SANTA CLARA VALLEY
HABITAT AGENCY

Santa Clara Valley Habitat Plan

ANNUAL REPORT FY2023–2024

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Santa Clara Valley Habitat Agency
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COVER PHOTO
Bay checkerspot butterfly (*Euphydryas editha bayensis*) at Richmond Ranch

Santa Clara Valley Habitat Agency. 2025. *Santa Clara Valley Habitat Plan Annual Report FY2023–2024*. May. Prepared with assistance from ICF and Dudek.

SANTA CLARA VALLEY
HABITAT AGENCY

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Abbreviations

Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
Co-Permittees	Cities of San José, Gilroy, and Morgan Hill; County of Santa Clara; Santa Clara Valley Water District; Santa Clara Valley Transportation Authority
County	County of Santa Clara
Creekside	Creekside Center for Earth Observation
ESA	federal Endangered Species Act
FY	fiscal year
Habitat Agency	Santa Clara Valley Habitat Agency
Habitat Plan	Santa Clara Valley Habitat Conservation Plan / Natural Community Conservation Plan
HCP	habitat conservation plan
MOCR	Máyyan 'Ooyákma—Coyote Ridge Open Space Preserve
NCCP	natural community conservation plan
O&M	operations and maintenance
OSA	Open Space Authority
PSE	Participating Special Entity
RWF	Regional Wastewater Facility
USFWS	U.S. Fish and Wildlife Service
Valley Water	Santa Clara Valley Water District
Vollmar	Vollmar Natural Lands Consulting
VTA	Santa Clara Valley Transportation Authority

This document is the tenth Annual Report for the Habitat Plan. It summarizes implementation activities undertaken during the FY2023–2024 reporting period (July 1, 2023–June 30, 2024) and since Habitat Plan inception, and it charts progress toward achieving the Habitat Plan's biological goals and objectives.

Introduction

Prepared by the Santa Clara Valley Habitat Agency (Habitat Agency), this annual report summarizes implementation activities undertaken during the reporting period (Fiscal Year [FY] 2023–2024, or July 1, 2023, through June 30, 2024) and cumulatively through permit term Year 11 of 50 per the conditions of the *Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan* (HCP/NCCP, or Habitat Plan).

The Habitat Plan offers a streamlined federal Endangered Species Act (ESA) and California Endangered Species Act (CESA) permitting process for development activities in the Plan Area while protecting, enhancing, and restoring valuable natural resources in Santa Clara County and contributing to the recovery of threatened and endangered species. Permits issued by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) in 2013 allow the Co-Permittees to comply with the ESA and California's Natural Community Conservation Planning Act. The Habitat Plan's Co-Permittees are the City of Gilroy, City of Morgan Hill, City of San José, County of Santa Clara (County), Santa Clara Valley Water District (Valley Water), and the Santa Clara Valley Transportation Authority (VTA).

Over the 50-year permit term, impacts from urban development and rural infrastructure projects will be offset by the creation of a Reserve System managed for the benefit of 18 covered species (**Table 1**) as well as the natural communities that they—and hundreds of other species—depend on for habitat.

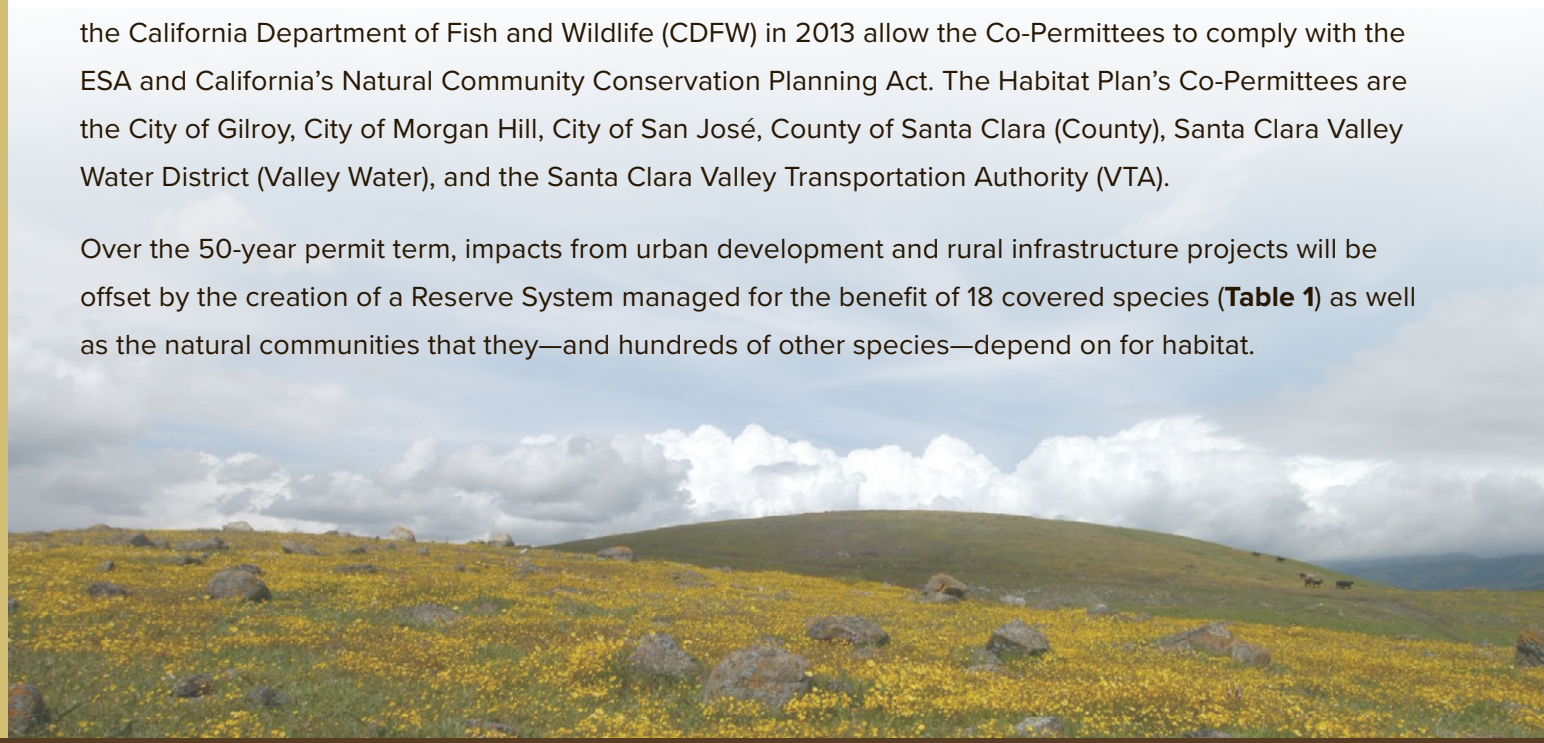


Table 1. Covered Species of the Habitat Plan

Common Name	Scientific Name	Status—State/CNPS[a,b]	Status—Federal[c]
Invertebrates			
Bay checkerspot butterfly	*Euphydryas editha bayensis*	—	FT
Amphibians and Reptiles			
California tiger salamander	*Ambystoma californiense*	ST	FT
California red-legged frog	*Rana draytonii*	CSC	FT
Foothill yellow-legged frog	*Rana boylii*	SE	FT
Western pond turtle	*Actinemys marmorata*	CSC	FPT
Birds			
Western burrowing owl	*Athene cunicularia hypugea*	SC	MBTA
Least Bell's vireo	*Vireo bellii pusillus*	SE	FE, MBTA
Tricolored blackbird	*Agelaius tricolor*	ST	MBTA
Mammals			
San Joaquin kit fox	*Vulpes macrotis mutica*	ST	FE
Plants			
Tiburon paintbrush	*Castilleja affinis* ssp. *neglecta*	ST/1B	FE
Coyote ceanothus	*Ceanothus ferrisiae*	1B	FE
Mount Hamilton thistle	*Cirsium fontinale* var. *campylon*	1B	—
Santa Clara valley dudleya	*Dudleya abramsii* ssp. *setchellii*	1B	FE
Fragrant fritillary	*Fritillaria liliacea*	1B	—
Loma Prieta hoita	*Hoita strobilina*	1B	—
Smooth lessingia	*Lessingia micradenia* var. *glabrata*	1B	—
Metcalf Canyon jewelflower	*Streptanthus albidus* ssp. *albidus*	1B	FE
Most beautiful jewelflower	*Streptanthus albidus* ssp. *peramoenus*	1B	—

[a] **State Status**
- SE State Listed as Endangered
- ST State Listed as Threatened
- CSC California Special Concern Species
- SC State Candidate Species

[b] **California Native Plant Society (CNPS)**
- 1B Rare, Threatened, or Endangered in California and Elsewhere

[c] **Federal Status**
- FE Federally Listed as Endangered
- FT Federally Listed as Threatened
- FC Federal Candidate
- FPT Federally Proposed as Threatened
- MBTA Migratory Bird Treaty Act

Covered Activities

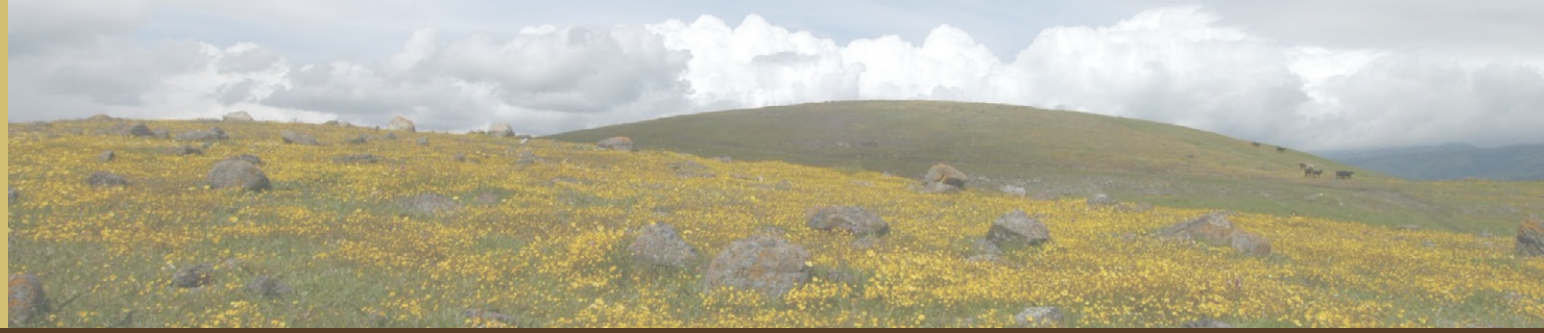
This section describes covered activities and their impacts on land cover types, modeled species habitats, and covered plants.

The Habitat Plan allows incidental take coverage for the following covered activities, as described in Chapter 2 of the Habitat Plan.

- Urban development projects
- In-stream capital projects
- In-stream operations and maintenance (O&M) activities
- Rural capital projects
- Rural O&M activities
- Rural development projects
- Conservation strategy implementation
- Nitrogen deposition–only projects*

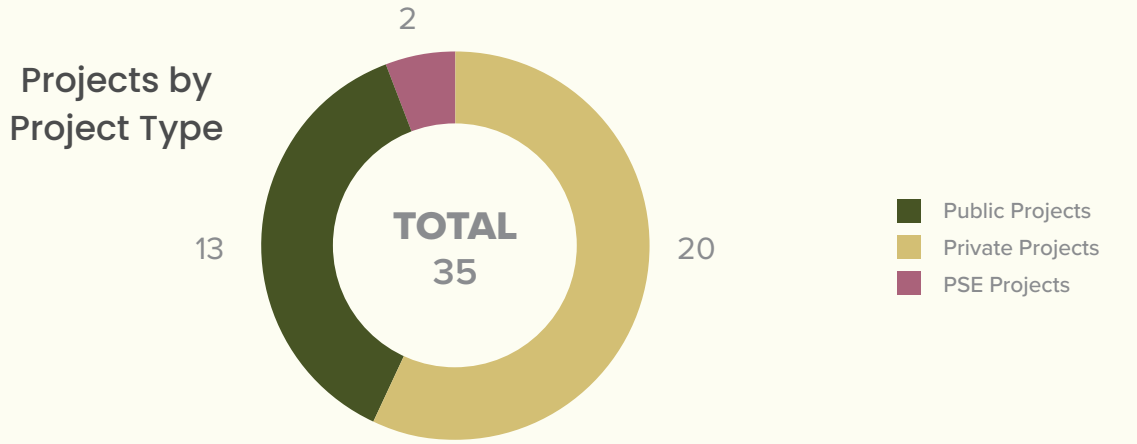
Figures 1–3 and **Tables 2 and 3** summarize covered activities undertaken during the reporting period and since Habitat Plan inception. **Figures 4 and 5** and **Tables 3–8** quantify impacts associated with these covered activities.

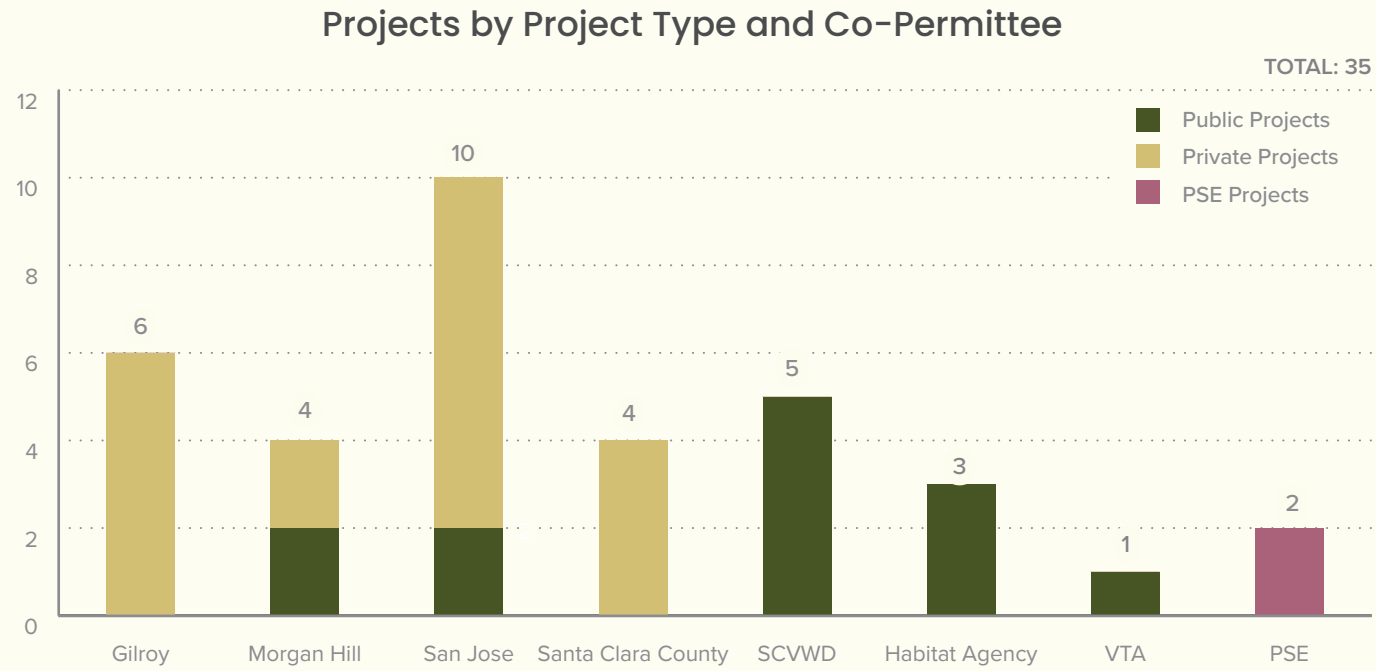
* *Nitrogen deposition–only projects* are development projects that do not contribute to land cover impacts in the Plan Area but do contribute to cumulative nitrogen deposition impacts.



During the reporting period, 35 projects received coverage under the Habitat Plan: 20 private projects, 13 public projects, and 2 Participating Special Entity (PSE) projects. The PSE projects were carried out by the California Department of Transportation (Caltrans) and the Santa Clara Valley Open Space Authority (OSA).

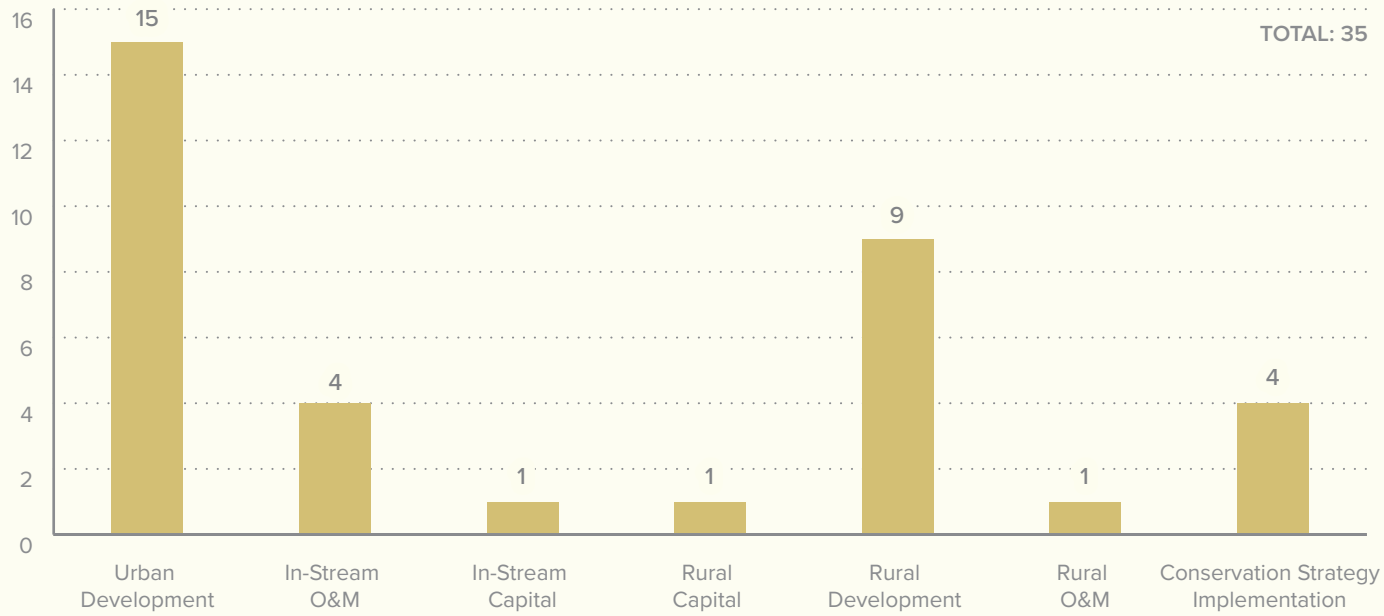
Figure 1. Covered Projects—Reporting Period





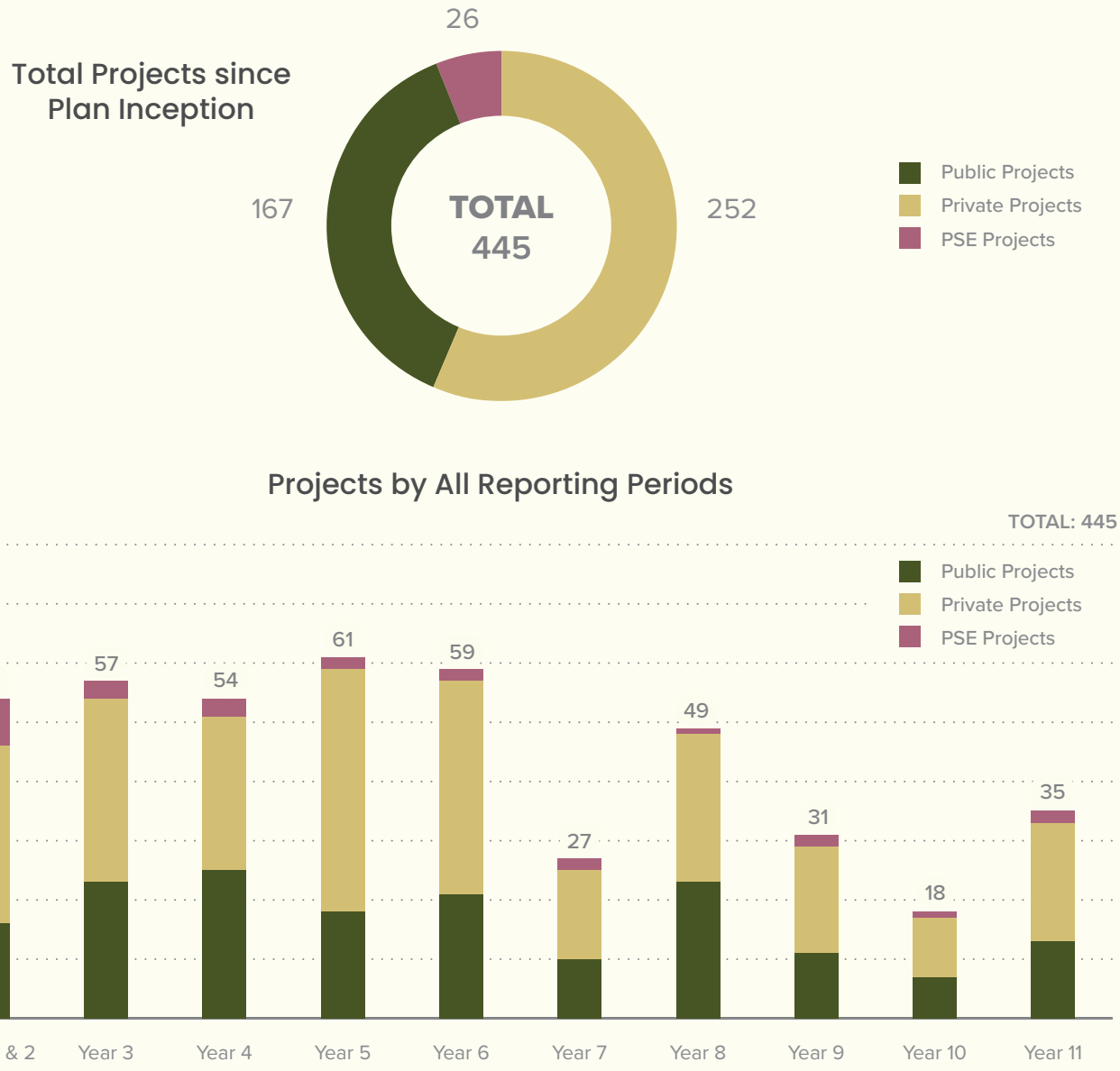
Covered projects consisted of 15 urban development projects, 4 in-stream operations and maintenance activities, 1 in-stream capital project, 1 rural capital project, 9 rural development projects, and 1 rural operations and maintenance project. There were 4 conservation strategy implementation projects during the reporting period, one of which was undertaken by the OSA. Table 2 lists all projects.

Figure 2. Covered Projects by Activity Type—Reporting Period



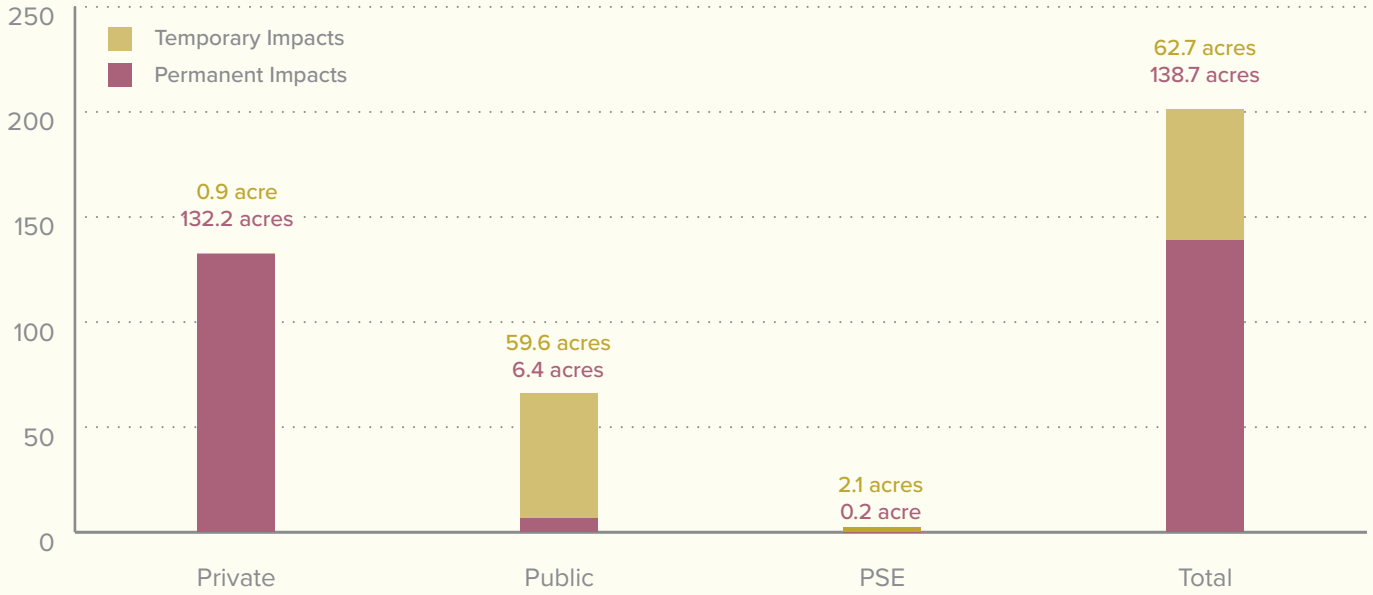
A total of 445 projects have received take coverage under the Habitat Plan since permit issuance. Note that this number excludes the 167 nitrogen deposition–only projects that have been reported since FY2018–2019; the Habitat Agency omits these projects from the cumulative total because they have no land cover impacts.

Figure 3. Covered Projects—Cumulative



The 35 projects undertaken during the reporting period resulted in 138.7 acres of permanent impacts and 62.7 acres of temporary impacts on land cover. During the reporting period, no covered plants were impacted from covered projects.

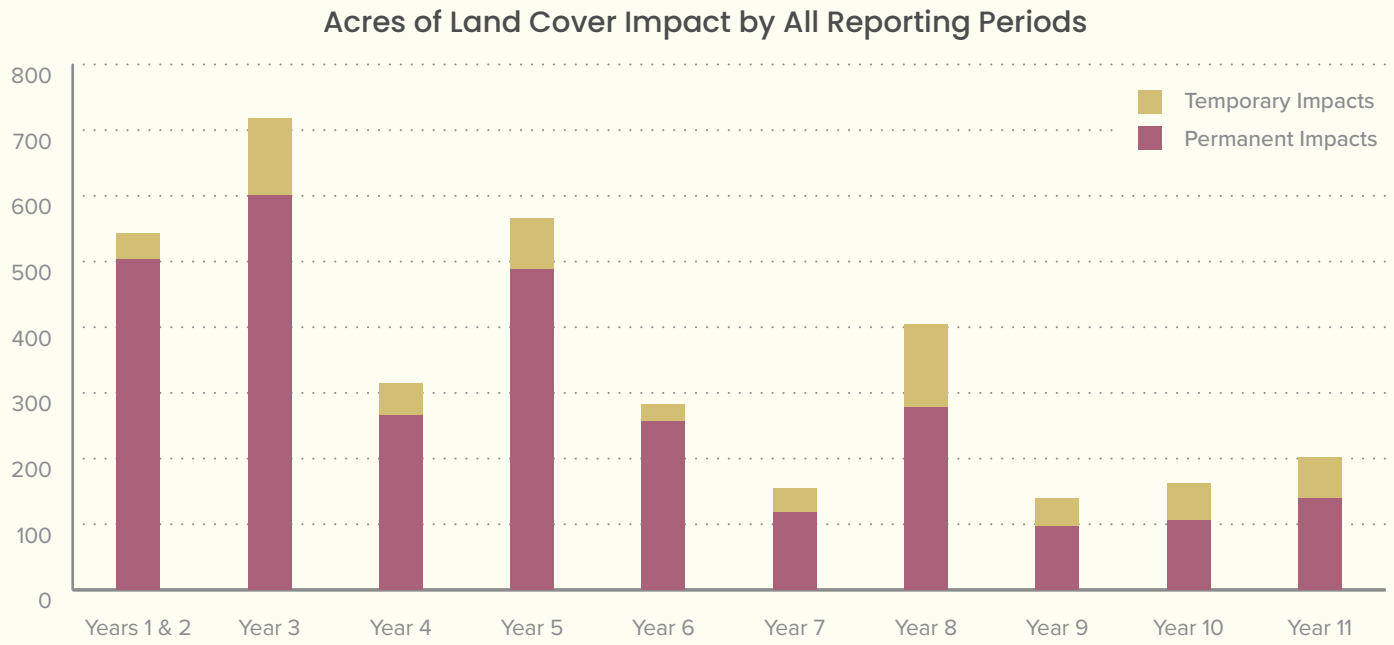
Figure 4. Acres of Land Cover Impact by Project Type—Reporting Period



Cumulative land cover impacts total 2,030 acres of permanent and 420 acres of temporary impacts, as well as 3,298 feet of permanent and 5,502 feet of temporary impacts on streams.

Note: Impact numbers were updated this year to exclude non-fee-generating land covers; therefore, total numbers shown here are lower than in the previous annual report.

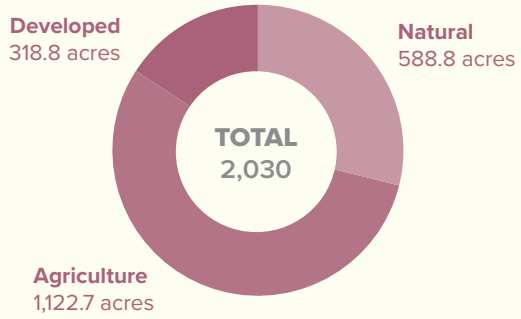
Figure 5. Covered Projects—Cumulative



Permanent Impacts

TOTAL ACRES = 2,030 | TOTAL FEET (STREAMS) = 3,298

See breakdown below



Temporary Impacts

TOTAL ACRES = 420 | TOTAL FEET (STREAMS) = 5,502

See breakdown below

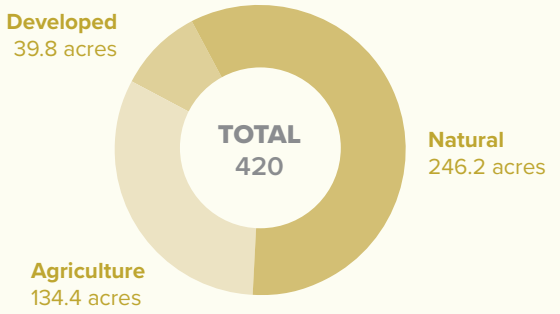


Table 2. Applied Conditions by Covered Activity—Reporting Period

Project Number	Project Name	Condition[a]																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MH-2023-0368	East Dunne Hillside Reservoir Project	•		•					•								•	•			
MH-2024-0435	Sewer Relief Trunk Line	•		•																	
PSE-2023-011	Caltrans/SR 152 Drainage Improvement & MGS Rehab	•		•	•	•	•	•					•				•	•	•		
PSE-2024-01	OSA Rancho Ponds—Pond 1, 7 and 10	•		•	•	•		•				•	•		•	•	•	•			
SJ-2024-0570	Coyote Creek Trail	•		•	•							•									
SVWD-2023-007	Anderson FOCP Additional Areas	•		•	•	•		•				•	•	•				•		•	•
VTA-2024-0592	Cerone Paratransit Parking	•		•																	
VW-2022-006	Dam Maintenance	•		•	•	•			•				•	•			•	•		•	•
VW-2023-0159	Snell Pipeline Rehabilitation Project	•		•	•	•										•		•			•
VW-2023-0227	Emergency Repair Pacheco Conduit Vault 34/Elephant Head Creek	•		•		•													•		
VW-2024-0484	Coyote-Alamitos Canal Maintenance	•		•					•					•						•	•
SJ-2024-2353	469 Piercy Road Project	•		•												•					
SJ-2024-2442	644–675 Piercy Rd	•	•	•												•		•			
SJ-2024-2889	Lot 2, Brasilia Way	•		•																	
SJ-2024-2667	Glendora Development	•		•																	
SJ-2024-2441	550 Piercy Rd	•		•												•					
SJ-2024-2545	1360 Fleming Avenue	•		•				•			•					•					
SCC-2023-1519	Akhter Grading Abatement Project	•		•	•							•	•								
MH-2023-1661	Borello Ranch Estates—Phase 4	•	•	•																	
MH-2023-1739	Manzanita Park	•		•																	
GIL-2023-1864	6705 Silacci Way	•		•																	
GIL-2023-1788	TMP—Royal Way	•		•								•				•	•	•			
GIL-2023-1521	Lands of Jianto	•		•																	
GIL-2024-2856	Gilroy Renz Industrial Center	•		•																	
SCC-2023-2177	Pashby—Heritage Way	•		•				•							•						
SCC-2024-2739	Villa—Flossa Way	•		•				•													
SCC-2023-1448	Lands of McCranie	•		•				•													
GIL-2024-2228	Warmington Residential	•																			
SJ-2023-1550	The Solis Residence	•		•										•							
SJ-2023-1558	San José, 455 Piercy Road Industrial Warehouse Project	•	•	•							•			•		•					•
GIL-2024-2393	StorQuest Express Self Storage—1000 Gilman Road	•		•																	
SJ-2024-0525	Alum Rock Mineral Springs Bridge Embankment Project	•		•	•	•															
SCVHA-2024-0541	Calero Pond 17 Desedimentation	•		•	•							•	•	•							•
SCVHA-2022-03	Pacheco Creek Restoration Project	•		•	•	•							•				•	•	•		
SCVHA-2022-04	Pajaro River Riparian Habitat Restoration	•		•	•			•				•	•				•	•			
Total	**35 projects**	**35**	**3**	**32**	**10**	**7**	**1**	**8**	**3**	**0**	**2**	**7**	**8**	**6**	**2**	**8**	**7**	**9**	**3**	**3**	**6**

[a] **Habitat Plan Conditions**

Condition 1 Avoid Direct Impacts on Legally Protected Plant and Wildlife Species
Condition 2 Incorporate Urban-Reserve System Interface Design Requirements
Condition 3 Maintain Hydrologic Conditions and Protect Water Quality
Condition 4 Avoidance and Minimization for In-Stream Projects
Condition 5 Avoidance and Minimization Measures for In-Stream Operations and Maintenance
Condition 6 Design and Construction Requirements for Covered Transportation Projects
Condition 7 Rural Development Design and Construction Requirements
Condition 8 Implement Avoidance and Minimization Measures for Rural Road Maintenance
Condition 9 Prepare and Implement a Recreation Plan
Condition 10 Fuel Buffer
Condition 11 Stream and Riparian Setbacks
Condition 12 Wetland and Pond Avoidance and Minimization
Condition 13 Serpentine and Associated Covered Species Avoidance and Minimization
Condition 14 Valley Oak and Blue Oak Woodland Avoidance and Minimization
Condition 15 Western Burrowing Owl
Condition 16 Least Bell's Vireo
Condition 17 Tricolored Blackbird
Condition 18 San Joaquin Kit Fox
Condition 19 Plant Salvage when Impacts are Unavoidable
Condition 20 Avoid and Minimize Impacts to Covered Plant Occurrences

Table 3. Species Conditions for Covered Activities—Reporting Period

Project Number	Project Name	Western Burrowing Owl				Least Bell's Vireo				Tricolored Blackbird				San Joaquin Kit Fox				Bay Checkerspot Butterfly				Smooth Lessingia		Fragrant Fritillary		Metcalf Canyon Jewel-flower		Most Beautiful Jewel-flower		Tiburon Paintbrush		Coyote Ceanothus		Santa Clara Valley Dudleya		Mount Hamilton Thistle		Loma Prieta Hoita	
		Habitat Survey	Preconstruction Surveys	AMM	Construction Monitoring	Habitat Survey	Preconstruction Surveys	AMM	Construction Monitoring	Habitat Survey	Preconstruction Surveys	AMM	Construction Monitoring	Habitat Survey	Preconstruction Surveys	AMM	Construction Monitoring	Habitat Survey	Preconstruction Surveys	AMM	Construction Monitoring	Preconstruction Surveys	AMM	Preconstruction Surveys	AMM	Preconstruction Surveys	AMM	Preconstruction Surveys	AMM	Preconstruction Surveys	AMM	Preconstruction Surveys	AMM	Preconstruction Surveys	AMM	Preconstruction Surveys	AMM	Preconstruction Surveys	AMM
MH-2023-0368	East Dunne Hillside Reservoir Project					•	•	•	•	•	•	•	•																										
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PSE-2024-01	OSA Rancho Ponds—Pond 1, 7 and 10	•	•	•	•	•	•	•	•	•	•	•	•					•	•	•	•																		
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Total	**35 projects**	**3**	**2**	**2**	**2**	**3**	**4**	**4**	**4**	**6**	**4**	**4**	**4**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 4. Summary of Impacts on Land Cover Types—Reporting Period and Cumulative

Land Cover Type	Reporting Period		Cumulative					
	Permanent (acres or as shown)	Temporary (acres or as shown)	Permanent (acres or as shown)	Temporary (acres or as shown)	Total Allowable Permanent Impact (acres or as shown)	Percentage Used of Total Allowable Permanent Impacts	Total Allowable Temporary Impact (acres or as shown)	Percentage Used of Total Allowable Temporary Impacts
Terrestrial								
California annual grassland	10.2	10.3	419.5	149.4	2,006	21%	574	26%
Serpentine bunchgrass	3.2	—	48.9	19.5	550	9%	91	21%
Serpentine rock outcrop/barrens	0.3	—	4.1	0.2	22	19%	2	10%
Serpentine seep	—	—	0.1	0.0	1	18%	0	0%
Rock outcrop (non-serpentine)	—	—	0.0	0.0	1	0%	0	0%
Northern mixed chaparral/chamise chaparral	0.1	—	11.5	0.4	86	13%	31	1%
Mixed serpentine chaparral	—	—	0.9	1.3	131	1%	30	4%
Northern coastal scrub/Diablan coastal scrub	6.5	0.1	15.0	1.0	178	8%	66	2%
Coyote brush scrub	—	—	3.6	0.3	10	36%	10	3%
Valley oak woodland	—	0.2	3.4	7.2	201	2%	45	16%
Mixed oak woodland and forest	0.3	—	27.0	19.0	1,441	2%	302	6%
Coast live oak woodland and forest	0.8	—	21.4	11.1	840	3%	181	6%
Blue oak woodland	—	—	3.8	1.7	131	3%	39	4%
Foothill pine-oak woodland	1.7	—	8.3	3.6	46	18%	26	14%
Mixed evergreen forest	—	—	0.0	0.1	50	0%	25	1%
Redwood forest	—	—	0.0	0.0	109	0%	56	0%
Knobcone pine woodland	—	—	0.0	0.0	8	0%	2	0%
Subtotal Terrestrial	*23.2*	*10.5*	*567.3*	*214.8*	*5,810*	*10%*	*1,481*	*15%*
Aquatic								
Willow riparian forest and scrub	0.01	0.03	3.00	3.60	180	2%	103	4%
Central California sycamore alluvial woodland	—	—	0.00	0.00	7	0%	6	0%
Mixed riparian woodland and forest	0.61	1.19	14.38	16.23	109	13%	101	16%
Coastal and valley freshwater marsh	0.03	—	2.80	5.39	25	11%	7	77%
Seasonal wetland	<0.01	0.05	0.89	0.37	15	6%	2	19%
Pond	0.12	0.61	0.39	5.74	52	1%	9	64%
Reservoir	0.8	1.9	21.5	31.3	388	6%	228	14%
Subtotal Aquatic	*2.78*	*6.03*	*90.20*	*30.00*	*388*	*23%*	*228*	*13%*
Stream (length in linear feet)								
Total Stream	*271*	*725*	*3,298*	*5,502*	*49,632*	*7%*	*253,440*	*2%*
Agricultural								
Orchard	6.6	—	86.2	5.2	625	14%	24	22%
Vineyard	—	—	0.2	0.3	37	1%	3	11%
Grain, row-crop, hay and pasture, disked/short-term fallowed	69.4	0.9	1036.2	128.9	7,356	14%	284	45%
Subtotal Agricultural	*76.0*	*0.9*	*1122.7*	*134.4*	*8,018*	*14%*	*311*	*43%*

Table continues on following page

Table 4. Summary of Impacts on Land Cover Types—Reporting Period and Cumulative (continued)

	Reporting Period		Cumulative					
Land Cover Type	**Permanent (acres or as shown)**	**Temporary (acres or as shown)**	**Permanent (acres or as shown)**	**Temporary (acres or as shown)**	**Total Allowable Permanent Impact (acres or as shown)**	**Percentage Used of Total Allowable Permanent Impacts**	**Total Allowable Temporary Impact (acres or as shown)**	**Percentage Used of Total Allowable Temporary Impacts**
Developed								
Rural residential	10.3	0.2	41.9	19.1	1,603	3%	139	14%
Golf courses/ urban parks	1.6	0.9	190.2	18.2	2,095	9%	40	45%
Ornamental woodland	0.4	0.1	6.5	1.1	30	22%	8	14%
Barren	8.4	0.4	80.2	1.5	32	251%	15	10%
Subtotal Developed	*20.6*	*1.6*	*318.8*	*39.8*	*3,760*	*8%*	*202*	*20%*
Total								
Acres	**120.5**	**14.9**	**2,030.3**	**420.4**	**17,976**	**11%**	**2,222**	**19%**
Linear feet	**271.3**	**724.5**	**3,298**	**5,502**	**49,632.0**	**7%**	**253,440**	**2%**

Table 5. Impacts on Aquatic Land Cover Types by Watershed—Reporting Period and Cumulative

Watershed	Reporting Period		Cumulative	
	Permanent (acres or as shown)	Temporary (acres or as shown)	Permanent (acres or as shown)	Temporary (acres or as shown)
Coyote				
Willow riparian forests, woodlands, and scrub	0.00	0.00	1.80	2.77
Central California sycamore alluvial woodland	0.00	0.00	0.00	0.00
Mixed riparian woodland and forest	0.34	0.54	7.54	11.16
Coastal and valley freshwater marsh	0.00	0.00	0.31	4.64
Seasonal wetland	0.00	0.00	0.03	0.11
Pond	0.00	0.00	0.02	0.00
Reservoir	0.00	6.74	0.00	6.77
Subtotal aquatic	*0.34*	*7.28*	*9.70*	*25.44*
Stream (linear feet)	*0*	*0*	*2,462*	*1,227*
Guadalupe				
Willow riparian forests, woodlands, and scrub	0.00	0.00	0.76	0.76
Central California sycamore alluvial woodland	0.00	0.00	0.00	0.00
Mixed riparian woodland and forest	0.00	0.00	0.53	0.20
Coastal and valley freshwater marsh	0.00	0.00	0.00	0.64
Seasonal wetland	0.00	0.10	0.20	0.22
Pond	0.00	0.00	0.09	0.00
Reservoir	0.00	0.00	32.80	0.30
Subtotal aquatic	*0.00*	*0.10*	*34.38*	*1.42*
Stream (linear feet)	*0*	*118*	*137*	*951*
Pajaro				
Willow riparian forests, woodlands, and scrub	0.00	0.00	0.19	0.03
Central California sycamore alluvial woodland	0.00	0.00	0.00	0.00
Mixed riparian woodland and forest	0.10	<0.10	1.69	1.17
Coastal and valley freshwater marsh	0.00	0.00	0.04	0.00
Seasonal wetland	0.00	0.00	0.00	0.00
Pond	0.00	0.00	0.00	0.09
Reservoir	0.00	0.00	0.00	0.00
Subtotal aquatic	*0.10*	*<0.10*	*1.92*	*1.29*
Stream (linear feet)	*0*	*0*	*0*	*806*

Table continues on following page

Table 5. Impacts on Aquatic Land Cover Types by Watershed—Reporting Period and Cumulative (continued)

Watershed	Reporting Period		Cumulative	
	Permanent (acres or as shown)	Temporary (acres or as shown)	Permanent (acres or as shown)	Temporary (acres or as shown)
Uvas				
Willow riparian forests, woodlands, and scrub	0.00	0.00	0.01	0.01
Central California sycamore alluvial woodland	0.00	0.00	0.00	0.00
Mixed riparian woodland and forest	0.00	0.00	5.54	3.44
Coastal and valley freshwater marsh	0.00	0.00	0.13	0.10
Seasonal wetland	0.00	0.00	0.44	0.07
Pond	0.00	0.17	0.04	0.17
Reservoir	0.00	0.00	0.00	0.00
Subtotal aquatic	*0.00*	*0.17*	*6.16*	*3.79*
Stream (linear feet)	*0*	*0*	*358*	*1,191*
Llagas				
Willow riparian forests, woodlands, and scrub	0.00	0.00	0.04	0.00
Central California sycamore alluvial woodland	0.00	0.00	0.00	0.00
Mixed riparian woodland and forest	0.00	0.00	0.11	0.10
Coastal and valley freshwater marsh	0.00	0.00	2.29	0.00
Seasonal wetland	0.00	0.00	0.21	0.02
Pond	0.00	0.37	0.12	5.43
Reservoir	0.00	0.00	0.00	0.00
Subtotal aquatic	*0.00*	*0.37*	*2.78*	*5.55*
Stream (linear feet)	*48*	*0*	*126*	*838*
San Tomas				
Willow riparian forests, woodlands, and scrub	0.00	0.00	0.00	0.00
Central California sycamore alluvial woodland	0.00	0.00	0.00	0.00
Mixed riparian woodland and forest	0.00	0.00	0.00	0.00
Coastal and valley freshwater marsh	0.00	0.00	0.00	0.00
Seasonal wetland	0.00	0.00	0.00	0.00
Pond	0.00	0.00	0.00	0.00
Reservoir	0.00	0.00	0.00	0.00
Subtotal aquatic	*0.00*	*0.00*	*0.00*	*0.00*
Stream (linear feet)	*0*	*0*	*0*	*0*

Table continues on following page

Table 5. Impacts on Aquatic Land Cover Types by Watershed—Reporting Period and Cumulative (continued)

Watershed	Reporting Period		Cumulative	
	Permanent (acres or as shown)	Temporary (acres or as shown)	Permanent (acres or as shown)	Temporary (acres or as shown)
Alamitos Creek				
Willow riparian forests, woodlands, and scrub	0.00	0.00	0.00	0.00
Central California sycamore alluvial woodland	0.00	0.00	0.00	0.00
Mixed riparian woodland and forest	0.00	0.00	0.00	0.00
Coastal and valley freshwater marsh	0.00	0.00	0.00	0.00
Seasonal wetland	0.00	0.00	0.00	0.00
Pond	0.00	0.00	0.00	0.00
Reservoir	0.11	0.00	0.11	0.00
Subtotal aquatic	*0.11*	*0.00*	*0.11*	*0.00*
Stream (linear feet)	*0*	*0*	*0*	*0*
Total				
Willow riparian forests, woodlands, and scrub	**0.00**	**0.00**	**2.80**	**3.57**
Central California sycamore alluvial woodland	**0.00**	**0.00**	**0.00**	**0.00**
Mixed riparian woodland and forest	**0.45**	**0.54**	**15.42**	**16.07**
Coastal and valley freshwater marsh	**0.00**	**0.00**	**2.77**	**5.38**
Seasonal wetland	**0.00**	**0.10**	**0.88**	**0.42**
Pond	**0.00**	**0.54**	**0.27**	**5.69**
Reservoir	**0.00**	**6.74**	**32.80**	**7.07**
Total aquatic	**0.45**	**7.92**	**54.95**	**38.20**
Total stream length (linear feet)	**48**	**118**	**3,083**	**5,013**

Table 6. Summary of Impacts on Modeled Covered Species Habitat

Modeled Habitat	Reporting Period		Cumulative					
	Permanent (acres or as shown)	Temporary (acres or as shown)	Permanent (acres or as shown)	Temporary (acres or as shown)	Maximum Allowable Permanent Impacts on Modeled Habitat (acres or as shown)	Percentage Used of Total Allowable Permanent Impacts (%)	Maximum Allowable Temporary Impacts on Modeled Habitat (acres or as shown)	Percentage Used of Total Allowable Temporary Impacts (%)[a]
Bay Checkerspot Butterfly								
Primary habitat	8.6	0.6	167.3	25.9	300	56%	54	48%
California Tiger Salamander								
Breeding habitat	—	0.4	0.9	0.7	77	1%	14	5%
Non-breeding habitat	128.2	26.3	1,129.6	313.8	12,855	9%	1,529	21%
Total	**128.2**	**26.7**	**1,130.6**	**314.5**	**12,932**	**9%**	**1,543**	**20%**
California Red-Legged Frog								
Primary habitat	0.5	1.0	57.3	28.2	299	19%	116	24%
Secondary habitat	127.7	25.7	1,435.9	590.5	12,937	11%	1,489	40%
Total	**128.1**	**26.7**	**1,493.2**	**618.8**	**13,236**	**11%**	**1,605**	**39%**
Foothill Yellow-Legged Frog (length in miles)								
Primary habitat	<0.1	—	0.3	0.2	2	15%	0.7	29%
Secondary habitat	<0.1	<0.1	0.4	0.3	5	8%	1.3	25%
Total	**0.0**	**0.0**	**0.7**	**0.5**	**7**	**10%**	**2.0**	**26%**
Western Pond Turtle								
Primary habitat	3.5	7.3	308.3	94.0	1,824	17%	440	21%
Secondary habitat	79.8	22.2	805.2	244.2	7,825	10%	986	25%
Total	**83.3**	**29.4**	**1,113.5**	**338.3**	**9,649**	**12%**	**1,426**	**24%**
Western Burrowing Owl								
Occupied nesting habitat	—	—	161.9	19.0	198	82%	20	95%
Potential nesting habitat	54.7	10.6	634.6	122.7	4,000	16%	604	20%
Overwintering habitat	104.5	9.0	1,308.6	553.8	9,671	14%	762	73%
Total	**159.2**	**19.6**	**2,110.8**	**710.4**	**13,869**	**15%**	**1,385**	**51%**
Least Bell's Vireo								
Primary habitat	0.1	—	22.5	6.6	72	31%	43	15%
San Joaquin Kit Fox								
Secondary habitat	0.1	0.8	7.6	10.5	198	4%	46	23%
Secondary habitat (low use)	0.1	0.1	4.7	29.2	28	17%	6	486%
Total	**0.1**	**1.0**	**11.8**	**35.4**	**226**	**5%**	**52**	**68%**

Table continues on following page

Table 6. Summary of Impacts on Modeled Covered Species Habitat (continued)

Modeled Habitat	Reporting Period		Cumulative					
	Permanent (acres or as shown)	Temporary (acres or as shown)	Permanent (acres or as shown)	Temporary (acres or as shown)	Maximum Allowable Permanent Impacts on Modeled Habitat (acres or as shown)	Percentage Used of Total Allowable Permanent Impacts (%)	Maximum Allowable Temporary Impacts on Modeled Habitat (acres or as shown)	Percentage Used of Total Allowable Temporary Impacts (%)[a]
Tricolored Blackbird								
Primary habitat	0.2	0.4	135.5	21.4	276	49%	93	23%
Secondary habitat	117.7	10.7	1,380.2	555.9	10,317	13%	768	72%
Total	**117.8**	**11.1**	**1,515.7**	**577.3**	**10,593**	**14%**	**861**	**67%**
Mount Hamilton Thistle								
Primary habitat	—	<0.1	0.1	0.0	26	0%	4	0%
Fragrant Fritillary								
Primary habitat	6.4	—	27.2	11.0	5503	0%	59	19%
Secondary habitat	11.1	20.2	169.5	102.3	2,729	6%	655	16%
Total	**17.5**	**20.2**	**196.7**	**113.2**	**3,279**	**6%**	**714**	**16%**
Loma Prieta Hoita								
Primary habitat	2.0	0.2	65.0	30.1	2,117	3%	413	7%
Secondary habitat	0.0	0.5	20.7	2.5	266	8%	60	4%
Total	**2.0**	**0.8**	**85.7**	**32.6**	**2,383**	**4%**	**473**	**7%**
Smooth Lessingia								
Primary habitat	16.1	—	195.2	26.3	550	35%	68	39%
Metcalf Canyon Jewelflower								
Primary habitat	6.4	—	26.5	10.9	550	5%	62	18%
Most Beautiful Jewelflower								
Primary habitat	16.2	0.5	210.4	28.9	550	38%	92	31%
Secondary habitat	—	—	—	—	0	0%	0	0%
Total	**16.2**	**0.5**	**210.4**	**28.9**	**550**	**38%**	**92**	**31%**

[a] Temporary impact tracking was updated consistent with the memorandum *Tracking Temporary Impacts for Compliance Monitoring of the Santa Clara Valley Habitat Plan* dated September 20, 2018. Temporary impacts are tracked cumulatively over the permit term against the total allowable impacts for each species (inclusive of all modeled habitat types), while ensuring that impacts on applicable breeding habitat, primary habitat, and/or occupied nesting habitat are not exceeded. In the case of San Joaquin kit fox, this limitation applies to secondary habitat.

Table 7. Summary of Impacts on Critical Habitat from Covered Activities

	Reporting Period		Cumulative					
Species	**Permanent (acres)**	**Temporary (acres)**	**Permanent (acres)**	**Temporary (acres)**	**Maximum Allowable Permanent Impact on Critical Habitat (acres)**	**Percentage used of Total Allowable Permanent Impacts (%)**	**Maximum Allowable Temporary Impact on Critical Habitat (acres)**	**Percentage used of Total Allowable Temporary Impacts (%)**
California Red-Legged Frog								
STC Unit 1	<0.1	<0.1	20.8	7.9	—	—	—	—
STC Unit 2	<0.1	1.03	26.3	7.9	—	—	—	—
ALA Unit 2	—	—	—	—	—	—	—	—
Total	**<0.1**	**1.0**	**47.1**	**15.8**	**1,035**	**5%**	**277**	**6%**
California Tiger Salamander								
EBR Unit 5	—	—	—	—	—	—	—	—
EBR Unit 6	—	—	4.2	1.1	—	—	—	—
EBR Unit 7	—	—	2.1	4.7	—	—	—	—
EBR Unit 8	<0.1		30.0	12.5	—	—	—	—
EBR Unit 9	—	—	—	—	—	—	—	—
EBR Unit 10a	—	—	0.2	—	—	—	—	—
EBR Unit 10b	—	—	—	—	—	—	—	—
EBR Unit 11	—	—	—	—	—	—	—	—
EBR Unit 12	0.2	0.7	4.5	11.0	—	—	—	—
Total	**0.2**	**0.7**	**40.9**	**29.4**	**272**	**15%**	**125**	**23%**
Bay Checkerspot Butterfly								
Tulare Hill	2.3	—	2.7	1.2	—	—	—	—
Metcalf	0.2	—	1.9	2.4	—	—	—	—
Santa Teresa Hills	—	—	7.5	1.0	—	—	—	—
Calero Reservoir	—	—	13.5	6.3	—	—	—	—
Kirby		0.11	42.7	10.5	—	—	—	—
Kalana	—	—	0.3	—	—	—	—	—
Hale	—	—	—	—	—	—	—	—
Bear Ranch	—	—	—	—	—	—	—	—
San Martin	—	—	—	—	—	—	—	—
Total	**2.5**	**0.1**	**68.6**	**21.4**	**550**	**12%**	**86**	**25%**

Table 8. Summary of Impacts on Covered Plants

Known Occurrences that May be Removed by Covered Activities[a]	Reporting Period[b]		Cumulative[b]	
	Extant	New	Extant	New
Tiburon Paintbrush				
0	0	0	0	0
Coyote Ceanothus[c]				
3,650	0	0	853 (individuals)	0
Mount Hamilton Thistle				
6	0	0	0	0
Santa Clara Valley Dudleya				
11	0	0	0	1
Fragrant Fritillary				
1	0	0	0	0
Loma Prieta Hoita				
0	0	0	0	0
Smooth Lessingia				
6	0	0	0	0
Metcalf Canyon Jewelflower				
2	0	0	0	0
Most Beautiful Jewelflower				
6	0	0	0	0

[a] These could change over time if additional occurrences are found. This column provides the limit of impacts by number of occurrences allowable under the Habitat Plan. The impact limit assumes that no new occurrences of the species are discovered during the permit term and that occurrences impacted are in worse condition than those protected within reserves. Impact limits were determined based on estimated impacts of covered activities. In some cases, impacts were capped to ensure regulatory standards are met.

[b] Extant are the known occurrences at the time of Habitat Plan adoption, and new are those discovered after Habitat Plan adoption.

[c] A total of 3,650 individuals of the occurrence on either side of Anderson Dam could be removed by covered activities, or up to 5% of the total population.

Land Acquisition and Preservation Status

This section documents properties acquired for the Reserve System during the reporting period (as of June 30, 2024). It also tracks impacts and preservation status across the Reserve System.

Sites Acquired

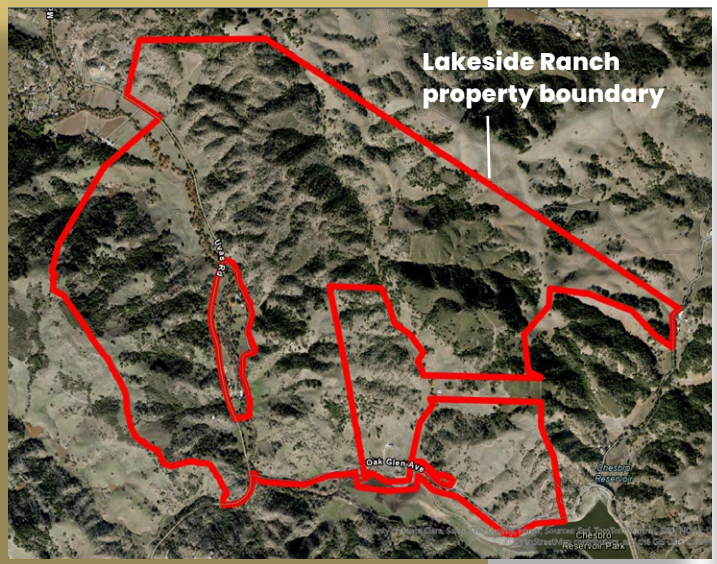
Five properties were protected or acquired by the Habitat Agency during the reporting period: Barker Property, Lakeside Ranch, Malech Ranch, Bates Ranch, and Richmond Ranch. These properties added 4,380 new acres to the Habitat Agency's Reserve System, bringing the total size of the Reserve System to 15,080 acres! A map showing the current Reserve System can be found on the Habitat Plan's website.

WEBLINK: MAP OF THE CURRENT RESERVE SYSTEM

Lakeside Ranch

Lakeside Ranch is a 1,900-acre property located between Chesbro Reservoir and Tilton Ranch Reserve in the West Hills of Santa Clara Valley. The property includes over 100 acres of serpentine grassland, 20 stock ponds, and several hundred acres of oak woodland. It also includes over 1 mile of Llagas Creek and associated riparian communities. This stretch of Llagas Creek is important for maintaining and enhancing aquatic habitat connectivity in the Llagas Creek watershed (Habitat Plan Linkage 11).

Several covered species and species considered for coverage are known to occur on the property. These include Bay checkerspot butterfly, California tiger salamander, foothill yellow-legged frog, mountain lion (*Puma concolor*), western pond turtle, Santa Clara Valley dudleya, Loma Prieta hoita, smooth lessingia, and most beautiful jewelflower.

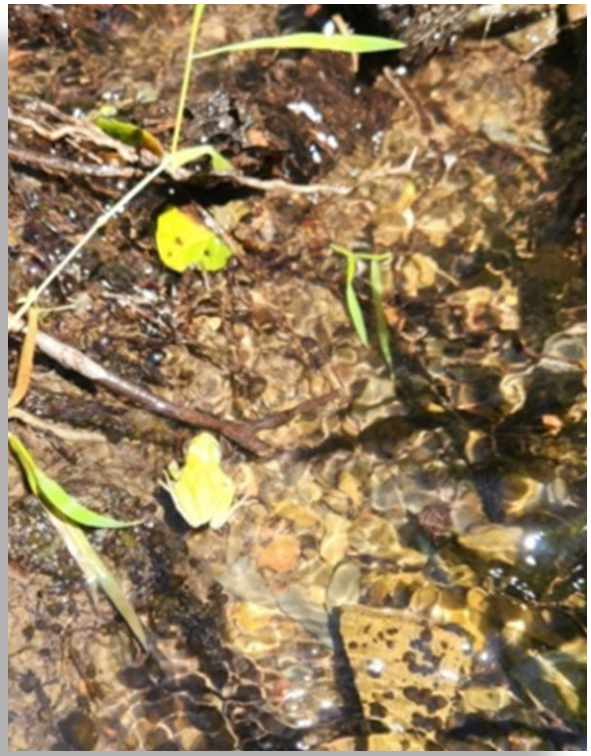


Aquatic and terrestrial habitat protection. Comprising 1,900 acres, the Lakeside Ranch property provides high-quality habitat for covered species that depend on aquatic and terrestrial communities.

Barker Property

The Barker Property is 40 acres in the southern part of Santa Clara County between Morgan Hill and Gilroy, near the Uvas Reservoir and the Habitat Agency's Uvas South Reserve and in the Upper Uvas Creek Watershed. The property consists of scrub and oak woodland natural communities.

This acquisition contributes to landscape wildlife linkages by helping connect Mount Madonna County Park with open space surrounding Uvas Reservoir and the Reserve System to the north. The site includes valuable habitat for California red-legged frog, western pond turtle, and Loma Prieta hoita, all of which are covered species of the Habitat Plan.



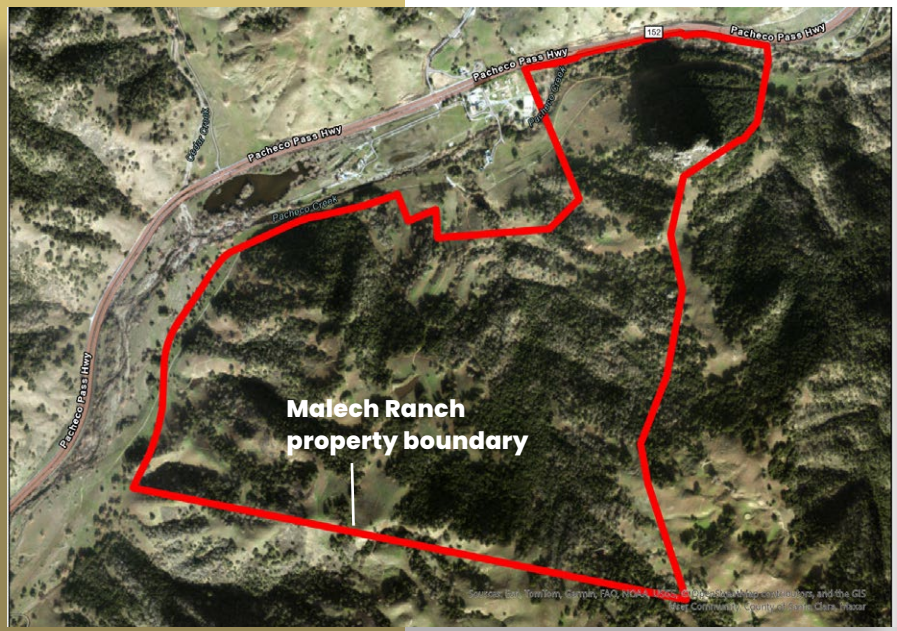
Flora and fauna on the Barker Property. Zigzag larkspur (*Delphinium patens;* left), a California native, and native tree frogs (*Pseudacris* sp.; right) both occur on the property.

Malech Ranch

Malech Ranch is a 761-acre property next to SR-152 and Pacheco Creek Reserve in the Pacheco Pass area. It contains California annual grassland, serpentine rock outcrop, mixed serpentine chaparral, oak woodland, and riparian communities associated with main stem Pacheco Creek. The property also includes five stock ponds, which provide suitable habitat for covered amphibian species.

Malech Ranch is integral to the Habitat Agency's efforts to maintain and enhance wildlife connectivity in the Pacheco Pass area (Habitat Plan Linkages 15 and 17). Santa Clara Valley dudleya, western monarch (*Danaus plexippus*), and mountain lion are known to occur on the property.

Improving wildlife connectivity. Malech Ranch is integral to the Habitat Agency's larger effort to improve wildlife connectivity in the Diablo Range (particularly in the Pacheco Pass area). This effort includes the habitat restoration on Pacheco Creek, planning for a wildlife crossing structure, and strategic land acquisition.



Bates Ranch

Bates Ranch is a 775-acre property in South Santa Clara County immediately adjacent to the Habitat Agency's Uvas South Reserve. This acquisition was prioritized to maintain and enhance wildlife connectivity between Santa Clara Valley and the Santa Cruz Mountains (Habitat Plan Linkage 13); it contributes to a contiguous 6,800-acre block of protected land and open space between Uvas Reservoir County Park and Mount Madonna County Park.

The property is largely composed of oak woodland, Diablan sage scrub, and California annual grassland. Mountain lion, which is proposed for coverage under the Habitat Plan, is known to occur on the property.

The Habitat Agency completed the initial Bates Ranch acquisition in September 2023. An adjacent 40-acre parcel of land became available and was purchased, increasing the size of this reserve to 775 acres.

From Uvas Reservoir to Mount Madonna. The Bates Ranch acquisition contributes to a contiguous, 6,800-acre block of open space in the Santa Cruz Foothills west of Gilroy.

Richmond Ranch Phase 1

The Habitat Agency acquired 944 acres of the 3,653-acre Richmond Ranch from The Conservation Fund. The property is in the Diablo Foothills between US-101 and San Felipe Ranch. It is immediately north of existing Habitat Agency reserves including Máyyan 'Ooyákma—Coyote Ridge Open Space Preserve (MOCR) and Coyote Ridge East Reserve. As such, it contributes to maintaining terrestrial connectivity from the Silver Creek Hills to Anderson Reservoir (Habitat Plan Linkage 6).

This acquisition protects 150 acres of regionally important serpentine bunchgrass grassland, several hundred acres of oak woodland, and over 1 mile of Silver Creek. Several covered species and species proposed for coverage are known to occur on the property, including Bay checkerspot butterfly, California red-legged frog, California tiger salamander, western burrowing owl, Crotch's bumblebee (*Bombus crotchii*), mountain lion, Tiburon paintbrush, Mount Hamilton thistle, fragrant fritillary, Metcalf canyon jewelflower, and smooth lessingia.

The Habitat Agency expects to complete Phase 2 of the acquisition project in 2025, closing escrow on another 1,218 acres.

A stronghold for serpentine-endemic species. Acquisition of Richmond Ranch contributes to the recovery of numerous serpentine endemic plants and the Bay checkerspot butterfly.

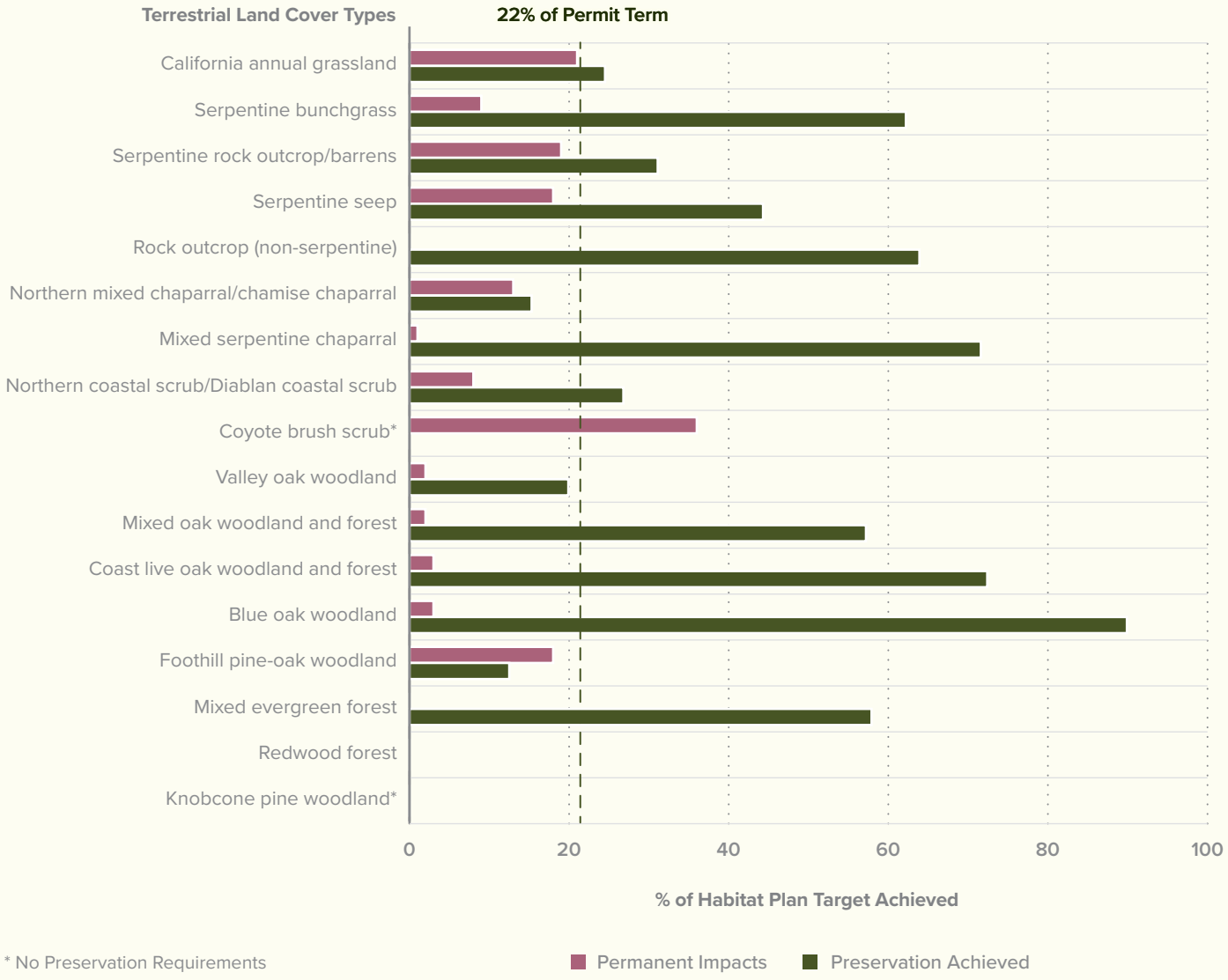
Preservation Achieved

Figures 6–10 summarize the Habitat Plan's progress in terms of impacts incurred and preservation achieved. **Figure 6** displays the percentages of impacts and preservation for terrestrial land cover types; **Figure 7** summarizes the same plus restoration/creation achieved for aquatic land cover types. **Figures 8 and 9** summarize impacts and preservation for wildlife and plant modeled habitat. **Figure 10** shows impacts incurred, conservation achieved, and funding received in comparison to the Habitat Plan limits and targets for Year 11 of the 50-year permit term.

Table 9 shows the status of species occupancy requirements for wildlife species in the Reserve System. The reporting period (Year 11) represents 22% of the permit term. If a constant rate of impacts is assumed, allowable impacts should be at about 22% of the impact cap. **Tables 10–12** show the covered plant, land cover, and covered species modeled habitat preservation to date, respectively.

The only terrestrial land cover type with a Habitat Plan target for which 22% of the permanent impact cap was exceeded is coyote brush (36%). Temporary impacts on California annual grassland are at 26% of the allowable temporary impacts. Preservation of terrestrial land cover types changed from the previous year because of the multiple land acquisitions during the reporting year. Permanent impacts are shown in Table 4, and preservation is shown in Table 11.

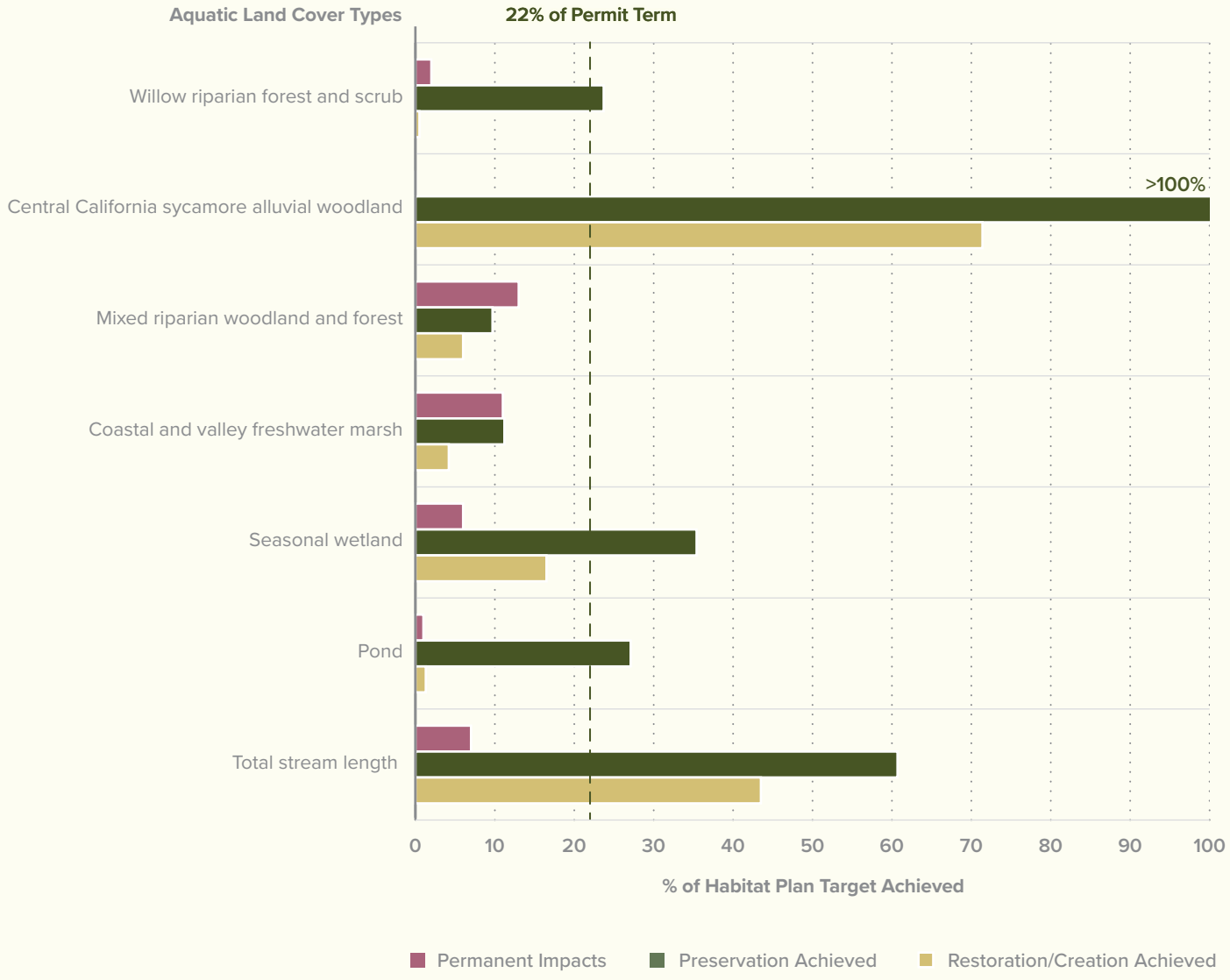
Figure 6. Cumulative Impacts Incurred and Preservation Achieved for Terrestrial Land Cover Types



Permanent impacts on all aquatic land cover types are below 22%.

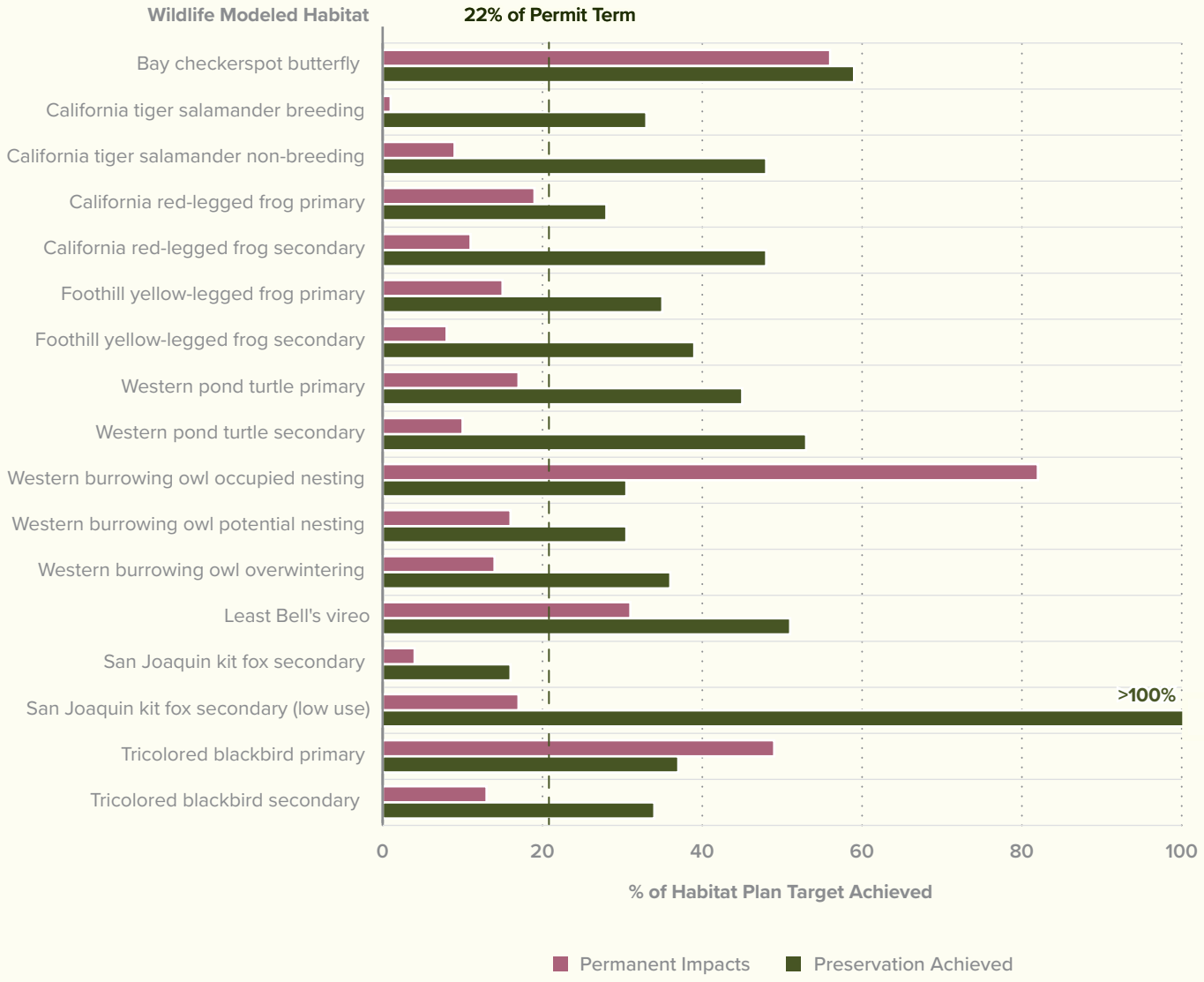
Preservation of aquatic land cover types increased markedly from last year, with Central California sycamore alluvial woodland now at 168% of the target and most other land cover types exceeding 22%. Restoration and creation also increased in FY2023–2024. Permanent impacts are shown in Table 4, preservation is shown in Table 11, and restoration and creation are shown in Table 13.

Figure 7. Cumulative Impacts Incurred and Preservation Achieved for Aquatic Land Cover Types



Permanent impact accrual rates far exceed 22% for Bay checkerspot butterfly (56%), western burrowing owl occupied nesting habitat (82%, same as last year), least Bell's vireo primary habitat (31%, same as last year), and tricolored blackbird primary habitat (49%, same as last year). Habitat preservation is generally tracking closely with or exceeding impacts except for western burrowing owl. The Habitat Agency is not authorizing any additional take for impacts on occupied burrowing owl habitat.

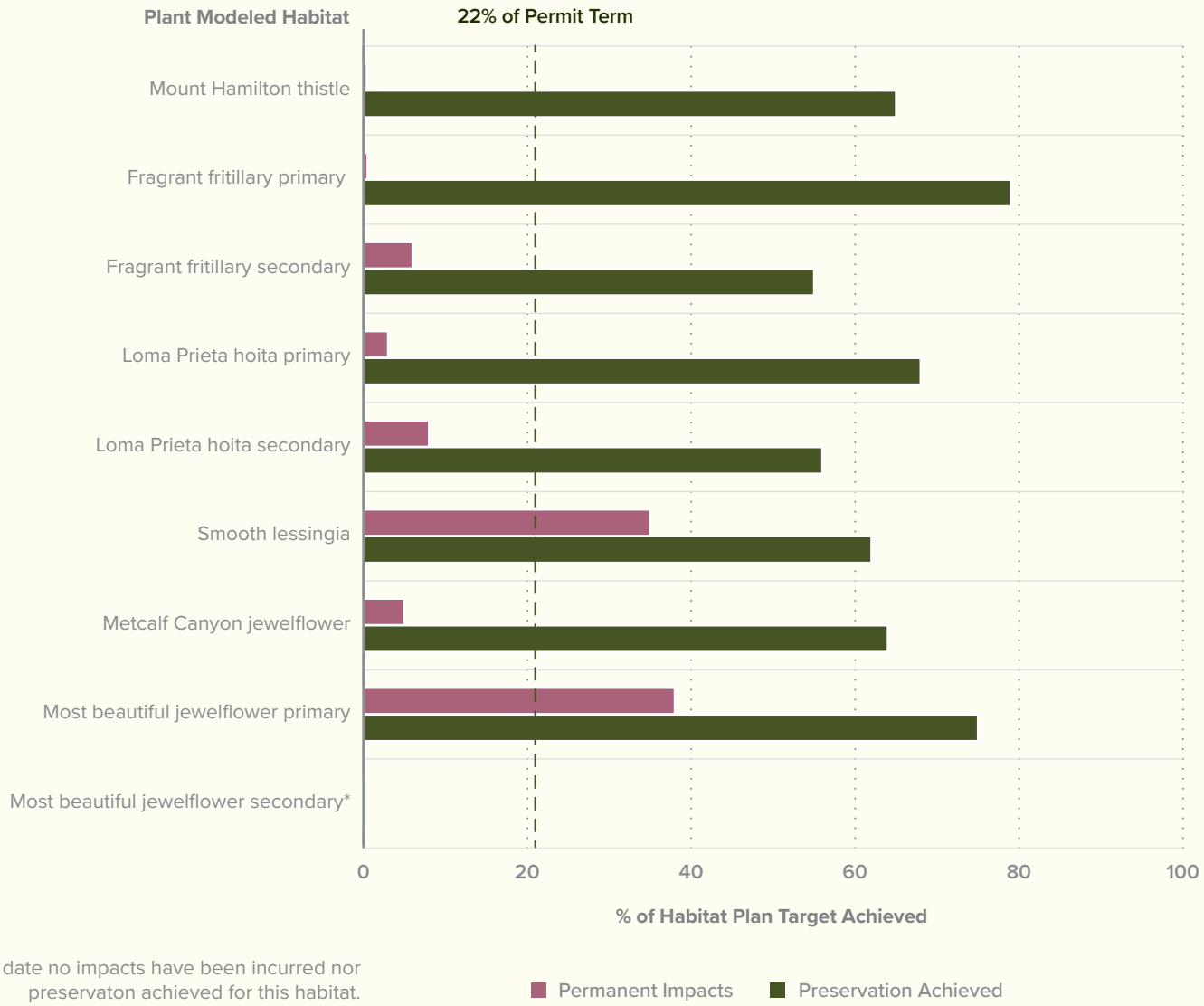
Figure 8. Cumulative Impacts Incurred and Preservation Achieved for Wildlife Habitat



As in previous years, only smooth lessingia and most beautiful jewelflower exceeded the 22% impact cap for the reporting period. Impacts on both species increased slightly during the reporting period, but preservation of modeled habitat for both species far exceeds impacts.

Preservation of covered plant species habitat increased from last year due to land acquisitions during the reporting year.

Figure 9. Cumulative Impacts Incurred and Preservation Achieved for Plant Habitat



* To date no impacts have been incurred nor preservaton achieved for this habitat.

Permanent project impacts have largely occurred in agricultural areas (55%), while 29% have occurred in natural lands and 16% in developed areas. The Reserve System totals approximately 15,080 acres with about 42% of the conservation target being achieved.

Figure 10. Cumulative Impacts Incurred, Preservation Achieved, and Funding Received as Percentages of Habitat Plan Limits and Targets

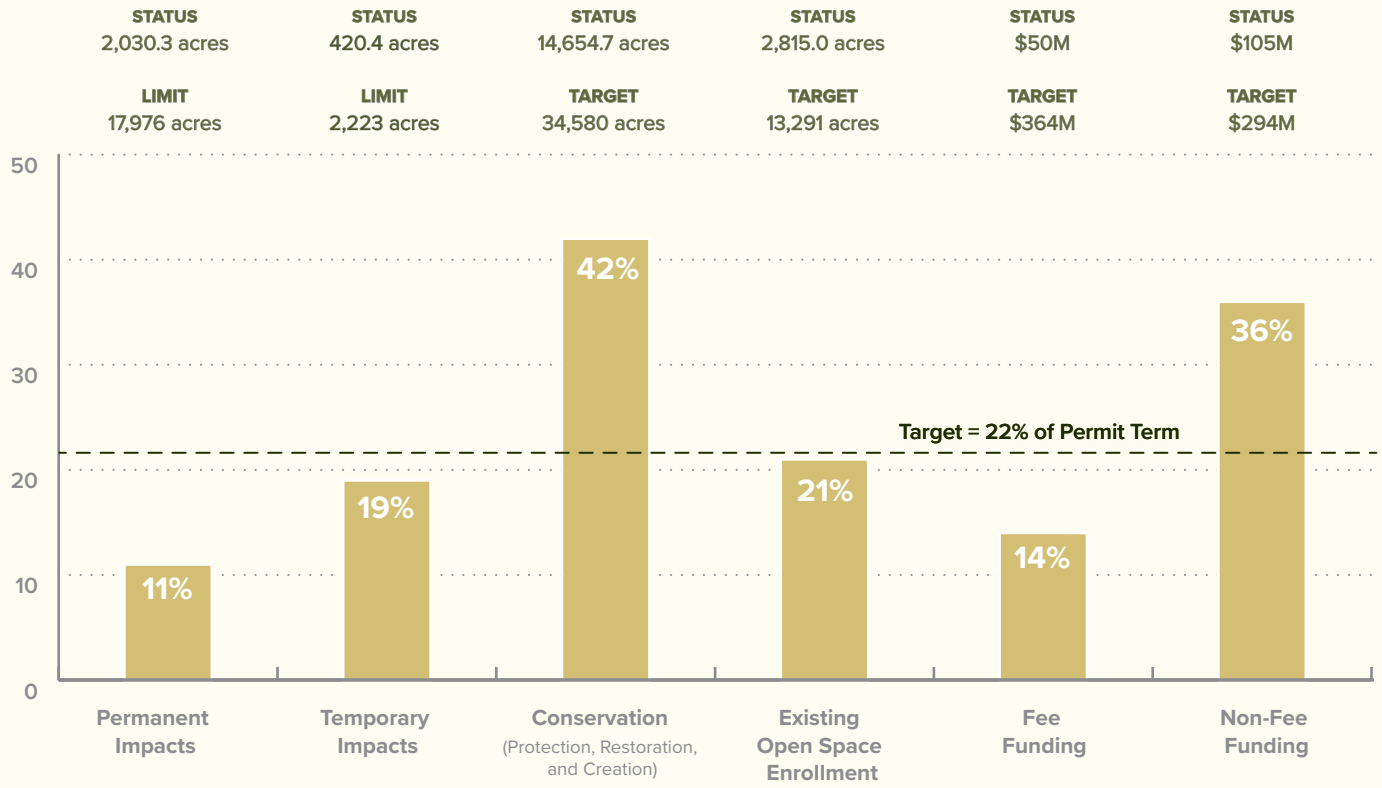


Table 9. Status of Wildlife Species Occupancy Requirements for Select Species in Reserve System

Species	Requirement	Status	Status Notes
Bay checkerspot butterfly	The four core habitat units (Kirby, Metcalf, San Felipe, and Silver Creek Hills) occupied at least 4 of every 10 consecutive years of the permit term. Occupancy is met by demonstrating the presence of both larvae and adults.	Currently being met	Occupancy has been recorded in 10 out of the past 10 years in the USFWS Kirby Recovery Units. Surveys conducted on Richmond Ranch in spring 2024 established occupancy in the Metcalf and San Felipe Units. Silver Creek Hills and a significant portion of the Metcalf Unit remain under private ownership.
Bay checkerspot butterfly	Half of the satellite units occupied once by year 45 of the permit term. Occupancy is met by demonstrating the presence of both larvae and adults.	Met	Occupancy criteria met. At least 50% of the satellite units in the 1998 Recovery Plan have been occupied once during the permit term.
California red-legged frog[a]	40% of ponds and wetlands occupied (support full lifecycle) in Federal Recovery Unit 4	7%	2/29 occupied
California red-legged frog[a]	40% of ponds and wetlands occupied (support full lifecycle) in Federal Recovery Unit 6	0%	0/33 occupied
California tiger salamander[a]	30% of ponds and wetlands occupied (support full lifecycle) within the entire reserve system	22%	14/65 occupied
Western pond turtle[a]	25% of ponds and wetlands occupied (adults and signs of successful reproduction) within the entire reserve system	25%	17/67 occupied
Foothill yellow-legged frog	Occupancy (eggs masses detected) in at least four of the watersheds in Figure 3-6)	25%	Occupancy detected in one watershed within the Reserve System (Llagas). Breeding documented in Llagas Creek (Lakeside Reserve) and Baldy Ryan Creek (Calero County Park Conservation Easement).

[a] Ponds created or wetlands restored in the Reserve System that meet occupancy criteria will count towards the occupancy requirement. Ponds created or wetlands restored that are not occupied do not count toward occupancy requirements.

Table 10. Summary of Covered Plant Preservation to Date

Species	Number of Covered Plant Occurrences																		Total in Reserve System
	Coyote Ridge Open Space Preserve		Calero County Park Conservation Easement		Baird & Davidson Reserves[a]		Tilton Ranch Reserve		O'Connell Ranch		Tulare Hill Wedge Reserve		Lakeside Ranch		Richmond Ranch (Phase 1)		Malech Conservation Easement		
	Habitat Plan Occurrences	New Occurrences[b]	Habitat Plan Occurrences	New Occurrences[b]	Habitat Plan Occurrences	New Occurrences[b]	Habitat Plan Occurrences	New Occurrences[b]	Habitat Plan Occurrences	New Occurrences[b]	Habitat Plan Occurrences	New Occurrences[b]	Habitat Plan Occurrences	New Occurrences[b]	Habitat Plan Occurrences	New Occurrences[b]	Habitat Plan Occurrences	New Occurrences[b]	
Mount Hamilton thistle	16	6	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	**26**
Santa Clara Valley dudleya	99	-3	6	2	0	1	1	2	0	0	0	1	0	3	0	1	0	1	**121**
Fragrant fritillary	3	0	1	-1[e]	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**3**
Loma Prieta hoita	0	2	2	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	**11**
Smooth lessingia	6	0	3	1	0	1	0	3	0	0	0	1	0	3	0	1	0	1	**23**
Metcalf Canyon jewelflower	1 (45)[c]	7[d]	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	**8**
Most beautiful jewelflower	1 (45)[c]	1	4	1	0	1	0	3	0	1	0	0	0	4	0	0	0	1	**21**
Coyote ceanothus	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	**2**
Tiburon paintbrush	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**

This table summarizes the number of plant occurrences identified in baseline surveys and tracked for Habitat Plan compliance. For most covered plants, the Habitat Plan occurrences align with the results of the baseline surveys; site surveys documented plants in approximately the same location, extent, and numbers to what was documented in the Habitat Plan. For other species, such as Santa Clara Valley dudleya, smooth lessingia, and most beautiful jewelflower in the Coyote Ridge Open Space Preserve, plant surveys documented much more widespread occurrences. In these cases, the number of compliance occurrences is based on the overlap of the Habitat Plan occurrences preserved. For example, using the 0.25 mile rule to determine separate occurrences for Santa Clara Valley dudleya, there are only 2 separate occurrences per the baseline surveys; however, the Habitat Plan assumed the same area included 99. For this species, 3 are removed because the surveys revealed 3 occurrence points to now be unoccupied.

[a] Reserves are adjacent parcels that support the same covered plant occurrences.

[b] Columns show new occurrences identified in baseline surveys.

[c] There are 45 occurrences of jewelflowers (*Streptanthus albidus*) at the MOCR that represent gradations of interbreeding individuals of at least two subspecies (most beautiful jewelflower and Metcalf Canyon jewelflower). Recent analysis of this species implemented in a partnership between Santa Clara University (Justen Whittall) and Creekside Science (Stu Weiss and Christal Neiderer) determined that the relative occurrences of particular flower sepal colors, which are correlated to genetics, within a population can be used to help distinguish populations to subspecies. However, it is premature at this point to attempt to differentiate the jewelflowers into distinct subspecies for these occurrences. Additional analysis by the Habitat Agency will be needed to determine population sepal color characteristics that differentiate one subspecies population from the other in order to distinguish these occurrences into respective subspecies occurrences.

[d] This number may increase or decrease based upon the genetic study results (see footnote c).

[e] There was one California Natural Diversity Database occurrence of fragrant fritillary; however, this species was not located again after baseline surveys and is now considered possibly extirpated at the Calero County Park Conservation Easement.

Table 11. Land Acquisition Contribution to Land Cover Requirements

Land Cover Type	Land Cover Requirements	Reporting Period	Cumulative[a]	
	Protection (acres)	Protection (acres)	Protection (acres)	Percent Complete (%)
California Annual Grassland	13,300	763.0	3,254.0	24.5%
Serpentine Bunchgrass Grassland	4,000	243.5	2,488.6	62.2%
Serpentine Rock Outcrop/ Barrens	120	22.9	37.3	31.1%
Serpentine Seep	10	0.5	4.4	44.3%
Rock Outcrop	10	2.4	6.4	63.9%
Northern Mixed Chaparral / Chamise Chaparral	400	0.0	61.1	15.3%
Mixed Serpentine Chaparral	700	94.4	501.2	71.6%
Northern Coastal Scrub / Diablan Sage Scrub	1,400	173.6	375.8	26.8%
Valley Oak Woodland	1,700	19.5	338.1	19.9%
Mixed Oak Woodland and Forest	7,100	1,273.6	4,062.0	57.2%
Blue Oak Woodland	1,100	579.5	989.0	89.9%
Coast Live Oak Forest and Woodland	2,900	1,010.4	2,098.5	72.4%
Foothill Pine—Oak Woodland	80	0.0	10.0	12.5%
Mixed Evergreen Forest	20	0.0	11.6	57.9%
Redwood Forest	10	0.0	0.0	0.0%
Willow Riparian Forest and Scrub	459	0.86	109.15	23.8%
Mixed Riparian Forest and Woodland	459	44.55	44.55	9.7%
Central California Sycamore Alluvial Woodland	54	20.76	90.78	168.1%
Coastal and Valley Freshwater Marsh (Perennial Wetland)	95	5.27	10.63	11.2%
Seasonal Wetland	60	4.12	21.24	35.4%
Pond	104	4.38	28.17	27.1%
Total (acres)	**34,080**	**4,263**	**14,542.5**	**42.7%**
Total stream miles	**110**	**26**	**67**	**60.7%**

[a] Cumulative acres include properties owned in fee title and protected via conservation easement. Calculations for Stay-Ahead requirements only include properties protected with a conservation easement or restored by the Habitat Agency outside the Reserve System with Wildlife Agency approval.

Table 12. Land Acquisition Contribution to Modeled Habitat Requirements

Land Cover Type	Modeled Habitat Requirements (acres)	Reporting Period (acres)	Cumulative[a]	
	Protection (acres)	Protection (acres)	Protection (acres)	Percent Complete (%)
Bay Checkerspot Butterfly				
Primary Habitat	3,800	214.1	2,244.2	59%
California Tiger Salamander				
Breeding Habitat	150	13.8	49.4	33%
Non-breeding Habitat	30,000	4,330.8	14,531.0	48%
Total	**30,150**	**4,344.6**	**14,580.4**	**48%**
California Red-Legged Frog				
Primary Habitat	1,300	103.9	462.4	28%
Secondary Habitat	30,000	4,213.4	14,306.2	48%
Total	**31,300**	**4,317.3**	**14,768.6**	**47%**
Foothill Yellow-Legged Frog (length in miles)				
Primary Habitat	30	3.9	10.6	35%
Secondary Habitat	50	6.7	19.7	39%
Total	**80**	**10.6**	**30.3**	**38%**
Western Pond Turtle				
Primary Habitat	7,000	982.5	3,178.6	45%
Secondary Habitat	20,000	3,086.6	10,609.9	53%
Total	**27,000**	**4,069.1**	**13,788.4**	**51%**
Western Burrowing Owl				
Overwintering Habitat	17,000	1,054.7	6,070.3	36%
Potential Nesting Habitat	—	410.5	1,333.6	—
Occupied Nesting Habitat	—	—	861.9	—
Subtotal potential and occupied nesting	5,300	1,465.2	3,250.2	61%
Total	**22,300**	**1,465.2**	**8,265.8**	**37%**
Tricolored Blackbird				
Primary Habitat	1,000	75.9	374.3	37%
Secondary Habitat	18,000	1,117.7	6,127.9	34%
Total	**19,000**	**1,193.6**	**6,502.2**	**34%**

Table 12. Land Acquisition Contribution to Modeled Habitat Requirements (continued)

Land Cover Type	Modeled Habitat Requirements (acres)	Reporting Period (acres)	Cumulative[a]	
	Protection (acres)	Protection (acres)	Protection (acres)	Percent Complete (%)
Least Bell's Vireo				
Primary Habitat	460	66.3	235.1	51%
San Joaquin Kit Fox				
Secondary Habitat	4,000	0.0	647.1	16%
Secondary Habitat (Low Use)	100	136.0	142.2	142%
Total	**4,100**	**136.0**	**789.3**	**19%**
Mount Hamilton Thistle				
Primary Habitat	150	8.6	96.9	65%
Fragrant Fritillary				
Primary Habitat	3,000	243.5	2,379.9	79%
Secondary Habitat	20,000	3,808.4	10,942.0	55%
Total	**23,000**	**4,051.9**	**13,321.8**	**58%**
Loma Prieta Hoita				
Primary Habitat	9,000	2,283.7	6,086.7	68%
Secondary Habitat	1,000	94.4	559.9	56%
Total	**10,000**	**2,378.2**	**6,646.6**	**66%**
Smooth Lessingia				
Primary Habitat	4,000	266.4	2,495.0	62%
Metcalf Canyon Jewelflower				
Primary Habitat	3,200	252.6	2,053.3	64%
Most Beautiful Jewelflower				
Primary Habitat	4,000	360.8	2,993.8	75%
Secondary	—	2.4	5.1	—
Total	**4,000**	**363.2**	**2,998.8**	**75%**

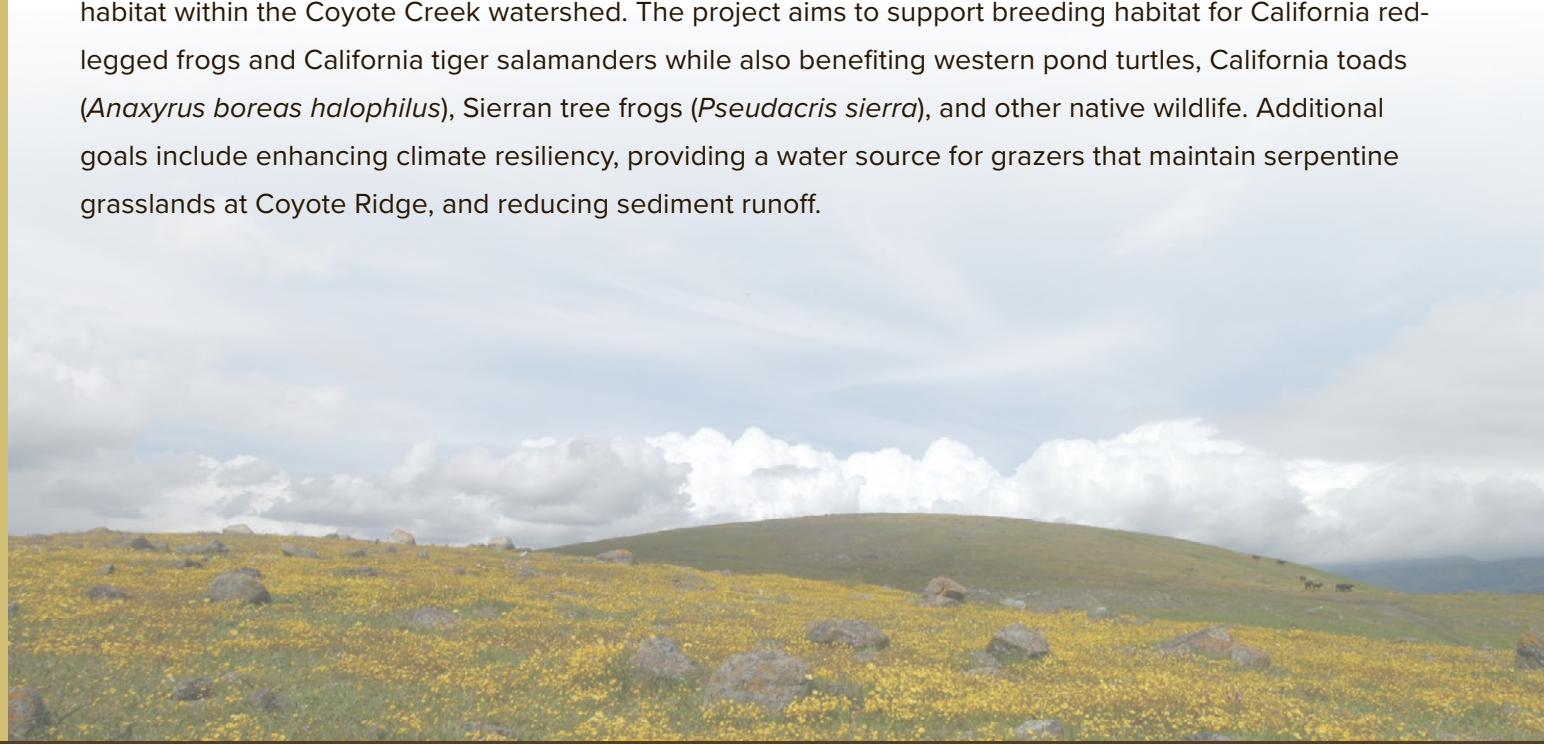
Habitat Restoration and Creation

This section summarizes habitat restoration and creation projects undertaken during the reporting period and documents cumulative restoration and creation by watershed.

Below are short summaries of habitat restoration and creation projects. **Table 13** shows aquatic land cover restoration and creation by watershed.

Coyote Ridge Open Space Preserve Ponds Restoration Project, Ponds CR1 and CR4

In 2019, the Habitat Agency partnered with the Santa Clara Valley OSA to create two ponds to restore habitat within the Coyote Creek watershed. The project aims to support breeding habitat for California red-legged frogs and California tiger salamanders while also benefiting western pond turtles, California toads (*Anaxyrus boreas halophilus*), Sierran tree frogs (*Pseudacris sierra*), and other native wildlife. Additional goals include enhancing climate resiliency, providing a water source for grazers that maintain serpentine grasslands at Coyote Ridge, and reducing sediment runoff.



Now in its fifth year of post-construction monitoring, the project evaluates nine key criteria, including hydrology, species presence, aquatic predators, invasive plant cover, wetland vegetation, and cattle access. Years 4 and 5 were the first with sufficient rainfall to assess hydrologic performance. Pond CR4 successfully held water year-round, fostering wetland vegetation and amphibian habitat. Pond CR1, however, failed to retain water for the target duration due to a leaky bottom. In 2024, the Habitat Agency will explore soil profile conditions to determine a solution.

Overall, Pond CR4 is a successful restoration pond, providing critical habitat for native species, including California tiger salamander.

WEBLINK: COYOTE RIDGE OPEN SPACE PRESERVE RESTORATION PROJECT REPORT

Water levels in ponds. As of April 29, 2024, pond CR4 (top) continued to hold water well, with 6 feet of water, while pond CR1 (bottom) dried down faster than intended, holding less than 1 foot of water, indicating expedited infiltration in the pond bottom.

Calero Pond and Wetland Restoration

The Calero Park Pond and Wetland Restoration Project, built in 2016, aims to restore and establish pond and wetland habitats in Calero County Park and provide for California tiger salamander, northwestern pond turtle, and Mount Hamilton thistle. In addition, the pond project was designed to provide potentially suitable habitat for the California red-legged frog, a species that is much less likely to be able to colonize the site due to distance from extant populations and intervening barriers to access.

By 2022, the wetland site was a success, but the pond continued to face challenges maintaining hydrology sufficiently to provide potential habitat for California red-legged frog (i.e., staying inundated through August during normal water years). However, following 2024 monitoring, the Habitat Agency has determined that the pond is functionally successful, providing consistent high-quality habitat for California tiger salamanders and western pond turtles and maintaining sufficient hydrology to support these species in spite of not meeting hydrology goals for frogs that have not colonized the site.

The pond margins support dense, high-quality native wetland vegetation cover, and the extant population of Mount Hamilton thistle population persists. Interestingly, by intentionally restricting access into the fenced pond area for cattle, restoration efforts significantly increased the native cover and species richness of vegetation within the wetland habitats along the pond margins. As an unintended consequence, this increased native plant cover and the reduction in pond disturbance from cattle exclusion appear to have impacted the population of Mount Hamilton thistles. With higher plant competition and less disturbance, bare soils are typically lacking for this biennial plant when seeds drop from second-year plants in the fall. Suitable seep hydrology for Mount Hamilton thistles may also be negatively affected by cattle exclusion. This was an important observation of the project and has led the Habitat Agency to begin exploring the relationship between cattle-mediated disturbances and Mount Hamilton thistle patches. Several pilot projects to better understand Mount Hamilton thistle disturbance needs have been initiated at Calero and Richmond.

Calero Park Pond and Wetland Restoration Project. Shown above are the Calero Pond (top) and a cattle trough delivering seep water into the pond and through a patch of Mount Hamilton thistle (bottom).

As pond hydrology is a topic of continued interest, the Habitat Agency will continue monitoring hydrology to ensure the pond does not function as a potential population sink for the covered species that consistently use the pond. In addition, the Habitat Agency will continue working to establish a sustainable management regime for the thistles and monitoring and managing the site for invasive and deleterious plant and animal species (e.g., bullfrogs [*Lithobates catesbeianus*], stinkwort [*Dittrichia graveolens*], and Himalayan blackberry [*Rubus armeniacus*]).

WEBLINK: CALERO PARK POND AND WETLAND RESTORATION PROJECT REPORT

Calero Conservation Easement Pond 17 Desedimentation and Restoration

In 2024, the Habitat Agency began restoring 0.06 acre of pond habitat. Pond 17 is a small cattle stock pond that supports an extant population of California tiger salamander. Pond 17's berm had failed, discharging sediment downstream and reducing the pond to a maximum depth of 2 feet.

In September 2024, the Habitat Agency restored the pond by repairing the berm and excavating accumulated sediment. The pond is now expected to sustain a maximum depth of over 4 feet and a longer ponding duration, both of which will benefit California tiger salamander. The project will be monitored against success criteria for 1 year after construction to ensure that it meets performance standards.

Pond restoration. Shown here are pond images from February 2024 (left), before restoration began, and December 2024 (right), after restoration work was completed.

Richmond Ranch Pond 1 Desedimentation and Restoration

In 2024, the Habitat Agency began creating 0.03 acre of pond habitat. Pond 1 historically supported California red-legged frog breeding. Surveys performed immediately after the Richmond Ranch acquisition in spring 2024 found that the pond was entirely silted in and no longer provided breeding habitat.

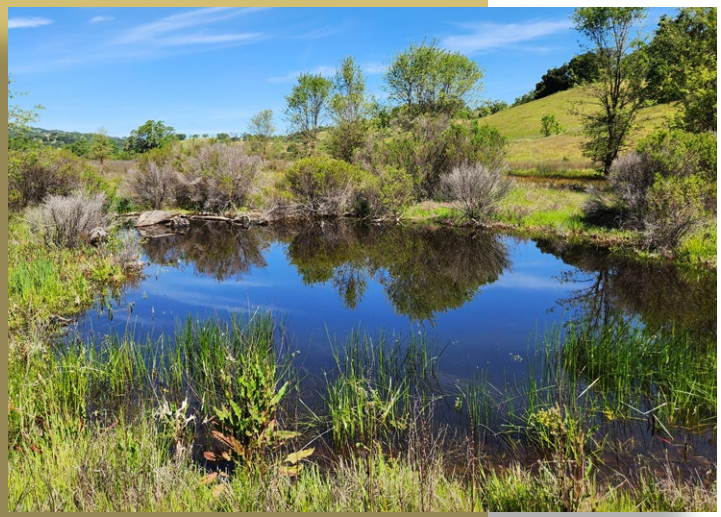
The Habitat Agency excavated approximately 200 cubic yards of sediment from the pond to create a pool greater than 3 feet deep suitable for California red-legged frog breeding. After excavation, a welded-wire panel exclusion fence was installed around the pond to reduce the impacts of herbivory and feral pig (*Sus scrofa*) rooting on wetland vegetation. The project will be monitored against success criteria for 1 year after construction to ensure it meets performance standards.

Restoration progress. Photos show the Richmond Ranch Pond 1 before restoration began (left), construction (center), and after restoration work was completed in December 2024 (right).

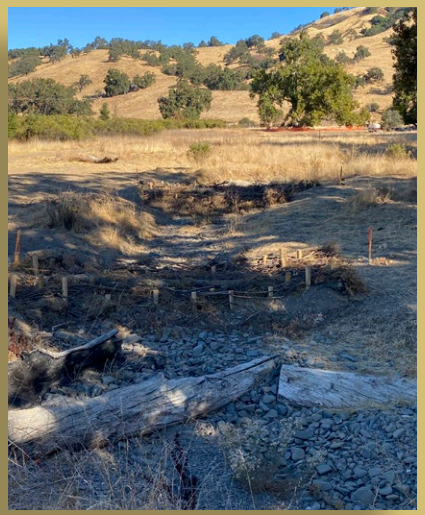
San Felipe Creek Restoration at Grant Park

The Habitat Agency has been working to restore approximately 1 mile of stream along San Felipe Creek in Joseph D. Grant County Park by modifying in-channel habitat and reinstating natural channel and floodplain functions. An additional goal and result of this project is the re-establishment and rehabilitation of large seasonal wetlands that were previously degraded by erosional draining and grazing. The restoration design addresses issues such as incised channels, disconnected floodplains, limited groundwater connectivity, and areas dominated by non-native plants. By mitigating impacts from historical grazing and hay production and enhancing riparian, wetland, and aquatic habitats through planting and management, the project supports special-status species, aquatic resources, and climate change resilience.

2024 marks Year 6 of the project monitoring period, and the project is performing exceptionally well. It has met all hydrologic performance standards for the year and is achieving the vegetation establishment standards for wetlands and riparian habitats. The restoration is on track to significantly improve the ecological condition of the project area compared to pre-project conditions, with 2024 providing favorable precipitation and excellent maintenance in support of habitat development.



Reinstating natural channel and floodplain functions. The restoration design of the San Felipe Creek Restoration project addresses issues such as incised channels, disconnected floodplains, limited groundwater connectivity, and areas converted to non-native plants.



Beaver dam analog feature. Staked debris jams have been shown to successfully slow water flows and capture sediment to raise the channel bed. A second phase was installed in 2024.

One aspect of the project was planned for phased restoration. The Eastern Incised Channel, with its 9-foot-high banks, was initially restored with 2.5-foot-tall, staked debris jams designed to slow water flows and capture sediment to raise the channel bed. After 5 years, the debris jams had successfully raised the bed, so in 2024, the Habitat Agency installed a second phase of staked debris jams, staggered between the first set, to raise the bed another 2.5 feet. These were installed by Helix Environmental Construction Group under guidance from Balance Hydrologics. Additionally, 14 beaver dam analogs—11 in Boyd's Creek and 3 in the Eastern Incised Channel—were installed to further slow water flows, raise groundwater levels, and enhance floodplain connectivity.

This project is set to be enrolled in the Santa Clara Valley Habitat Agency In-Lieu Fee program, providing mitigation credits for Clean Water Act–related impacts on waters of the U.S. and the state. These credits will be available for Habitat Plan covered projects requiring such mitigation.

WEBLINK: SAN FELIPE CREEK RESTORATION AT GRANT PARK PROJECT REPORT

Pacheco Creek Riparian Restoration Project

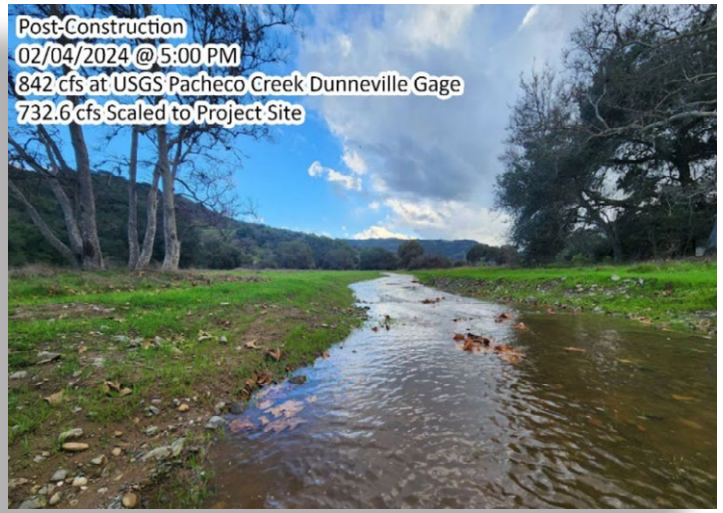
The Pacheco Creek Riparian Restoration Project, the Habitat Agency's largest and most complex restoration effort to date, completed construction in winter 2023/24. In 2024, the first year of maintenance and monitoring, stormwater flows successfully inundated the newly established secondary channels five times. The design performed well, and early maintenance efforts have set up the project for success despite minor challenges. Located in southern Santa Clara County along SR 152, the project restores habitat within the Pacheco Creek corridor of the Pajaro River watershed.

The project aims to restore and enhance California sycamore alluvial woodland, seasonal wetlands, freshwater marsh, and stream channel habitat while improving the mainstem of Pacheco Creek. These efforts benefit covered species such as tricolored blackbird, least Bell's vireo, California red-legged frog,

and northwestern pond turtle, while also supporting native species like South-Central California Coast steelhead (*Oncorhynchus mykiss*), yellow warbler (*Setophaga petechia*), and yellow-breasted chat (*Icteria virens*). It is also designed to aid species expected to gain Habitat Plan coverage, including mountain lion, monarch butterfly, American badger (*Taxidea taxus*), and Crotch's bumblebee.

A key goal is establishing 10 acres of California sycamore alluvial woodland, but securing genetically pure planting stock has been a challenge. The team collected thousands of branch cuttings from tested trees to grow rooted seedlings, yet propagation proved difficult from drought-stressed cuttings collected in early 2022 and 2023. Of the 700+ planned sycamores, only 315 were available at construction, and high vole populations further reduced that number. Cuttings taken in early 2024—after a good wet year—proved to be healthier and more productive, and all of the remaining trees, along with replacements for rodent-killed plantings, were planted during the winter of 2024/25.

Funded primarily by Habitat Plan impact fees, the project also received generous support from CDFW's Local Assistance Grant program, the Proposition 68 Parks & Water Bond (2018), and Valley Water's Safe, Clean Water Project D3 Grant.



Restoring habitat within the Pacheco Creek corridor of the Pajaro River watershed. A newly constructed channel with conditions in November 2023 (left) as compared to February 2024 (right).

Pajaro River Riparian Habitat Restoration

In collaboration with the Santa Clara Valley OSA and Point Blue Conservation Science, the Habitat Agency built an important restoration project along the Pajaro River in 2023 and 2024. The Pajaro River Riparian Habitat Restoration Project is transforming degraded farmland along the Pajaro River into new riparian and wetland habitat areas and contributing to a critical wildlife linkage across the valley between the Santa Cruz and Diablo mountains. The project began in fall 2023 with grading and soil preparation, followed by planting through spring 2024. To ensure project success, the Habitat Agency evaluated the early response of the installed plants during the late summer and fall and implemented a thorough replacement planting effort in December 2024, setting the stage for optimal results in the 5 years of required project monitoring and maintenance: 2025–2029.

This project restores an approximate 1-acre marsh and seasonal wetland complex along the river's lowered floodplain, creates 4 acres of riparian woodland, and enhances 3,800 feet of stream habitat. Extending a native riparian canopy and improved channel corridor from the river's confluence with Llagas Creek, it supports the foraging, nesting, and migratory needs of native wildlife.

Creating riparian woodland. This project is creating 4 acres of riparian woodland that will support the foraging, nesting, and migratory needs of native wildlife.

By transforming a landscape historically dominated by agriculture and invasive weeds, the project provides essential habitat for least Bell's vireo, western pond turtles, and native fish while strengthening a key wildlife corridor. It also benefits native pollinators including monarch butterflies and bumblebees.

This reach of the Pajaro is adjacent to one of Santa Clara County's only recent least Bell's vireo sightings (i.e., 1997 and 2001, documented by Valley Water biologists along Llagas Creek). The project design considered the habitat needs of the vireo and has focused on the dense, multi-leveled riparian canopy that this species needs for suitable nesting habitat. Habitat Agency ecologists have already observed monarch butterflies laying eggs on newly planted milkweed plants within months of planting (see photo below); we hope this revitalized habitat will soon help bring nesting least Bell's vireos back to the region.

New milkweed plants. Monarch butterflies have been observed laying eggs on newly planted milkweed plants.

Table 13. Aquatic Land Cover Restoration and Creation by Watershed—Cumulative

Watershed	Aquatic Land Cover (acres or as shown)							
	Willow Riparian Forests, Woodlands, and Scrub	Central California Sycamore Alluvial Woodland	Mixed Riparian Woodland and Forest	Coastal and Valley Freshwater Marsh	Seasonal Wetland	Pond	Stream (linear feet)	Aquatic Land Cover Total
Coyote								
Restoration	0.82	—	0.82	0.15	3.72	0.73	9,645	6.24
Creation	—	—	—	—	—	—	—	0.00
Subtotal	*0.82*	*0.00*	*0.82*	*0.15*	*3.72*	*0.73*	*9,645*	*6.24*
Guadalupe								
Restoration	—	—	—	0.12	—	0.22	—	0.34
Creation	—	—	—	—	0.34	—	—	0.34
Subtotal	—	—	—	*0.12*	*0.34*	*0.22*	—	*0.68*
Pajaro								
Restoration	—	10.00	9.28	1.62	0.50	—	12,567	21.40
Creation	—	—	—	—	0.38	—	—	0.38
Subtotal	*0.00*	*10.00*	*9.28*	*1.62*	*0.88*	*0.00*	*12,567*	*21.78*
Uvas								
Restoration	—	—	—	—	—	—	1,700	—
Creation	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	*1,700*	—
Llagas								
Restoration	—	—	—	—	—	—	—	—
Creation	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—
Total	**0.82**	**10.00**	**10.10**	**1.89**	**4.94**	**0.95**	**23,912**	**28.70**

Western Burrowing Owl Management and Monitoring

This section notes western burrowing owl–related management and monitoring actions undertaken during the reporting period and shows young fledged annually since 2014.

During the reporting period, the Habitat Agency managed two of five western burrowing owl breeding sites and two new reintroduction sites discussed below. Also within the reporting period, the Habitat Agency continued managing a captive breeding facility to increase the number of owls in the Plan Area. Burrowing owl surveys were conducted throughout the Permit Area and Extended Permit Area for burrowing owl conservation.

Western burrowing owls in the burrowing owl conservation area.

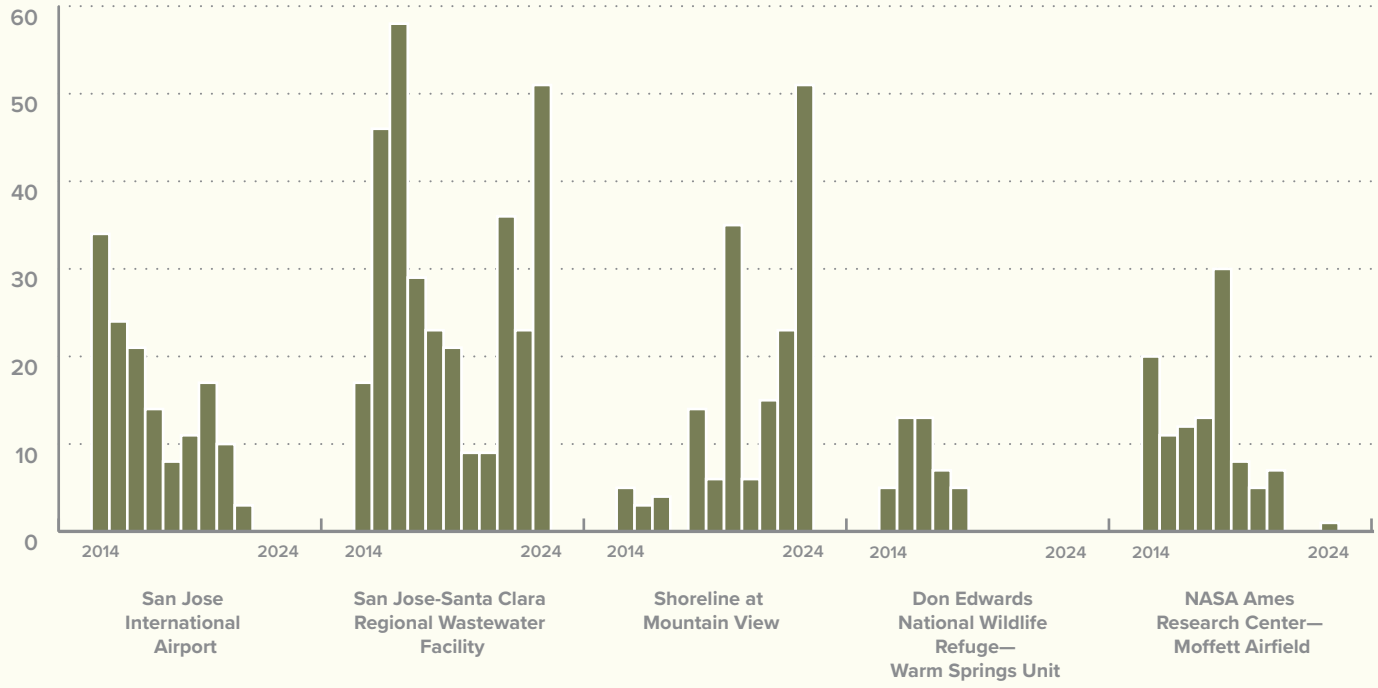
The 2024 western burrowing owl surveys documented successfully breeding owls at three of the five sites, the Regional Wastewater Facility (RWF), Moffett Field, and Shoreline at Mountain View. One single owl was detected at San Jose Airport, and owls continued to be absent at the Don Edwards National Wildlife Refuge. Nonetheless, the total number of adult owls observed during the breeding season increased from 47 to 94 adults (46 pairs) between 2023 and 2024. The number of young fledged increased from 95 young to 211 young, and the average number of offspring per pair stayed roughly the same at 4.6 juveniles per pair.

These results are very encouraging. The increase in the number of breeding adults and their offspring is a result of continued Tier 3 recovery actions (owl reintroduction phase) that the Habitat Agency conducted during the FY2023–2024 reporting period. This year, a total of 21 pairs of burrowing owls—20 of which successfully reproduced a total of 119 offspring (5.7 young per pair)—and 4 females were soft-released as part of the Juvenile Burrowing Owl Overwintering Project. These 46 owls represent 49% of the total breeding population in the Permit Area in 2024. For the second year, owls were soft-released (10 pairs) at two reintroduction sites in the southern part of the county that were not occupied by wild burrowing owls prior to reintroduction. Those two sites are the Peninsula Open Space Trust/Santa Clara OSA Reintroduction Site and the Santa Clara County Parks and Recreation Department Reintroduction Site. All 10 pairs successfully reproduced at both sites. Additionally, six owls (three pairs) remained in the Captive Breeding Program. These three captive pairs produced a total of 18 offspring (6.0 young per pair). The success of the Overwintering Project and the Captive Breeding Program are crucial for meeting a conservation goal for this species in the Permit Area, which is to first stabilize the population, then demonstrate a positive population growth trend.

Successful breeding. This year, 20 pairs of burrowing owls produced a total of 119 offspring.

The number of young fledged at the five conservation sites each year has varied over time; however, the total number of young produced across these sites has decreased since 2014. The decreasing trend in offspring rate is attributable partly to inbreeding depression (i.e., the reduction in the average fitness of offspring born to parents that are closely related to each other). Other factors include climate change, habitat loss and disturbance, rodent eradication, lack of suitable habitat, and increase in predation by non-native predators.

Figure 11. Number of Young Fledged (2014–2024)

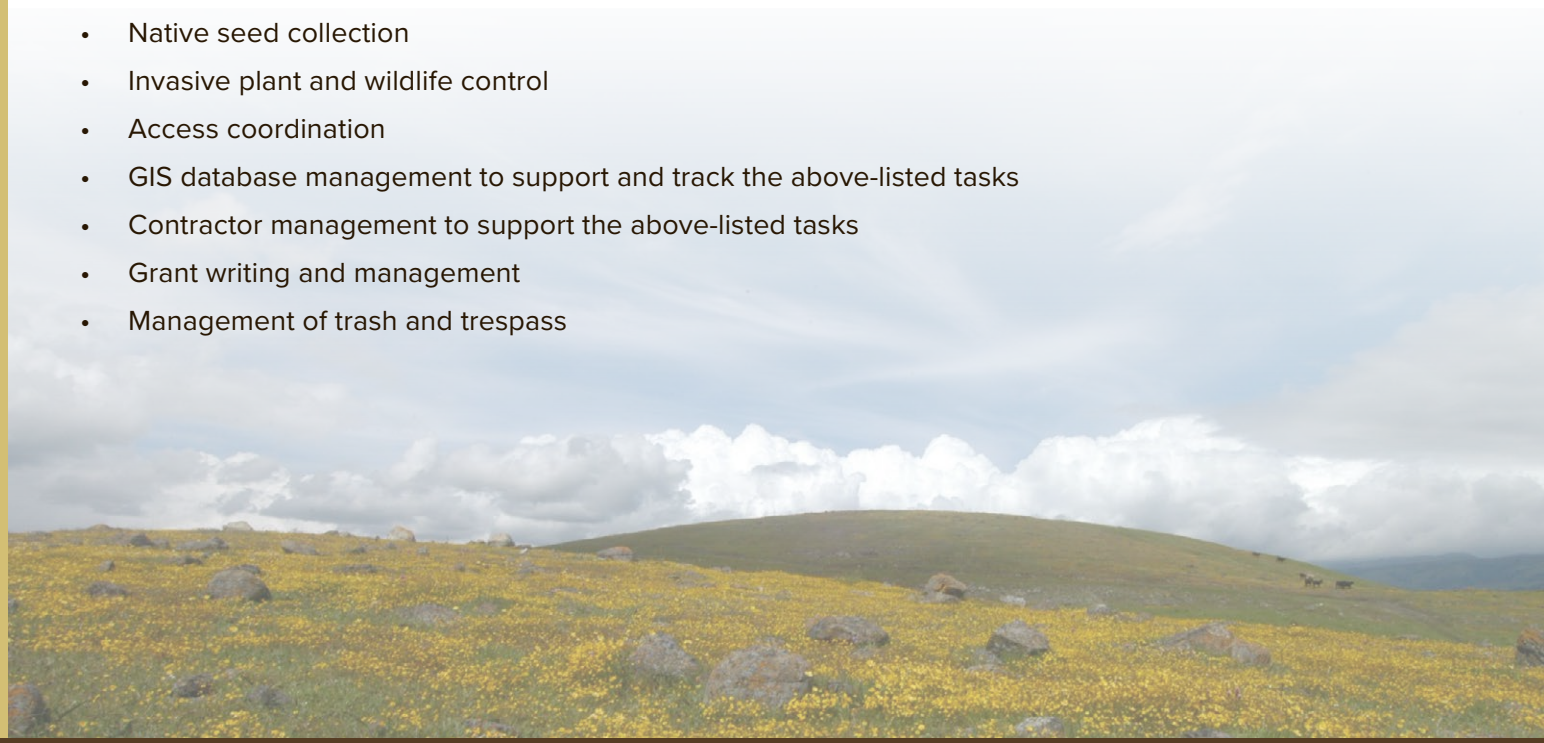


This section summarizes management actions that took place during the reporting period and highlights notable accomplishments.

Reserve System Management

During the reporting period, the Reserve System grew to approximately 15,080 acres of conservation land. For the Reserve System to meet the biological goals and objectives set forth in the Habitat Plan, a wide range of land management actions are needed, including the following:

- Conservation easement monitoring
- Reserve System patrols
- Grazing oversight
- Maintenance and repair of grazing infrastructure (e.g., fences, gates, troughs, and water systems)
- Vegetation management
- Native seed collection
- Invasive plant and wildlife control
- Access coordination
- GIS database management to support and track the above-listed tasks
- Contractor management to support the above-listed tasks
- Grant writing and management
- Management of trash and trespass



Highlights

Highlights from Reserve System management activities during the reporting period are listed below.

- Habitat Agency staff made over 250 site visits to Reserve System properties.
- Habitat Agency staff and contractors controlled over 300 acres of invasive plant species including barbed goatgrass (*Aegilops triuncialis*), yellow starthistle (*Centaurea solstitialis*), purple starthistle (*Centaurea purpurea*), milk thistle (*Silybum marianum*), artichoke thistle (*Cynara cardunculus*), tamarisk (*Tamarisk* sp.), tree of heaven (*Ailanthus altissima*), and stinkwort.
- Working with partners, the Habitat Agency controlled populations of invasive wildlife species:
  - Numerous American bullfrogs were dispatched and removed from the Reserve System.
  - A total of 74 feral pigs were dispatched and removed from the Reserve System.
- Habitat Agency contractors installed approximately 1,150 linear feet of welded-wire panel fence to enhance stock pond habitat for covered amphibians.
- Consultants from Rangeland Conservation Science conducted residual dry matter surveys on the Bates, Baird, Davidson, and Tilton Reserves to inform grazing management.
- Over 1,000 pounds of trash and debris from dilapidated buildings was removed from the Reserve System.

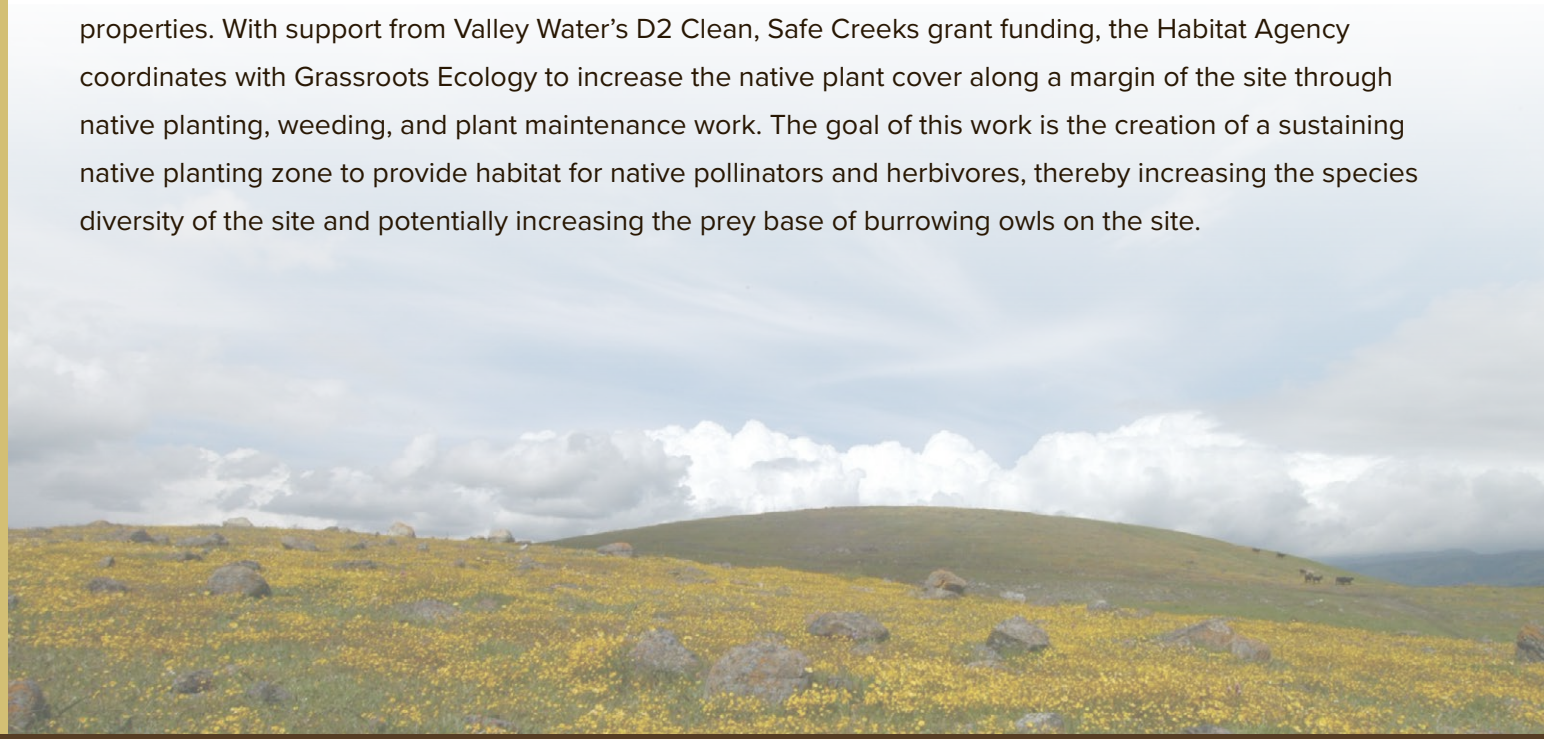
Pond at Coyote Ridge Open Space Preserve.

Monitoring, Research, and Adaptive Management

This section summarizes monitoring, research, and adaptive management projects undertaken during the reporting period.

San José-Santa Clara Regional Wastewater Facility Bufferlands Pilot Planting

In FY2023–2024, the 201-acre San José-Santa Clara RWF bufferlands was formally added to the Habitat Agency Reserve System with the recordation of a conservation easement held by the Habitat Agency. This rare patch of critical burrowing owl habitat in the county is the most urbanized of the Habitat Agency reserve properties. With support from Valley Water's D2 Clean, Safe Creeks grant funding, the Habitat Agency coordinates with Grassroots Ecology to increase the native plant cover along a margin of the site through native planting, weeding, and plant maintenance work. The goal of this work is the creation of a sustaining native planting zone to provide habitat for native pollinators and herbivores, thereby increasing the species diversity of the site and potentially increasing the prey base of burrowing owls on the site.



In 2024, Grassroots Ecology staff implemented staff work days, community days including plant maintenance work with community volunteers, bioblitz data gathering to capture the species interacting with the native plantings, and some replanting work.

Community connections. Grassroots Ecology leverages community connections to increase the effectiveness of work days while giving volunteers a sense of engagement in natural resource management.

Wildlife Linkage and Connectivity Projects

- SR-152 Pacheco Creek Wildlife Connectivity and Corridor Enhancement
- Pacheco Pass Wildlife Linkage and Connectivity Improvements
- Pacheco Pass Wildlife Overpass Planning
- Understanding Mountain Lion Connectivity and Gene Flow in the Pacheco Pass Area Local Assistance Grant

Lakeside Ranch Baseline Botanical Surveys and Development of a Reserve System-Wide Covered Plant Monitoring Program

Through a Local Assistance Grant, the Habitat Agency contracted Nomad Ecology to conduct baseline botanical surveys at the newly acquired Lakeside Ranch Reserve and develop a covered plant monitoring program that will be expanded to the larger Reserve System. Baseline surveys at Lakeside Ranch documented populations of Santa Clara Valley dudleya, Loma Prieta hoita, most beautiful jewelflower, and smooth lessingia. The covered plant monitoring program component of the project remains in progress. Project completion is expected in late 2025.

Baseline Biological Surveys at Richmond Ranch

In January 2024, the Habitat Agency completed phase 1 of the Richmond Ranch Acquisition Project by purchasing 944 acres of the 3,650-acre property. The Habitat Agency then contracted Creekside Center for Earth Observation (Creekside) and Vollmar Natural Lands Consulting (Vollmar) to conduct baseline resource inventories on Richmond Ranch. Creekside was contracted to perform baseline surveys for Bay checkerspot butterfly and covered plants. Vollmar was contracted to perform baseline surveys for covered amphibians and reptiles. Several covered species were found on the property during these baseline surveys, including Bay checkerspot butterfly, California tiger salamander, California red-legged frog, Tiburon paintbrush, Mount Hamilton thistle, Santa Clara Valley dudleya, fragrant fritillary, smooth lessingia, and Metcalf Canyon jewelflower. Western burrowing owl have also been found overwintering.

Covered Species Monitoring

Bay Checkerspot Butterfly

In early 2024, the Habitat Agency contracted Creekside to conduct larval and adult surveys for Bay checkerspot butterfly to determine occupancy and assess population trends throughout the Reserve System. Larval and adult surveys were conducted at MOCR and Richmond Ranch Reserve. Adult surveys were also conducted at Baird, Davidson, Tilton, Lakeside, Tulare Hill, and Calero Conservation Easement Reserves. Reporting for this year's survey efforts is being finalized.

Covered Plants

Calero Conservation Easement. The Habitat Agency contracted Nomad Ecology to monitor covered plant populations at Calero County Park that were first surveyed in 2017.

Máyyan 'Ooyákma—Coyote Ridge Open Space Preserve. The Habitat Agency contracted Creekside to monitor populations of covered plants at MOCR that were first surveyed in 2018.

Wildlife

Habitat Agency staff conducted monitoring surveys for reptiles and larval amphibians at Lakeside, Tilton, MOCR, Coyote Ridge East, Malech, and O'Connell Reserves. Highlights of internal survey efforts included the following.

- California tiger salamander breeding was observed at Tilton Ranch for the first time.
- Foothill yellow-legged frog egg masses were found in Llagas Creek at Lakeside Reserve.
- Successful California red-legged frog breeding occurred at MOCR and Coyote Ridge East Reserve.

Monitoring surveys for reptiles and larval amphibians. California tiger salamander at Richmond Ranch, foothill yellow-legged frog egg mass at Lakeside Reserve, and California red-legged frog at Coyote Ridge East.

Coyote Ceanothus Mitigation Project

Annual planting of coyote ceanothus concluded at Valley Water's mitigation site on Coyote Ridge in winter of 2022. Planting began in 2015 within four original test plots, or habitat types (Chaparral Edge, Pine, Lower Sage, and Upper Sage). From 2019 to 2022, planting also occurred in serpentine grassland outside the test plots as they reached capacity. Planting consisted of a combination of direct seeded basins and container plants installed in basins.

At the time of annual monitoring in summer 2024, there were 1,287 active basins (basins with at least one living coyote ceanothus in them; direct seeded basins are installed with four seeds per basin), down slightly from 1,295 active basins in 2023. Monitoring of all planted basins for survival, health and vigor, plant height, and fruiting is conducted in June, while monitoring for flowering is typically conducted in February or March. Monitoring for natural recruitment was instituted in 2024 and conducted in March.

Coyote Ceanothus in flower.
Monitoring for flowering is typically conducted in February and March.

Natural recruitment under mature plants, first documented in 2023, continued in 2024. Monitoring focused on areas next to and underneath older plants because those are most likely to have dispersed enough fruit for natural recruitment to conceivably occur. A total of 36 natural recruits were recorded in March, with 30 survivors documented in June. Most of the natural recruitment was seen in the Pine plot, with 23 recruits and 21 survivors as of June. Recruitment in low numbers was seen in every other plot and the serpentine grassland area (one seedling recorded in the area planted in 2020).

Eight years after planting, container plants continue to maintain high survival rates with minimal variation across habitat types (80–90% survival). In contrast, direct seeded plants exhibit a generally declining survival rate over time with notable differences between habitat types, ranging from 85% survival in the Pine plot to 8% survival in the Lower Sage plot. As the 2024 monitoring effort shows, this created occurrence continues to demonstrate healthy growth and unassisted reproduction via natural recruitment under maturing plants.

The Habitat Agency extends a special thanks to Janell Hillman, Valley Water Senior Biologist and project lead, for continuing to champion this project.

WEBLINK: REPORT

Coyote Ceanothus planting.
This created occurrence continues to demonstrate healthy growth and unassisted reproduction via natural recruitment.

Stay-Ahead Provision

This section evaluates compliance with the Habitat Plan's Stay-Ahead provisions for natural communities, the burrowing owl conservation strategy, and covered plants.

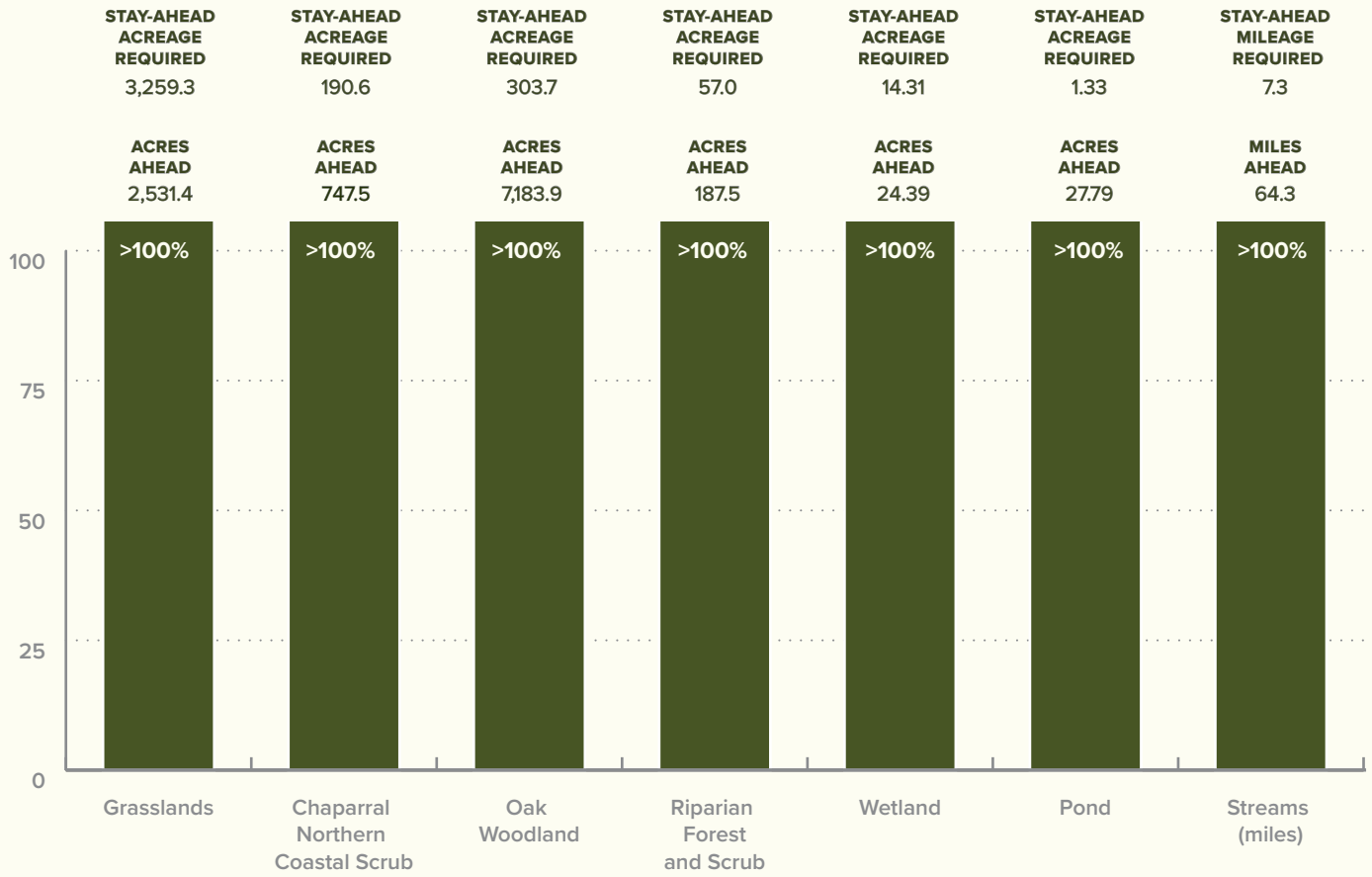
The Stay-Ahead provision requires that the amount of each land cover type conserved, restored, or created by the Habitat Agency as a proportion of the total requirement for each land cover type must be roughly proportional to the impact on that land cover type as a proportion of the total impact expected by all covered activities. For example, if 25% of the expected impacts on mixed serpentine chaparral have occurred, then at least 25% of the required land acquisition for mixed serpentine chaparral must also have occurred. To provide flexibility during implementation, the Habitat Agency may fall behind by a maximum of 10% of its conservation strategy requirements (conservation overall and by each applicable land cover type) and still be in compliance with the Stay-Ahead provision. This deviation accounts for the likely pattern of infrequent land acquisition of large parcels that will allow the Habitat Agency to jump far ahead of impacts with just one acquisition.

The Habitat Plan's Stay-Ahead provision requires that conservation is ahead of or proportional to impacts for natural communities, plants, and the western burrowing owl conservation strategy. For natural communities and plants, this is achieved by acquiring land for the Reserve System in advance of impacts. For the burrowing owl conservation strategy, land acquisition, management agreements, and conservation actions contribute to the Stay-Ahead requirements.

The following pages show Stay-Ahead compliance for natural communities (**Figure 12**), western burrowing owl (**Figure 13**), and plants (**Figure 14**).

Stay-Ahead requirements for natural communities are still being exceeded. The Habitat Agency acquired several properties within the reporting period, significantly contributing to compliance with the Stay-Ahead provision. The Habitat Agency will continue to acquire land throughout the permit term in order to remain in compliance with the Stay-Ahead requirement.

Figure 12. Stay-Ahead Compliance for Natural Communities



Notes

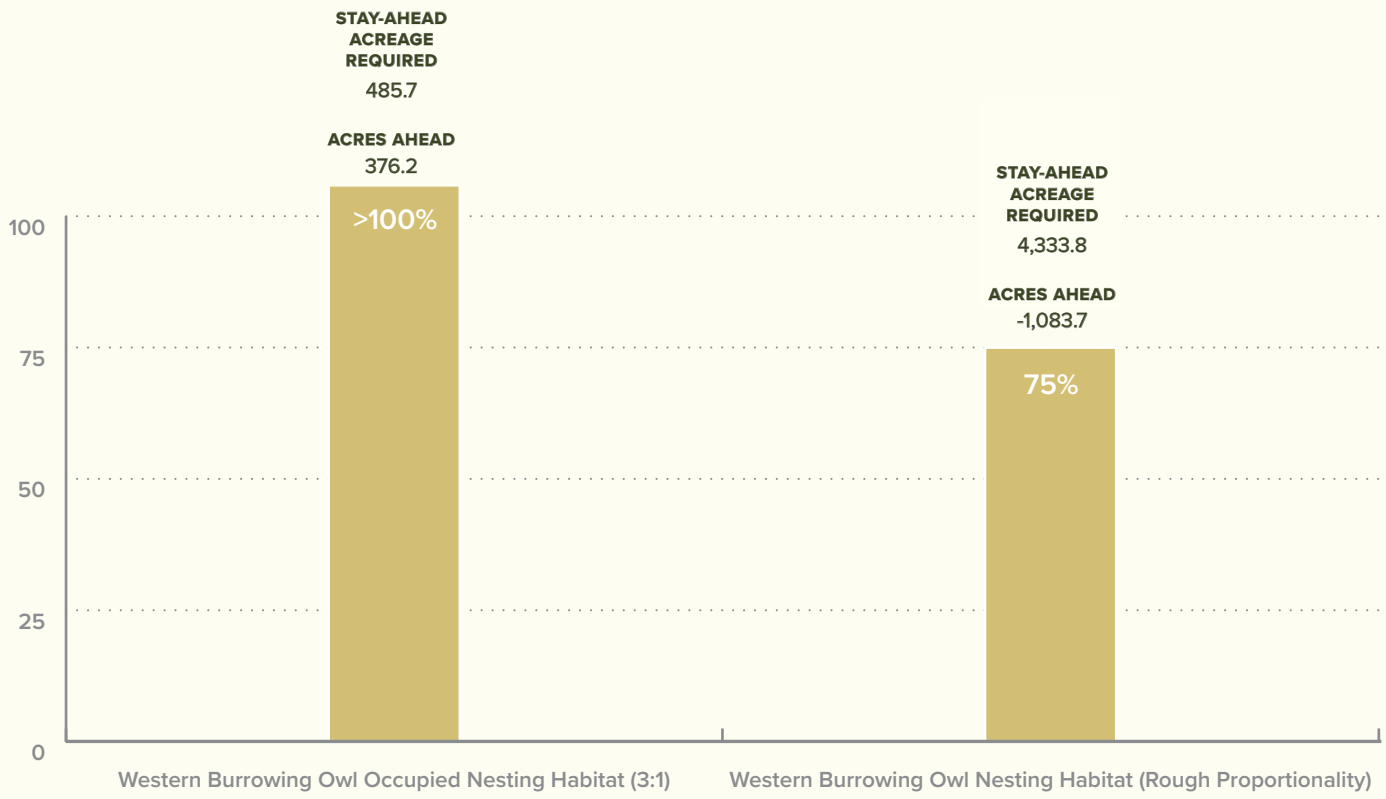
Stay-Ahead is tracked by natural community rather than land cover type to allow for flexibility in Reserve System assembly. Compliance is tracked as a proportion of conservation achieved/expected compared to impacts incurred/expected.

Acres Ahead = (Conservation Achieved) – (Conservation Required).

Conservation Required = (% of Allowable Impacts Accrued)*(Conservation Total).

The Habitat Agency continues to remain in compliance with the Stay-Ahead requirement for occupied nesting habitat but is not in compliance with nesting habitat (rough proportionality).

Figure 13. Stay-Ahead Compliance for Western Burrowing Owl



Notes

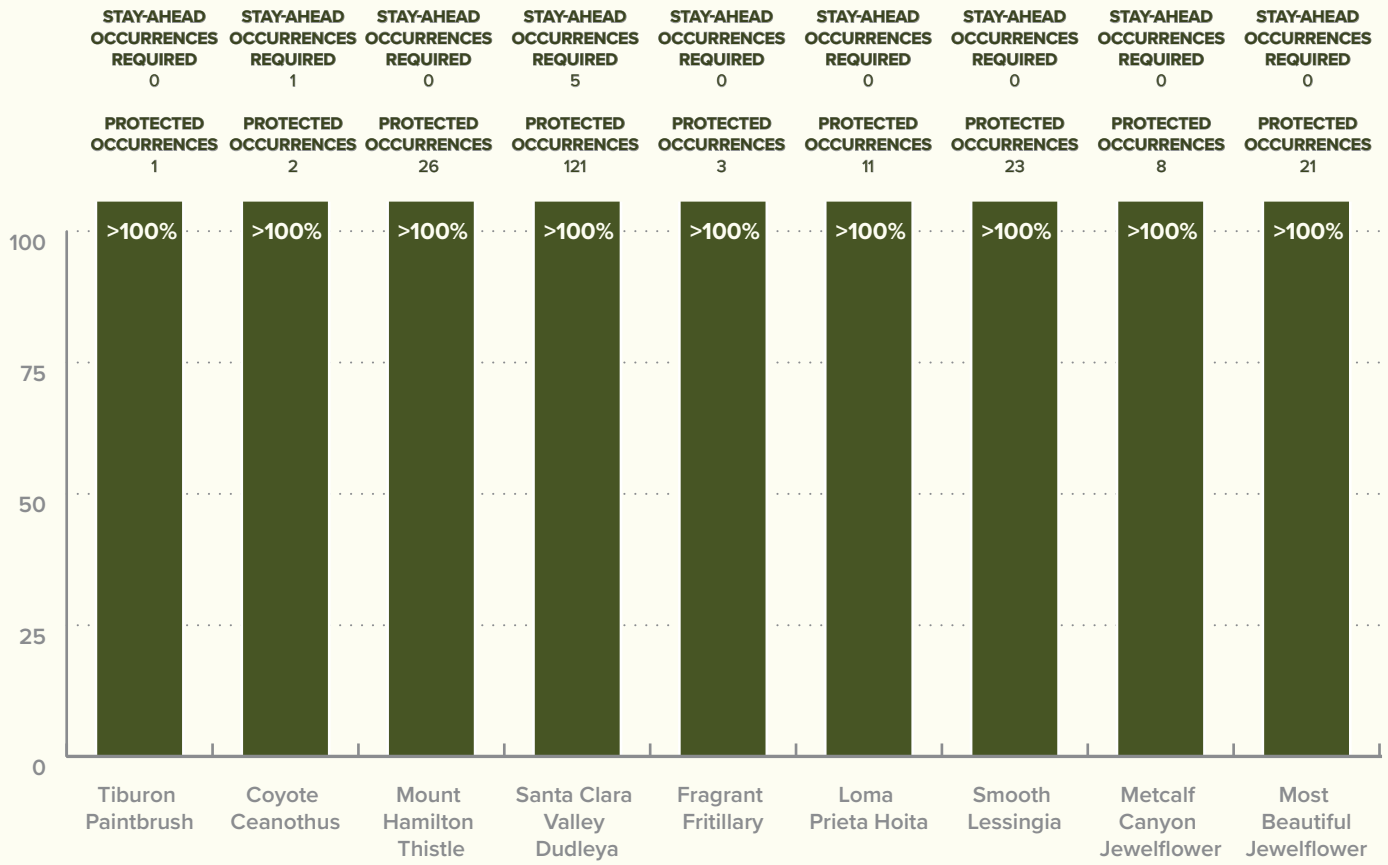
The western burrowing owl Stay-Ahead requirement measures two different compliance metrics— (1) occupied nesting habitat: impacts and conservation of occupied nesting habitat using a 3:1 ratio within a 10% deviation, and (2) nesting habitat rough proportionality: rough proportionality for impacts to occupied breeding habitat compared to conserved occupied nesting and potential breeding habitat within a 10–15% deviation. For both metrics, both lands enrolled in the Reserve System and lands under management agreements can be credited toward conservation. For the second metric, conservation actions implemented on managed lands allow for the 10% deviation to be increased to 15%.

Acres Ahead = (Conservation Achieved) – (Conservation Required).

Compliance = (Conservation Achieved)/(Conservation Required).

All the covered plant species continue to exceed the Stay-Ahead requirements in the Habitat Plan for the reporting period, given that there have been very few impacts on covered plant species occurrences to date.

Figure 14. Stay-Ahead Compliance for Plants



Notes

Stay-Ahead requirements for covered plants are tracked by covered plant occurrence and do not allow for 10% deviation or aggregation. Plant occurrences must be protected in advance of impacts. Only coyote ceanothus creation or acquisition is allowed to deviate—a 5-year grace period is allowed from the first impact.

Conservation Required = (% of Allowable Impacts Accrued)*(Conservation Total).

Compliance = (Conservation Achieved)/(Conservation Required).

Changed and Unforeseen Circumstances

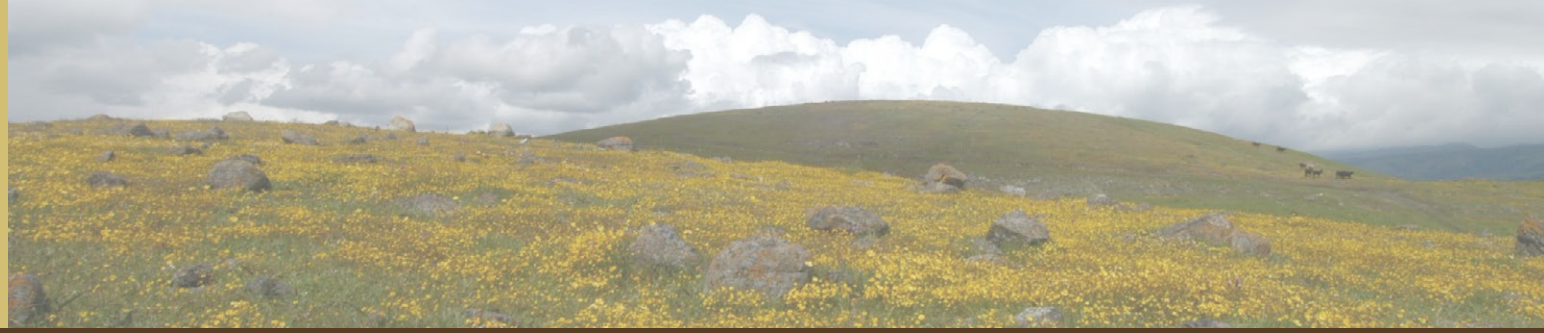
This section notes any changed or unforeseen circumstances that occurred during the reporting period.

The "No Surprises" Regulation established by USFWS defines *changed circumstances* as those circumstances affecting a species or geographic area covered by an HCP that can be reasonably anticipated by the applicant or USFWS and to which the parties preparing the HCP can plan a response. The Natural Community Conservation Planning Act has a similar provision for NCCPs.

No changed circumstances occurred during the reporting period. Data to illustrate no changed circumstance for climate change are described below.

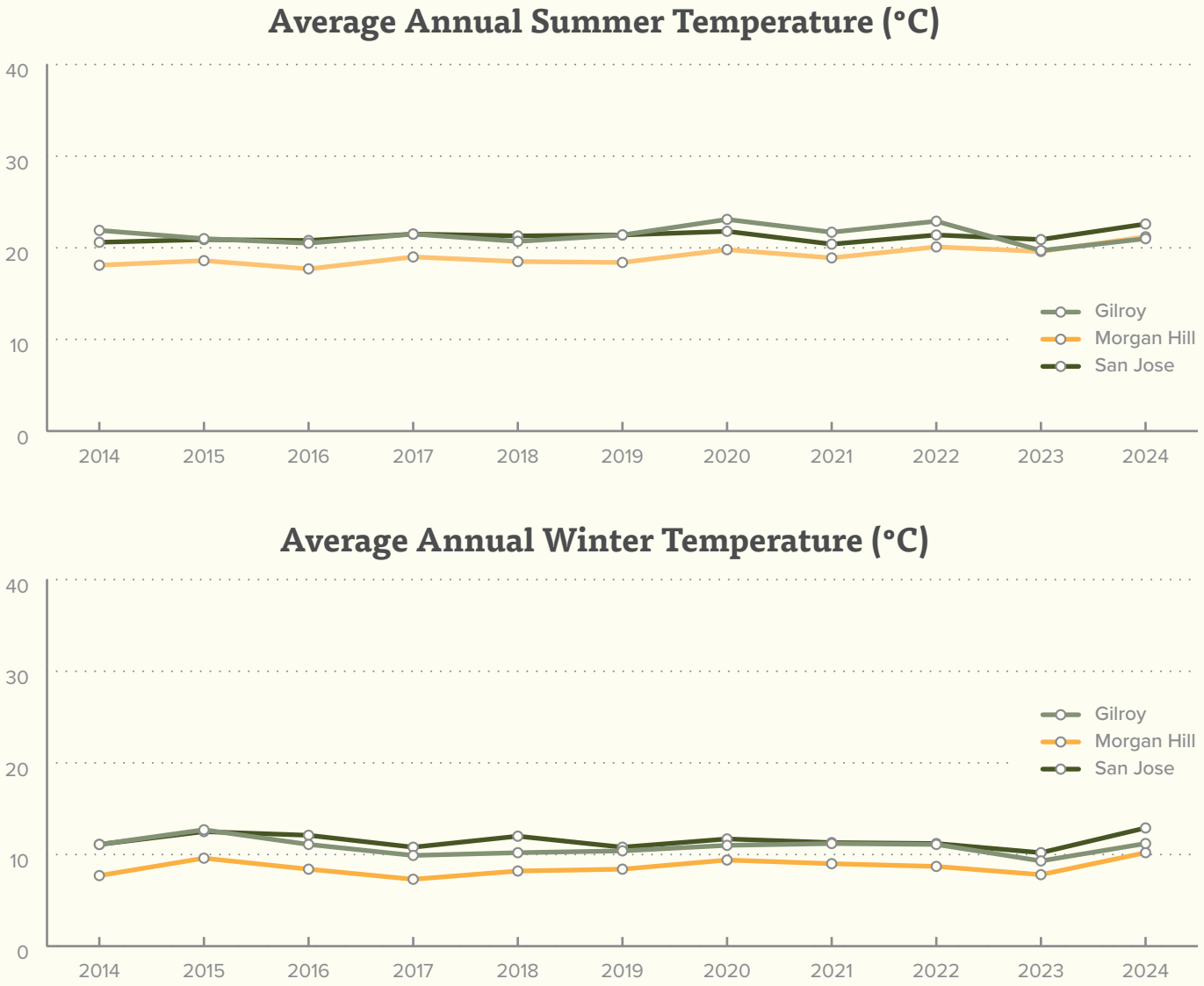
Climate Change

Under the Habitat Plan, an increase in temperature of up to 2.8 degrees Celsius for any of the three baseline periods measured as a 10-year running average is a changed circumstance. The Habitat Agency is tracking these average annual temperatures. The changed circumstance **has not been met**; based on the last 10 years of data, temperatures have generally been stable. These trends are shown on the following page in **Figure 15**, which charts the average annual summer and winter temperatures in the Plan Area since Habitat Plan inception.



Since Habitat Plan inception, temperatures have generally been stable within the Plan Area, meaning the climate change changed circumstance has not occurred.

Figure 15. Average Temperatures in the Plan Area



Note

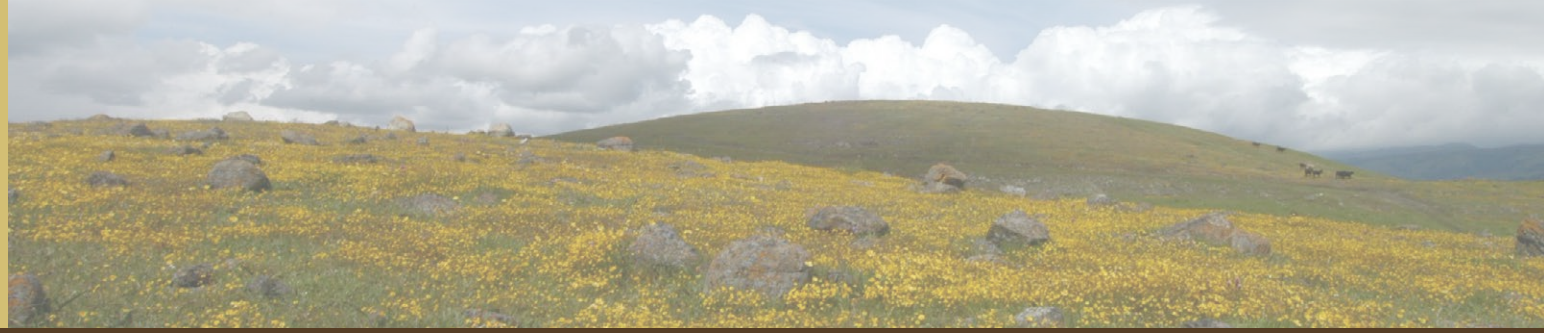
Data from previous annual reports have been updated in this figure.

Education and Outreach

This section summarizes education and outreach activities during the reporting period.

Education and outreach are unique opportunities for our staff to present what the Habitat Agency does and inform various members of the public. This reporting year, opportunities varied widely and included presentations at schools, donor meetings, Rotary Clubs, Annual Coalition meetings, workshops, and guided hikes. A list of these opportunities during the reporting year is below.

- Nathan Hale (Senior Restoration Ecologist) and Don Arnold (Conservation Planner) gave a presentation on invasive species and the need for habitat restoration to two groups of Latimer Middle School students.
- Nathan Hale presented to the American Association of University Women on Native Plants and Insect Biodiversity and briefly what the Habitat Agency is.
- Edmund Sullivan (Executive Officer) gave a talk at the Sacramento Lobby Day with the California HCP Coalition on the need for state Natural Community Conservation Planning funding.
- Matt Fogarty (Senior Land Management and Monitoring Specialist) helped to lead a Bay Nature Hike at Coyote Ridge. Matt spoke about the role the Habitat Agency played in protecting Coyote Ridge.
- Edmund Sullivan spoke at the California HCP Coalition annual meeting on the need for state Natural Community Conservation Planning funding.



- Nathan Hale spoke at the California HCP Coalition annual meeting on the pollinator conservation strategies that are part of our current plan (Bay checkerspot butterfly conservation) and plan amendment species (monarch, Crotch's bumblebee, and large marble butterfly [*Euchloe ausonides*]).
- Julie King (Principal Land Management Specialist) spoke at the California HCP Coalition annual meeting on mountain lion connectivity conservation strategies.
- Edmund Sullivan presented to Peninsula Open Space Trust donors on fundraising and advocacy.
- Gerry Haas and Nathan Hale coordinated a spring field trip for Co-Permittees and members of the Public Advisory Committee to showcase the Pacheco Creek Restoration Project.
- Nathan Hale presented virtually to the Sycamore Summit on the topic of Restoration of Sycamore Alluvial Woodland habitat at Pacheco Creek including challenges with growing native sycamore trees from cuttings.
- Edmund Sullivan spoke at the Santa Cruz Mountain Stewardship Council Spotlight event educating elected officials' staff members on what the Habitat Agency is and successes to date.
- Matt Fogarty spoke at a Virtual Adventure with the OSA on the role the Habitat Agency plays in regional conservation and the species we cover.
- Edmund Sullivan presented to the Gilroy Rotary Club to introduce the Habitat Agency, discuss what we do, and successes to date.
- Robin Kohn (Senior Real Estate Agent) presented at a County Parks and Recreation training on joint land acquisitions with the Habitat Agency.
- Julie King put on a feral pig management workshop at the Morgan Hill City Hall with Pig Brig and CDFW.

Spring field trip to see the Pacheco Creek Restoration Project.

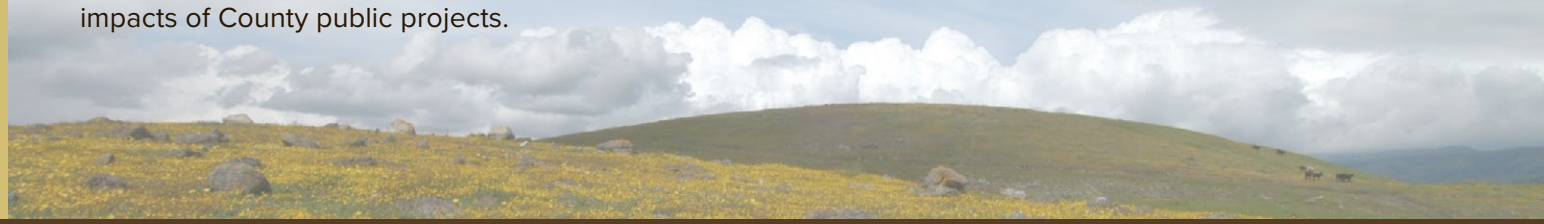
Finances

This section includes the economic assumptions on which the Habitat Plan was based, summarizes all revenues received, and assesses the post-permit term funding strategy.

Each year, the Habitat Agency evaluates the economic assumptions on which the Habitat Plan was based, an accounting of all revenues received, and an assessment of the post-permit term funding strategy. The Habitat Agency's allocated budget and expenditures varied from what was anticipated by the Habitat Plan (**Figure 16**). For Years 11–15, the Habitat Plan assumed $11.9 million for its average annual budget. The FY2023–2024 Habitat Plan implementation budget was $9.2 million—77% of the anticipated budget. The budget focused on habitat restoration, program administration, land enrollment, land management activities, burrowing owl management, reserve management, and monitoring (**Figure 16**).

The Habitat Plan anticipates 55% of funding from fees and 45% from non-fee sources (grants and donations; **Figure 17**). Private and public development-based fees fund mitigation to offset losses of land cover types, covered species habitat, and other biological values. These fees pay for the full cost of mitigating project effects on the covered species and natural communities addressed by the Habitat Plan. These fees are charged for permanent and temporary impacts and include an endowment fee and plan preparation cost recovery fee component. The endowment fee component is included in all development fees to build an endowment for post-permit term funding.

Non-fee-based funding comes from local, state, and federal sources other than Habitat Plan fees. These include land acquisitions and other conservation actions by local organizations and grants from federal, state, local, and private entities. These local funding sources typically require that funds be used to contribute to the recovery of the covered species (i.e., the NCCP portion of the Habitat Plan) or used to mitigate the impacts of their own agency. For example, County Parks has begun enrolling its land to mitigate impacts of County public projects.



A percentage of the development fees collected is set aside for an endowment fund. For land cover and serpentine fees, the endowment is 20%. In the FY2023–2024 reporting period, endowment funds were deposited to and managed by the Sand Hill Global Advisors investment team.

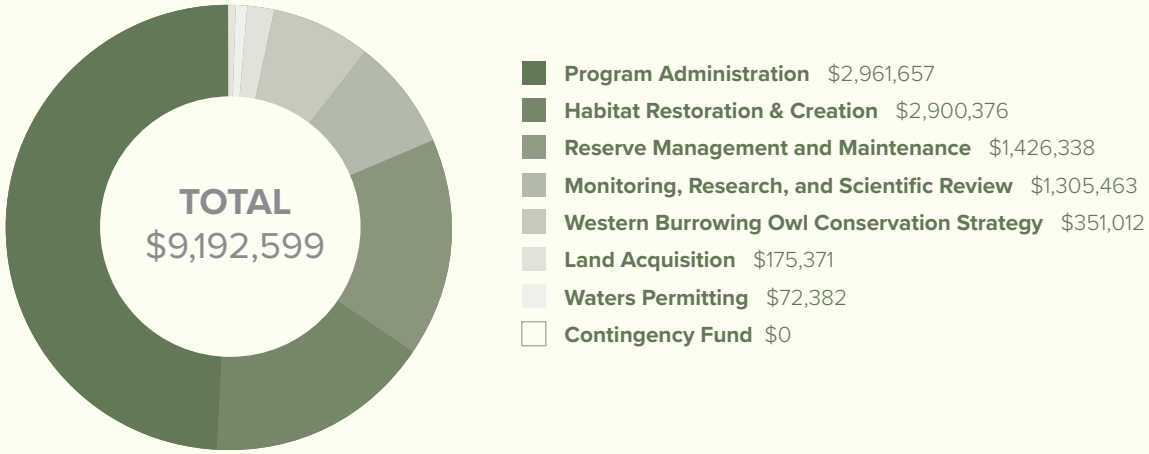
As mentioned in last year's annual report, the Habitat Plan Effects Impact Assessment and Level of Take (Chapter 4) relies on anticipated build-out of the general plans of the Co-Permittee agencies as well as master planning for Valley Water, VTA, and Co-Permittee public agencies. As of the end of the reporting year, the Habitat Agency has provided take coverage for permanent impacts on 2,030 acres of land. This amount is 1,930 acres short of land conversion expectations that drive the Habitat Plan conservation and restoration requirements. When taken as an average of Zone B land cover fees since Habitat Plan inception, the 1,930 fewer acres of impacts equates to revenue shortfalls of at least $35 million, a conservative estimate. The amount is higher if specialty land cover types are factored into the analysis. The revenue and land cover impacts for the first 11 years of the permit term are illustrated in **Figure 18**. The resulting revenue deficit means the Habitat Plan is outperforming its cost model in terms of the conservation and restoration that the Habitat Agency has achieved to date with less fee funding. This early conservation success is due to better-than-expected grant funding, strategic land acquisition, and cooperation with partners in land enrollment and restoration. However, this model will not be sustainable in the long term as the fee revenue gap may continue to grow and grant funding might not be able to close the gap indefinitely.

Although the impact assessment was based on the best available information in 2012, development is not occurring at the rate anticipated. The Habitat Plan may have overestimated the land cover impacts in its assumptions and/or development in the Plan Area may be slowing or may be occurring more commonly in non-fee-paying land cover types (urban/suburban), as opposed to natural lands. In either event, with several years of tracking, it appears evident that the Plan Area will not see the full build-out envisioned by the Co-Permittees within the permit term. Reducing the anticipated land cover impacts for the remainder of the permit term will also reduce the total conservation and restoration commitments, which will bring Habitat Plan costs more in line with actual fee revenues. This issue has become a focus in the Plan Amendment currently underway.

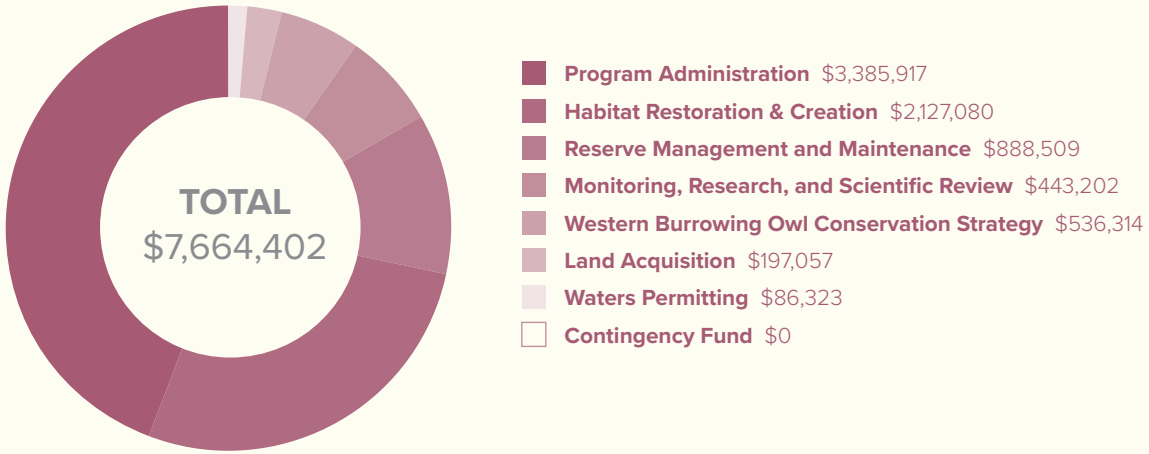
The Habitat Agency expended 82% of its budget during the FY2023–2024 reporting period, with a budget of $9.2M and expenditures of $7.7M. The largest expenditure (45%) was program management which consists of expenses needed by the Habitat Agency to carry out the Habitat Plan requirements, such as staffing, land management, monitoring and equipment. The second largest expenditure (28%) was habitat restoration and creation, and planning and permitting.

Figure 16. Summary of Expenditures

Budget (Reporting Period)



Expenditures (Reporting Period)



The Habitat Agency received approximately $38.5 million in funds during the reporting period from fee and non-fee funding sources.

Fee funding totaled approximately $3.5 million (10% of total revenues) across private, public, and PSE projects. Non-fee funding totaled approximately $35.0 million (90%).

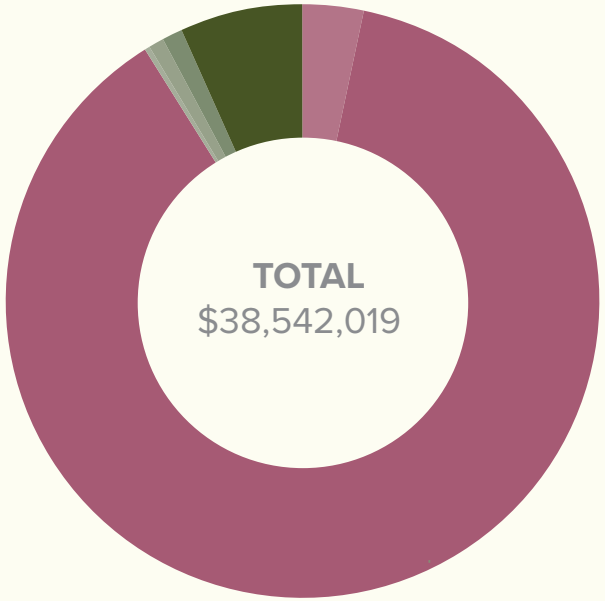
Cumulatively, fee funding and non-fee funding are different from the Habitat Plan's assumptions, with a 32/68% split, respectively.

Figure 17. Summary of Revenue

Revenue (Reporting Period)

Total Fee Funding
$3,499,512

- **Land Cover Fee** $2,641,712
- **Wetland Fee** $410,925
- **Nitrogen Deposition Fee** $138,853
- **Serpentine Fee** $277,264
- **Regional General Permit Fee** $19,500
- **PSE Charges** $11,258
- **Burrowing Owl Fee** $0

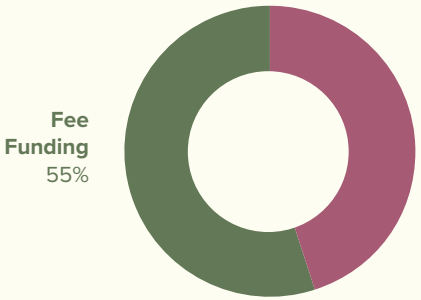


Total Non-Fee Funding
$35,042,507

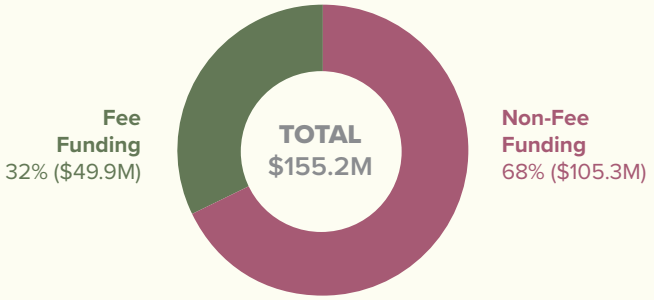
- **Land Acquisition by Local Land Agencies, Non-Profits, and Foundations** $33,801,390
- **Grants** $1,241,117
- **Mitigation Only and Voluntary Contributions** $0

Fee Funding Non-Fee Funding

Habitat Plan Assumptions

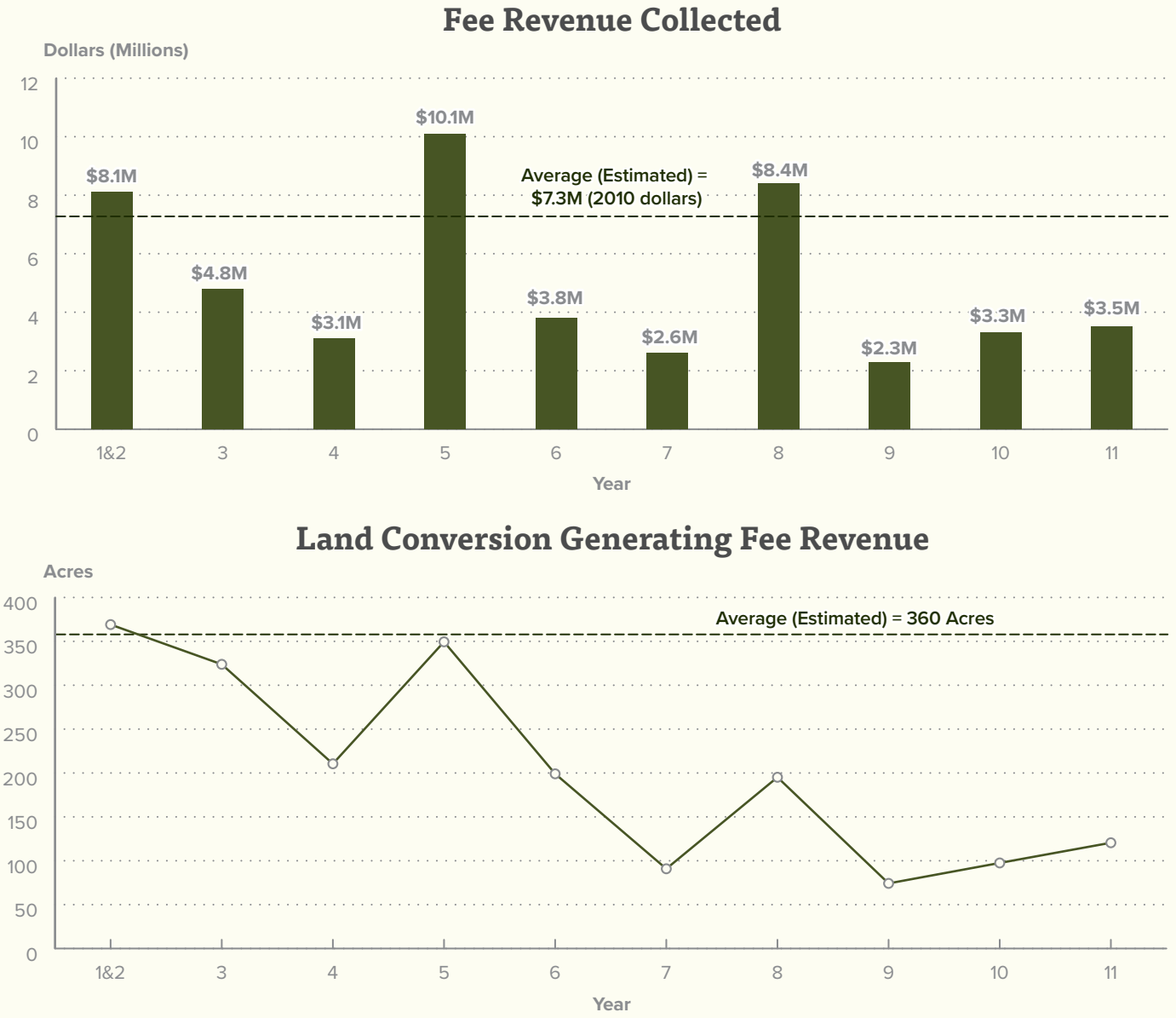


Actual Revenue (Cumulative)



The Habitat Agency has provided take coverage for fewer acres of permanent land conversion than is estimated in the Habitat Plan, as reflected in the fee revenue collected over the first 11 years of the permit term. These two graphs show the actual fee revenue, the source of fee revenue, and land conversion per year. On average, impacts have been substantially lower than anticipated.

Figure 18. Fee Revenue Shortfalls over the First 11 Years

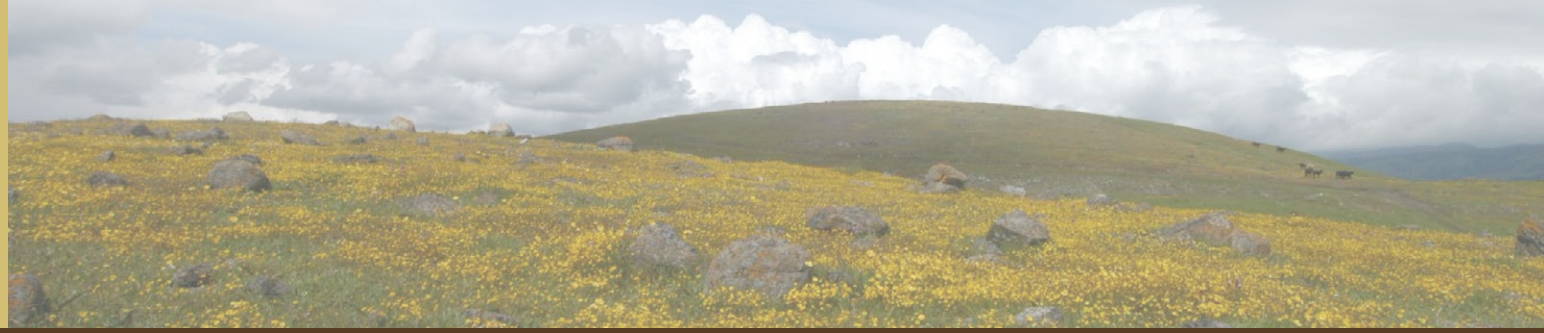


Plan Amendment

This section summarizes any administrative changes, minor modifications, and amendments made to the Habitat Plan during the reporting period.

During the FY2023–2024 reporting period, there were no new administrative changes or minor modifications made to the Habitat Plan. The Habitat Agency has continued to work on a major amendment to the Habitat Plan, a process which began in 2022. The Plan Amendment is funded by two USFWS Section 6 Planning Assistance Grants, administered by CDFW. As described in last year's Annual Report, the amendment is necessary for the Habitat Agency and its Co-Permittees to remain in compliance with the Habitat Plan and associated take permits. The two primary drivers for the Plan Amendment are (1) to add new covered species and (2) to expand the Habitat Plan boundary and covered activity list.

A Plan amendment is the only way to provide coverage for new plant and wildlife species that were not originally included in the Habitat Plan but that may now warrant inclusion due to changes in listing status, range, or life history information. By including these species in the Habitat Plan, impacts resulting from the covered activities can be mitigated through a well-established, landscape-level conservation program rather than on a project-by-project basis. Also, by adding these species, covered projects will continue to take advantage of instantaneous and automatic take coverage, thus avoiding permit delays.



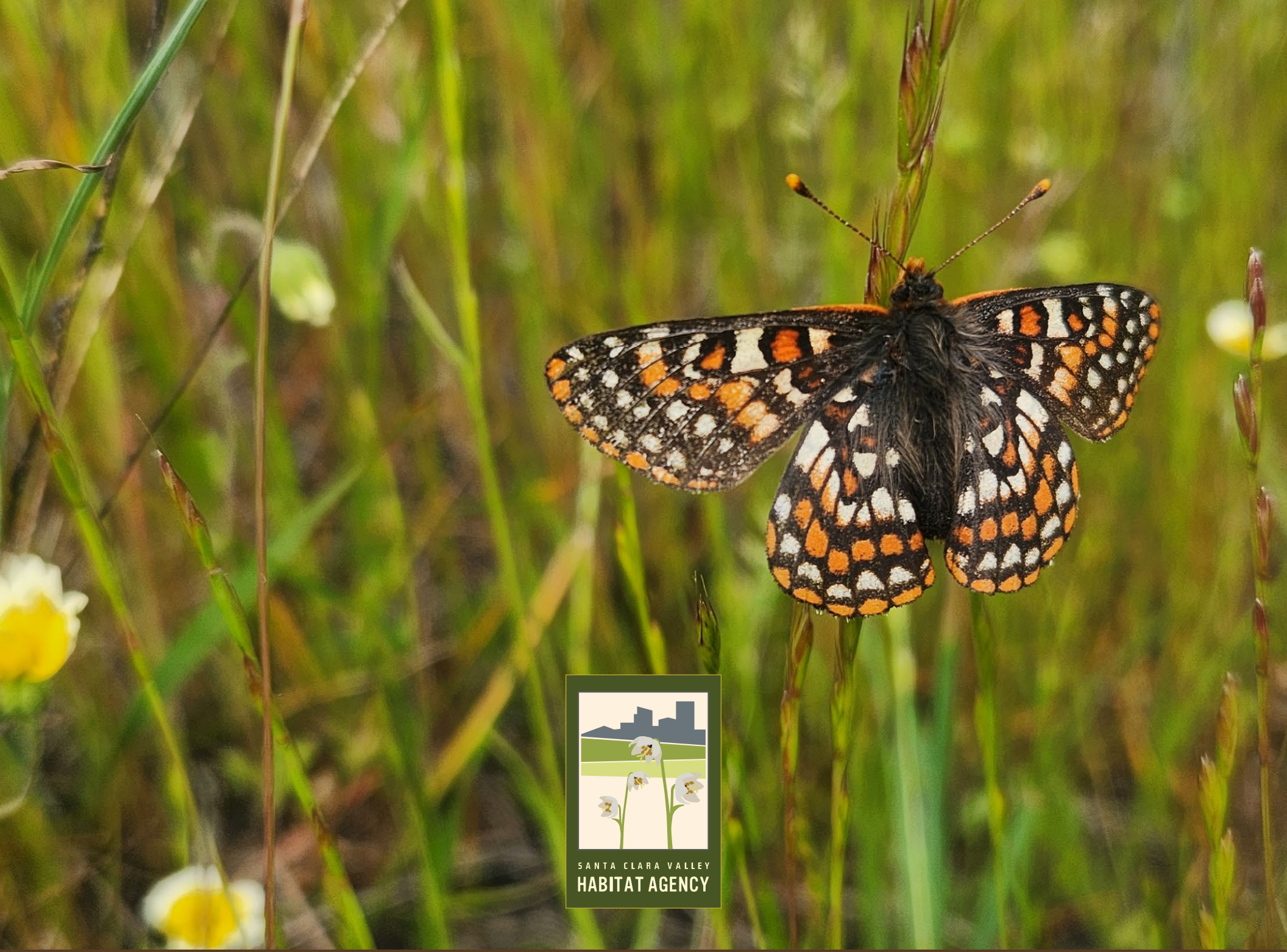
The Habitat Agency proposes the inclusion of seven special-status species for coverage under the Habitat Plan. These species include two federal candidate species (monarch butterfly, large marble butterfly), two state candidate species (mountain lion, Crotch's bumblebee), one species that is fully protected by CESA (Swainson's hawk [*Buteo swainsoni*]), and two other species that are considered species of concern at the state and federal level (American badger, loggerhead shrike [*Lanius ludovicianus*]).

The proposed expansion of the Habitat Plan coverage area would include the entire portion of northwestern Santa Clara County, which is currently outside the Plan boundary, for select public projects. In this area, coverage for public projects would be the same as those within the existing Plan boundary. The expansion would also include the northeastern portion of the county—also currently outside the Plan boundary—for additional conservation only.

New covered activities are proposed, such as Valley Water's Stream Maintenance Program and implementation of the California Vegetation Treatment Program by various partners. In addition, the Plan Amendment will address administrative changes (such as correcting discrepancies), clarify language, and provide more guidance on topics such as the covered plant occurrences.

All draft chapters of the proposed amended Habitat Plan are expected to be complete in the 2025 calendar year. They will be shared at a minimum of two public meetings with the Habitat Agency's Public Advisory Committee and the Implementation Board. There will be opportunities for public input at these meetings and during the CEQA/NEPA analysis. The Habitat Agency anticipates a completed and amended Habitat Plan will be ready for approval by mid-2026.

WEBLINK: INFORMATION ABOUT THE PROPOSED PLAN AMENDMENT



SANTA CLARA VALLEY
HABITAT AGENCY

This report was prepared by the Santa Clara Valley Habitat Agency with assistance from ICF and Dudek.