Upper Newport Bay ER include Dittrichia graveolens (stinkwort; NCC priority 1), Oncosiphon pilulifer (stinknet; NCC priority 1), Iris Pseudacorus (pale yellow iris; NCC priority 1), spiny softshell turtle, and Caulerpa prolifera. These species and any others that are reported will be managed collaboratively with partners.

## **Fuel Management Activities**

### **Installation of new fuel management to be undertaken within the reserve?**

Yes

#### **Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

In January 2023, CDFW staff will be removing a small stand of Brazilian peppertrees (Schinus terebinthifolia) and Arundo donax at the base of bluffs ( 33°37'58.33"N, 117°53'24.78"W) where illicit activities are known to take place. The trees are not only fuel, but provide coverage for documented fire risk activities that could impact homes located uphill at the top of the bluff.

The small Arundo donax stands throughout Upper Newport Bay ER have been documented on Calflora and efforts to remove them will take place in fall 2023 after nesting season.

In February 2023, CDFW will be working with the California Conservation Corps to thin cattails in the Big Canyon pond which is considered a fire risk as well as a vector control issue.

**Maintenance of existing fuel management to be undertaken within the reserve?**

No



# Crystal Cove State Park



**Land Manager Name**

Ca Dept Parks Rec

**Reporting Year**

2022

**Park, open space or management unit**

Crystal Cove SP

**Website**

<http://www.crystalcovestatepark.org>

**Land owning entity:**

California Department of Parks and Recreation

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

Crystal Cove State Park (CCSP) continued to be managed in a manner consistent with the habitat protection values of the OC NCCP/HCP, the Park's general plan, and the broader mission of State Parks. We continue to experience high visitation at CCSP, both in the backcountry and on our beaches, although our estimate of visitation decreased from the previous two years. Despite repeated efforts to close and rehabilitate unauthorized trails, we continue to observe—and are concerned by—the increasing number and length of illegal trails. State Parks oversaw completion of two recreation infrastructure improvements in 2022; the replacement of the Pelican Point bridge and the installation of permeable parking pavers and ADA improvements at Reef Point and Pelican parking lots. Additionally, we repaired a failing spillway structure in Los Trancos Creek within the Historic District. This maintenance work was covered by the Crystal Cove Historic District Preservation and Public Use Plan (PPUP).

In February of 2022, the 155-acre Emerald Fire burned approximately 80 acres of CCSP along the coastal portion of moro ridge. The fire did not impact the neighboring communities of Emerald Bay and Irvine Cove, but did burn healthy stands of CSS and native grassland. Native vegetation is recovering well with the aid of periodic spot weed control. Fuel management practices and public access policies for the park were unchanged in 2022. State Parks continued to survey and treat invasive plants at a regional scale, including implementation of an EDRR program (in partnership with NCC). We also continued to survey our riparian habitat for evidence ISHB infestations. Orange Coast District initiated site-prep on a second phase of habitat restoration in “the Bowl” with Department funding for Wildfire Resiliency. The project will restore an additional 14 acres of CSS and 1 acre of native grassland over the next 5 years. Land IQ, with funding from NCC and the Wildlife Conservation Board (WCB), continued their habitat restoration project for western spadefoot toad on moro ridge. Progress continued on the 7.5-acre CSS and grassland habitat restoration project lead by Irvine Ranch Conservancy in the lower moro area. Lastly, we expect completion of the Natural Resources Management Plan (NRMP) for Crystal Cove in 2023.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight**

## 1. Use Policies and Procedures

### a. Public Access Description for the Property

Open Access (see website above)

### b. Is there an official written policy governing property closure conditions and procedures?

Yes

#### i. If yes, attach a PDF of the policy in the space below or provide a brief written summary

[Posted-Orders-2021.pdf](#)

#### Description of closure conditions and procedures.

The 2021 District Superintendent Posted Orders are attached. They go through minor revisions, additions, and subtraction on an annual basis. No changes were made to property closure conditions or procedures in 2022. The Trail Use posted order (925-21-14) was updated in 2021 to reflect restrictions on e-bike use in Crystal Cove State Park.

Relevant posted orders include:

925-21-01 Public Health and Safety Closure (p. 3)

925-21-03 Day use areas - Hours of Closure (p. 5)

925-21-14 Trail Usage (pg. 26)

925-21-23 Resource Protection - Closed Areas (pg. 44)

925-21-29 Temporary Rain Closures (p. 52)

#### ii. Has the policy been officially modified since the previous year's annual report?

No

### c. In the table provided below please identify the number of times the property was closed and the circumstances

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
02/10/2022	Emerald Fire	3	Partial
03/28/2022	Rain	4	Partial
09/09/2022	Rain	3	Partial
10/15/2022	Rain	3	Partial
11/02/2022	Rain	2	Partial
11/06/2022	Rain	5	Partial
12/07/2022	Rain	2	Partial
12/11/2022	Rain	6	Partial
12/28/2022	Rain	3	Partial, BFI trail closed

### d. Is there an official written policy governing special events use of the property?

Yes

#### Description of special events use for the property.

Crystal Cove State Park provides opportunities for the public to permit special events that include but, are not limited to, private and commercial use events. Common examples of private events include weddings, parties, tours, and sporting events. Commercial uses include semi-regular activities such as wellness/fitness training, sporting competitions, nature tours, outdoor skills classes and recreational hikes/walks. CCSP also permits special events to support our Concession/Co-Op partner for fundraising events, education programming and open to the public interpretive events, such as art shows, walking tours and other recreational activities. The Special Event Application and policies is available for viewing/download at: [http://www.crystalcovestatepark.org/special\\_events](http://www.crystalcovestatepark.org/special_events)

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Sector Superintendent	1	1
Environmental Scientist	3	1.5
Environmental Science Intern	7	4
Special Event coordinator	3	2
Interpreter	4	3
Facilities Maintenance Manager/Supervisor	4	4
Maintenance Park Aide	20	15
Park Aide (seasonal)	47	25
Peace Officer Ranger/Lifeguard	8	8
Lifeguard (seasonal)	75	26

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Kevin Pearsall	District Superintendent	kevin.pearsall@parks.ca.gov	(714) 377-2456

**B. Visitation**

**a. Total number of public visitors to the property based on land owner’s estimate:**

1868835

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

The day use estimate includes free and paid day use, park entry by any means including by motor vehicle of any type, on foot, on bicycle, by boat or on horseback. Admission based on the use of annual passes is incorporated into this estimate. Additionally, we maintain 9 trail counters in the Crystal Cove back-country to estimate back-country

use, and counts are calibrated to each specific counter location. However, only counts from our trail counters near Ridge Park and Irvine Cove entrance gates, and along Moro Ridge, were included in the annual estimate to minimize double counting with visitors entering paid Stat Park parking lots or via Laguna Coast Wilderness south.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

For comparison, the estimated number of total visitors in 2021 was 3,276,731 and 2,482,805 in 2020.

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

E-bike users and to a lesser extent, drone users. The District has posted orders concerning both activities.

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
04/01/2022	CP Carillo Hike	100
05/12/2022	Expert Active Hike	40
05/16/2022	Rock It Racing Trail Run	350
06/04/2022	John Wayne Cancer Run	300
06/29/2022	Aldersgate Summer Camp	100
09/02/2022	CP Carillo Hike	100
09/17/2022	Nature Nexus Hike	40
09/25/2022	XTERRA Triathlon	600
10/04/2022	Pacifica Christian HS Run	250
11/12/2022	Crystal Cove Conservancy Hike	30
12/17/2022	SoCal Series Trail Run	400
Multiple	REI- Outdoor Class Series	1500
Multiple	The Pearl Laguna Hike	500
Multiple	La Vida Laguna Hike	75
Multiple	Warrior Week Hike	200

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
---------------------	-----------------------	--------------	-----------------

Ongoing	Continued use and creation of existing unauthorized trails	CSS	2
---------	--	-----	---

## C. Monitoring Performed by Land Owner or Land Manager

### a. Does land owner or its land managing representative monitor trail conditions annually?

Yes

#### i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.

Park rangers, lifeguard, and natural resource staff visually inspect trail conditions throughout the year during normal park operations. Following rain events, supervising park ranger(s) or lifeguard(s) assess conditions once roads and trails are dry enough to drive and report back to staff about needed road closures, and where significant damage has occurred. Typically, at the conclusion of each rain season, park staff work with internal heavy equipment operators or OCFA to repair damaged utility roads. Non-utility roads and trails are repaired by maintenance and natural resource staff using heavy equipment and/or hand tools, as appropriate. Trail assistant volunteers and natural resource staff also assist with maintenance of single-track portions in the park.

While heavily used, authorized trails in the Park fared well for most of 2022 due to the ongoing drought. However, storms in mid-November and late December 2022 did cause road and trail damage in locations prone to winter erosion. The double-track trail down to Deer Canyon campground continues to require regular maintenance and repair due to the steep grades. The BFI trail (a single-track connection between Moro Ridge and Moro Canyon trails) was closed on 12/28 after heavy rain caused severe erosion and public safety concerns. We are still evaluating potential solutions, including a small trail reroute.

#### ii. Are notes, photographs or other documentation of the monitoring performed archived?

Yes

## III. Recreation Facility Construction and Maintenance

### Did any recreational facility construction or maintenance occur or do such facilities occur on the property?

Yes

#### Facility & Location

Pelican and Reef Point Parking Lots, Coastal bluff

#### Start Date

2021-11-22

#### End Date

2022-05-06

### Was facility identified in an applicable GDP or RMP?

Yes

### Impacts: Habitats or Sensitive Species

Type	Amount (Acres)
------	----------------

NA	0
----	---

#### Coordination with NCC?

No

#### Nature of Impact: Temporary (# of Acres)

0.05

#### Nature of Impact: Permanent (# of Acres)

0.005

#### Restoration Actions Taken?

No

#### Please describe the actions taken or justify why no such actions were taken

Installation of permeable paving at three parking lots and ADA accessibility improvements at these same facilities. The planned actions will allow Parks to meet water quality compliance standards with the State Water Board that includes the Irvine Coast Area of Biological Significance (ASBS) and ADA requirements.

#### Documentation: Reports, Notes, Photographs (Provide Reference)

- [Crystal-Cove-NPDES-II-Approved-Plans.pdf](#)

---

#### Facility & Location

Pelican Point Bridge Replacement, Coastal bluffs

#### Start Date

2021-11-22

#### End Date

2022-06-15

#### Was facility identified in an applicable GDP or RMP?

Yes

#### Impacts: Habitats or Sensitive Species

Type	Amount (Acres)
CSS	0.005

#### Coordination with NCC?

No

#### Nature of Impact: Temporary (# of Acres)

0.005

#### Nature of Impact: Permanent (# of Acres)

0.003

#### Restoration Actions Taken?

Yes

#### Please describe the actions taken or justify why no such actions were taken

Replacement of an existing vehicle/pedestrian bridge (Pelican Point Bridge) on the Treasure Cove trail just north of the Pelican Point parking lot #1.

#### Documentation: Reports, Notes, Photographs (Provide Reference)

#### IV. Infrastructure Facility Construction and Maintenance

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

Yes

---

##### Facility & Location

Spillway structure repair in lower Los Trancos Creek

##### Start Date

2022-09-12

##### End Date

2022-10-10

**Was facility identified in an applicable GDP or RMP?**

Yes

##### Coordination with NCC?

No

##### Impacts: Habitats or Sensitive Species

Type	Amount (Acres)
Riparian	0.086

##### Nature of Impact: Temporary (# of Acres)

0.02

##### Nature of Impact: Permanent (# of Acres)

0.009

##### Restoration Actions Taken?

No

##### Please describe the actions taken or justify why no such actions were taken

This project is identified as maintenance under Crystal Cove Historic District Preservation and Public Use Plan (PPUP). Riparian vegetation that had encroached within the spillway was removed using chainsaws and disposed of off site. For additional details, please see the attached Notice of Completion (NOC) report to CDFW.

##### Documentation: Reports, Notes, Photographs (Provide Reference)

- [LosTrancos-NOC\\_Spillway\\_FINAL\\_Combined.pdf](#)

#### V. Habitat Restoration and Enhancement

**Did any habitat restoration or enhancement occur on the property?**

Yes

---

##### Project Lead

NCC

##### Mitigation



No

**Cactus Scrub Community Acres**

10.48

**Other Restoration Community Acres**

0.22

**Other Restoration Community Type**

Seasonal ponds (for spadefoot toad)

**If this is a formal restoration plan, please provide the name:**

Habitat Restoration and Monitoring Plan for Crystal Cove State Park Upland Habitat Restoration & Seasonal Pool Creation—Western Spadefoot (*Spea hammondi*)

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2019-11-04

**Anticipated End Date**

2025-09-01

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Danny Fry, NCC

---

**Project Lead**

Land owner

**Provide project name and/or permit number if the project is on behalf of an agency other than the land owner.**

Phase II Bowl Habitat Restoration in Moro Canyon

**Mitigation**

No

**CSS Community Acres**

14

**Grassland Community Acres**

1

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2022-03-15

**Anticipated End Date**

2026-05-01

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Lana Nguyen, State Parks

**If this is a formal restoration plan, please provide the name:**

The Bowl Phase II Restoration Plan for Crystal Cove State Park

---

**Project Lead**

Third party

**Mitigation**

Yes

**CSS Community Acres**

6.5

**Grassland Community Acres**

1

**If this is a formal restoration plan, please provide the name:**

Habitat Mitigation and Monitoring Plan, BFI Restoration Site, Crystal Cove State Park

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2020-04-01

**Anticipated End Date**

2029-05-31

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin, IRC

**VI. Invasive Species Control****A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

## **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

State Parks initiated regular/annual surveys for ISHB in Crystal Cove beginning in 2017-2018. Survey efforts in 2022 included regularly monitoring for ISHB in moro canyon, deer canyon, and the coastal terrace using sticky traps and lures. Traps are collected and replaced every 4-6 weeks by SP staff, and "spent" traps are collected by UC extension for processing and beetle identification. A map of sticky trap locations within Crystal Cove SP is available upon request (there is no attachment option here).

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

<b>Infested Tree Species</b>	<b>Invasive Beetle Name</b>	<b>Infested Geographic Area of the Property</b>	<b># of Infested Trees</b>
Willows (arroyo and black)	ISHB	lower moro canyon	45
Arroyo willow	ISHB	Pelican lot 4 area	4

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In February of 2021, State Parks partnered with OCFA to remove a total of 45 willow trees in lower moro canyon that were heavily infested with ISHB. The objective was to remove the most heavily infected trees in an effort to slow ISHB spread further up the canyon and to surrounding areas (e.g. HOAs, LCW, etc.). Please see attached document for additional details and rationale.

No comprehensive assessment for infected trees nor tree removal occurred in 2022.

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[ISHB-tree-removal-info-sheet-2.16.21.pdf](#)

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

## **A. Fuel Management**

**Did any fuel management projects occur on the property?**

Yes

### **Fuel Management Map**

[Fuel-Management-Area-Map-CCSP-2022.pdf](#)

---

### **Project Number Referenced on the Map**

01

### **Coordination with NCC (i.e., discussion and/or plan review)**

No

### **Habitat Type(s) in Which Modification Occurred**

- Annual grassland
- Disturbed vegetation
- CSS

### **General Description of Fuel Modification Technique Employed**

- Mowing
- Pruning/thinning
- Shrub matrix/remove dead material

### **Approximate Area Treated in Acres**

6.5

### **Management Action Consistent with Stakeholder Guide (WFMP)**

Yes

**New Fuel Management Treatment or Maintenance of Existing Maintenance**

---

### **Project Number Referenced on the Map**

02

### **Coordination with NCC (i.e., discussion and/or plan review)**

No

### **Habitat Type(s) in Which Modification Occurred**

- Annual grassland
- Disturbed vegetation
- CSS

### **General Description of Fuel Modification Technique Employed**

- Mowing
- Pruning/thinning
- Shrub matrix/remove dead material

### **Approximate Area Treated in Acres**

2.1

**Management Action Consistent with Stakeholder Guide (WFMP)**

Yes

**New Fuel Management Treatment or Maintenance of Existing**

Maintenance

**VIII. Work Plan**

**Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

State Parks frequently receives applications to conduct research at Crystal Cove State Park, particularly from local Universities like UC Irvine. Research applications are reviewed and approved by natural resource staff to ensure field work and/or sample collections have no or only minor impact on natural resources, and advance our understanding of the Park and the natural world broadly. For a complete list of approved research projects at CCSP in 2022, please reach out to the Parks' Sr. Environmental Scientist Riley Pratt.

**Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## Habitat Restoration and Enhancement (For only projects 0.25 acres or more)

### Mitigation habitat restoration to be initiated?

No

### Non-mitigation habitat restoration initiated?

Yes

### If yes, please fill out the following

Project Name	Habitat Type	Approximate Location	Area (acres)
No Brains Road Closure	CSS	CCSP, above Moro Station	9

### Additional Information:

No Brains Road Closure - This project involves the full removal of No Brains Road through hillslope recontouring, road decompaction, brush boxes, installation of soil berms to slow soil-water transport, and roadside ditch-outs to dissipate rainwater flow. Straw wattle installation in steepest sections. Revegetate road using native seed. As needed weeding. This road is redundant and not been in use for 25+ years. This project will result in the reduction of sediment input into drainages within the park and neighboring facilities and will restore sheet flow to this exposed hill side. This work will dovetail with efforts from partner Natural Communities Coalition, who will close 1/4 mile of the upper reaches of No Brains as part of a restoration project.

## Invasive Species Control

### Invasive plant control actions to be undertaken by land owner (not NCC)?

Yes

### Please explain the invasive plant control actions to be undertaken by land owner (not NCC).

State Parks will continue to participate in regular (annual) meetings w/ regional partners (including NCC and OC Parks) to set invasive plant control goals and actions for the reserve system as a whole. We expect to continue to monitor, map, and treat high priority invasive plants as well as treat high-priority EDRR species in 2023, similar in scope and scale to past years.

### Invasive beetle control actions to be undertaken by land owner or contractor?

No

## Fuel Management Activities

### Installation of new fuel management to be undertaken within the reserve?

Yes

### Please explain the maintenance of existing fuel management to be undertaken within the reserve.

State Parks has solicited Land IQ for an updated Fire Risk and Fuel Modification Zone Assessment along CCSP's southeast edge where these two residential communities exist. The aim is to let the results of this study inform any needed fuel management policy changes and formalize those changes in an updated fuel modification management plan for the park.

Additionally, State Parks received additional funding in 2021-2025 to enhance habitat in existing fuel modification

zones. This project will enhance habitat for coastal cactus wren while meeting fuel reduction objectives around Park infrastructure. It would also provide a demonstration area to the public on what “habitat friendly” fuel breaks look like.

**Maintenance of existing fuel management to be undertaken within the reserve?**

Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

State Parks works with two Laguna Beach HOAs to maintain hazard reduction zones adjacent to their property (Emerald Canyon and Irvine Crest Areas). Each year, the HOAs submit Right of Entry permit applications proposing to remove/manage vegetation extending 170 feet from edge of property, with the intensity of removal treatments (every 50 ft) dissipating with distance from property. Because the fuel management occurs in late spring, State Parks conducts nest surveys for birds and delineates any needed buffers from active nests/sensitive resources or postponements of treatments prior to their contractors entering the park to conduct their work.

## 8.3 Orange County Parks

### Aliso and Wood Canyons Wilderness Park





**Land Manager Name**

Orange County Parks

**Reporting Year**

2022

**Park, open space or management unit**

Aliso & Wood Canyons WP

**Website**

<http://www.ocparks.com/parks/aliso>

**Land owning entity:**

OC Parks

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

In 2022, Aliso & Wood Canyons Wilderness Park began to experience lessened impacts from COVID-19 conditions, including a full return to park special events, habitat restoration, and invasive weed control activities, although park attendance increased from 2021. The Coastal Fire started May 11, 2022 and was contained at approximately 200 total acres. SCE began evaluating options for undergrounding segments of powerlines within the park. The South Orange County Wastewater Authority (SOCWA) completed portions of their Sludge Force Main Replacement Project and initiated mitigation for temporary impacts in the park.

In 2023, existing habitat restoration and mitigation projects will continue and OC Parks will monitor the Coastal Fire habitat recovery. OC Parks will continue conducting ISHB and invasive weed surveys. Prioritized invasive species will be controlled and target plant populations and treatments will be captured in Calflora. A new OC Parks Trail Ambassador Program will provide trail use and etiquette outreach and education for park users. OC Parks may inventory the park trail system.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**

[RPRT-Closures.pdf](#)

**Description of closure conditions and procedures.**

Please see:

Sec. 2-5-46 (d). Trails, trespassing and closed areas.

Sec. 2-5-215. Hours.

General practices follow:

Hours – 7:00 am to Sunset

Closures for wet and muddy conditions, as determined by staff

Closures for localized red flag conditions, as determined by staff

Closures following significant fires, as advised by OC Fire Authority and determined by staff

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
05/11/2022	Coastal Fire	6	Full
05/17/2022	Coastal Fire	3	Partial
12/28/2022	Rain	4	Full

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[RPRT-Competitive-Race-Events-Policy.pdf](#)

**Description of special events use for the property.**

All special event requests are subject to OC Parks permitting, which includes review by operations field and management staff. Permits are subject to compliance with special conditions tailored to individual events and resources within the park.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Supervising Park Ranger	1	Y
Park Ranger	2	Y
Maintenance Worker (multiple classes)	2	Y

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Adam Martinez	Supervising Park Ranger	adam.martinez@ocparks.com	949.923.2201
Alisa Flint	Natural Resources Program Coordinator	alisa.flint@ocparks.com	949.585.6470

## B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

398025

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Estimates are based on parking data, visitor center logs, and trail cameras/counters.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2022 - 398,025

2021 - 380,000

2020 - 338,735

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
03/11/2022	La Vida Laguna hiking event	15
07/24/2022	La Vida Laguna hiking event	15
08/08/2022	La Vida Laguna hiking event	15
09/21/2022	La Vida Laguna hiking event	15
10/13/2022	La Vida Laguna hiking event	15
11/08/2022	La Vida Laguna hiking event	15
11/12/2022	Dirt Fondo mountain bike event	100

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A	--	--	--

## C. Monitoring Performed by Land Owner or Land Manager

### a. Does land owner or its land managing representative monitor trail conditions annually?

Yes

### i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.

Trail conditions are monitored via ranger patrols, maintenance inspections, visitor reports, and wildlife cameras. All single-track trails received annual drainage and tread repair following the rainy season and all fire roads were graded.

Lynx Trail and Cholla Trail were assessed in partnership with NCC and Utah State University to consider directional and/or designation changes to enhance user flow and safety; both trails have since been returned to their original designations.

### ii. Are notes, photographs or other documentation of the monitoring performed archived?

Yes

## III. Recreation Facility Construction and Maintenance

### Did any recreational facility construction or maintenance occur or do such facilities occur on the property?

No

## IV. Infrastructure Facility Construction and Maintenance

### Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?

Yes

---

### Facility & Location

Aliso & Wood Canyons Wilderness Park; Aliso Creek East - SOCWA Export Sludge Force Main

### Start Date

2021-09-30

### End Date

2022-01-28

### Was facility identified in an applicable GDP or RMP?

No

### Coordination with NCC?

Yes

### Impacts: Habitats or Sensitive Species

Type	Amount (Acres)
Riparian-wetland	0.06
Coastal sage scrub	6.11

Ruderal-disturbed	4.77
-------------------	------

**Nature of Impact: Temporary (# of Acres)**

12.48

**Nature of Impact: Permanent (# of Acres)**

0.161

**Restoration Actions Taken?**

Yes

**Please describe the actions taken or justify why no such actions were taken**

Project is permitted by SOCWA and portions have been completed. Mitigation for temporary impacts was implemented per regulatory permitting and is anticipated to extend through 2024. Anticipated permanent impacts have been delayed and are being reevaluated; compensatory mitigation will be determined based on finalized permanent impacts. Please refer to SOCWA and/or HMMP (too large to attach) for specifics. HMMP: Coastal Treatment Plant Export Sludge Force Main Replacement Project, August 2015, Prepared for South Orange County Wastewater Authority.

**Documentation: Reports, Notes, Photographs (Provide Reference)**

---

**Facility & Location**

Aliso & Wood Canyons Wilderness Park; adjacent to Ben Brown's Golf Course property - SCE Temporary Pole Installation

**Start Date**

2022-06-11

**End Date**

2022-06-14

**Was facility identified in an applicable GDP or RMP?**

No

**Coordination with NCC?**

Yes

**Impacts: Habitats or Sensitive Species**

Type	Amount (Acres)
Ruderal	<0.01

**Restoration Actions Taken?**

No

**Please describe the actions taken or justify why no such actions were taken**

The temporary SCE pole site covers less than 2 square meters and was composed of bare ground and annual weed species prior to pole installation. SCE agreed to revegetate the location with coastal sage scrub species following removal of the pole, which will occur when a permanent solution to provide power to the SOCWA plant is implemented. The temporary pole location is shown in the attached exhibit.

**Documentation: Reports, Notes, Photographs (Provide Reference)**

- [Temporary-SCE-Pole-Location.jpg](#)

## V. Habitat Restoration and Enhancement

**Did any habitat restoration or enhancement occur on the property?**

Yes

---

**Project Lead**

Third party

**Mitigation**

No

**Other Restoration Community Acres**

26

**Other Restoration Community Type**

Mixed CSS-grassland

**If this is a formal restoration plan, please provide the name:**

Pecten Reef Habitat Restoration by Laguna Canyon Foundation (grant-funded)

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2019-01-19

**Anticipated End Date**

2024-12-31

**Performance Monitoring**

No

**Data Archived in GIS Database**

Yes

**Data Manager**

OC Parks GIS Manager

---

**Project Lead**

Third party

**Mitigation**

No

**If this is a formal restoration plan, please provide the name:**

Aliso Creek Habitat Restoration & Enhancement Project Work Plan by Laguna Canyon Foundation (WCB-funded)

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2020-01-01

**Anticipated End Date**

2025-12-31

**Performance Monitoring**

No

**Data Archived in GIS Database**

Yes

**Other Restoration Community Acres**

21

**Other Restoration Community Type**

Riparian transitional and coastal sage scrub

**Data Manager**

OC Parks GIS Manager

---

**Project Lead**

Third party

**Mitigation**

Yes

**Other Restoration Community Acres**

55

**Other Restoration Community Type**

Primarily riparian with transitional upland

**If this is a formal restoration plan, please provide the name:**

Aliso Creek Habitat Mitigation & Monitoring Plan for OCTA (Measure M)

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2017-09-01

**Anticipated End Date**

2025-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

OC Parks GIS Manager

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Comprehensive park surveys were last conducted in 2020 (survey attached). In more recent years, surveys have focused on front country portions of the facility (non-NCCP/HCP). Previous intensive field surveys showed overall lower infestation severity of individual trees in the backcountry, so resources were shifted toward GSOB surveys in strategic locations across OC Parks facilities and insect trapping served to monitor trends in the park. If an uptick in ISHB activity is detected, resources can be redistributed to survey individual trees.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
--	--	--	--

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In 2022, no trees were removed.

General treatment prescriptions for OC Parks management by infestation severity follow:

Low - Soil injection with Imidacloprid

Moderate II, Heavy - Remove tree

Moderate I, II, Heavy when trees are to remain - Soil injection with Imidacloprid, trunk spray of Bifenthrin with Cease or Tebuconazole with Pentrabark

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[Aliso-Woods-Canyons-WP-C5-map.pdf](#)



## VII. Fire Management Activities

Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.

### A. Fuel Management

Did any fuel management projects occur on the property?

Yes

#### Fuel Management Map

[ALWO-FC-1.03-City-Grazing.pdf](#)

---

#### Project Number Referenced on the Map

1 - Work performed by the City of Laguna Beach Fire Department on behalf of the City

#### Coordination with NCC (i.e., discussion and/or plan review)

Yes

#### Habitat Type(s) in Which Modification Occurred

- Annual grassland
- Disturbed vegetation

#### General Description of Fuel Modification Technique Employed

- Grazing

#### Approximate Area Treated in Acres

28

#### Management Action Consistent with Stakeholder Guide (WFMP)

Yes

#### New Fuel Management Treatment or Maintenance of Existing

Maintenance

## VIII. Work Plan

### Proposed Work Plan for Use, Monitoring and Management

Property closure policy: new or amended?

No

Property special use policy: new or amended?

No

GDP and/or Master Plan: new or amended?

No

Change in methodology for estimating property visitor use?

No

Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?

Yes

**Research (ongoing or new)?**

No

**Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Trails

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

33\*30'28"N 117\*44'31"W

**Impact Size**

0.24

**Habitat Type**

Riparian-transitional

**Identify any project lead(s) (i.e., utility, government department):**

OC Parks - Repair to small segment of Valido Trail.

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Electric, telephone, cable television and natural gas facilities

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

Pole 1: 33\*31'27"N 117\*44'15"W; Pole 2: 33\*31'25"N 117\*44'15"W (approximate; specific locations to be determined)

**Impact Size**

<0.01 ac

**Habitat Type**

Coastal sage scrub

**Identify any project lead(s) (i.e., utility, government department):**

SCE - Conceptual planning to underground power lines. Two new poles will be needed to span creek and several abandoned poles will be removed. Specifics remain to be determined.

## Habitat Restoration and Enhancement (For only projects 0.25 acres or more)

### Mitigation habitat restoration to be initiated?

Yes

### If yes, please fill out the following

Project Name	Habitat Type	Approximate Location	Area (acres)
Coastal Treatment Plant Export Sludge Force Main Replacement Project	Riparian transitional, upland transitional	East side of Aliso Creek within park	0.62

### Non-mitigation habitat restoration initiated?

No

### Additional Information:

Mitigation for the Force Main project is permitted by SOCWA. Mitigation activities are anticipated to extend through 2024.

## Invasive Species Control

### Invasive plant control actions to be undertaken by land owner (not NCC)?

Yes

### Please explain the invasive plant control actions to be undertaken by land owner (not NCC).

OC Parks will continue targeting high-priority species as outlined in the 5-year Invasive Plant Management Plan for the Coastal Reserve of the Nature Reserve of Orange County. Yellow starthistle (*Centaurea solstitialis*), Sahara mustard (*Brassica tournefortii*), stinkwort (*Dittrichea graveolens*), Arundo (*Arundo donax*), crown daisy (*Glebionis coronaria*), and spiny emex (*Rumex spinosus*) will remain primary focus species.

Calflora and Early Detection / Rapid Response training will continue for staff and volunteers, including Laguna Canyon Foundation, in 2023.

### Invasive beetle control actions to be undertaken by land owner or contractor?

Yes

### Please explain the invasive beetle control actions to be undertaken by land owner or contractor.

Monitoring will continue; identified amplifier trees may be removed and identified asset trees will be preventatively treated. Adaptive management will be informed by research, monitoring data, and best practices.

### Other invasive species (please describe):

Cowbird trapping (NCC)

## Fuel Management Activities

### Installation of new fuel management to be undertaken within the reserve?

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Existing road/trail maintenance, including vegetation brushing and weed abatement, will continue.

## 8.3 Orange County Parks

### Irvine Ranch Open Space



**Land Manager Name**

Irvine Ranch Conservancy

**Reporting Year**

2022

**Park, open space or management unit**

Irvine Ranch Open Space

**Website**

<https://letsgooutside.org>

**Land owning entity:**

County of Orange

**Land managing entity if different from above:**

Irvine Ranch Conservancy

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

The Irvine Ranch Open Space received approximately 4,533 visitors for guided activities in 2022, which was 890 more than in 2021.

Regular annual inspections were conducted to assess erosion and vegetation encroachment within the designated trail system. Routine post-winter trail repairs were performed, and regular quarterly vegetation trimming was performed.

Trail width and trailside vegetation quality are monitored yearly, and there has been no significant change in trail width over time. Trail conditions are monitored continuously, and maintenance occurs as needed. Restoration and enhancement of multiple habitats is being conducted over 100 acres. A CDFW-funded Tecate cypress enhancement project that was initiated in 2020 was completed. Surveys and control of both invasive plant species and invasive beetles are ongoing and will continue in 2023.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Both Open and Hosted Limited Access

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**Description of closure conditions and procedures.**

Unofficial: INTERNAL PROTOCOLS

OC Parks in collaboration with Irvine Ranch Conservancy uses internal protocols for cancellation of activities and closure of access to trails and roads that may occur in order to be consistent with the applicable resource plans. This may follow significant rain events and during periods of high fire danger such as official Red Flag Warnings. The Conservancy will recommend closures for weather and other reasons, subject to the concurrence of the OC Parks Operations Manager. The OC Parks Operations Manager will provide additional guidance on closures based on trail condition assessments and provide status updates using trail status maps.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
01/01/2022	Rainstorm(s) wet and muddy conditions	4/8	Full/Partial
02/16/2022	Rainstorm(s) wet and muddy conditions	5	Partial
02/23/2022	Rainstorm(s) wet and muddy conditions	2	Partial
03/20/2022	Rainstorm(s) wet and muddy conditions	1	Partial
03/28/2022	Rainstorm(s) wet and muddy conditions	5	Partial
04/28/2022	Rainstorm(s) wet and muddy conditions	2	Partial
09/10/2022	Rainstorm(s) wet and muddy conditions	1	Partial
11/08/2022	Rainstorm(s) wet and muddy conditions	6	Partial
11/19/2022	Rainstorm(s) wet and muddy conditions	1	Full
12/11/2022	Rainstorm(s) wet and muddy conditions	2/6	Full/Partial
12/28/2022	Rainstorm(s) wet and muddy conditions	3	Partial
12/31/2022	Rainstorm(s) wet and muddy conditions	1	Partial

**d. Is there an official written policy governing special events use of the property?**

Yes

**Description of special events use for the property.**

OC Parks and IRC have developed internal guidelines in our efforts to adaptively manage human access at the Irvine Ranch Open Space. Currently, the Irvine Ranch Open Space allows one large event per month, per geographical management area (for example Black Star Canyon, Fremont Canyon, etc.). A large event is defined from 100 participants up to 600 participants. Additionally, the public activity calendar for each area where a large event is scheduled is blocked out for 1-3 days following the event to allow for a rest period. Trails available for special event use may be adjusted or completely restricted depending on surveyed nest locations or other sensitivities during breeding/nesting season. Special events will be rescheduled or cancelled in areas burned in major wildfires for at least one growing season to allow the area to recover with reduced human presence.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Operations Manager	1	
Supervising Park Ranger II	1	
Park Ranger II	2	
Resource Specialist	1	
Park Maintenance Supervisor	1	
Park Maintenance Worker 1	1	

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
John Gump	Operations Manager	john.gump@ocparks.com	949-585-6481
Irvine Ranch Conservancy		4727 Portola Parkway Irvine, CA 92620	714-508-4757

**B. Visitation**

**a. Total number of public visitors to the property based on land owner's estimate:**

4533

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Activity attendance numbers are based on registration data from the [www.letsgooutside.org](http://www.letsgooutside.org) website. The number includes all volunteers and public participants on public and private activities implemented on the Landmarks, including recreation, trail work, restoration, special events, and training. In 2022, visitor numbers for guided activities were provided to the landowners quarterly.

Irvine Ranch Conservancy (IRC) manages the website [www.letsgooutside.org](http://www.letsgooutside.org), which was created to promote public activities within the Landmarks areas, manage public activity registration, manage volunteer assignments, obtain public participant feedback, and create automated reporting functions for all public and volunteer-only activities. The current system allows the general public to register for public activities online. After online registration, the processing is as follows:

- Waiver created
- Post Activity Report generated by activity Lead confirming attendance of registrants and volunteers.
- Waivers verified and archived in activity database
- Monthly attendance reports generated which feed into research projects that correlate human access and wildlife movement in the Irvine Ranch Open Space to help the Conservancy make adaptive management decisions.



**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2022 4,533  
2021 3,643  
2020 3,173

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

2022- No  
2021- No  
2020- Increased trespassing during early covid months, this phased out after a few months.

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
05/07/2022	Trail Running	159
09/17/2022	Mountain Biking	133

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
No current observations in 2022			

## C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored regularly throughout the year and after any significant rainfall event ( $>0.25''$ ), and maintenance occurs within the limits of the trail-tread on an as-needed basis. Annual preventative maintenance includes, but is not limited to, filling rills and ruts, implementing industry-standard natural surface erosion control measures (grade dips, grade reversals, grade nicks, etc.), trail armoring, and sediment removal from existing erosion control features. Vegetation trimming is limited to maintenance of the scheduled trail widths per the approved RRMP. No trails were observed to have excessive erosion that required any maintenance beyond the routine anticipated annual post-winter repairs. Additionally, trail width and trailside vegetation quality are measured at fixed points throughout the Reserve. At each point, photos are taken in each direction of the trail and to either side (4 total). To date, no significant change in trail width has been identified.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

### III. Recreation Facility Construction and Maintenance

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

Yes

---

#### Facility & Location

Upper Dripping Springs Trail Realignment: Completed the realignment of the existing upper segment of the Dripping Springs Trail intersecting the Sandtrap Trail. The realignment bypassed approximately 2,172 lineal feet of existing trail with grades in excess of 20%. The new alignment segment, approximately 2,577 lineal feet of trail, consists of grades averaging 10% or less with limited short segments up to 15%, which is consistent with industry standard methods for trail construction. The upper and lower portions of the trail intersect with the existing Sandtrap Trail the existing Dripping Springs Trail within the in the approximate coordinates of 33°44'17.2"N 117°41'41.9"W and 33°44'08.6"N 117°41'19.1"W.

#### Start Date

2022-01-03

#### End Date

2022-01-18

**Was facility identified in an applicable GDP or RMP?**

Yes

#### Impacts: Habitats or Sensitive Species

Type	Amount (Acres)
CSS and Degraded grassland	.021

#### Coordination with NCC?

No

**Nature of Impact: Temporary (# of Acres)**

0.021

#### Restoration Actions Taken?

No

**Please describe the actions taken or justify why no such actions were taken**

Disturbance limited to the re-established trail footprint only

**Documentation: Reports, Notes, Photographs (Provide Reference)**

### IV. Infrastructure Facility Construction and Maintenance

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

Yes

---

#### Facility & Location

PROJECT 1 West Sinks Viewing area re-build: Implement the re-construction of the West Sinks Viewing Deck destroyed in the October 26, 2020 Silverado Fire. Deck was reconstructed in the same location with a 56% larger footprint (10' x 30') to accommodate additional social distancing for visitors. Deck surface was re-built utilizing a "Rammed Earth" process in lieu of engineered wood and steel fabricated deck. The railing system was constructed with the USFD, USDA, OSHA and AASHTO standards for railing systems in "Moderate Risk" Areas. The center point coordinates of the viewing deck: 33°43'05.8"N 117°40'17.4"W.

**Start Date**

2022-01-24

**End Date**

2022-02-03

**Was facility identified in an applicable GDP or RMP?**

Yes

**Coordination with NCC?**

No

**Impacts: Habitats or Sensitive Species**

Type	Amount (Acres)
None - previously existing infrastructure	0

**Restoration Actions Taken?**

No

**Please describe the actions taken or justify why no such actions were taken**

Rebuild

**Documentation: Reports, Notes, Photographs (Provide Reference)**

---

**Facility & Location**

PROJECT 2 East Sinks Viewing area re-build: The West Sinks Viewing Deck destroyed in the October 26, 2020 Silverado Fire was reconstructed. Deck was reconstructed in the same location with a 56% larger footprint (10' x 30') to accommodate additional social distancing for visitors. Deck surface was re-built utilizing a "Rammed Earth" process in lieu of engineered wood and steel fabricated deck. The railing system was constructed to be consistent with the USFD, USDA, OSHA and AASHTO standards for railing systems in "Moderate Risk" Areas. The center point coordinates of the viewing deck: 33°43'03.9"N 117°39'40.0"W.

**Start Date**

2022-03-11

**End Date**

2022-03-20

**Was facility identified in an applicable GDP or RMP?**

Yes

**Coordination with NCC?**

No

**Impacts: Habitats or Sensitive Species**

Type	Amount (Acres)
------	----------------

None - previously existing infrastructure	0
---	---

### Restoration Actions Taken?

No

**Please describe the actions taken or justify why no such actions were taken**

N/A

**Documentation: Reports, Notes, Photographs (Provide Reference)**

## V. Habitat Restoration and Enhancement

**Did any habitat restoration or enhancement occur on the property?**

Yes

---

### Project Lead

Third party

### Mitigation

Yes

### CSS Community Acres

26.1

### Grassland Community Acres

34.2

### Riparian Community Acres

1.2

### Woodland Community Acres

1

**If this is a formal restoration plan, please provide the name:**

West Loma II - HMMP: West Loma Subwatershed

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

### Start Date

2013-10-21

### Anticipated End Date

2023-12-31

### Performance Monitoring

Yes

### Data Archived in GIS Database

Yes

### Data Manager

Yi-Chin Fang

---

### Project Lead

Third party

**Mitigation**

No

**CSS Community Acres**

27.9

**Grassland Community Acres**

9.75

**If this is a formal restoration plan, please provide the name:**

West Loma I - Phase II Restoration Plan for Orange County Parks West Loma Subwatershed

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2010-01-01

**Anticipated End Date**

2029-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

---

**Project Lead**

Third party

**Mitigation**

Yes

**CSS Community Acres**

0.8

**Riparian Community Acres**

0.5

**If this is a formal restoration plan, please provide the name:**

Agua Chinon OCTA - HMMP: Agua Chinon Subwatershed

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2013-01-01

**Anticipated End Date**

2024-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

---

**Project Lead**

Third party

**Mitigation**

Yes

**Riparian Community Acres**

7.65

**Woodland Community Acres**

2.42

**If this is a formal restoration plan, please provide the name:**

Agua Chinon OCWR - HMMP: Agua Chinon Wash San Diego Creek Watershed

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2013-01-01

**Anticipated End Date**

2024-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

---

**Project Lead**

Third party

**Mitigation**

No

**Woodland Community Acres**

2

**If this is a formal restoration plan, please provide the name:**

Enhancing Tecate Cypress to Promote Population Resilience

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2019-11-13

**Anticipated End Date**

2022-03-31

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin

---

**Project Lead**

Third party

**Mitigation**

No

**CSS Community Acres**

0.5

**Grassland Community Acres**

0.4

**Woodland Community Acres**

0.4

**If this is a formal restoration plan, please provide the name:**

Augustine Staging Area Beautification and Enhancement

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2020-01-01

**Anticipated End Date**

2029-03-31

**Performance Monitoring**

No

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

---

**Project Lead**

Third party

**Mitigation**

No

**Grassland Community Acres**

0.3

**If this is a formal restoration plan, please provide the name:**

Pilot Project to Enhance Butterfly Habitat in Limestone Canyon

**Coordination with NCC (i.e., discussion and/or plan review)**

No

**Start Date**

2022-01-07

**Anticipated End Date**

2025-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi- Chin

## **VI. Invasive Species Control**

### **A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

### **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

GSOB-infested coast live oaks were identified in Weir Canyon in 2014 and have been monitored and treated each year. In 2017, a sycamore in Weir was discovered to have signs of ISHB infestation and was subsequently removed. Sycamores in Upper Weir and Agua Chinon Canyons were surveyed in 2020, but no infestations were detected.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

GSOB



**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

<b>Infested Tree Species</b>	<b>Invasive Beetle Name</b>	<b>Infested Geographic Area of the Property</b>	<b># of Infested Trees</b>
Coast Live Oak	GSOB	Weir and Gypsum Canyon	306

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

GSOB-infested coast live oaks were identified in Weir Canyon in 2014 and have been monitored and treated each year. In 2018, the infestation was found to have spread to isolated trees in Gypsum Canyon. In April and May 2022, approximately 3,172 coast live oaks, including known infested trees and adjacent uninfested trees, were treated with carbaryl.

In 2017, a sycamore in Weir was discovered to have signs of ISHB infestation and was subsequently removed. Sycamores in Upper Weir and Agua Chinon Canyons were surveyed in 2020, but no infestations were detected.

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

Trail condition monitoring is being revised to capture larger trail segments and to incorporate drone imagery to provide more information. There is ongoing long-term vegetation monitoring, which includes post-fire data collection, as well as monitoring and research related to invasive tree pests and western spadefoot.

**Recreational Facility Construction and Maintenance (As defined in Section III)****Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)****Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Habitat Restoration and Enhancement (For only projects 0.25 acres or more)****Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

**Invasive Species Control****Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

IRC will continue to monitor and treat priority invasive plants and report the results in Calflora.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

**Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

IRC will continue to monitor and chemically treat known GSOB infestation in Weir and Gypsum Canyons as well as survey for GSOB and ISHB in other parts of the Reserve.

**Fuel Management Activities****Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No

# 8.3 Orange County Parks

## Irvine Regional Park



**Land Manager Name**

Orange County Parks

**Reporting Year**

2022

**Park, open space or management unit**

Irvine RP

**Website**

<http://www.ocparks.com/parks/irvine>

**Land owning entity:**

OC Parks

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

In 2022, Irvine Regional Park began to experience lessened impacts from COVID-19 conditions, including a return to park special events and invasive weed control activities. Park visitation increased from 2021, likely due to the grand opening of a new exhibit at the OC Zoo. The Irvine Ranch Water District (IRWD) installed a 54-inch pipeline across a portion of Santiago Creek and initiated restoration for temporary impacts.

In 2023, OC Parks will continue conducting ISHB and invasive weed surveys. Prioritized invasive species will be controlled and target plant populations and treatments will be captured in Calflora. A new OC Parks Trail Ambassador Program will provide trail use and etiquette outreach and education for park users.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**

[RPRT-Closures-1.pdf](#)

**Description of closure conditions and procedures.**

Please see:

Sec. 2-5-46 (d). Trails, trespassing and closed areas.

Sec. 2-5-215. Hours.

General practices follow:

Hours – 7:00 am to Sunset

Closures for wet and muddy conditions, as determined by staff

Closures for localized red flag conditions, as determined by staff

Closures following significant fires, as advised by OC Fire Authority and determined by staff

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
01/01/2022	Rain	2	Partial (trails around turf park)
02/10/2022	High winds	1	Full
3/28/2022	Rain	2	Partial (trails around turf park)
11/08/2022	Rain	2	Partial (trails around turf park)
11/16/2022	High winds	1	Full
12/11/2022	Rain	3	Partial (trails around turf park)
12/31/2022	Rain	1	Partial (trails around turf park)

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[RPRT-Competitive-Race-Events-Policy-1.pdf](#)

**Description of special events use for the property.**

All special event requests are subject to OC Parks permitting, which includes review by operations field and management staff. Permits are subject to compliance with special conditions tailored to individual events and resources within parks.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Supervising Park Ranger	1	Y
Park Ranger	2	Y
Maintenance Supervisor (multiple classes)	2	Y
Maintenance Worker (multiple classes)	14	Y

Maintenance Worker	2	N
--------------------	---	---

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Zach Salazar	Supervising Park Ranger	zachary.salazar@ocparks.com	714.973.6834
Alisa Flint	Natural Resources Program Coordinator	alisa.flint@ocparks.com	949.585.6470

### B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

1749201

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Estimates are based on parking data, visitor center logs, and monthly trends.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2022 - 1,749,201

2021 - 1,377,944

2020 - 1,100,000

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
01/15-16/2022	Ninja bike skills class	30
01/23,30/2022	Art & Wilderness Institute event	144
02/06,13,27/2022	Art & Wilderness Institute event	144
02/12/2022	Rock It foot racing event	250
03/06,13/20/2022	Art & Wilderness Institute event	144
03/12-13/2022	Ninja bike skills class	30
04/02/2022-05/02/2022	REI events	435

04/24/2022	Art & Wilderness Institute event	144
05/01,08,15,22/2022	Art & Wilderness Institute event	144
08/01-05/2022	OC Peace Camp	50
09/09/2022	Vanguard University cross-country meet	250
11/01,03/2022	Coast View Athletic Association event	400
11/05-06/2022	Ninja bike skills class	30
11/10/2022	Santiago Canyon College cross-country meeting	200
12/03/2022	Trailblazers Into the Wild OC trail run	150

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A	--	--	--

### C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored via ranger patrols, maintenance inspections, visitor reports, and wildlife cameras. All park trails received annual drainage and tread repair following the rainy season and fire roads were graded as needed.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

### III. Recreation Facility Construction and Maintenance

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### IV. Infrastructure Facility Construction and Maintenance

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

Yes

---

#### Facility & Location

Irvine Regional Park; Santiago Creek adjacent to Peacock Hill Equestrian Center - IRWD 54" Water Pipeline



**Start Date**

2022-01-04

**End Date**

2022-02-12

**Was facility identified in an applicable GDP or RMP?**

No

**Coordination with NCC?**

Yes

**Impacts: Habitats or Sensitive Species**

Type	Amount (Acres)
Coastal sagescrub, willow riparian scrub, scalebroom scrub	0.242

**Nature of Impact: Temporary (# of Acres)**

0.242

**Restoration Actions Taken?**

Yes

**Please describe the actions taken or justify why no such actions were taken**

Project is permitted by IRWD and was completed in 2022. Implementation dates are approximate. IRWD commenced revegetation to restore willow riparian scrub and coastal sage scrub habitat across 0.25 acres temporarily impacted by the pipeline per permit requirements. See attached HMMP for the 54-inch Baker Pipeline Realignment in Reach 1U through Santiago Creek Mitigation Site, August 2021, prepared for Santiago Aqueduct Commission.

**Documentation: Reports, Notes, Photographs (Provide Reference)**

- [Harmsworth-HMMP-Final-2021-08-24.pdf](#)

**V. Habitat Restoration and Enhancement****Did any habitat restoration or enhancement occur on the property?**

No

**VI. Invasive Species Control****A. Plants**

NCC Contractor Results will be summarized based on Cal Flora records.

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

## B. Beetles

### 1. Were active surveys conducted on the property for invasive beetles?

Yes

#### Please explain why or why weren't active surveys conducted on the property for invasive beetles.

Surveys were conducted to monitor for ISHB since it was previously detected in the park. Please see the attached survey.

### 2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?

Yes

#### i. If yes, identify the species:

ISHB

#### ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
Please see attached	--	--	--

#### iii. Did active management for invasive beetles occur on the property?

Yes

#### Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:

In 2022, 293 trees were treated and one tree was removed. General treatment prescriptions for OC Parks management by infestation severity follow:

Low - Soil injection with Imidacloprid

Moderate II, Heavy - Remove tree

Moderate I, II, Heavy when trees are to remain - Soil injection with Imidacloprid, trunk spray of Bifenthrin with Cease or Tebuconazole with Pentrabark

#### Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:

[Irvine-Cycle-8-map.pdf](#)

## VII. Fire Management Activities

Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.

### A. Fuel Management

#### Did any fuel management projects occur on the property?

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

Wildlife camera traps (OC Parks) - ongoing

Christmas bird count (Sea and Sage Audubon) - ongoing

Owl count (Volunteer) - continued

Vegetation monitoring (UCI) - ongoing

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

## **Invasive Species Control**

### **Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

### **Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

OC Parks will continue targeting high-priority species as outlined in the 5-year Invasive Plan Management Plan for the Central Reserve of the Nature Reserve of Orange County. Yellow starthistle (*Centaurea solstitialis*), Sahara mustard (*Brassica tournefortii*), stinkwort (*Dittrichea graveolens*), spiny emex (*Rumex spinosus*), and fountain grass (*Pennisetum setaceum*) will remain primary focus species.

Calflora and Early Detection / Rapid Response training will continue for staff and volunteers in 2023.

### **Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

### **Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

Monitoring will continue; identified amplifier trees may be removed and identified asset trees will be preventatively treated. Adaptive management will be informed by research, monitoring data, and best practices.

### **Other invasive species (please describe):**

Control of imported red fire ants (OC Vector Control)

Cowbird trapping (NCC)

## **Fuel Management Activities**

### **Installation of new fuel management to be undertaken within the reserve?**

No

### **Maintenance of existing fuel management to be undertaken within the reserve?**

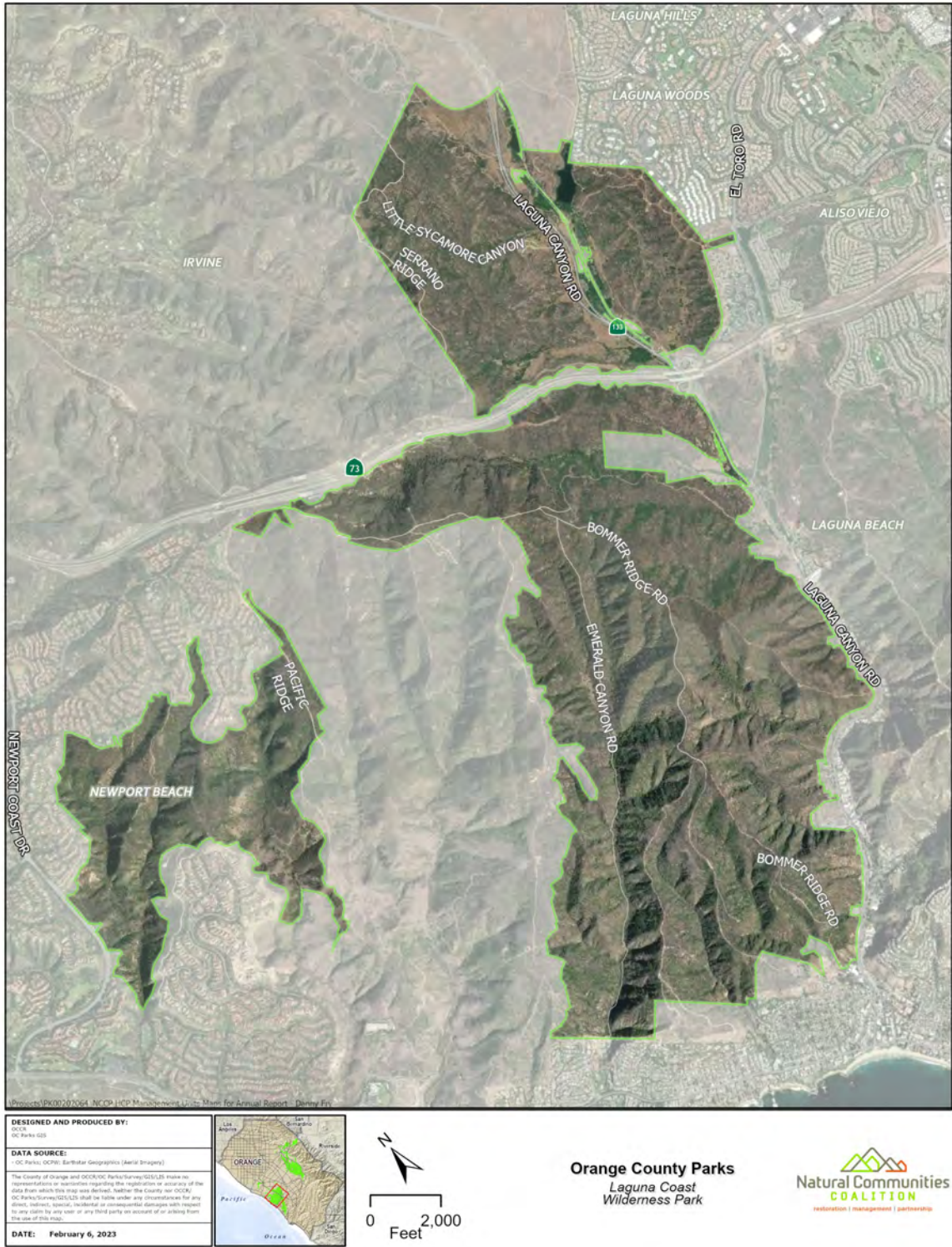
Yes

### **Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Existing road/trail maintenance, including vegetation brushing and weed abatement, will continue.

# 8.3 Orange County Parks

## Laguna Coast Wilderness Park



**Land Manager Name**

Orange County Parks

**Reporting Year**

2022

**Park, open space or management unit**

Laguna Coast WP

**Website**

<http://www.ocparks.com/parks/lagunac>

**Land owning entity:**

OC Parks

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

In 2022, Laguna Coast Wilderness Park began to experience lessened impacts from COVID-19 conditions, including significantly less visitation than 2020 and 2021 and a return to park special events, habitat restoration, and invasive weed control activities. The Emerald Fire started February 10, 2022 and was contained at approximately 154 acres across OC Parks and California State Parks lands. A restoration project was initiated to repair fire suppression damages from bulldozer work related to the 2021 SR-73 Fire. The NCC-sponsored spadefoot toad habitat restoration and USFWS-sponsored Pacific pocket mouse reintroduction projects continued.

In 2023, the Caltrans-OC Public Works joint road improvement project at Laguna Canyon Road and El Toro Road will commence. Existing habitat restoration and reintroduction projects will continue and OC Parks will monitor the Emerald Fire habitat recovery. OC Parks, LCF, and volunteers will continue invasive weed surveys and control of prioritized species, capturing plant populations and treatments in Calflora. A new OC Parks Trail Ambassador Program will provide trail use and etiquette outreach and education for park users. OC Parks may inventory the park trail system.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**

[RPRT-Closures-2.pdf](#)

**Description of closure conditions and procedures.**

Please see:

Sec. 2-5-46 (d). Trails, trespassing and closed areas.

Sec. 2-5-215. Hours.

General practices follow:

Hours – 7:00 am to Sunset

Closures for wet and muddy conditions, as determined by staff

Closures for localized red flag conditions, as determined by staff

Closures following significant fires, as advised by OC Fire Authority and determined by staff

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
03/28/2022	Rain	2	Full
11/08/2022	Rain	3	Full
12/11/2022	Rain	4	Full
12/28/2022	Rain	4	Full

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[RPRT-Competitive-Race-Events-Policy-2.pdf](#)

**Description of special events use for the property.**

All special event requests are subject to OC Parks permitting, which includes review by operations field and management staff. Permits are subject to compliance with special conditions tailored to individual events and resources within parks.

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Supervising Park Ranger	1	Y
Park Ranger	2	Y
Maintenance Supervisor	1	Y
Maintenance Worker (multiple classes)	2	Y

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Brad Barker	Supervising Park Ranger	brad.barker@ocparks.com	949.923.2201
Matt Major	Natural Resources Program Coordinator	matt.major@ocparks.com	657.266.4701

### B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

283827

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Estimates are based on parking data, visitor center tallies, and trail cameras/counters.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2022 - 283,827

2021 - 381,851

2020 - 388,392

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No new types of park users were noted.

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
04/28/2022	La Vida Laguna hiking event	15
05/10/2022	La Vida Laguna hiking event	15
05/18/2022	La Vida Laguna hiking event	15
06/17/2022	La Vida Laguna hiking event	15
08/23/2022	La Vida Laguna hiking event	15
09/26/2022	La Vida Laguna hiking event	15
09/27/2022	La Vida Laguna hiking event	15
11/04/2022	La Vida Laguna hiking event	15
11/12/2022	Dirt Fondo mountain bike event	25



12/13/2022	La Vida Laguna hiking event	15
------------	-----------------------------	----

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A	--	--	--

### **C. Monitoring Performed by Land Owner or Land Manager**

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored via wildlife cameras, ranger patrols, maintenance inspections, and reports from Laguna Canyon Foundation staff, park visitors, and volunteers. Observations indicate continued persistence of unauthorized trail creation and usage. Staff and non-profit support partner Laguna Canyon Foundation attempted to address unauthorized trails quickly and effectively.

All single-track trails received annual drainage and tread repair following the rainy season and all fire roads were graded.

Laguna Ridge Trail and Old Emerald Trail were assessed in partnership with NCC and Utah State University to consider directional and/or designation changes to enhance user flow and safety; both trails have since been returned to their original designations.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

Yes

---

**Project Lead**

Land owner

**Provide project name and/or permit number if the project is on behalf of an agency other than the land owner.**

Laguna Coast Wilderness Park 73 Dozer Scar Habitat Restoration Project

**Mitigation**

No

**Cactus Scrub Community Acres**

5

**If this is a formal restoration plan, please provide the name:**

Laguna Coast Wilderness Park 73 Dozer Scar Habitat Restoration Project

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2022-01-04

**Anticipated End Date**

2025-12-26

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

OC Parks GIS Manager

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

In 2022, surveys were focused on known areas of infestation. Resources shifted toward GSOB surveys in strategic locations across OC Parks facilities and utilizing insect trapping served to monitor ISHB trends. 2022 trapping data for multiple OC Parks facilities, including Laguna Coast Wilderness Park, is attached. If an uptick in ISHB activity is detected, resources can be redistributed to survey individual trees.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
--	--	--	--

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In 2022, treatment continued for 17 sycamores and no trees were removed. ISHB trapping information showed stable levels in the park. If an uptick in ISHB activity is detected, resources can be redistributed to manage the infestation.

General treatment prescriptions for OC Parks management by infestation severity follow:

Low - Soil injection with Imidacloprid

Moderate II, Heavy - Remove tree

Moderate I, II, Heavy when trees are to remain - Soil injection with Imidacloprid, trunk spray of Bifenthrin with Cease or Tebuconazole with Pentrabark

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[I.-2022-Q2-ISHB-Trap-Monitoring-Summary.pdf](#)

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

Yes

## **VIII. Work Plan**

## **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

No

## **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Arterial and other identified roads

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

33°35'00.2"N, 117°45'42.26"W

**Identify any project lead(s) (i.e., utility, government department):**

Caltrans & OC Public Works - SR-133 & El Toro Road improvement joint project

**Impact Size**

Unknown

**Habitat Type**

Possibly ruderal, coastal sage scrub, oak woodland

## **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

### **Mitigation habitat restoration to be initiated?**

No

### **Non-mitigation habitat restoration initiated?**

No

### **Additional Information:**

Spadefoot toad restoration (NCC) and Pacific pocket mouse reintroduction (USFWS/SDZWA) projects are reported separately.

## **Invasive Species Control**

### **Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

### **Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

OC Parks will continue targeting high-priority species as outlined in the 5-year Invasive Plan Management Plan for the Coastal Reserve of the Nature Reserve of Orange County. Boneseed (*Chrysanthemoides monilifera* ssp. *monilifera*), Sahara mustard (*Brassica tournefortii*), stinkwort (*Dittrichea graveolens*), veldtgrass (*Ehrhart calycina*), and St. John's wort (*Hpericum canariense*) will remain primary focus species.

Calflora and Early Detection / Rapid Response training will continue for staff and volunteers, including Laguna Canyon Foundation, in 2023.

### **Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

### **Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

Monitoring will continue; identified amplifier trees may be removed and identified asset trees will be preventatively treated. Adaptive management will be informed by research, monitoring data, and best practices.

### **Other invasive species (please describe):**

No

## **Fuel Management Activities**

### **Installation of new fuel management to be undertaken within the reserve?**

No

### **Maintenance of existing fuel management to be undertaken within the reserve?**

Yes

### **Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Existing Nix Interpretive Center fuel modification and facility road/trail maintenance, including vegetation brushing and weed abatement, will continue.

# 8.3 Orange County Parks

## Peters Canyon Regional Park



**Land Manager Name**

Orange County Parks

**Reporting Year**

2022

**Park, open space or management unit**

Peters Canyon RP

**Website**

<http://www.ocparks.com/parks/peters>

**Land owning entity:**

OC Parks

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

In 2022, Peters Canyon Regional Park began to experience lessened impacts from COVID-19 conditions, including decreased visitation from 2021 and a return to special events, park projects, and invasive weed control. Per the approved park General Development / Resource Management Plan, planned trail realignments and improvements were made to East Ridge and Eucalyptus Trails to enhance long-term sustainability.

In 2023, OC Parks will continue ISHB and invasive weed surveys and control prioritized species, capturing target plant populations and treatments in Calflora. A new OC Parks Trail Ambassador Program will provide trail use and etiquette outreach and education for park users. A previously noted item, installation of public restrooms at the south end of the park, has been delayed.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**

[RPRT-Closures.pdf](#)

**Description of closure conditions and procedures.**

Please see:

Sec. 2-5-46 (d). Trails, trespassing and closed areas.

Sec. 2-5-215. Hours.

General practices follow:

Hours – 7:00 am to Sunset

Closures for wet and muddy conditions, as determined by staff

Closures for localized red flag conditions, as determined by staff

Closures following significant fires, as advised by OC Fire Authority and determined by staff

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
12/11/2022	Rain	5	Full
12/31/2022	Rain	1	Full

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[RPRT-Competitive-Race-Events-Policy.pdf](#)

**Description of special events use for the property.**

All special event requests are subject to OC Parks permitting, which includes review by operations field and management staff. Permits are subject to compliance with special conditions tailored to individual events and resources within parks.

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Supervising Park Ranger	1	Y

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Steve Jax	Supervising Park Ranger	steve.jax@ocparks.com	714.973.6612
Alisa Flint	Natural Resources Program Coordinator	alisa.flint@ocparks.com	949.585.6470



## B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

320274

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Estimate is based on parking data and observation of monthly trends.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2022 - 320,274

2021 - 362,242

2020 - 130,000

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
04/22/2022	Rock It mountain bike event	250

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A	--	--	--

## C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored via ranger patrols, maintenance inspections, and park visitor reports. All single-track trails received annual drainage, tread repair, and brushing following the rainy season and all fire roads were graded and brushed.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

No

### III. Recreation Facility Construction and Maintenance

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

Yes

---

#### Facility & Location

Peters Canyon Regional Park; south end - East Ridge and Eucalyptus Trail Realignment

#### Start Date

2022-11-29

#### End Date

2023-12-15

**Was facility identified in an applicable GDP or RMP?**

Yes

#### Impacts: Habitats or Sensitive Species

Type	Amount (Acres)
Ruderal, coastal sage scrub	0.22

#### Coordination with NCC?

Yes

**Nature of Impact: Permanent (# of Acres)**

0.21

#### Restoration Actions Taken?

Yes

**Please describe the actions taken or justify why no such actions were taken**

The project to reroute and improve facility trails per the park Master Plan was completed in 2022 and coordinated with NCC and USFWS/CDFW. Related habitat restoration will fully initiate in 2023 and include placement of salvaged soil and plant materials, installation of locally-collected native seed, and invasive weed control. The 2:1 coastal sage scrub restoration offsets the need for incidental take. Please see the attached restoration plan for more information.

#### Documentation: Reports, Notes, Photographs (Provide Reference)

- [East-Ridge-Trail-Realignment-Restoration-Plan-10.26.22.pdf](#)

### IV. Infrastructure Facility Construction and Maintenance

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

### V. Habitat Restoration and Enhancement

**Did any habitat restoration or enhancement occur on the property?**

No

## VI. Invasive Species Control

### A. Plants

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

### B. Beetles

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Surveys were conducted to monitor for ISHB since it was previously detected in the park. Please see attached survey.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
Please see attached	--	--	--

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In 2022, 9 trees were treated and 1 tree was removed. General treatment prescriptions for OC Parks management by infestation severity follow:

Low - Soil injection with Imidacloprid

Moderate II, Heavy - Remove tree

Moderate I, II, Heavy when trees are to remain - Soil injection with Imidacloprid, trunk spray of Bifenthrin with Cease or Tebuconazole with Pentrabark

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[Peters-Canyon-ISHB-May-2022.pdf](#)

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

Small mammal and camera trapping (CSU Long Beach) - ongoing

Least Bells vireo, southwest willow flycatcher, California gnatcatcher, and coastal cactus wren surveys (OC Public Works) - ongoing

Christmas bird count (Sea & Sage Audubon) - ongoing

Vegetation study (UCI) - ongoing

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Trails

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

33°46'46.59"N, 117°45'33.32"W

**Impact Size**

Estimated 1.0 acres

**Habitat Type**

Coastal sage scrub and ruderal

**Identify any project lead(s) (i.e., utility, government department):**

OC Public Works - Regional Trails Plan (timeline unknown)

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Storm drain and flood control facilities
- Access roads

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

33°46'55"N, 117°45'36"W

**Impact Size**

TBD

**Habitat Type**

Riparian, coastal sage scrub

**Identify any project lead(s) (i.e., utility, government department):**

The Irvine Company. Work includes connecting 84" pipeline to Peters Canyon Reservoir for East Orange development.

**Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

Yes

**If yes, please fill out the following**

Project Name	Habitat Type	Approximate Location	Area (acres)
East Ridge Trail Realignment Restoration Plan	Coastal sage scrub	South end of park	0.43

**Additional Information:**

The OC Public Works Peters Canyon Wash mitigation project is reported separately.

**Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

OC Parks will continue targeting high-priority species as outlined in the 5-year Invasive Plant Management Plan for the Central Reserve of the Nature Reserve of Orange County. Sahara mustard (*Brassica tournefortii*), spiny emex (*Rumex spinosa*), artichoke thistle (*Cynara cardunculus*), and castor bean (*Ricinus communis*) will remain primary focus species.

Calflora and Early Detection / Rapid Response training will continue for staff and volunteers in 2023.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

**Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

Monitoring will continue; identified amplifier trees may be removed and identified asset trees will be preventatively treated. Adaptive management will be informed by research, monitoring data, and best practices.

**Other invasive species (please describe):**

Cowbird trapping (NCC)

**Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

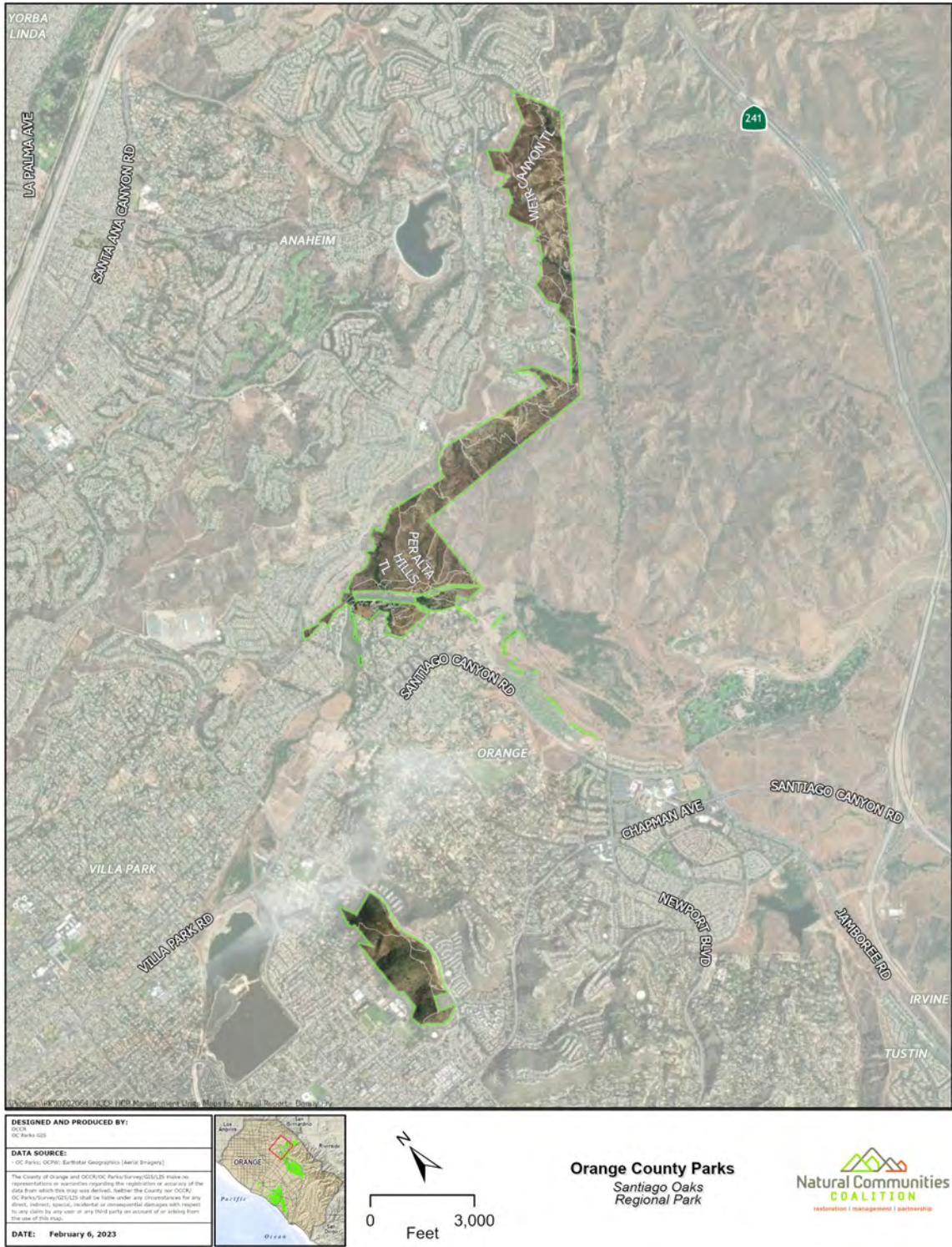
Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Existing road/trail maintenance, including vegetation brushing and weed abatement, will continue.

# 8.3 Orange County Parks

## Santiago Oaks Regional Park



**Land Manager Name**

Orange County Parks

**Reporting Year**

2022

**Park, open space or management unit**

Santiago Oaks RP

**Website**

<http://www.ocparks.com/parks/santiago>

**Land owning entity:**

OC Parks

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

In 2022, Santiago Oaks Regional Park began to experience lessened impacts from COVID-19 conditions, including lower visitation from 2020 and 2021 and a return to park special events and invasive weed control activities. In 2023, OC Parks will continue to conduct ISHB and invasive weed surveys and control prioritized invasive weed species, capturing target plant populations and treatments in Calflora. A new OC Parks Trail Ambassador Program will provide trail use and etiquette outreach and education for park users.

\* Please note, El Modena Open Space is included under the management of Santiago Oaks Regional Park.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**

[RPRT-Closures-1.pdf](#)

**Description of closure conditions and procedures.**

Please see:

Sec. 2-5-46 (d). Trails, trespassing and closed areas.

Sec. 2-5-215. Hours.

General practices follow:



Hours – 7:00 am to Sunset

Closures for wet and muddy conditions, as determined by staff

Closures for localized red flag conditions, as determined by staff

Closures following significant fires, as advised by OC Fire Authority and determined by staff

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
01/01/2022	Rain	2	Full
02/10/2022	High winds	1	Full
03/28/2022	Rain	2	Full
11/08/2022	Rain	2	Full
11/16/2022	High winds	1	Full
12/11/2022	Rain	3	Full
12/31/2022	Rain	1	Full

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[RPRT-Competitive-Race-Events-Policy-1.pdf](#)

**Description of special events use for the property.**

All special event requests are subject to OC Parks permitting, which includes review by operations field and management staff. Permits are subject to compliance with special conditions tailored to individual events and resources within parks.

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Supervising Park Ranger	1	Y
Park Ranger	1	Y

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Maura Hay	Supervising Park Ranger	maura.hay@ocparks.com	714.973.6621
Alisa Flint	Natural Resources Program Coordinator	alisa.flint@ocparks.com	949.585.6470

## B. Visitation

### a. Total number of public visitors to the property based on land owner's estimate:

145896

### b. What method(s) is/are used to estimate visitation? Summarize in the box below.

Estimates are based on parking data and observation of monthly trends.

### c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.

2022 - 145,896

2021 - 196,049

2020 - 150,000

### d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.

No

### e. Were there any special events held for which special use permits were issued for the property?

Yes

### i. Provide in the table below a summary of special events held for which special use permits were issued for the property.

Event Date	Type of Special Event	# of Participants
Monthly, January through August	Non Dot mountain bike clinic	24-80 (est. 360 total)
03/07/2022; 11/06/2022	Ninja bike skills class	40
05/24/2022	Earthroots Field School event	12
06/27-30/2022	Art in Wilderness Institute event	35
07/11-14/2022	Art in Wilderness Institute event	35

### f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A	---	---	---

## **C. Monitoring Performed by Land Owner or Land Manager**

### **a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

### **i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored via ranger patrols, maintenance inspections, visitor reports, and wildlife cameras. Trails received annual drainage, tread repair, and brushing following the rainy season, and roads were graded and brushed as needed.

The Windes and Pacifica Trails reopened after minor repairs following Canyon Fire 2. The Peralta Hills, Chutes Ridgeline, Yucca Ridge, Cactus Canyon, and Pony Trails were assessed in partnership with NCC and Utah State University to consider directional and/or designation changes to enhance user flow and safety; all trails have since been returned to their original designations.

### **ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

## **III. Recreation Facility Construction and Maintenance**

### **Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

## **IV. Infrastructure Facility Construction and Maintenance**

### **Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

## **V. Habitat Restoration and Enhancement**

### **Did any habitat restoration or enhancement occur on the property?**

Yes

---

### **Project Lead**

Third party

### **Mitigation**

Yes

### **Woodland Community Acres**

8

### **If this is a formal restoration plan, please provide the name:**

OC Waste & Recycling Oak Tree Mitigation and Monitoring Plan

### **Coordination with NCC (i.e., discussion and/or plan review)**

No

### **Start Date**

2014-01-01

**Anticipated End Date**

2034-01-01

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

No

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Surveys were conducted to monitor for ISHB since it was previously detected in the park. Please see attached report.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
Please see attached	--	--	--

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In 2022, 12 trees were treated and no trees were removed. General treatment prescriptions for OC Parks management by infestation severity follow:

Low - Soil injection with Imidacloprid

Moderate II, Heavy - Remove tree

Moderate I, II, Heavy when trees are to remain - Soil injection with Imidacloprid, trunk spray of Bifenthrin with Cease or Tebuconazole with Pentrabark

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[Santiago-Oaks-ISHB-March-2022.pdf](#)

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

## **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

### **Additional Information:**

OC Waste & Recycling oak woodland mitigation is reported separately.

## **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

OC Parks will continue targeting high-priority species as outlined in the 5-year Invasive Plant Management Plan for the Central Reserve of the Nature Reserve of Orange County. Sahara mustard (*Brassica tournefortii*) and fountain grass (*Pennisetum setaceum*) will continue to be focus species for both Irvine and El Modena.

Calflora and Early Detection / Rapid Response training will continue for staff and volunteers in 2023.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

**Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

Monitoring will continue; identified amplifier trees may be removed and identified asset trees will be preventatively treated. Adaptive management will be informed by research, monitoring data, and best practices.

**Other invasive species (please describe):**

N/A

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Existing road/trail maintenance, including vegetation brushing and weed abatement, will continue.

# Talbert Regional Park





**Land Manager Name**

Orange County Parks

**Reporting Year**

2022

**Park, open space or management unit**

Talbert NP

**Website**

<http://www.ocparks.com/parks/talbert>

**Land owning entity:**

OC Parks

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

In 2022, Talbert Regional Park visitation rose slightly from 2020 and 2021, but remained fairly stable. Master planning efforts continued and a habitat enhancement grant was obtained.

In 2023, OC Parks anticipates finalizing a park Master Plan and implementing grant-funded habitat enhancement. Staff and contractors will continue to conduct ISHB and invasive weed survey. Prioritized species will be controlled and target plant populations and treatments will be captured in Calflora. A new OC Parks Trail Ambassador Program will provide trail use and etiquette outreach and education for park users.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**

[RPRT-Closures-2.pdf](#)

**Description of closure conditions and procedures.**

Please see attached file:

Sec. 2-5-46 (d). Trails, trespassing and closed areas.

Sec. 2-5-215. Hours.

General practices follow:

Hours – 7:00 am to Sunset

Closures for wet and muddy conditions, as determined by staff

Closures for localized red flag conditions, as determined by staff

Closures following significant fires, as advised by OC Fire Authority and determined by staff

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
N/A	---	---	---

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[RPRT-Competitive-Race-Events-Policy-2.pdf](#)

**Description of special events use for the property.**

All special event requests are subject to OC Parks permitting, which includes review by operations field and management staff. Permits are subject to compliance with special conditions tailored to individual events and resources within parks.

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Supervising Park Ranger	1 (covers Talbert & Upper Newport Bay)	Y
Park Ranger	1 (covers Talbert & Upper Newport Bay)	Y
Maintenance Supervisor	1 (covers Talbert & Upper Newport Bay)	Y
Maintenance Worker (multiple classes)	9 (covers Talbert & Upper Newport Bay)	Y

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Derrick Ankerstar	Supervising Park Ranger	derrick.ankerstar@ocparks.com	714.923.2294
Alisa Flint	Natural Resources Program Coordinator	alisa.flint@ocparks.com	949.585.6470

## B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

118256

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Staff estimate is based on visitor contacts and observation of monthly trends.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2022 - 118,256

2021 - 117,000

2020 - 117,295

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No new types of park users or uses were observed.

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
05/07/2022	OC Marathon	Pending

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A	--	--	--

## C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored via ranger patrols, maintenance inspections, and visitor reports.

All roads were graded following rainy season.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

No

### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

### **VI. Invasive Species Control**

#### **A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

#### **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Surveys were conducted to monitor for ISHB since it was previously detected in the park. Please see attached survey.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
Please see attached	--	--	--

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In 2022, 17 trees were treated and no trees were removed. General treatment prescriptions for OC Parks management by infestation severity follow:

Low - Soil injection with Imidacloprid

Moderate II, Heavy - Remove tree

Moderate I, II, Heavy when trees are to remain - Soil injection with Imidacloprid, trunk spray of Bifenthrin with Cease or Tebuconazole with Pentrabark

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[Talbert-ISHB-March-2022.pdf](#)

## VII. Fire Management Activities

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### A. Fuel Management

**Did any fuel management projects occur on the property?**

No

## VIII. Work Plan

### Proposed Work Plan for Use, Monitoring and Management

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

Yes

**Please explain why the GDP and/or Master Plan was created anew or amended.**

Talbert Regional Park is in need of a Master Plan. Planning efforts initiated and biological studies were conducted in 2020. Master planning initiated in 2021 and continued through 2022. Following stakeholder input from the public, municipalities, and regulatory agencies, it is anticipated the Master Plan will be finalized and approved in 2023.

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Trails

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

33°38'40"N, 117°56'48"W. Final locations and the scope of improvements will be subject to the approved Park Master Plan.

**Impact Size**

TBD

**Habitat Type**

Ruderal

**Identify any project lead(s) (i.e., utility, government department):**

OC Parks - Trail improvements may initiate, pending an approved Master Plan. Activities may include closing redundant trails, creating trail connectors, and enhancing existing roads.

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

Yes

**If yes, please fill out the following**

Project Name	Habitat Type	Approximate Location	Area (acres)
--------------	--------------	----------------------	--------------

Talbert Regional Park Habitat Enhancement	Ruderal, alkali scrub	South Talbert	23.25
---	-----------------------	---------------	-------

### **Additional Information:**

The Talbert Regional Park Habitat Enhancement project is grant-funded. Work is anticipated to initiate in 2023 and continue through 2026.

OC Public works mitigation is reported separately.

## **Invasive Species Control**

### **Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

### **Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

OC Parks will continue targeting high-priority species as outlined in the 5-year Invasive Plan Management Plan for the Coastal Reserve of the Nature Reserve of Orange County. Pampas grass (*Cortaderia selloana*), perennial pepperweed (*Lepidium latifolium*), Myoporum (*Myoporum laetum*), Brazilian pepper (*Schinus terebinthifolius*), palms (sp.), and ice plant (sp.) will remain focus species.

Calflora and Early Detection / Rapid Response training will continue for staff and volunteers in 2023.

### **Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

### **Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

Monitoring will continue; identified amplifier trees may be removed and identified asset trees will be preventatively treated. Adaptive management will be informed by research, monitoring data, and best practices.

### **Other invasive species (please describe):**

N/A

## **Fuel Management Activities**

### **Installation of new fuel management to be undertaken within the reserve?**

No

### **Maintenance of existing fuel management to be undertaken within the reserve?**

Yes

### **Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Existing road/trail maintenance, including vegetation brushing and weed abatement, will continue.

# Upper Newport Bay Nature Preserve





**Land Manager Name**

Orange County Parks

**Reporting Year**

2022

**Park, open space or management unit**

Upper Newport Bay NP

**Website**

<http://www.ocparks.com/parks/newport>

**Land owning entity:**

OC Parks

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

In 2022, Upper Newport Bay Nature Preserve experienced lessened impacts of COVID-19 conditions, including a full return to volunteer activities, habitat restoration, and invasive weed control. Park visitation showed some increase over 2020 and 2021. Volutaria control continued in partnership with Newport Bay Conservancy (NBC) and the California Department of Fish and Wildlife (CDFW).

In 2023, OC Parks, NBC, and volunteers will continue to perform invasive weed surveys and control prioritized species, capturing target plant populations and treatments in Calflora. A new OC Parks Trail Ambassador Program will provide trail use and etiquette outreach and education for park users.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**

[RPRT-Closures-3.pdf](#)

**Description of closure conditions and procedures.**

Please see attached file:

Sec. 2-5-46 (d). Trails, trespassing and closed areas.

Sec. 2-5-215. Hours.

General practices follow:

Hours – 7:00 am to Sunset

Closures for wet and muddy conditions, as determined by staff

Closures for localized red flag conditions, as determined by staff

Closures following significant fires, as advised by OC Fire Authority and determined by staff

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
N/A	---	---	---

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[RPRT-Competitive-Race-Events-Policy-3.pdf](#)

**Description of special events use for the property.**

All special event requests are subject to OC Parks permitting, which includes review by operations field and management staff. Permits are subject to compliance with special conditions tailored to individual events and resources within parks.

**ii. Has the policy been officially modified since the previous year’s annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Supervising Park Ranger	1 (covers Upper Newport & Talbert)	Y
Park Ranger	1 (covers Upper Newport & Talbert)	Y
Maintenance Supervisor	1 (covers Upper Newport & Talbert)	Y
Maintenance Worker (multiple classes)	9 (covers Upper Newport & Talbert)	Y

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Derrick Ankerstar	Supervising Park Ranger	derrick.ankerstar@ocparks.com	714.923.2294

Alisa Flint	Natural Resources Program Coordinator	alisa.flint@ocparks.com	949.585.6470
-------------	---------------------------------------	-------------------------	--------------

## B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

651244

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Estimates are based on visitor center tallies and observation of monthly trends.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2022 - 651,244

2021 - 622,495

2020 - 622,127

\*Updated totals for prior years.

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
05/07/2022	Team World Vision running event	50

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A	--	--	--

## C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored via ranger patrols, maintenance inspections, and visitor reports.

All trails received annual drainage and tread work repairs and brushing following the rainy season. All roads were graded and brushed as needed.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

No

**III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

**IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

**V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Surveys were conducted to monitor for ISHB since it was previously detected in the park. Please see attached survey.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
Please see attached	--	--	--

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In 2022, no trees were treated or trees were removed. General treatment prescriptions for OC Parks management by infestation severity follow:

Low - Soil injection with Imidacloprid

Moderate II, Heavy - Remove tree

Moderate I, II, Heavy (when trees are to remain) - Soil injection with Imidacloprid, trunk spray of Bifenthrin with Cease or Tebuconazole with Pentrabark

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[Upper-Newport-ISHB-July-2022.pdf](#)

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

No

**Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Storm drain and flood control facilities

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

33\*39'10"N, 117\*53'01"W

**Impact Size**

Tbd

**Habitat Type**

Ruderal and bare ground, estuarine, transitional

**Identify any project lead(s) (i.e., utility, government department):**

Orange County Flood Control - Work includes widening Delhi Channel, improving trails, and performing native revegetation. The final scope and timeline are to be determined.

**Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

**Additional Information:**

OC Parks and Newport Bay Conservancy will continue undertaking small-scale habitat and wildlife enhancement

projects.

## **Invasive Species Control**

### **Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

#### **Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

OC Parks will continue targeting high-priority species as outlined in the 5-year Invasive Plant Management Plan for the Coastal Reserve of the Nature Reserve of Orange County. Egyptian knapweed (*Volutaria tubiflora*), perennial pepperweed (*Lepidium latifolium*), Brazilian pepper trees (*Schinus terebinthifolius*), and artichoke thistle (*Cynara cardunculus*) will remain primary target species.

Calflora and Early Detection / Rapid Response training will continue for staff and volunteers, including Newport Bay Conservancy, in 2023.

### **Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

#### **Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

Monitoring will continue; identified amplifier trees may be removed and identified asset trees will be preventatively treated. Adaptive management will be informed by research, monitoring data, and best practices.

#### **Other invasive species (please describe):**

N/A

## **Fuel Management Activities**

### **Installation of new fuel management to be undertaken within the reserve?**

No

### **Maintenance of existing fuel management to be undertaken within the reserve?**

Yes

#### **Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Existing road/trail maintenance, including vegetation brushing and weed abatement, will continue.

# Whiting Ranch Wilderness Park





**Land Manager Name**

Orange County Parks

**Reporting Year**

2022

**Park, open space or management unit**

Whiting Ranch WP

**Website**

<http://www.ocparks.com/parks/whiting>

**Land owning entity:**

OC Parks

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

In 2022, Whiting Ranch Wilderness Park began to experience lessened impacts from COVID-19 conditions, including lower visitation than 2020 and 2021 and a return to special events, habitat restoration, and invasive weed control activities.

In 2023, OC Parks staff will continue monitoring post-fire recovery from the 2020 Silverado Fire. Staff will also continue to conduct ISHB and invasive weed surveys and control of prioritized species, capturing target plant populations and treatments in Calflora. A new OC Parks Trail Ambassador Program will provide trail use and etiquette outreach and education for park users.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**i. If yes, attach a PDF of the policy in the space below or provide a brief written summary**

[RPRT-Closures-4.pdf](#)

**Description of closure conditions and procedures.**

Please see attached file:

Sec. 2-5-46 (d). Trails, trespassing and closed areas.

Sec. 2-5-215. Hours.

General practices follow:

Hours – 7:00 am to Sunset

Closures for wet and muddy conditions, as determined by staff

Closures for localized red flag conditions, as determined by staff

Closures following significant fires, as advised by OC Fire Authority and determined by staff

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
01/04/2022	Rain	1	Partial
03/28/2022	Rain	1	Full
08/20/2022	Maintenance	1	Partial (Borrego Trail)
08/30/2022	Maintenance	61	Partial (Billy Goat Trail)
09/28/2022	Flooding	4	Partial
12/31/2022	Rain	1	Full

**d. Is there an official written policy governing special events use of the property?**

Yes

**i. If yes, attach a PDF of the policy or provide a brief written summary in the space below**

[RPRT-Competitive-Race-Events-Policy-4.pdf](#)

**Description of special events use for the property.**

All special event requests are subject to OC Parks permitting, which includes review by operations field and management staff. Permits are subject to compliance with special conditions tailored to individual events and resources within parks.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Supervising Park Ranger	1	Y
Park Ranger	1	Y
Maintenance Supervisor	1	Y
Maintenance Worker	1	Y

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Candi Hubert	Supervising Park Ranger	candice.hubert@ocparks.com	949.923.2244
Matt Major	Natural Resources Program Coordinator	matt.major@ocparks.com	657.266.4701

### B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

108579

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Estimates are based on parking data and observed monthly trends.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2022 - 108,579

2021 - 230,000

2020 - 175,000

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No new types of park users were noted.

**e. Were there any special events held for which special use permits were issued for the property?**

Yes

**i. Provide in the table below a summary of special events held for which special use permits were issued for the property.**

Event Date	Type of Special Event	# of Participants
N/A	---	---

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A	--	--	--

### C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored via ranger patrols, maintenance inspections, visitor reports, and cameras/trackers. All trails received annual drainage and tread work repair as well as brushing following the rainy season and all roads were graded and brushed as needed.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

### **VI. Invasive Species Control**

#### **A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

#### **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Resources shifted toward GSOB surveys in strategic locations across OC Parks facilities and utilizing insect trapping served to monitor ISHB trends. This is due to findings of low infestation from prior intensive field surveys, 2022

trapping data for multiple OC Parks facilities, including Whiting Ranch Wilderness Park, is attached. If an uptick in ISHB activity is detected, resources can be redistributed to survey individual trees.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
--	--	--	--

**iii. Did active management for invasive beetles occur on the property?**

Yes

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

In 2022, no trees were treated or removed. General treatment prescriptions for OC Parks management by infestation severity follow:

Low - Soil injection with Imidacloprid

Moderate II, Heavy - Remove tree

Moderate I, II, Heavy when trees are to remain - Soil injection with Imidacloprid, trunk spray of Bifenthrin with Cease or Tebuconazole with Pentrabark

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[I.-2022-Q2-ISHB-Trap-Monitoring-Summary.pdf](#)

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

Yes

**Please explain why the GDP and/or Master Plan was created anew or amended.**

Whiting Ranch Wilderness Park has been managed according to an Interim Operations Plan (IOP) and is slated for development of a Master Plan.

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

Wildlife cameras (OC Parks) - ongoing

ISHB monitoring (UC Davis) - ongoing

**Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

**Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

OC Parks will continue targeting high-priority species as outlined in the 5-year Invasive Plant Management Plan for the Central Reserve of the Nature Reserve of Orange County. Senecio (*Senecio angustifolius*) and Sahara mustard (*Brassica tournefortii*) will remain primary focus species.

Calflora and Early Detection / Rapid Response training will continue for staff and volunteers in 2023.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

**Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

Monitoring will continue; identified amplifier trees may be removed and identified asset trees will be preventatively treated. Adaptive management will be informed by research, monitoring data, and best practices.

**Other invasive species (please describe):**

N/A

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Fuel management adjacent to the Portola Center development along Glenn Ranch Road will begin per agreements with NCC, Orange County, and Orange County Fire Authority.

**Maintenance of existing fuel management to be undertaken within the reserve?**

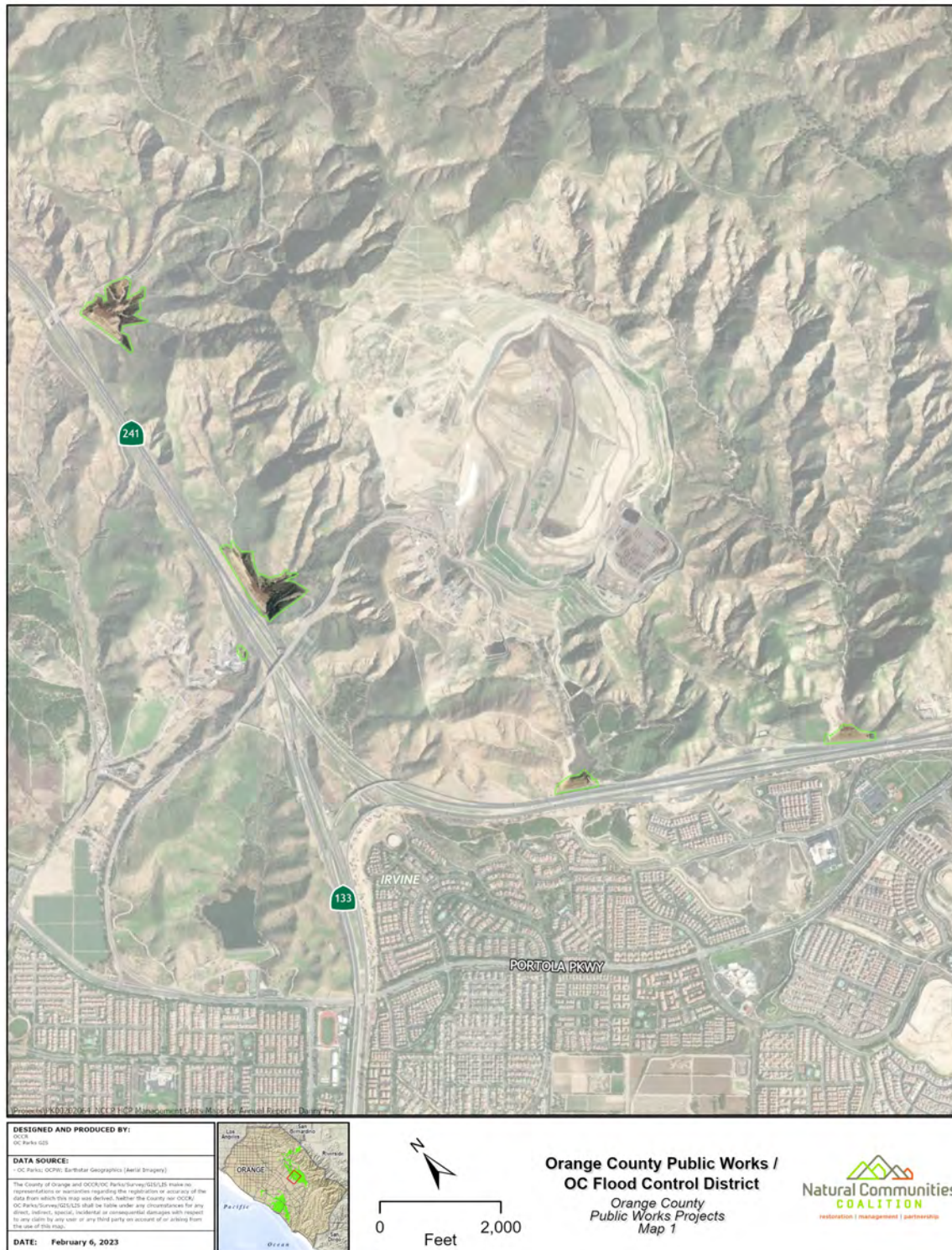
Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Existing park office infrastructure and road/trail maintenance, including vegetation brushing and weed abatement, will continue.

## 8.4 Orange County Public Works & Flood Control District

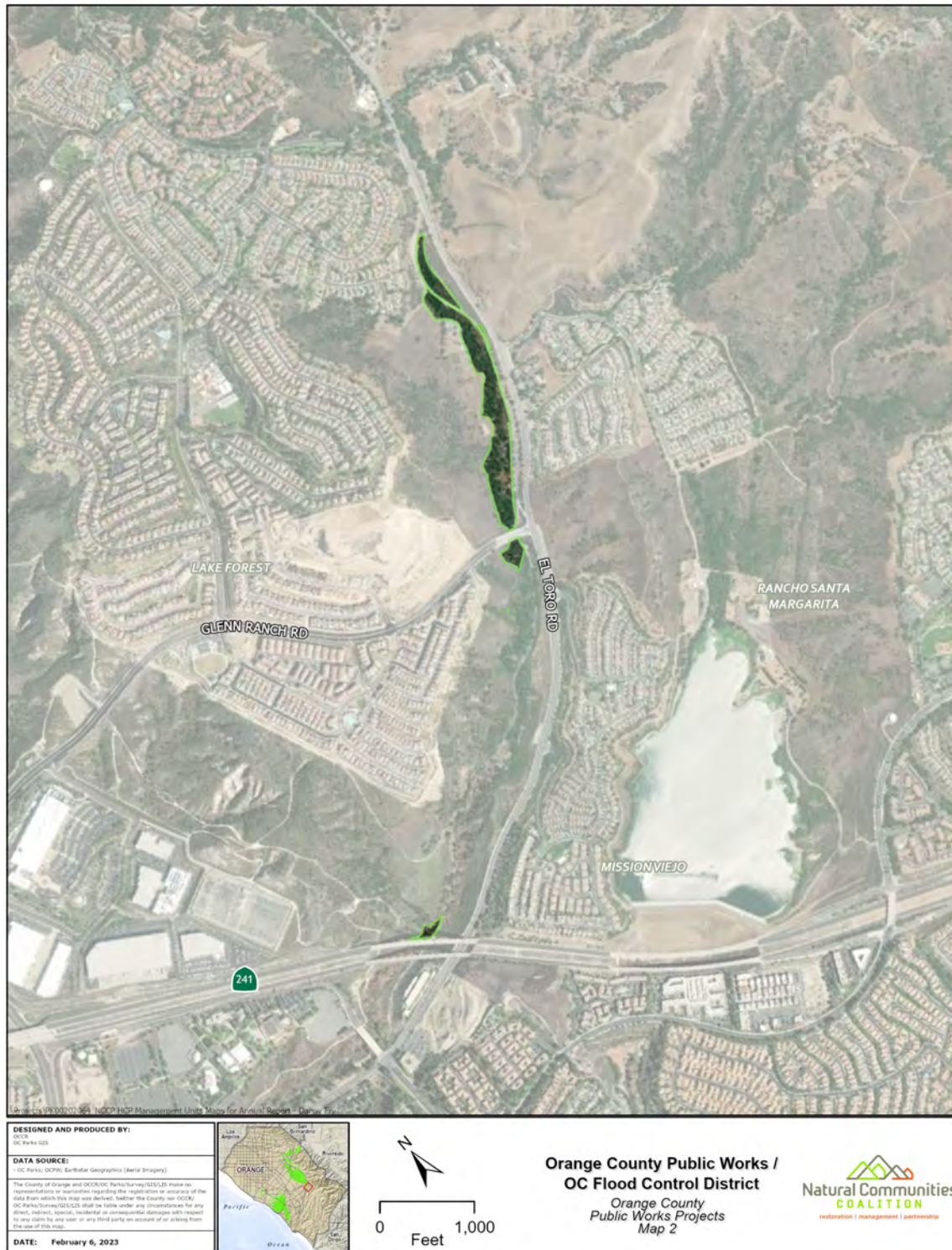
# Orange County Public Works Projects Map 1





## 8.4 Orange County Public Works & Flood Control District

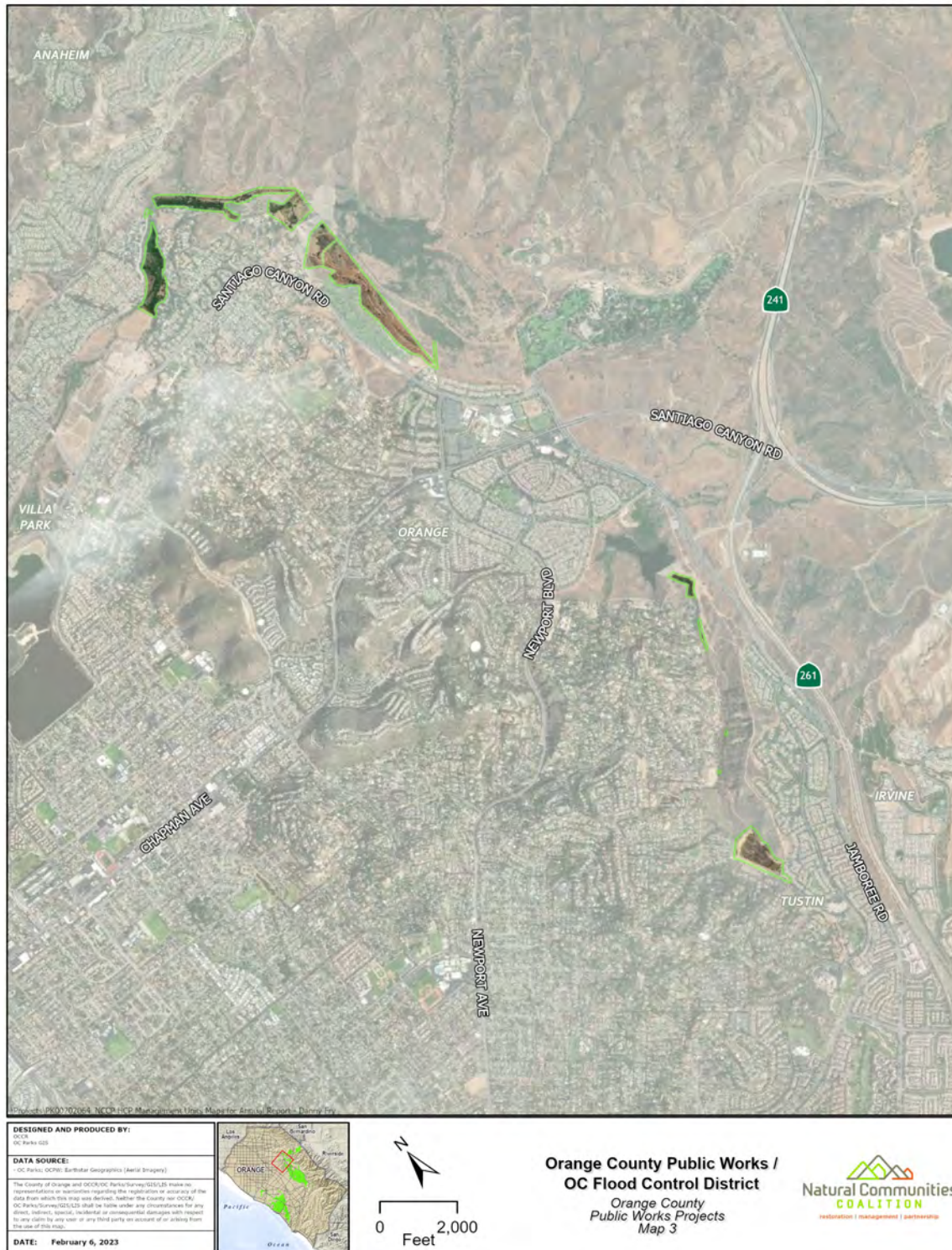
### Orange County Public Works Projects Map 2





## 8.4 Orange County Public Works & Flood Control District

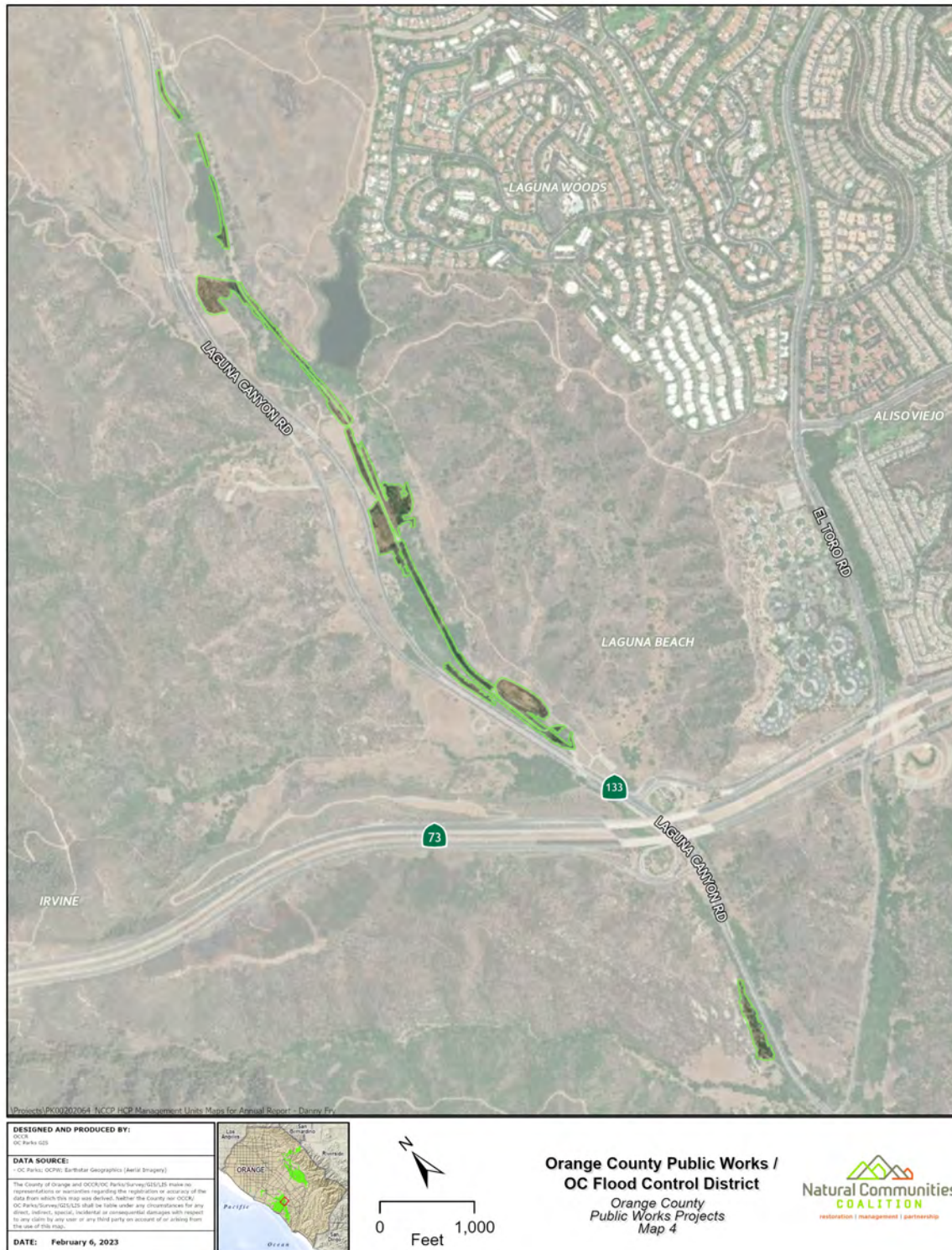
### Orange County Public Works Projects Map 3





## 8.4 Orange County Public Works & Flood Control District

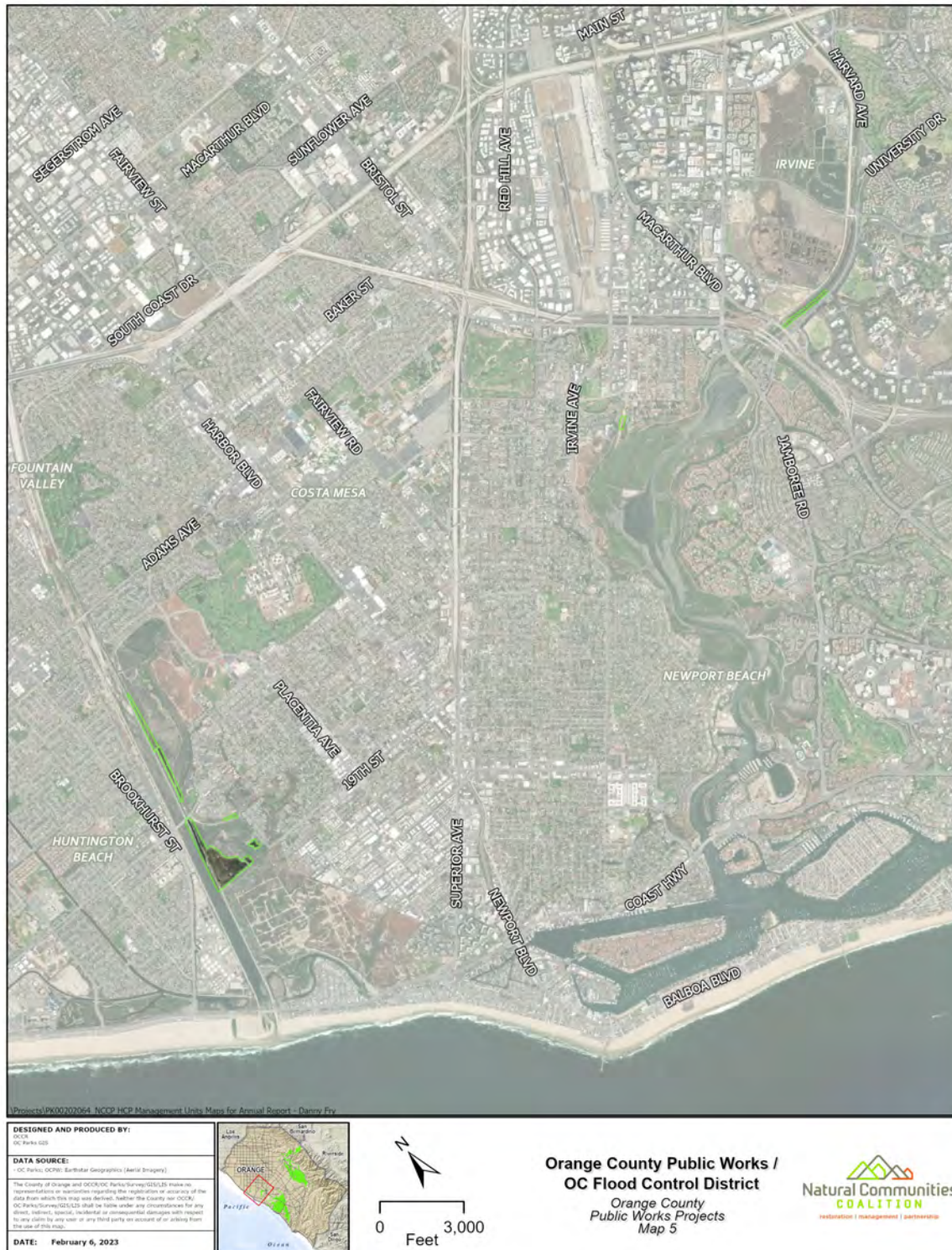
### Orange County Public Works Projects Map 4





## 8.4 Orange County Public Works & Flood Control District

### Orange County Public Works Projects Map 5



**Land Manager Name**

OC Public Works

**Reporting Year**

2022

**Park, open space or management unit**

OCPW

**Website**

<http://www.ocpublicworks.com/>

**Land owning entity:**

OC Public Works/OC Flood Control District

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

OC Public Works actively manages six compensatory mitigation sites in the NCCP Reserve, all on OC Parks land. OC Public Works used 0.01 acre of take for the Loma Ridge Road Widening project in 2022. OC Public Works anticipated using 1.33 acres of take in the Laguna Coastal Streams watershed for a joint road project [SR-133] with Caltrans in 2020; however, construction of that project continues to be delayed. This anticipated take will roll over to 2023 in addition to the Peter's Canyon Bikeway project which is still in the design and permitting phase (anticipated take will be 0.77 acre) .

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

No Public Access

**b. Is there an official written policy governing property closure conditions and procedures?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
00/00/0000	Not applicable		

**d. Is there an official written policy governing special events use of the property?**

Yes

**Description of special events use for the property.**

OC Flood Control District property is not accessible to the public. Any access by contractors wishing to perform work within District property is subject to provision of an encroachment permit per Orange County, California Code of Ordinances (Title 9 - Water Quality--Orange County Flood Control District / Division 2 --Encroachments).

With regard to District-owned lands in the NCCP Reserve, tracking of take impacts is the responsibility of OC Public Works/Environmental Resources - Mitigation Program. Encroachment permits authorizing access to District lands is tracked by OC Public Works/ Development Services - Permitting.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Manager, Mitigation Program	1	.05

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Jennifer Shook	Manager, Mitigation Program	Jennifer.Shook@ocpw.ocgov.com	(714) 955-0615

**B. Visitation**

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

OC Flood Control District property is not accessible to the public. Any access by contractors wishing to perform work within District property is subject to provision of an encroachment permit per Orange County, California Code of Ordinances (Title 9 - Water Quality--Orange County Flood Control District / Division 2 --Encroachments).

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

Not applicable.

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

Not applicable.

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
00/00/0000	Not applicable		

### **C. Monitoring Performed by Land Owner or Land Manager**

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Some flood control access/service trails are used for passive recreation (walking/hiking/biking). Monitoring of access and service roads to/along/around District flood control channels and basins is conducted by OC Public Works - Operations & Maintenance Department.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

Yes

---

#### **Facility & Location**

Loma Ridge Road Widening/Safety Improvements

#### **Start Date**

2022-08-01

#### **End Date**

2023-03-15

**Was facility identified in an applicable GDP or RMP?**

No

#### **Coordination with NCC?**

Yes

#### **Impacts: Habitats or Sensitive Species**

Type	Amount (Acres)
CSS	0.09

**Nature of Impact: Temporary (# of Acres)**

0.08

**Nature of Impact: Permanent (# of Acres)**

0.01

**Restoration Actions Taken?**

Yes

**Please describe the actions taken or justify why no such actions were taken**

Take used for 0.01 acre of permanent impacts. The temporarily impacted areas will be stabilized with hydromulch with a native seed mix of css and wildflowers.

**Documentation: Reports, Notes, Photographs (Provide Reference)**

- [OCPW-Loma-Ridge-Take-Request\\_03-18-22.pdf](#)

**V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

OC Public Works road infrastructure and OC Flood District drainage infrastructure lies mostly outside of the Reserve areas. However, OC Agricultural Commissioners office is using State funding to identify and survey invasive shot hole borer throughout Orange County, including areas within the NCCP in support of the State program (this surveys also include private property).

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this**



**property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

OC Public Works road infrastructure and OC Flood District drainage infrastructure lies mostly outside of the Reserve areas. The few small areas of property within the Reserve are monitored for potential invasive beetle impacts during ongoing routine maintenance and trees that pose a threat to public safety or have the potential to impede flood flows are removed. OC Public Works does manage mitigation sites on OC Parks property within the Reserve and monitor for invasive beetle activity. If we identify a growing problem, as signaled by branch or tree-die back, formal surveys or control strategies will be initiated .

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

## **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## Infrastructure Facility Construction and Maintenance (As defined in Section IV)

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Access roads

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

33.582694, -117.761047

**Impact Size**

1.33 acre

**Habitat Type**

CSS

**Identify any project lead(s) (i.e., utility, government department):**

Caltrans
OC Public Works

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Other

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

33.784712, -117.758715

**Impact Size**

0.77 acre (Class 1 bikeway along Jamboree Road)

**Habitat Type**

CSS

**Identify any project lead(s) (i.e., utility, government department):**

OC Public Works (design lead)
OC Parks
Caltrans (Federal Partner since federal funds will be used)

## Habitat Restoration and Enhancement (For only projects 0.25 acres or more)

**Mitigation habitat restoration to be initiated?**

Yes

**If yes, please fill out the following**

<b>Project Name</b>	<b>Habitat Type</b>	<b>Approximate Location</b>	<b>Area (acres)</b>
Lower Peters / Lane / Barranca	Riparian woodland/scrub & transitional habitat	Peter's Canyon Regional Park (lower reach)	2.97

**Non-mitigation habitat restoration initiated?**

No

**Additional Information:**

23.39 acres of land within Peter's Canyon Regional Park was quitclaimed from Irvine Company to OC Flood Control District for mitigation. 14.96 acres was restored to offset impacts to maintenance along San Diego Creek. The balance of the quitclaim acreage will be restored in fall 2023 to offset impacts from maintenance within Lower Peters Retarding Basin and along Lane and Barranca channels (part of the quitclaim acreage was set aside for a fuel modification set-back area).

## **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

OC Public Works mitigation program conducts invasive control as part of our routine maintenance of mitigation sites. Work is minimal as most of our sites are fairly well established with little non-native seed back by this point.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

**Other invasive species (please describe):**

OC Public Works Agricultural Commissioner's office handles invasive species control for unincorporated property and OC Flood Control District.

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

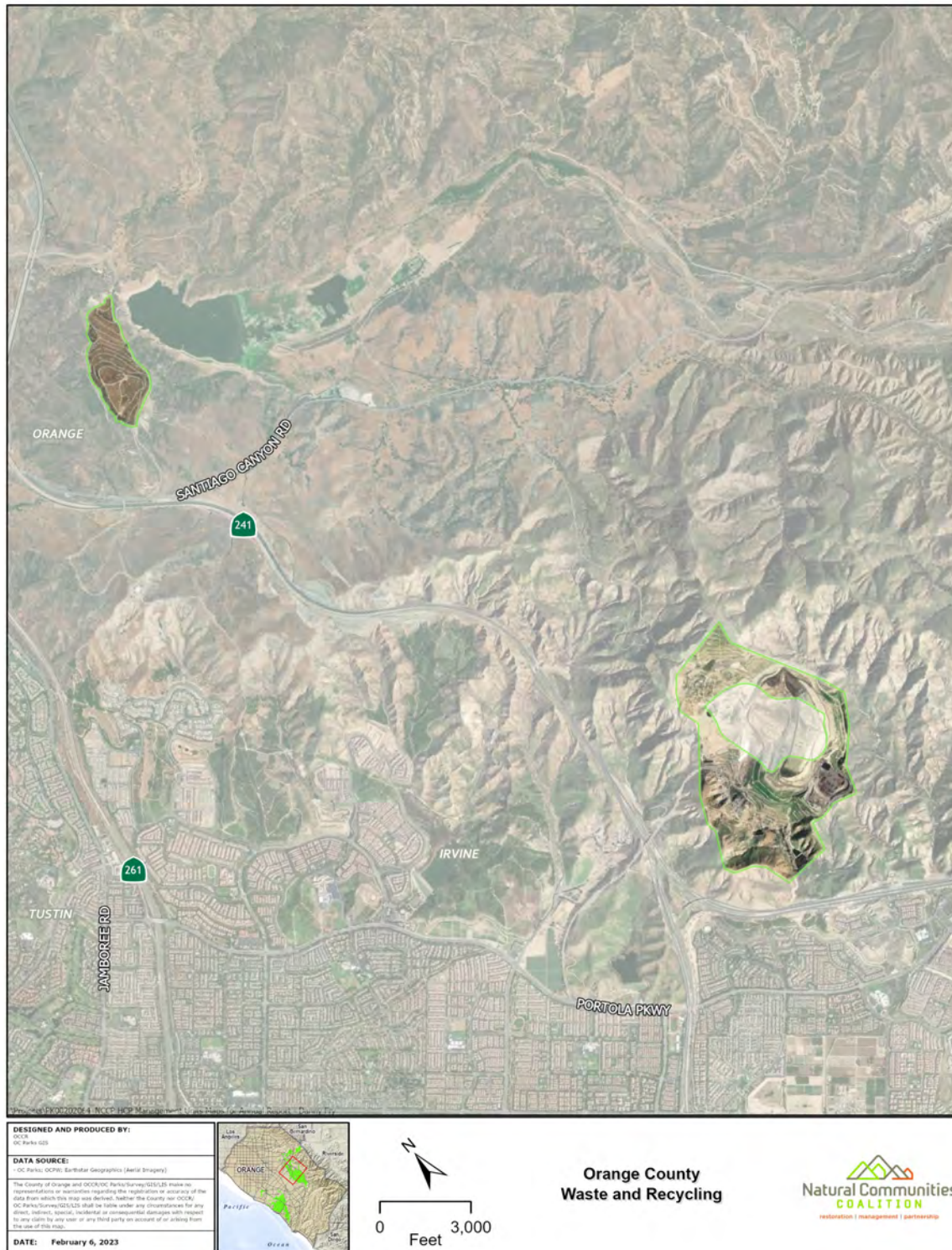
No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No

## 8.5 Orange County Waste and Recycling

### Orange County Waste and Recycling



**Land Manager Name**

OC Waste Recycling

**Reporting Year**

2022

**Park, open space or management unit**

OCWR

**Website**

<https://oclandfills.com/>

**Land owning entity:**

OC Waste & Recycling

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

OC Waste & Recycling's plans for 2023 include the continuation of the Frank R. Bowerman Landfill Phase 8A-1 development , that began in September 2022. This project impacted 5.23 acres of CSS in 2022 and there are 1.48 acres of CSS impacts remaining to be removed in 2023, resulting in a total of 6.71 acres of CSS take for the Phase 8A-1 project.

OCWR will continue to manage the Agua Chinon and Wetland Basin mitigation projects and maintain the open space areas surrounding the landfill in good condition.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Hosted Limited Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
		0	no closures

**d. Is there an official written policy governing special events use of the property?**

No

## 2. Oversight: Property Dedicated Staffing by Position

Position Title	Number of Positions	FTE
Sr. Environmental Resource Specialist	1	full time

## 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Weena Dalby	Sr. Environmental Resource Specialist	weena.dalby@ocwr.ocgov.com	949 262-2433
Aimee Halligan	CEQA & Habitat Program manager, Compliance Support	aimee.halligan@ocwr.ocgov.com	714 834-4107

## B. Visitation

### a. Total number of public visitors to the property based on land owner's estimate:

25

### b. What method(s) is/are used to estimate visitation? Summarize in the box below.

The Frank R. Bowerman Landfill closely tracks all visitors who tour the landfill and only a small number of visitors are invited to visit open space areas on the landfill.

### c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.

The past two years, 2020 and 2021, OCWR hosted 0 visitors in open space areas of OCWR. This was a direct correlation to COVID restrictions on landfill tours. A total of 25 visitors in 2022 OCWR reflects the lifted restrictions on landfill tours and a increased interest in touring habitat restoration projects. Going forward into 2023, the number of open space visitors may increase to 40 people.

### d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.

No new types of visitors or visitor activity occurred in 2022 and management of visitors is not expected to change. All tours are guided and visitor activity is monitored closely.

### e. Were there any special events held for which special use permits were issued for the property?

No

### f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
			0 acres

### C. Monitoring Performed by Land Owner or Land Manager

#### a. Does land owner or its land managing representative monitor trail conditions annually?

Yes

#### i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.

Trails are bladed 1-2 times each year for weed control and to repair erosion rills. A small Caterpillar D5 dozer is used for this purpose. Any weed removal is performed post July, following a breeding bird survey. The Frank R. Bowerman east perimeter trail and north perimeter trail, leading up to Loma Ridge are maintained regularly.

#### ii. Are notes, photographs or other documentation of the monitoring performed archived?

No

### III. Recreation Facility Construction and Maintenance

#### Did any recreational facility construction or maintenance occur or do such facilities occur on the property?

No

### IV. Infrastructure Facility Construction and Maintenance

#### Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?

Yes

---

#### Facility & Location

Frank R. Bowerman Landfill Phase 8A-1 construction

#### Start Date

2022-11-14

#### End Date

2022-12-31

#### Was facility identified in an applicable GDP or RMP?

Yes

#### Coordination with NCC?

Yes

#### Impacts: Habitats or Sensitive Species

Type	Amount (Acres)
Coastal Sage Scrub	6.71

**Nature of Impact: Permanent (# of Acres)**

6.71

**Restoration Actions Taken?**

Yes

**Please describe the actions taken or justify why no such actions were taken**

The 6.71 acres of coastal sage scrub will be deducted from OCWR's css take allotment.

**Documentation: Reports, Notes, Photographs (Provide Reference)**

- [Phase-VIIIA-1-CSS-Removal-Notification-reduced-size.pdf](#)

---

**Facility & Location**

Header Bypass

**Start Date**

2022-08-29

**End Date**

2022-12-31

**Was facility identified in an applicable GDP or RMP?**

Yes

**Coordination with NCC?**

No

**Impacts: Habitats or Sensitive Species**

Type	Amount (Acres)
ruderal vegetation	0.7

**Nature of Impact: Temporary (# of Acres)**

0.2

**Nature of Impact: Permanent (# of Acres)**

0.5

**Restoration Actions Taken?**

No

**Please describe the actions taken or justify why no such actions were taken**

Ruderal/annual grass vegetation was impacted by this landfill header pipeline installation project. No sensitive habitat was disturbed.

**Documentation: Reports, Notes, Photographs (Provide Reference)**

- [connection-to-LCRS.jpg](#)
- [alignment.jpg](#)

**V. Habitat Restoration and Enhancement****Did any habitat restoration or enhancement occur on the property?**

Yes



Land owner

**Provide project name and/or permit number if the project is on behalf of an agency other than the land owner.**

Wetland Basin Mitigation Project

**Mitigation**

Yes

**Riparian Community Acres**

2.27

**Other Restoration Community Acres**

2.07

**Other Restoration Community Type**

Wetlands

**If this is a formal restoration plan, please provide the name:**

Wetland Basin Habitat Mitigation and Monitoring Plan

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2014-07-01

**Anticipated End Date**

2028-07-01

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

No

---

**Project Lead**

Third party

**Mitigation**

Yes

**Riparian Community Acres**

14.91

**Other Restoration Community Acres**

2.15

**Other Restoration Community Type**

upland riparian scrub

**If this is a formal restoration plan, please provide the name:**

Agua Chinon Mitigation Project

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2013-06-01

**Anticipated End Date**

2024-12-31

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Irvine Ranch Conservancy

---

**Project Lead**

Third party

**Mitigation**

Yes

**CSS Community Acres**

7.5

**If this is a formal restoration plan, please provide the name:**

OCWR Project for Habitat Restoration of the BFI Site, Crystal Cove State Park

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2021-01-01

**Anticipated End Date**

2031-02-07

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Irvine Ranch Conservancy

---

**Project Lead**

Land owner

**Provide project name and/or permit number if the project is on behalf of an agency other than the land owner.**

East Flank Landslide Restoration of Loma Ridge

**Mitigation**

Yes

**Other Restoration Community Acres**

0.7

**Other Restoration Community Type**

Bushmallow chaparral

**Coordination with NCC (i.e., discussion and/or plan review)**

No

**Start Date**

2016-01-01

**Anticipated End Date**

2024-01-01

**Performance Monitoring**

No

**Data Archived in GIS Database**

No

**VI. Invasive Species Control**

**A. Plants**

NCC Contractor Results will be summarized based on Cal Flora records.

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

No, not at all

**i. If no or partially, please complete the table below:**

Treatment Methodology	Invasive Plant Name	Habitat(s) Impacted	Area of Treatment (Square Meters)
Synthetic Herbicide	Oncosiphon piluliferum	riparian and ruderal	1000
Synthetic Herbicide	Brassica nigra	CSS, disturbed, ruderal, grassland, chaparral	2000
Synthetic Herbicide	Nicotiana glauca	CSS, disturbed	50
Synthetic Herbicide	Tamarix ramosissima	wetland, riaparian	50

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Surveys were conducted on landscape Quercus agrifolia and Platanus racemosa trees surrounding the Frank R.

Bowerman Landfill office and in Bee Canyon Wash.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

No beetles were observed on oak woodland in riparian, wetland, or sycamore woodland habitats surveyed in December 2022.

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

Yes

#### **Fuel Management Map**

[FRB-Fuel-modification-exhibits-1.pdf](#)

---

#### **Project Number Referenced on the Map**

6.01

#### **Coordination with NCC (i.e., discussion and/or plan review)**

No

#### **Habitat Type(s) in Which Modification Occurred**

- CSS

#### **General Description of Fuel Modification Technique Employed**

- Pruning/thinning

#### **Approximate Area Treated in Acres**

8

#### **Management Action Consistent with Stakeholder Guide (WFMP)**

Yes

#### **New Fuel Management Treatment or Maintenance of Existing**

Maintenance

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Landfill gas recovery facilities
- Access roads
- Monitoring wells and maintenance facilities

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

Continuation of Phase 8A-1 Frank R. Bowerman landfill development 33.712851, -117.699033

**Impact Size**

1.48 acre

**Habitat Type**

CSS

**Identify any project lead(s) (i.e., utility, government department):**

OCWR

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Electric, telephone, cable television and natural gas facilities

**Location where above work is proposed to take place? (GPS approximate center of project location and**

**record below):**

Santiago Canyon/Irvine Regional Park/Irvine Lake 33.789347, -117.726769

**Impact Size**

0.1 acre

**Habitat Type**

CSS and Oak woodland

**Identify any project lead(s) (i.e., utility, government department):**

OCWR, IRWD, Socal Edison

**Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

**Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

Salsola tragus, Oncosiphon piluliferum, Brassica nigra, and Tamarix ramosissima control throughout the landfill, via hand pulling, string trimming, and herbicide.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

**Other invasive species (please describe):**

No beetle control is anticipated at this time. However, potential beetle activity will begin to be monitored with traps in 2023 for green waste entering the Bee Canyon Greenery.

**Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Landfill development Phase 8A-1 construction involves the relocation of diesel tanks on the landfill, requiring the implementation of a fuel modification surrounding the diesel tank pad.

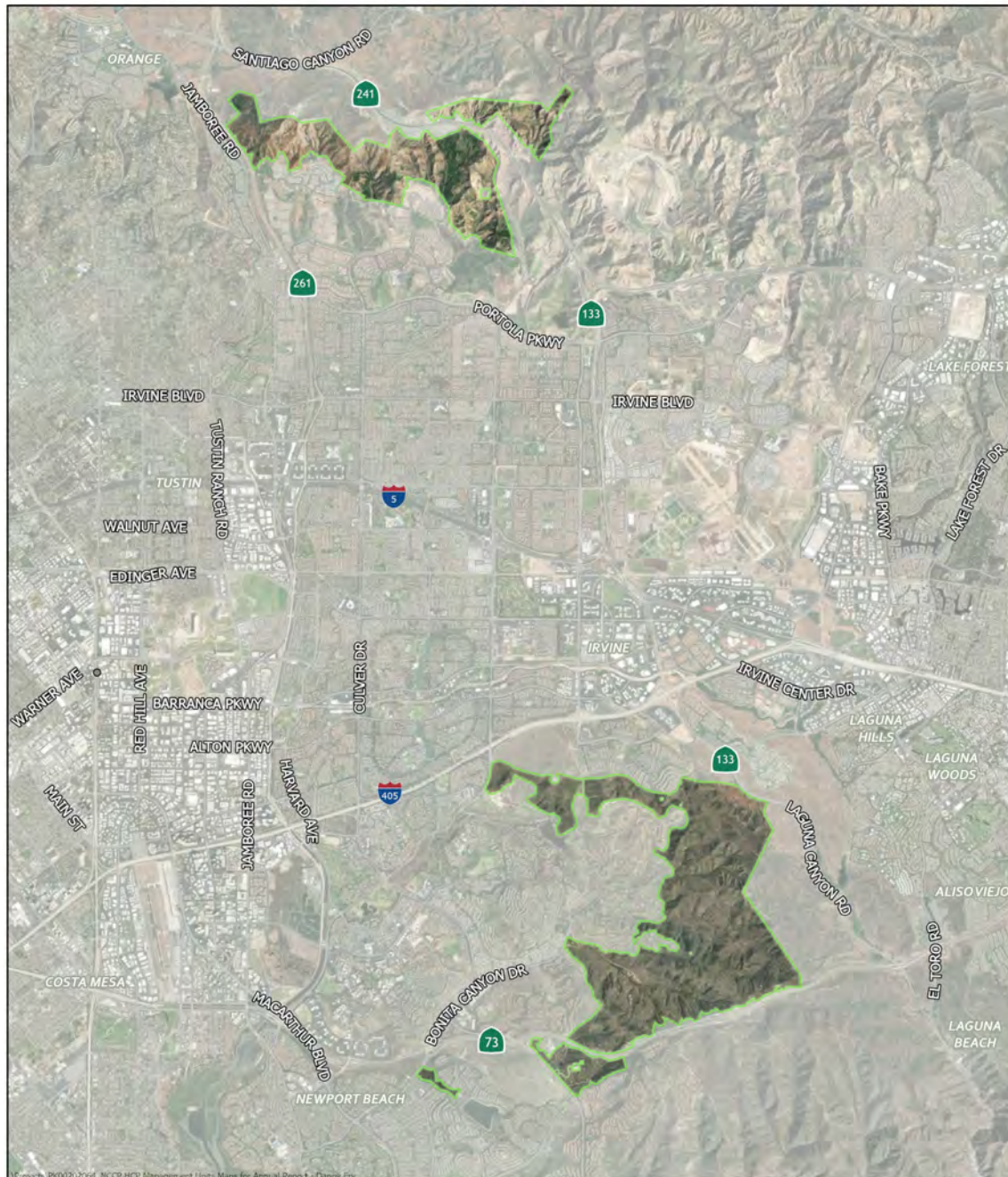
**Maintenance of existing fuel management to be undertaken within the reserve?**

Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

Fuel modification areas surrounding the Frank R. Bowerman Landfill office, warehouse, maintenance yard, and flare station, will continue to be maintained.

# 8.6 City of Irvine Open Space Preserve



<b>DESIGNED AND PRODUCED BY:</b> OCPR OC Parks GIS			<b>City of Irvine</b> Open Space Preserve	
<b>DATA SOURCE:</b> OC Parks, OCPR, Earthstar Geographics (Aerial Imagery) <small>The County of Orange and OCPR/OC Parks/OCGIS make no representations or warranties regarding the registration or accuracy of the data from which this map was derived. Neither the County nor OCPR/OC Parks/OCGIS shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claims by any user or any third party on account of or arising from the use of this map.</small>				
<b>DATE:</b> February 6, 2023				



**Land Manager Name**

Irvine Ranch Conservancy

**Reporting Year**

2022

**Park, open space or management unit**

City of Irvine

**Website**

<https://letsgooutside.org>

**Land owning entity:**

City of Irvine

**Land managing entity if different from above:**

Irvine Ranch Conservancy

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

The City of Irvine Open Space Preserve received approximately 1,701 visitors for guided activities in 2022. However, data from a trail counter placed at West Fork indicate similarly high levels of self-guided access as observed in 2021, which was four-to five times that estimated in 2019.

Regular annual inspections were conducted to assess erosion and vegetation encroachment within the designated trail system. Routine post-winter trail repairs were performed, and regular quarterly vegetation trimming was performed.

Trail width and trailside vegetation quality are monitored yearly, and there has been no significant change in trail width over time. Trail conditions are monitored continuously, and maintenance occurs as needed. Planting and weed control for a habitat restoration and enhancement project in Bommer were conducted in 2022. Surveys and control of both invasive plant species and invasive beetles is ongoing and will continue in 2023.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Both Open and Hosted Limited Access

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
01/01/2022	Rainstorm(s) wet and muddy conditions	7	Full
03/28/2022	Rainstorm(s) wet and muddy conditions	3	Full
11/10/2022	Rainstorm(s) wet and muddy conditions	3	Full
11/19/2022	Red Flag Warning - Extreme Fire Conditions	1	Full
12/11/2022	Rainstorm(s) wet and muddy conditions	6	Full
12/28/2022	Rainstorm(s) wet and muddy conditions	3	Full
12/31/2022	Rainstorm(s) wet and muddy conditions	1	Full

**d. Is there an official written policy governing special events use of the property?**

Yes

**Description of special events use for the property.**

The City is responsible for processing and administration of special use permits, special event permits, and other access permit requests upon review by IRC for compliance with the NCCP and applicable Recreation and Resource Management Plans. These include but are not limited to individual permits for such activities as photography shoots, recreational or exercise programs, special events in Bommer Cattle Camp that extend into the open space, and other access authorized or managed by the City, which will be coordinated with the IRC.

All permits will include access notification requirements for the permit holder which will include notification to the email [access@irconservancy.org](mailto:access@irconservancy.org). After permits have been issued, IRC will coordinate notification of permitted access activities by the permit holder with appropriate City staff, City Permits Office, and Open Space Patrol rangers. IRC maintains and will continue to maintain an email address ([access@irconservancy.org](mailto:access@irconservancy.org)) where advance notification of access to the Preserve by permit holders can be posted and distributed electronically to relevant individuals including City staff.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Parks & Open Space Administrator	1	1
Community Services Manager	1	1
Open Space Ranger	1	1

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Casey Gnad	Parks & Open Space Administrator	cgnadt@cityofirvine.org	949-724-7621
Dave Cardon	Open Space Ranger	dcardon@cityofirvine.org	949-724-7000
Kristin Auer	Community Services Manager	kauer@cityofirvine.org	949-724-7462

### B. Visitation

#### a. Total number of public visitors to the property based on land owner's estimate:

1701

#### b. What method(s) is/are used to estimate visitation? Summarize in the box below.

Activity attendance numbers for guided activities are based on registration data on the [www.letsgooutside.org](http://www.letsgooutside.org) website. The visitor numbers for these activities are provided to landowners on a quarterly basis. The number includes all volunteers and public participants on implemented public and private activities on the Landmarks, including recreation, trail work, restoration, special events, and training.

IRC manages the website [www.letsgooutside.org](http://www.letsgooutside.org), which was created to promote public activities within the Landmarks areas, manage public activity registration, manage volunteer assignments, obtain public participant feedback, and create automated reporting functions for all public and volunteer-only activities. The current system allows for the general public to register for public activities online. After online registration, processing is as follows:

- Waiver created
- Post Activity Report generated by activity Lead confirming attendance of registrants and volunteers.
- Waivers verified and archived in activity database
- Monthly attendance reports are generated which feed into research projects that correlate human access and wildlife movement in the Irvine Ranch Open Space to help the Conservancy make adaptive management decisions.

#### c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.

2022 1,701

2021 2,304

2020 1,184

Note that these numbers are only for guided activities and do not reflect the increase in self-guided access first observed in 2020. Data from a trail counter placed at West Fork indicate a four-to five-fold increase in activity since 2020 compared to 2019 (approximately 50,000 in 2022, 39,524 in 2021, 41,913 in 2020, and 8,046 in 2019).

#### d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.

No

#### e. Were there any special events held for which special use permits were issued for the property?

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
Various Dates	Trail Short-cutting	Black Mustard	Less than 500 sq. ft.

### **C. Monitoring Performed by Land Owner or Land Manager**

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail conditions are monitored regularly throughout the year and after any significant rainfall event (>0.25"), and maintenance occurs within the limits of the trail tread on an as-needed basis. Annual preventative maintenance occurs during the months of September through November and includes, but is not limited to, filling rills and ruts, implementing industry standard natural surface erosion control measures (grade dips, grade reversals, grade nicks, etc.), trail armoring, and sediment removal from existing erosion control features. Vegetation trimming occurs between August 15th and February 15th and is limited to maintenance of the scheduled trail widths per the approved RRMP. No trails were observed to have excessive erosion that required any maintenance beyond the routine anticipated annual post-winter repairs. Additionally, trail width and trailside vegetation quality are measured at fixed points throughout the Reserve. At each point, photos are taken in each direction of the trail and to either side (4 total). To date, no significant change in trail width has been identified.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

Yes

---

**Project Lead**

Third party

**Mitigation**

No

**CSS Community Acres**

14

**If this is a formal restoration plan, please provide the name:**

Bommer Canyon Habitat Restoration Plan

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2018-08-20

**Anticipated End Date**

2027-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Invasive shothole borer is known to occur in the City of Irvine Open Space Reserve, so surveys are conducted annually to determine if management is needed.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this**

**property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
Arroyo Willow	ISHB	Bommer Canyon	13
Arroyo Willow	ISHB	Shady Canyon	1
Black Willow	ISHB	Bommer Canyon	2
Sycamore	ISHB	Bommer Canyon	10
Sycamore	ISHB	Shady Canyon	7

**iii. Did active management for invasive beetles occur on the property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

All infested trees that were surveyed are of low-to-moderate severity without dieback, so no management action was recommended.

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

Trail condition monitoring is being revised to capture larger trail segments and to incorporate drone imagery to provide more information. There is ongoing long-term vegetation monitoring as well as monitoring and research related to invasive tree pests and western pond turtle.

**Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

**Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

IRC will continue to monitor and treat priority invasive plants and report the results in Calflora.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

**Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

IRC will continue to monitor ISHB in Bommer Canyon and Shady Canyon and recommend action as needed.

**Other invasive species (please describe):**

Invasive amphibians crayfish are monitored as part of annual western pond turtle population assessments.

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No



## 8.7 City of Newport Beach

### Buck Gully Preserve



**Land Manager Name**

Irvine Ranch Conservancy

**Reporting Year**

2022

**Park, open space or management unit**

Newport Beach

**Website**

<https://letsgooutside.org>

**Land owning entity:**

City of Newport Beach

**Land managing entity if different from above:**

Irvine Ranch Conservancy

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

The Buck Gully trail received approximately 68,201 visitors in 2022 based on trail counter data and participation in guided activities.

Regular annual inspections were conducted to assess erosion and vegetation encroachment within the designated trail system. Routine post-winter trail repairs were performed, and regular quarterly vegetation trimming were performed. Planned maintenance for 2023 will include additional trail-tread hardening.

In 2022, planting and maintenance activities were performed to restore the illegal trail cut that occurred in 2019. Site preparation continued on a 1.5-acre restoration and a 1.4-acre site.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

Yes

**Description of closure conditions and procedures.**

Cancellation of public activities and temporary closure of access to trails and roads will occur consistent with the

applicable RRMPs, NCCP terms and conditions, and other deed restrictions and in connection with significant events, including but not limited to: National Weather Service Red Flag Warnings (or other high wind/high fire-risk periods); active fire; wet or muddy conditions; earthquake; damage due to inappropriate or unauthorized use; or any other event deemed a threat to the Buck Gully Reserve or public safety.

IRC will be responsible for monitoring conditions in the Buck Gully Reserve, facilities, and trails, and will use its best judgment, experience, and knowledge of Best Management Practices to determine when the Reserve or parts of the Reserve should be temporarily closed (including consideration of whether adjacent open space areas are closed or open). The Conservancy will immediately inform the designated City staff, and the Park Patrol via email or text message of the need to temporarily close and re-opening certain areas. The City Public Safety Department and Park Patrol may also initiate closure of the Buck Gully Reserve or facilities for: police investigations; search and rescue; and other special events related to public safety.

The City's responsibilities regarding temporary closure and re-opening of trails and/or facilities includes deploying City staff to close or re-open the trailheads, placing/removing temporary closure barriers at trail entrances located at 5th and Poppy Avenues, along San Joaquin Hills Road and any other mutually agreed upon access locations, and assisting the Conservancy in executing the temporary closure when needed and requested. The Conservancy will supply temporary closure signs/barriers to be used by Park Patrol staff during temporary closures. Public programs led by the Conservancy that are cancelled due to trail conditions will have a cancellation notice posted with the activity on the website (see Communications Section for discussion of the website) and also emailed to all registered participants. The City will enforce terms and conditions of each temporary closure through its Park Patrol and Public Safety personnel.

**ii. Has the policy been officially modified since the previous year's annual report?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
01/01/2022	Rainstorm(s) wet and muddy conditions	17	Full
03/28/2022	Rainstorm(s) wet and muddy conditions	5	Full
09/10/2022	Rainstorm(s) wet and muddy conditions	1	Full
11/08/2022	Rainstorm(s) wet and muddy conditions	3	Full
11/19/2022	Red Flag Warning - Extreme Fire Conditions	1	Full
12/11/2022	Rainstorm(s) wet and muddy conditions	12	Full
12/28/2022	Rainstorm(s) wet and muddy conditions	3	Full
12/31/2022	Rainstorm(s) wet and muddy conditions	1	Full

**d. Is there an official written policy governing special events use of the property?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Recreation and Senior Services Director	1	1
Recreation Supervisor	1	.9
Park Patrol Ranger	1	.25

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Sean Levin	Superintendent of Recreation	slevin@newportbeach.gov	949-644-3149

## B. Visitation

### a. Total number of public visitors to the property based on land owner's estimate:

68201

### b. What method(s) is/are used to estimate visitation? Summarize in the box below.

Trail counter data indicated there were 67,872 visitors in addition to 329 participants in Irvine Ranch Conservancy (IRC) volunteer-led activities (see below).

IRC manages the website [www.LetsGoOutside.org](http://www.LetsGoOutside.org), which promotes public access activities in the Buck Gully Reserve and Irvine Ranch Natural Landmarks, manages public activity registration, manages volunteer assignments, obtains public participant feedback, and creates automated reporting functions for activities. The registration system that IRC maintains on behalf of the City allows the public to easily find and sign up for offered activities online. Once an individual completes registration for an activity, they receive an automated confirmation e-mail with a map to the location and additional instructions specific to the program they have signed up for (clothing, trail conditions, etc.). The registered individual's information is also auto-populated into a Release of Liability Waiver that the volunteer or staff member leading the activity can print in advance of the activity. The pre-printed document is used both as the sign-in sheet and the Release of Liability Waiver, streamlining the sign-in process and allowing minimal time before the event can depart. Information is collected and utilized in accordance with the City of Newport Beach Personal Information Privacy Act.

After the activity, the activity leader returns to the website to fill out an online post-activity report form. This form confirms each participant's attendance in the database. Website functionality includes activity reports that are used to provide quarterly attendance reports, volunteer service hours, numbers of volunteers, number of activities, and other information to the City as well as for NCCP reporting. Guided activity visitor numbers are reported to the landowner on a quarterly basis.

### c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.

2022 68,201

2021 66,520

2020 53,560

### d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of

drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.

No. Presence of e-bike users on the one-way trail system was noted in 2020.

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
None			

### **C. Monitoring Performed by Land Owner or Land Manager**

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Trail width and trailside vegetation quality are measured at fixed points. At each point, photos are taken in each direction of the trail and to either side (4 total). To date, no significant change in trail width has been identified. Additionally, qualitative trail monitoring occurs throughout the year and after any significant rainfall event (>.25").

Trail damage is reported to IRC's Infrastructure team, and issues are addressed as soon as possible. Trails are monitored on a regular basis throughout the year, and maintenance occurs within the limits of the trail-tread on an as-needed basis. Annual preventative maintenance occurs during the months of September through November. Maintenance includes, but is not limited to, filling rills and ruts and implementing industry-standard natural surface erosion control measures (grade dips, grade reversals, grade nicks, etc.). Trail armoring continues to be a key maintenance component for the year-round wet conditions due to upslope runoff. Vegetation trimming occurs between August 15th and February 15th and is limited to maintenance of the scheduled trail widths per the approved RRMP. No trails were observed to have excessive erosion that required any maintenance beyond the routine anticipated annual post-winter repairs.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

## V. Habitat Restoration and Enhancement

**Did any habitat restoration or enhancement occur on the property?**

Yes

---

**Project Lead**

Third party

**Mitigation**

Yes

**CSS Community Acres**

3.1

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2020-02-01

**Anticipated End Date**

2029-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

**If this is a formal restoration plan, please provide the name:**

Buck Gully CSS Restoration - Sandcastle and Bobcat Tracts, Buck Gully Unauthorized Trail Restoration and Maintenance Project - Isabella, Buck Gully Unauthorized Trail Restoration and Maintenance Project - Castlecove

---

**Project Lead**

Third party

**Mitigation**

No

**CSS Community Acres**

1.5

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2020-11-01

**Anticipated End Date**

2023-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

---

**Project Lead**

Third party

**Mitigation**

No

**CSS Community Acres**

1.4

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2021-01-08

**Anticipated End Date**

2028-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

Yes

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Invasive shothole borer is known to occur in the Buck Gully Reserve, so surveys are conducted annually to determine if management is needed.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

Infested Tree Species	Invasive Beetle Name	Infested Geographic Area of the Property	# of Infested Trees
Arroyo Willow	ISHB	Buck Gully	11
Red Willow	ISHB	Buck Gully	1
Sycamore	ISHB	Buck Gully	1

**iii. Did active management for invasive beetles occur on the property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

All infested trees that were surveyed are of low-to-moderate severity without dieback, so no management actions were recommended. The numbers include possibly infested trees whose status could not be confirmed.

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**



No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

Yes

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

Trail condition monitoring is being revised to capture larger trail segments and to incorporate drone imagery to provide more information.

**Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

Yes

---

**What is the nature of the anticipated construction or maintenance project? (Check all that apply)**

- Trails

**Location where above work is proposed to take place? (GPS approximate center of project location and record below):**

Approximately 1,500 lineal feet of the existing trail-tread within the easter portion of the Buck Gully trail located between the coordinates from 33.603010, -117.842368 through 33.603003, -117.845900 Multiple locations with historical occurrences of post-rain excessive dry-out periods will have trail tread-hardening implemented throughout an approximate 1,500 lineal foot area of the eastern section of the Buck Gully Trail. Hardening will include excavation of the existing trail surface followed by a combination of buttressing with rip rap, gravel, C-mix, and or "True-Grid" composite turf mat. The tread-hardening will provide a more suitable all-weather condition with better stability and shorter post-rain dry-out periods.

**Impact Size**

Approximately .14 acre of natural surface soil. No vegetation impacts.

**Habitat Type**

N/A

**Identify any project lead(s) (i.e., utility, government department):**

Adam Maywhort Director, Planning & Infrastructure Irvine Ranch Conservancy

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

## **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

IRC will continue to monitor and treat priority invasive plants and report the results in Calflora.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

Yes

**Please explain the invasive beetle control actions to be undertaken by land owner or contractor.**

IRC will continue to monitor ISHB in Buck Gully and recommend action as needed.

## **Fuel Management Activities**

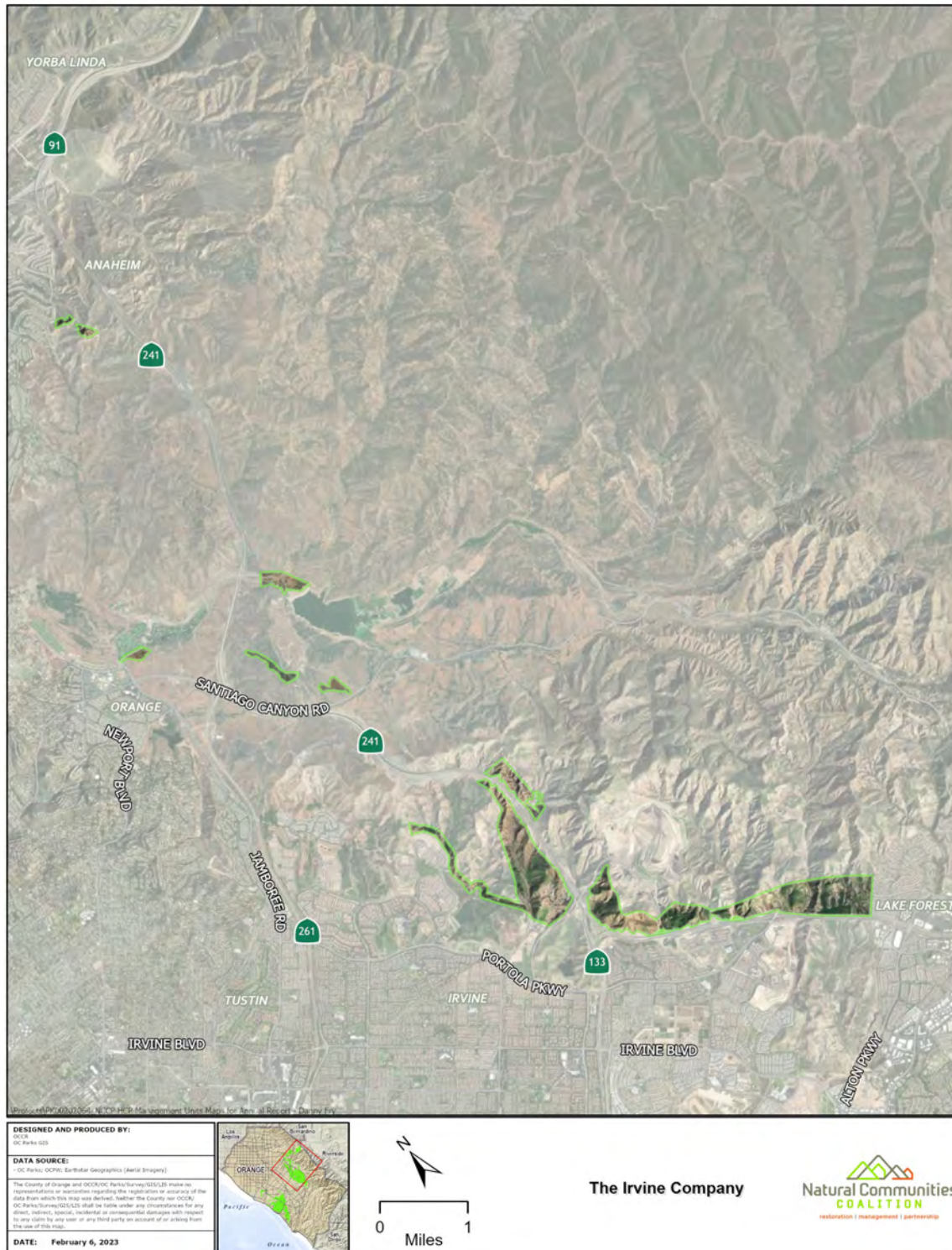
**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No

# Irvine Company



**Land Manager Name**

Irvine Ranch Conservancy

**Reporting Year**

2022

**Park, open space or management unit**

Irvine Company

**Website**

<https://letsgooutside.org/>

**Land owning entity:**

Irvine Company (Irvine Company is the third party in some instances - see below)

**Land managing entity if different from above:**

Irvine Ranch Conservancy

**I. Executive Summary****Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

The Irvine Company has continued to comply fully with its resource agency permit conditions through ongoing maintenance, monitoring, and reporting on all of its habitat mitigation sites within the Reserve. Notwithstanding post-Silverado Fire (2020) and drought-related effects, it also continues to meet the performance standards as required in each of the mitigation monitoring years and will continue to monitor them until performance standards are achieved. The Company's dedication to habitat restoration, specifically riparian habitat, within the Reserve is evident in the sites becoming fully established habitat for special-status species. No habitat impacts, fuel management, or public access occurred in 2022, and no significant changes or modifications are planned in 2023, aside from extended performance monitoring in areas affected by the Silverado Fire.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

No Public Access

**b. Is there an official written policy governing property closure conditions and procedures?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
-----------------	--------------------	----------------------------	-------------------------

N/A			
-----	--	--	--

**d. Is there an official written policy governing special events use of the property?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
N/A	N/A	N/A

**3. Property Supervisor Contact Information**

Name	Title	Email	Phone
Irvine Ranch Conservancy		4727 Portola Parkway Irvine CA 92620	714-508-4757

**B. Visitation**

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

N/A

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

N/A

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

None

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A			

**C. Monitoring Performed by Land Owner or Land Manager**

**a. Does land owner or its land managing representative monitor trail conditions annually?**

N/A

### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

Yes

---

#### **Project Lead**

Land owner

**Provide project name and/or permit number if the project is on behalf of an agency other than the land owner.**

The Irvine Co. is both the land owner and third party.

#### **Mitigation**

Yes

#### **Riparian Community Acres**

7.38

**If this is a formal restoration plan, please provide the name:**

Planning Area 1 Habitat Mitigation and Monitoring Plan, dated Oct 2015

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

#### **Start Date**

2015-01-01

#### **Anticipated End Date**

2023-12-31

#### **Performance Monitoring**

Yes

#### **Data Archived in GIS Database**

Yes

#### **Data Manager**

Yi-Chin Fang

---

**Project Lead**

Third party

**Mitigation**

Yes

**CSS Community Acres**

3.21

**Riparian Community Acres**

1.26

**Woodland Community Acres**

0.34

**If this is a formal restoration plan, please provide the name:**

HMMP: OCTA Agua Chinon Subwatershed

**Coordination with NCC (i.e., discussion and/or plan review)**

Yes

**Start Date**

2013-01-01

**Anticipated End Date**

2024-06-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

Yes

**Data Manager**

Yi-Chin Fang

**VI. Invasive Species Control****A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Partially

**i. If no or partially, please complete the table below:**

Treatment Methodology	Invasive Plant Name	Habitat(s) Impacted	Area of Treatment (Square Meters)
Other	Invasives were treated as part of the HMMP annual maintenance within the 7.43 acres and not conducted as part of a widespread invasive treatment control plan.		

## B. Beetles

### 1. Were active surveys conducted on the property for invasive beetles?

No

#### Please explain why or why weren't active surveys conducted on the property for invasive beetles.

Invasive beetles have not previously been observed, and suitable habitat is limited.

### 2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?

No

#### Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:

Invasive beetles have not been observed to occur on the property.

## VII. Fire Management Activities

### Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.

#### A. Fuel Management

#### Did any fuel management projects occur on the property?

No

## VIII. Work Plan

### Proposed Work Plan for Use, Monitoring and Management

#### Property closure policy: new or amended?

No

#### Property special use policy: new or amended?

No

#### GDP and/or Master Plan: new or amended?

No

#### Change in methodology for estimating property visitor use?



No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

Yes

**If yes, please fill out the following**

<b>Project Name</b>	<b>Habitat Type</b>	<b>Approximate Location</b>	<b>Area (acres)</b>
Ongoing riparian maintenance and monitoring	Riparian	Orchard Hills NH3 & NH4	7.43

**Non-mitigation habitat restoration initiated?**

No

### **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

IRC will continue to monitor and treat priority invasive plants and partially report the results in Calflora.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

### **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

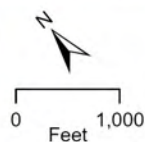
No

## 8.9 University of California, Irvine

### Ecological Preserve



<b>DESIGNED AND PRODUCED BY:</b> DCCB DC Parks GIS	
<b>DATA SOURCE:</b> DC Parks, DCCB, Earthstar Geographics (Aerial Imagery)	
<small>The County of Orange and DCCB/DCCB Parks/Survey/SES/SES shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claims by any user or any third party on account of or arising from the use of this map.</small>	
<b>DATE:</b> February 6, 2023	



University of California, Irvine  
Ecological Preserve



**Land Manager Name**

UC Irvine

**Reporting Year**

2022

**Park, open space or management unit**

Ecological Preserve

**Website**

<https://ecopreserve.ucnrs.org/>

**Land owning entity:**

University of California Irvine

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

Activities at the UCI Ecological Preserve in 2022 included: pedestrian trail use by recreational users, management of invasive plant species and a tussock moth outbreak, research and teaching, stewardship of the fuel modification demonstration areas, and monitoring of White tailed kites, wildlife cameras, and monthly bird surveys.

UCI-Nature was awarded a \$61,200 grant from the California Coastal Conservancy to expand the UCI Wildfire Safety and Healthy Habitats Restoration Project along its border with University Hills. The contract was initiated December 2022. This project was initiated with funds from the Natural Communities Coalition in 2018.

UCI-Nature hosted its first Bioblitz at the Ecological Preserve in April 2022. Several students and community members participated in this outreach activity, which helped to promote the preserve and expand our volunteer list. Invasive plant species control is primarily implemented by a small group of resident volunteers from the University Hills community that conduct weekly patrols. Staff time is limited, but supplemental spot control with herbicide is conducted as well.

A substantial increase in damage was observed winter-spring 2021-2022 on populations of *Eriogonum fasciculatum* by the tussock moth (*Orgyia vestuta*). Because this species is the dominant coastal sage scrub species on the reserve, the impact to the overall scrub habitat was substantial. Denuding of vegetation by this moth on *E. fasciculatum* has been observed over the years in the past, but the substantial increase in area from 2020-2022 was noted independently by several people. UCI staff mapped and sprayed the most active areas where the caterpillars were still active, but it was towards the end of their season. Entomologists informed us the females are flightless which may explain why we observed a “front” of activity. We will continue to monitor its impact in 2022-2023, but with limited staff resources a full scale study and control will likely not be feasible. An assessment for restoration of this species in heavily impacted areas is needed.

Much of the research and teaching conducted at the Ecological Preserve was implemented at a long-term restoration and rainfall manipulation field experiment “Drought-net”. UCI Nature maintains the infrastructure and establishment of plants and facilitates research and class use of the site. Multiple graduate students conducted research at the site and classes from the Masters in Conservation and Restoration Science and Introduction to Ecology utilized the site for their instruction.

Sea and Sage Audubon continued monthly bird surveys along set routes and enter data into ebird.

UCI Nature is also working with volunteers to maintain a camera trap at the culvert at the base of Research Park drainage leading to the Bonita Canyon corridor.

White-tailed kites have been observed nesting on the UCI campus and open space for over 50 years. Numbers of

kite observations and nests have declined considerably in the county based on monitoring records over the past 20 years or so (data Pete Bloom, Scott Thomas). In recent years, kites have been observed nesting consistently along a row of eucalyptus bordering of the Ecological Preserve and University Hills and maintaining pairs is a conservation priority due to their decline elsewhere. Tree trimming and other disturbances such as harassment by crows and further development is a concern. In 2021 UCI Nature implemented a monitoring program with volunteers to track their activity with respect to hunting and nesting within a grid system superimposed on the Preserve. In addition, UCI Nature worked with University administrators to fund a study on White-tailed Kites in an effort to summarize and document this pattern and investigate their foraging and nesting preferences with detailed observations and radio transmitters. In 2022 the study was initiated with a literature review, purchasing of transmitters, and gathering and summarizing existing data. In addition, a Capstone Team with the UCI Masters in Conservation and Restoration Program are working on this project for their team thesis project, enhancing the study scope and thoroughness.

## II. Use Policies, Monitoring and Management

### A. Use Policies, Procedures and Oversight

#### 1. Use Policies and Procedures

##### a. Public Access Description for the Property

Open Access (see website above)

##### b. Is there an official written policy governing property closure conditions and procedures?

No

##### c. In the table provided below please identify the number of times the property was closed and the circumstances

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
1/01/22	none	0	0

##### d. Is there an official written policy governing special events use of the property?

No

#### 2. Oversight: Property Dedicated Staffing by Position

Position Title	Number of Positions	FTE
Executive Director	1	.25
Research & Land Management Specialist	1	.1

#### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Megan Lulow	Executive Director	mlulow@uci.edu	949-500-8754

## B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

35000

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

Rough estimation based on asking a handful of frequent resident users and staff observations. Estimates were broken down by week day use and weekend use and then summed.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

2020- 39,000

2021- 35,000

2022- 35,000

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No.

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
1/01/2022	none	none	0

## C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Our trail monitoring is not systematic and simply involves staff walking the trails and noting changes, such as new spurs or the effectiveness of closures. There was an effort to close spur trails about 2019 by adding signs and eagle scouts roping lookout points. This was pretty effective, but not entirely.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

No

## III. Recreation Facility Construction and Maintenance

**Did any recreational facility construction or maintenance occur or do such facilities occur on the**

**property?**

No

#### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

#### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

#### **VI. Invasive Species Control**

##### **A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

Yes, completely

##### **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

No

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

The trees infested with beetles are in three areas of NCCP owned by UCI: 1) a riparian gully dominated by eucalyptus in the Ecological Preserve, 2) a riparian area of Research Park west of the Ecological Preserve and along the 73 where the wildlife culvert occurs (included within attachment of 2017 survey), and the other is along San Diego Creek adjacent to the UCI San Joaquin Marsh and San Joaquin Landfill. Surveys were conducted in 2017 marking uninfested and lightly infested trees in the Research Park area, and observed, but not surveyed in the other two areas. Another survey would be helpful to identify change of status in previously uninfested or lightly infested trees and for the other unsurveyed areas, but we are short on staff time to do this.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

Yes

**i. If yes, identify the species:**

ISHB

**ii. Please complete the table limiting your responses to species occurrences or upload a attachment outlining the specifics below:**

<b>Infested Tree Species</b>	<b>Invasive Beetle Name</b>	<b>Infested Geographic Area of the Property</b>	<b># of Infested Trees</b>
sycamore	PSHB	see attachment	data on uninfested or lightly infested trees in search area, others were infested

**iii. Did active management for invasive beetles occur on the property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

Attached is a summary of a survey conducted among UCI riparian areas, one of which is within the NCCP. Since then, infested trees have been observed in two other areas owned by UCI within the NCCP. We had engaged with Akif for treatment options, but have had insufficient funds to implement them. Another survey would be good to conduct at this time prior to treatment.

**Optional: upload a concise attachment regarding species occurrences, invasive beetle names, infested area and number of infested trees and actions taken or justify why no such actions were taken:**

[Site-aerials-cover-estimate-raw-data-28.sep2017.pdf](#)

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

Yes

#### **Fuel Management Map**

[Final-Report-Fuel-Modification-Zones.pdf](#)

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**



No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

Yes

**If yes, please enter additional details regarding the research pertaining to resources addressed by NCCP/HCP:**

1. Research and maintenance continued in the Drought Net climate change and restoration study at the Ecological Preserve in 2022. Herbaceous forbs were added to the plots and data were collected from multiple labs and classes including: Sarah Kimball, Center for Environmental Biology, UCI Nature, Claudia Czimczik (soils), Masters in Conservation and Restoration Science courses, Celia Faiola (volatile emissions), Kathleen Treseder (fungi).
2. Monitoring of kite nests and behavior across the UCI Ecological Preserve and San Joaquin Marsh continued in 2022. Just outside the Preserve a series of mowed and unmowed annual grassland plots were established to see if the kites preferentially use mowed plots.
3. Pollination Ecology of Sage Scrub and Chaparral; University of California, Riverside; Christopher Allen, Erin Rankin, David Rankin, Mark Swenson, Magda Argueta
4. Vouchered checklist of the plants of the UCI Ecological Preserve; University of California, Irvine; Rebecca Crowe, Peter Bowler
5. Plant Inventory of the UC Irvine Ecological Preserve; Michael Simpson, San Diego State University (CSU); F. M. Roberts Publications; University of California, Irvine Rebecca Crow
6. Genetic and Phenotypic Variation in California Sagebrush Across Southern California; California State University (CSU), San Bernardino; Dave Smith.
7. Sea and Sage Audubon continued monthly bird surveys along set routes and enter data into ebird.
8. UCI Nature is also working with volunteers to maintain a camera trap at the culvert at the base of Research Park drainage leading to the Bonita Canyon corridor.

**Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

**Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

Yes

**If yes, please fill out the following**

Project Name	Habitat Type	Approximate Location	Area (acres)
Landfill Restoration	Ruderal	San Joaquin Landfill	5
Wildfire Safety and Healthy Habitats Expansion	annual grassland	border of Ecological Preserve	1.4

**Additional Information:**

UCI Nature along with the Office of Physical and Environmental Planning are planning a restoration project of the San Joaquin Landfill in 5 acres increments. We will continue to work on a conceptual plan and plan to share drafts with partners. Vegetation mapping and sampling of soils will occur.

**Invasive Species Control****Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

The Preserve and parts of San Diego Creek will be included in NCC's early detection program. We are coordinating with partners on mapping and control of invasive species along the west/south side of Reach 1 of San Diego Creek, but perennial pepperweed is extensive and we don't know that volunteers and staff will be able to get to all populations on UCI property. University Hills volunteer group plans to continue their patrols of the Ecological Preserve into 2023.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

**Other invasive species (please describe):**

We will monitoring and try to control for the tussock moth if they are observed in substantial numbers again.

**Fuel Management Activities****Installation of new fuel management to be undertaken within the reserve?**

Yes

**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

1.4-acre grassland restoration expansion. University will expand weed management and restoration efforts beyond existing pilot plots to suppress invasive species and establish a diverse community of mow-tolerant native forbs and grasses. Where appropriate, cacti will also be used to increase fuel moisture and provide additional habitat for the coastal cactus wren.

Eucalyptus will be thinned within a 0.7-acre dense stand to create defensible space within

100 ft of adjacent residences. This will reduce immediate risk of wildfire to the adjacent community while helping to

transition this area towards native oak-sycamore woodland.

**Maintenance of existing fuel management to be undertaken within the reserve?**

Yes


**Please explain the maintenance of existing fuel management to be undertaken within the reserve.**

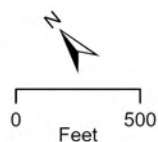
We will continue to maintain and monitor the existing footprint of the wildfire safety and healthy habitats demonstration project and will expand the weed control area (1.4 ac) as part of site preparation for planting and seeding in 2023 and 2024. Thinning of eucalyptus will likely not be implemented until 2024.

## 8.10 Irvine Ranch Water District

### San Joaquin Reservoir



<b>DESIGNED AND PRODUCED BY:</b> DCWR DC Parks GIS	
<b>DATA SOURCE:</b> DC Parks GIS; Earthstar Geographics (Aerial Imagery)	
<small>The County of Orange and DCWR/DC Parks/DCGIS make no representations or warranties regarding the registration or accuracy of the data from which this map was derived. Neither the County nor DCWR, DC Parks/DCGIS/DCGIS shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.</small>	
<b>DATE:</b> February 6, 2023	



Irvine Ranch Water District  
San Joaquin Reservoir



**Land Manager Name**

Irvine Ranch Water Dist

**Reporting Year**

2022

**Park, open space or management unit**

San Joaquin Reservoir

**Website**

<http://www.irwd.com>

**Land owning entity:**

Irvine Ranch Water District

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

There were no major management efforts completed this year.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

No Public Access

**b. Is there an official written policy governing property closure conditions and procedures?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
01/01/2022	Private Property	365	full

**d. Is there an official written policy governing special events use of the property?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Natural Resources Manager	1	

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Ian Swift	Natural Resources Manager	swift@irwd.com	(949)433-5837

### B. Visitation

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

There is no public visitation

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

There is no public visitation

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

There is no public visitation

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
01/01/2020	No Impacts noted		

### C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

N/A

### III. Recreation Facility Construction and Maintenance

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

#### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

#### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

#### **VI. Invasive Species Control**

##### **A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

No

##### **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

No

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

No surveys were conducted based on type/usage of site.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

No beetles have been surveyed at site.

#### **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

##### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

### **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

No

**Invasive beetle control actions to be undertaken by land owner or contractor?**



No

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No

## 8.10 Irvine Ranch Water District

### Syphon Reservoir Preserve



**Land Manager Name**

Irvine Ranch Water Dist

**Reporting Year**

2022

**Park, open space or management unit**

Syphon Reservoir Preserve

**Website**

<https://www.irwd.com>

**Land owning entity:**

Irvine Ranch Water District

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

No new management practices have occurred this year.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

No Public Access

**b. Is there an official written policy governing property closure conditions and procedures?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
01/01/2022	Not open for public	365	full

**d. Is there an official written policy governing special events use of the property?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Natural Resources Manager	1	

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Ian Swift	Natural Resources Manager	swift@irwd.com	(949)433-5837

### B. Visitation

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

No visitors are allowed at this location.

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

Total visitors is same as last year.

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

No.

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
	No impact		

### C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

N/A

### III. Recreation Facility Construction and Maintenance

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

#### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

#### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

#### **VI. Invasive Species Control**

##### **A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

No

##### **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

No

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

No surveys were conducted due to the type of premises.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

No surveys deemed necessary due to type of premises.

#### **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

##### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

### **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

No

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No



## 8.11 Transportation Corridor Agencies

### Bonita Creek





**Reporting Year**

2022

**Park, open space or management unit**

Bonita Creek

**Website**

<https://www.thetollroads.com>

**Land owning entity:**

Transportation Corridor Agencies

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

Bonita Creek Channel work plan for 2023 includes: as needed exotic species and trash removal and minimal maintenance along the maintenance path.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

Open Access (see website above)

**b. Is there an official written policy governing property closure conditions and procedures?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
N/A			

**d. Is there an official written policy governing special events use of the property?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
		257

Chief Capital Programs Officer	1	Yes
Manager, Environmental Planning	1	Yes
Environmental Analyst	1	Yes

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Stephanie Blanco	Chief Capital Programs Officer	sblanco@thetollroads.com	949-754-3454
Doug Feremenga	Manager, Environmental Planning	dferemenga@thetollroads.com	949-754-3496
Virginia Gomez	Environmental Analyst	vgomez@thetollroads.com	19492361632

## B. Visitation

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

N/A

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

N/A

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

N/A

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
N/A			

## C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

Staff does quarterly monitoring of the path. Staff observations note only as needed maintenance along the path. Some trimming of overgrown vegetation along the path is done, as necessary, to ensure a clear path for users.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

**III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

**IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

**V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

**VI. Invasive Species Control**

**A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

No

**B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

No

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

While no active surveys were completed, staff conducts visual inspections during routine monitoring activities of the site and is not aware of any beetle infestation in the area.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

N/A

## **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

### **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

## **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

**Additional Information:**

N/A

## **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

Exotic species removal of eucalyptus saplings and pampas grass seedlings performed if needed.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

**Other invasive species (please describe):**

N/A

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

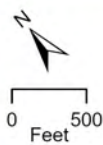
No

## 8.11 Transportation Corridor Agencies

### Coyote Canyon



<b>DESIGNED AND PRODUCED BY:</b> DCCRA DC Parks GIS	
<b>DATA SOURCE:</b> DC Parks GIS; Aerial Imagery (Aerial Drapers)	
<small>The County of Orange and DCCRA/DC Parks/DCGIS make no representations or warranties regarding the registration or accuracy of the data from which this map was derived. Neither the County nor DCCRA/DC Parks/DCGIS shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claims by any user or any third party on account of or arising from the use of this map.</small>	
<b>DATE:</b> February 6, 2023	



Transportation Corridor Agencies  
Coyote Canyon



**Land Manager Name**

Transportation Corridor Agencies

**Reporting Year**

2022

**Park, open space or management unit**

Coyote Canyon

**Website**

<https://www.thetollroads.com>

**Land owning entity:**

County of Orange

**Land managing entity if different from above:**

Transportation Corridor Agencies

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

Coyote Canyon had no maintenance activities in 2022, and no plans for maintenance activities in 2023.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

No Public Access

**b. Is there an official written policy governing property closure conditions and procedures?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
N/A			

**d. Is there an official written policy governing special events use of the property?**

No

## 2. Oversight: Property Dedicated Staffing by Position

Position Title	Number of Positions	FTE
N/A		

## 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Stephanie Blanco	Chief Capital Programs Officer	sblanco@thetollroads.com	949-754-3454
Doug Feremenga	Manager, Environmental Planning	dferemenga@thetollroads.com	949-754-3496
Virginia Gomez	Environmental Analyst	vgomez@thetollroads.com	949-754-3487

## B. Visitation

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

N/A

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

N/A

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

N/A

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
	N/A		

## C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

N/A



### **III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

### **IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

### **V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

No

### **VI. Invasive Species Control**

#### **A. Plants**

**NCC Contractor Results will be summarized based on Cal Flora records.**

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

No

#### **B. Beetles**

**1. Were active surveys conducted on the property for invasive beetles?**

No

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

N/A. The habitat isn't expected to support beetles.

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

N/A

### **VII. Fire Management Activities**

**Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.**

## **A. Fuel Management**

**Did any fuel management projects occur on the property?**

No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

## **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

No

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No

# 8.12 Southwest Resource Management Association

## Portola South



**Reporting Year**

2022

**Park, open space or management unit**

Portola South

**Land owning entity:**

Southwest Resource Management Association (SRMA)

**I. Executive Summary**

**Provide a brief summary of the highlights relating to habitat impacts, restoration, fuel management and public access, as well as significant changes or modifications planned next year.**

Minor impacts to habitat have occurred due to ongoing mountain bike trail building. SRMA has an active program of trail decommission and preventing future trails. The SRMA ranger provides regular patrols of the property and the only public access is the old Edison walking trail, which is not an official trail maintained by SRMA since the property has been set aside as a natural area with little or no public access under the terms of conservation. There is no fuel management on the property and there has been only one restoration project on the site on a 4-acre section that helped to increase coastal sage scrub and cactus habitat for the benefit of CAGN and cactus wren.

**II. Use Policies, Monitoring and Management****A. Use Policies, Procedures and Oversight****1. Use Policies and Procedures****a. Public Access Description for the Property**

No Public Access

**b. Is there an official written policy governing property closure conditions and procedures?**

No

**c. In the table provided below please identify the number of times the property was closed and the circumstances**

Date of Closure	Reason for Closure	Duration of Closure (Days)	Full or Partial Closure
1/1/2022	No Public Access	365	Full

**d. Is there an official written policy governing special events use of the property?**

No

**2. Oversight: Property Dedicated Staffing by Position**

Position Title	Number of Positions	FTE
Ranger	1	Part Time

### 3. Property Supervisor Contact Information

Name	Title	Email	Phone
Kerwin Russell		krussell@srma-ca.org	9095534349

## B. Visitation

**a. Total number of public visitors to the property based on land owner's estimate:**

15

**b. What method(s) is/are used to estimate visitation? Summarize in the box below.**

None

**c. Compare the estimated number of total visitors this year to the past two years in the space provided below. If estimates for previous years do not exist for the property, please know the goal in future annual reports is to have estimates for three consecutive years to document visitation trends.**

15

**d. Were there new types of park users or uses observed over the past year (e.g., geocaching, use of drones, ebikes, etc.) that could warrant a management response or need for development of a new visitor policy? Please list new users and/or uses below.**

Mountain bike trail riding

**e. Were there any special events held for which special use permits were issued for the property?**

No

**f. In the table provided below, please identify any documented impacts to habitat from unauthorized property uses.**

Date of Observation	Description of Impact	Habitat Type	Estimated Acres
04/05/2022	Trail building	CSS	.10

## C. Monitoring Performed by Land Owner or Land Manager

**a. Does land owner or its land managing representative monitor trail conditions annually?**

Yes

**i. If yes, summarize methodology in the space below and describe the general trend you observed for the property, and identify any specific trails where conditions are found to be degraded and any actions proposed or taken to address the degradation.**

There are numerous bike trails that are both old and new that SRMA continues to control. In 2022, there was one

new trail established but 2 trails were decommissioned and are no longer used. There are no public trails the maintain.

**ii. Are notes, photographs or other documentation of the monitoring performed archived?**

Yes

**III. Recreation Facility Construction and Maintenance**

**Did any recreational facility construction or maintenance occur or do such facilities occur on the property?**

No

**IV. Infrastructure Facility Construction and Maintenance**

**Did any infrastructural facility construction or maintenance occur or do such facilities occur on the property?**

No

**V. Habitat Restoration and Enhancement**

**Did any habitat restoration or enhancement occur on the property?**

Yes

---

**Project Lead**

Land owner

**Provide project name and/or permit number if the project is on behalf of an agency other than the land owner.**

TruMark Restoration

**Mitigation**

Yes

**CSS Community Acres**

2.85

**Cactus Scrub Community Acres**

1.25

**If this is a formal restoration plan, please provide the name:**

Trumark Mitigation and Restoration HMMP

**Coordination with NCC (i.e., discussion and/or plan review)**

No

**Start Date**

2022-01-02

**Anticipated End Date**

2026-01-30

**Performance Monitoring**

Yes

**Data Archived in GIS Database**

No

## VI. Invasive Species Control

### A. Plants

NCC Contractor Results will be summarized based on Cal Flora records.

**1. Did the land owner/manager or their staff, volunteers or contractor treat invasive plant species on the property?**

Yes

**a. Were the results of the invasive plant control efforts for the property conducted by the land owner/manager or their contractor reported to CalFlora?**

No, not at all

**i. If no or partially, please complete the table below:**

Treatment Methodology	Invasive Plant Name	Habitat(s) Impacted	Area of Treatment (Square Meters)
Organic Herbicide	Tocolote	CSS	35
Organic Herbicide	Mustard	CSS	45

### B. Beetles

**1. Were active surveys conducted on the property for invasive beetles?**

No

**Please explain why or why weren't active surveys conducted on the property for invasive beetles.**

Funding

**2. Were any invasive beetle occurrences discovered prior to or during the reporting year on this property?**

No

**Provide a brief summary or explanation regarding species occurrences and justify the actions or lack of actions taken in the space provided and/or upload a specific attachment below:**

Funding

## VII. Fire Management Activities

Fire incident reports to be completed by NCC and summarized in Section 4.1 of this annual report.

### A. Fuel Management

**Did any fuel management projects occur on the property?**



No

## **VIII. Work Plan**

### **Proposed Work Plan for Use, Monitoring and Management**

**Property closure policy: new or amended?**

No

**Property special use policy: new or amended?**

No

**GDP and/or Master Plan: new or amended?**

No

**Change in methodology for estimating property visitor use?**

No

**Implement new or continue protocols for monitoring changes in trail conditions and/or reporting?**

No

**Research (ongoing or new)?**

No

### **Recreational Facility Construction and Maintenance (As defined in Section III)**

**Recreation facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Infrastructure Facility Construction and Maintenance (As defined in Section IV)**

**Infrastructure facility construction or maintenance with anticipated temporary or permanent habitat impacts?**

No

### **Habitat Restoration and Enhancement (For only projects 0.25 acres or more)**

**Mitigation habitat restoration to be initiated?**

No

**Non-mitigation habitat restoration initiated?**

No

### **Invasive Species Control**

**Invasive plant control actions to be undertaken by land owner (not NCC)?**

Yes

**Please explain the invasive plant control actions to be undertaken by land owner (not NCC).**

SRMA will continue limited weed and invasive plant control (palms, tamarisk, castor bean) on the property as funds permit.

**Invasive beetle control actions to be undertaken by land owner or contractor?**

No

**Other invasive species (please describe):**

None

## **Fuel Management Activities**

**Installation of new fuel management to be undertaken within the reserve?**

No

**Maintenance of existing fuel management to be undertaken within the reserve?**

No