



**Conservation of a Declining
Species in an Urban Landscape:
*The Santa Clara Valley HCP's
Burrowing Owl Strategy***



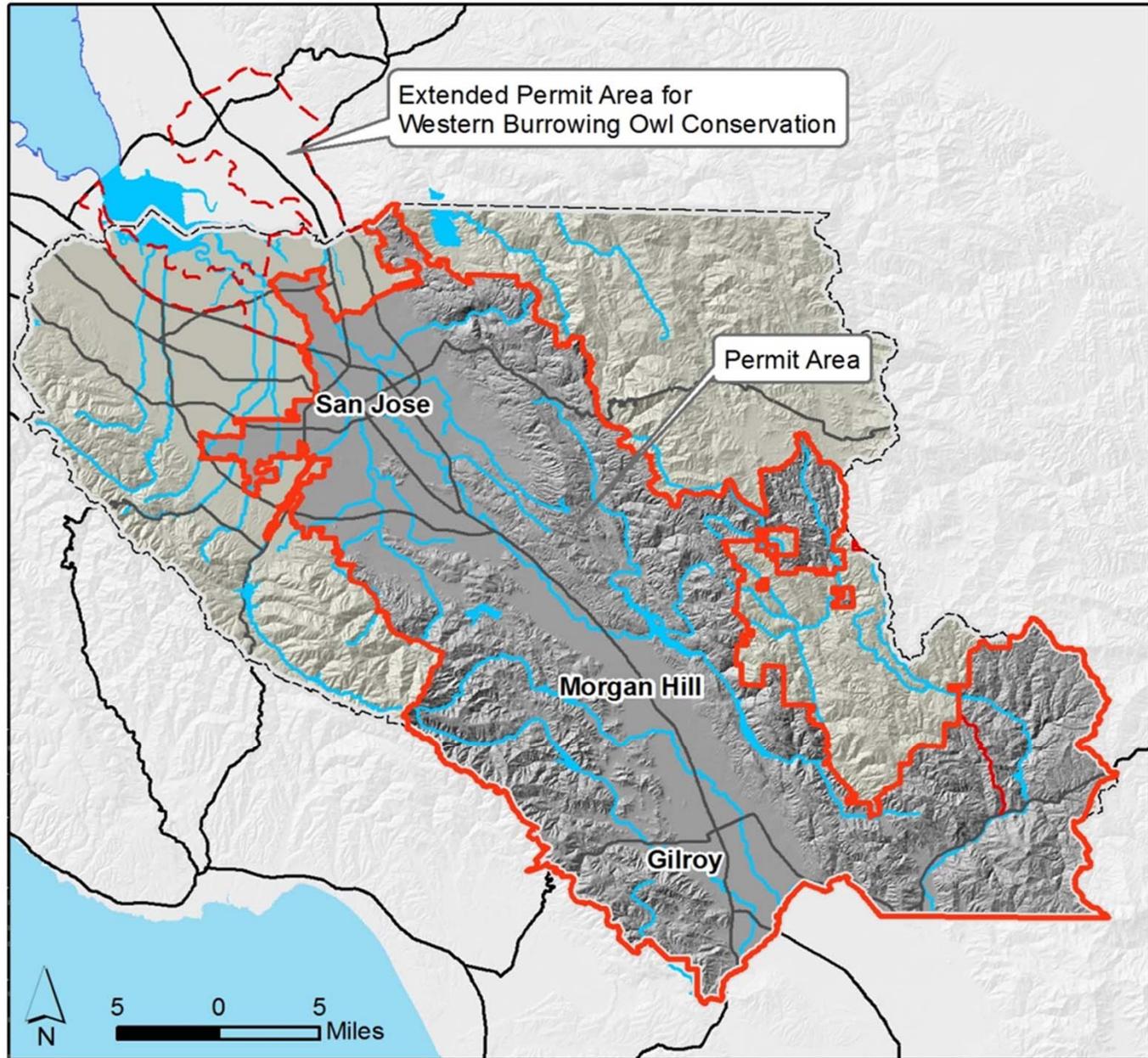
National HCP Coalition Meeting
November 2019



SANTA CLARA VALLEY
HABITAT AGENCY



- City of Gilroy
- City of Morgan Hill
- City of San José
- County of Santa Clara
- Santa Clara Valley Water District
- Santa Clara Valley Transportation Authority



Santa Clara Valley Habitat Plan Permit Area



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Santa Clara Valley Habitat Plan

- Origins: Biological Opinion for Highway widening project
- Approved: 2013
- Permittees at left: 3 cities, 1 county, two special districts
- Implementing Entity = *Santa Clara Valley Habitat Agency*
- Covered species = 18
- Permit term = 50 years
- Take allowance = 18,000 acres
- Also Natural Community Conservation Plan (CA specific)
- Successes:
 - Many projects using plan
 - Strong political support
- Challenges:
 - New stand-alone entity

Species Covered by the Permit



Wildlife

Invertebrates

★ Bay checkerspot butterfly

Amphibians and Reptiles

California tiger salamander

California red-legged frog

Foothill yellow-legged frog

Western pond turtle

Birds

Western burrowing owl

Least Bell's vireo

Tricolored blackbird

Mammals

San Joaquin kit fox

Plants

Tiburon Indian paintbrush

★ Coyote ceanothus

★ Mount Hamilton thistle

★ Santa Clara Valley dudleya

Fragrant fritillary

Loma Prieta hoita

★ Smooth lessingia

★ Metcalf Canyon jewelflower

Most beautiful jewelflower

★ = Endemic to Plan Area



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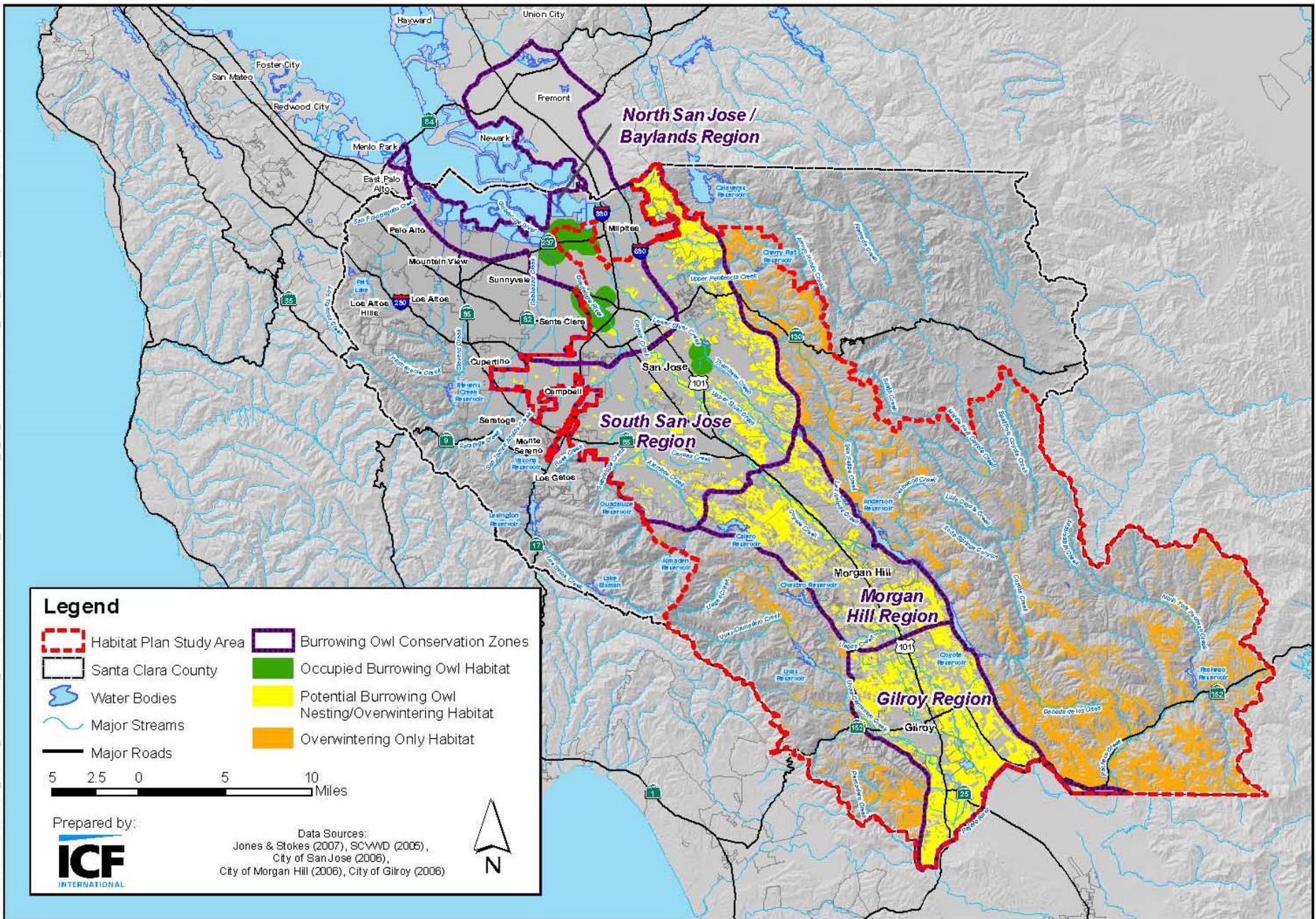


Figure 5-14
Burrowing Owl Conservation Strategy - Habitat Types

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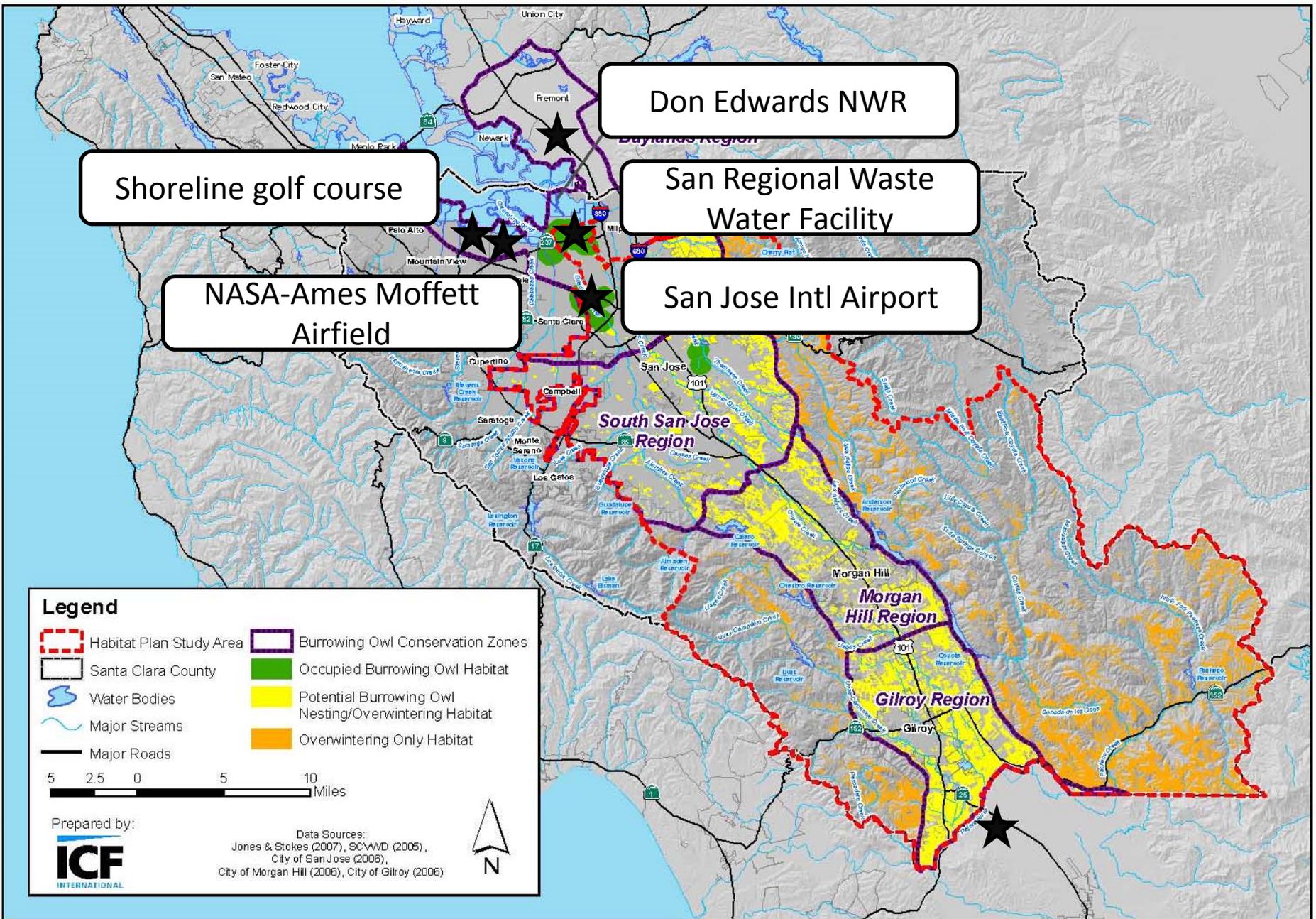
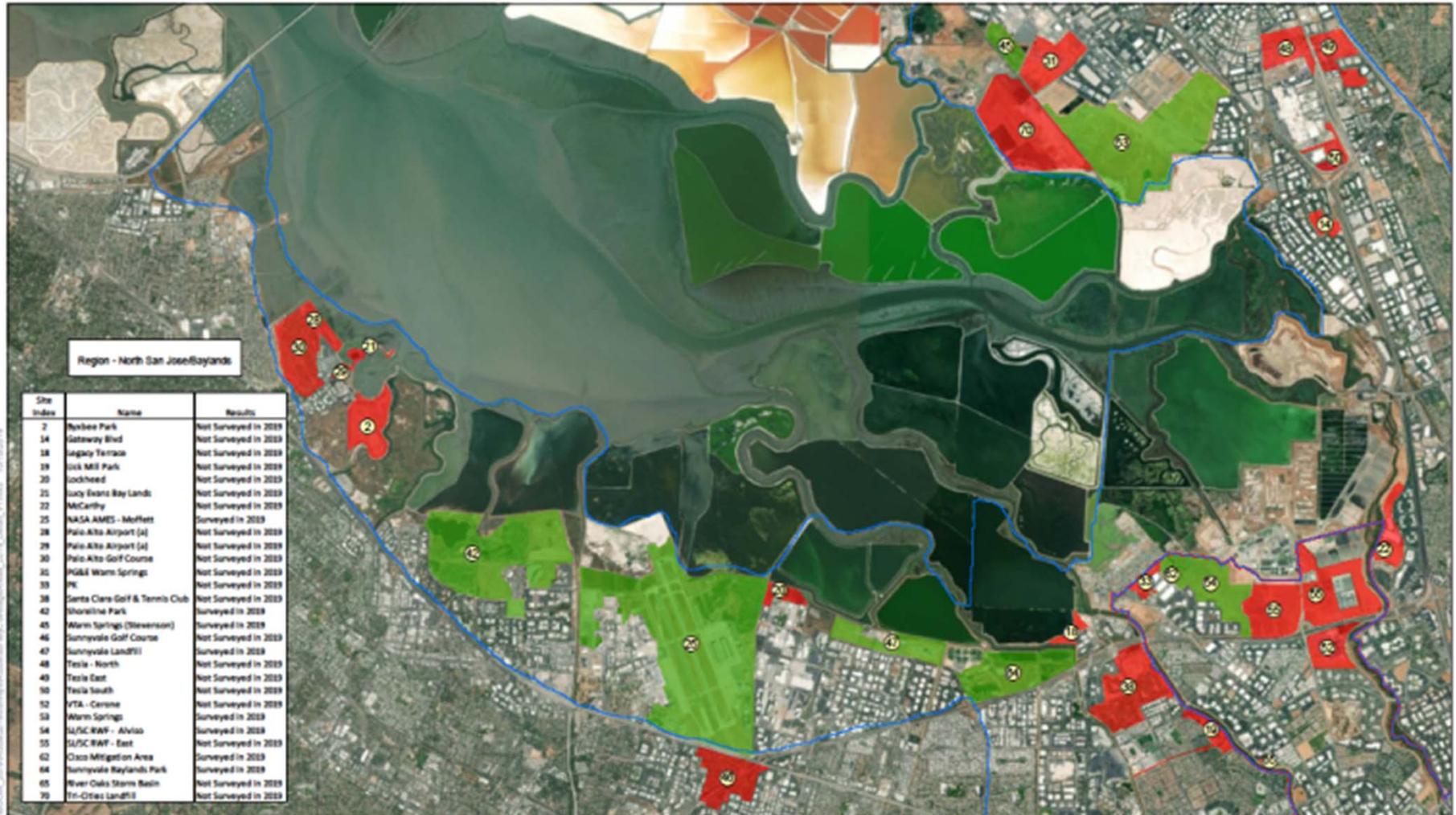


Figure 5-14
Burrowing Owl Conservation Strategy - Habitat Types



Region - North San Jose Baylands

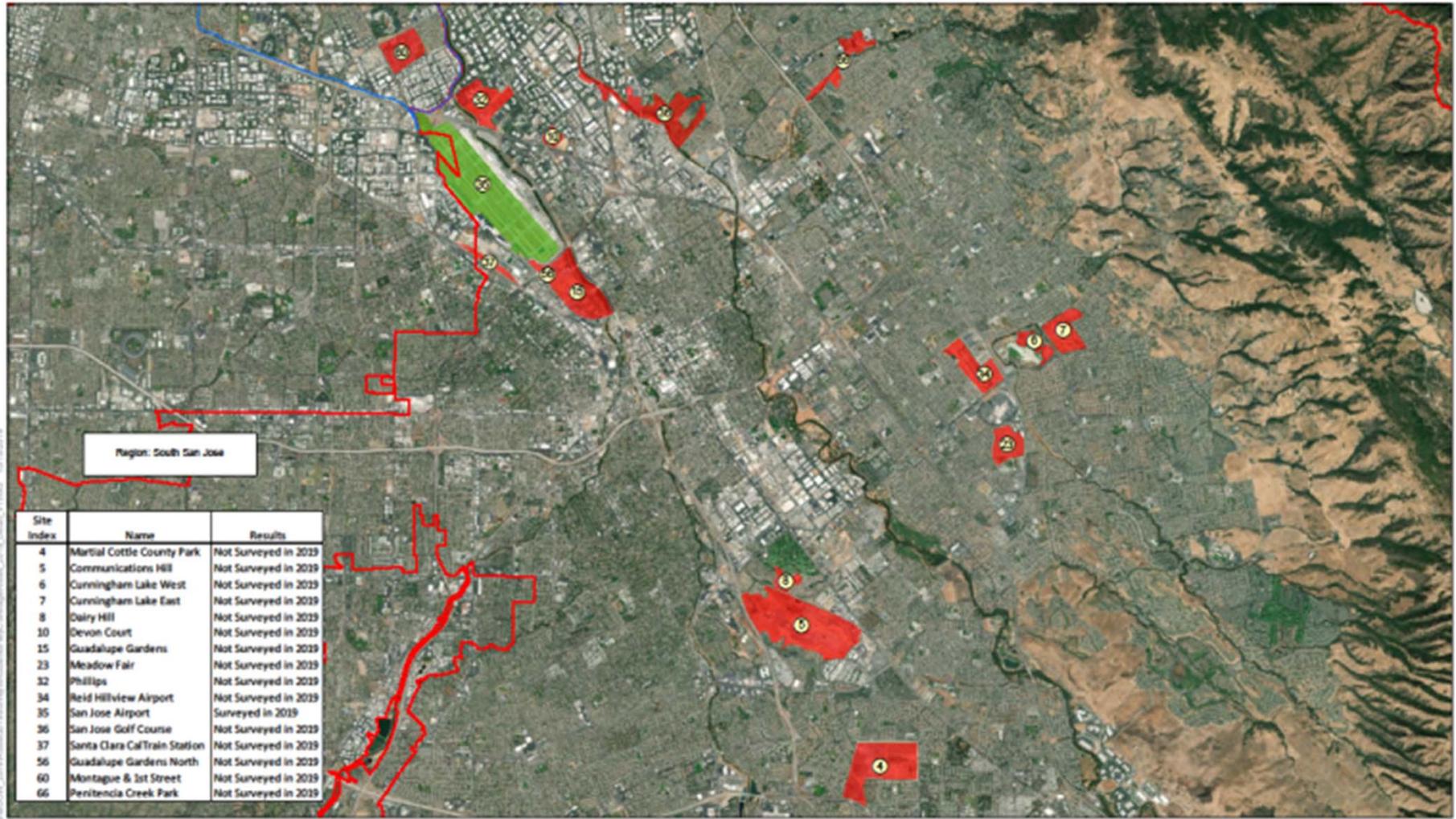
Site Index	Name	Results
2	Nybee Park	Not Surveyed in 2019
14	Gateway Blvd	Not Surveyed in 2019
18	Jagay Terrace	Not Surveyed in 2019
19	Jick Mill Park	Not Surveyed in 2019
20	Lockheed	Not Surveyed in 2019
25	Lucy Evans Bay Lands	Not Surveyed in 2019
27	McCarthy	Not Surveyed in 2019
28	NASA AMES - Moffett	Surveyed in 2019
29	Palo Alto Airport (A)	Not Surveyed in 2019
30	Palo Alto Airport (B)	Not Surveyed in 2019
32	PGA Warm Springs	Not Surveyed in 2019
33	PK	Not Surveyed in 2019
38	Santa Clara Golf & Tennis Club	Not Surveyed in 2019
42	Shoreline Park	Surveyed in 2019
45	Warm Springs (Stevenson)	Surveyed in 2019
46	Sunnyvale Golf Course	Not Surveyed in 2019
47	Sunnyvale Landfill	Surveyed in 2019
48	Tejia - North	Not Surveyed in 2019
49	Tejia East	Not Surveyed in 2019
50	Tejia South	Not Surveyed in 2019
52	VTA - Corone	Not Surveyed in 2019
53	Warm Springs	Surveyed in 2019
54	SL/C RWF - Alviso	Surveyed in 2019
55	SL/C RWF - East	Not Surveyed in 2019
62	Coast Mitigation Area	Surveyed in 2019
64	Sunnyvale Baylands Park	Surveyed in 2019
65	River Oaks Storm Basin	Not Surveyed in 2019
70	Tri-Cities Landfill	Not Surveyed in 2019

2019 BUOW Survey Coverage

- Habitat Plan Expanded Study Area
- Habitat Plan Permit Area
- Surveyed in 2019
- Not Surveyed in 2019

Area 1





Region: South San Jose

Site Index	Name	Results
4	Marial Cottle County Park	Not Surveyed in 2019
5	Communications Hill	Not Surveyed in 2019
6	Cunningham Lake West	Not Surveyed in 2019
7	Cunningham Lake East	Not Surveyed in 2019
8	Dairy Hill	Not Surveyed in 2019
10	Devon Court	Not Surveyed in 2019
15	Guadalupe Gardens	Not Surveyed in 2019
23	Meadow Fair	Not Surveyed in 2019
32	Phillips	Not Surveyed in 2019
34	Reid Hillview Airport	Not Surveyed in 2019
35	San Jose Airport	Surveyed in 2019
36	San Jose Golf Course	Not Surveyed in 2019
37	Santa Clara CalTrain Station	Not Surveyed in 2019
56	Guadalupe Gardens North	Not Surveyed in 2019
60	Montague & 3rd Street	Not Surveyed in 2019
66	Penitencia Creek Park	Not Surveyed in 2019

2019 BUOW Survey Coverage

1151 Alvarado
 535 Alvarado Avenue
 Morgan Hill, CA 95037
 (408) 779-7261



- Habitat Plan Expanded Study Area
- Habitat Plan Permit Area
- Surveyed in 2019
- Not Surveyed in 2019



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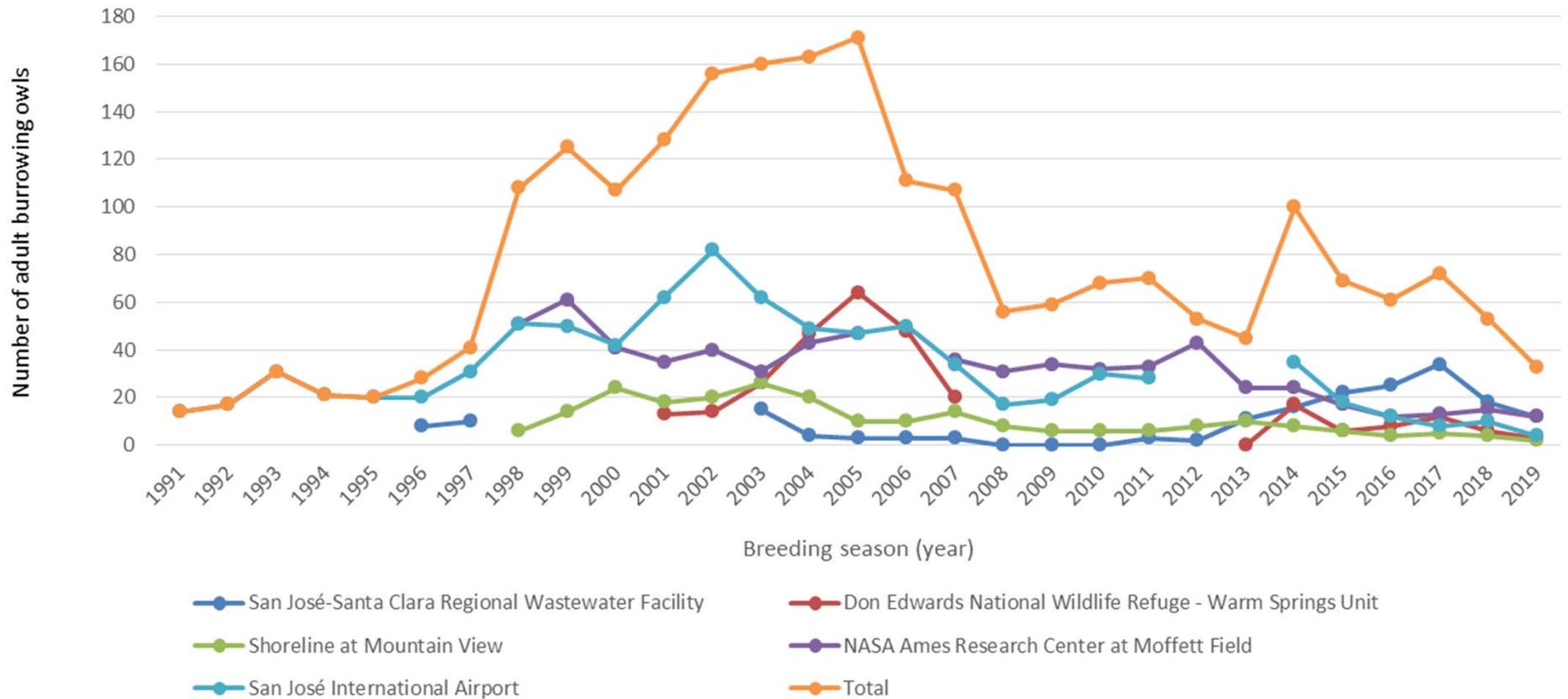
Burrowing Owls in South San Francisco Bay

- Precipitous decline in burrowing owls
- Population Viability Analysis
 - Without intervention, 95% chance of local extinction by Year 18 of HCP
 - Need to change population growth rate from negative to positive by Year 15 in order to avoid high risk of local extinction
- HCP conservation actions:
 - **Tier 1:** Protection and management measures to stabilize and improve population immediately
 - **Tier 2:** Establish partnerships and regional monitoring program to identify and protect potential habitat
 - **Tier 3:** Experimental measures, if population continues to decline



Number of Adult Burrowing Owls 1991 - 2019

South Bay Area Annual Burrowing Owl Survey Results





Tier 1: Short-term Management Agreements

- Short-term agreements to manage habitat to benefit owls
 - Vegetation management (e.g., grazing, mowing)
 - Soil loosening or stockpiling to attract ground squirrels
 - Brush piles as habitat for prey
- **Allows for conservation to occur in locations where conservation easements are not possible**
 - Airports
 - Water treatment facilities
 - National wildlife refuges
 - Golf courses
- Designed to stabilize the current population





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Tier 2: Annual Monitoring Program

- HCP institutionalized annual monitoring program
- Monitoring the number of adult owls present during the breeding season
- Includes bi-annual coordination with local burrowing owl surveyors to closely track numbers
- Burrowing conservation fee area is based on the results of annual surveys (fee charged in radius from occupied sites)

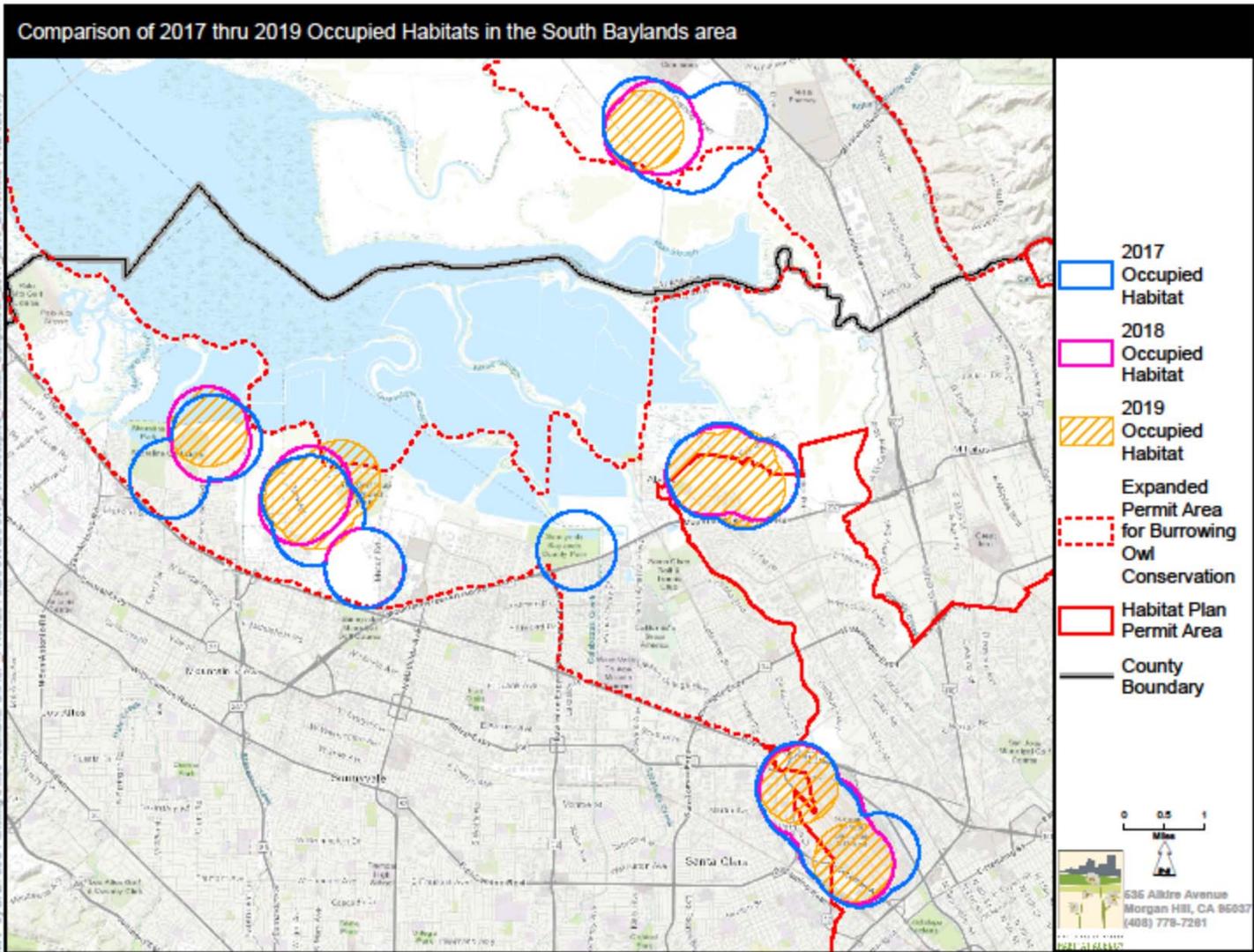
Change in Occupied Habitat



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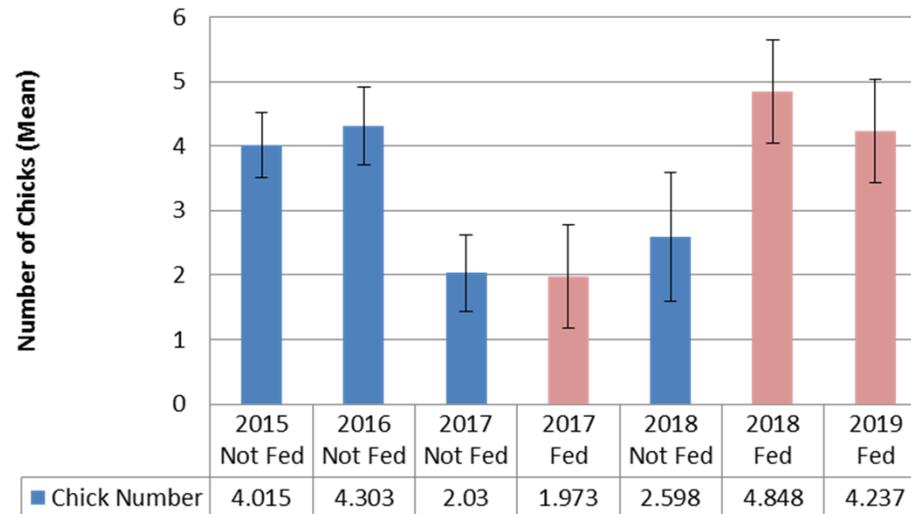
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Tier 3: Supplemental Feeding Study in Breeding Season – 3 Years



Mean numbers of chicks at fed nests in 2018 and 2019 were comparable or exceeded numbers in 2015 and 2016

Mean number of Chicks/Nest at Fed vs. Not Fed Nests





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STEALTH CAM 18:05 11/09/18 75 F SVI04



STEALTH CAM 05:56 10/26/18 53 F SVI01

Tier 3: Captive Overwintering Juvenile Burrowing Owls & Relocation



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Peninsula Humane Societies Facility



San Diego Wild Animal Park Captive Breeding Program



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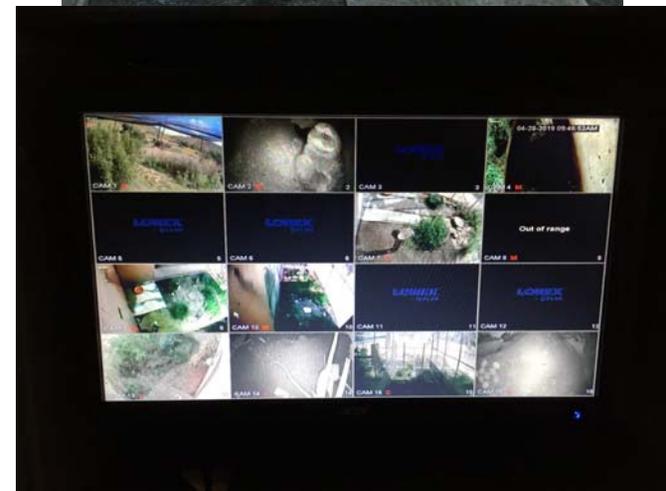
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Learning from Others: San Diego Burrowing Owl Relocation Project



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Questions?

