



San Diego Annual Burrowing Owl Meeting

Santa Clara County Burrowing Owl Conservation

December 6, 2021

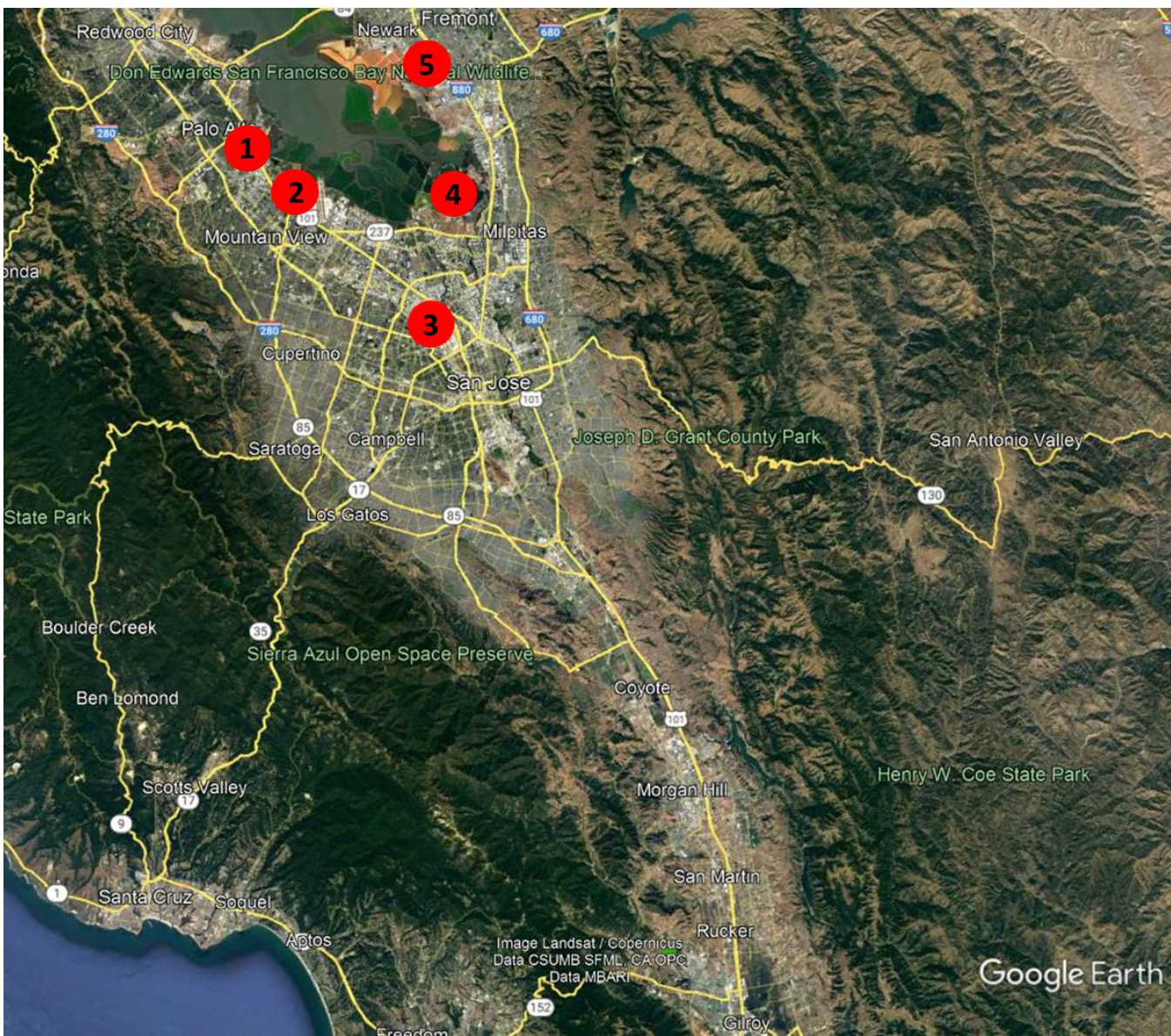


SANTA CLARA VALLEY
HABITAT AGENCY



- 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

Focus Sites: 1 – Shoreline, 2 – Moffett Airfield, 3 – San Jose International Airport, 4 – RWF, Alviso, & 5 – Don Edwards National Wildlife Refuge, Warm Springs Unit



Burrowing Owl Population Dynamics 2014 - 2021



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| Location | | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------------------------------------|------------------|------|------|------|------|-------|------|------|------|
| San Jose International Airport | Number of Adults | 35 | 18 | 12 | 8 | 10 | 4 | 9 | 4 |
| | Number of Chicks | 34 | 24 | 21 | 14 | 8 | 11 | 17 | 10 |
| SJ/SC Regional Wastewater Facility | Number of Adults | 16 | 22 | 25 | 34 | 18 | 12 | 6 | 12 |
| | Number of Chicks | 17 | 46 | 58 | 29 | 23 | 21 | 9 | 9 |
| Shoreline | Number of Adults | 8 | 6 | 4 | 5 | 4 | 2 | 16 | 11 |
| | Number of Chicks | 6 | 3 | 4 | 0 | 14 | 6 | 35 | 6 |
| Don Edwards NWR – Warm Springs | Number of Adults | 17 | 6 | 8 | 12 | 6 | 3* | 0 | 0 |
| | Number of Chicks | 4 | 13 | 13 | 7 | 5-6 | 0 | 0 | 0 |
| Moffett Airfield | Number of Adults | 24 | 17 | 12 | 13 | 12 | 12 | 4 | 5 |
| | Number of Chicks | 20 | 11 | 12 | 13 | 30 | 8 | 5 | 7 |
| Ohlone (Captive Breeding) | Number of Adults | - | - | - | - | - | - | - | 4 |
| | Number of Chicks | - | - | - | - | - | - | - | 4 |
| Other Locations | Number of Adults | 16 | 5 | -- | 2 | -- | 0 | 0 | 0 |
| | Number of Chicks | 6 | -- | -- | 1 | -- | 0 | 0 | 0 |
| Total | Number of Adults | 116 | 74 | 61 | 74 | 50 | 33 | 35 | 36 |
| | Number of Chicks | 87 | 97 | 108 | 64 | 80-81 | 46 | 66 | 36 |



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2021 Burrowing Owl Breeding Season Survey Results

| Site Name/Location | Number of Adults | Number of Young Fledged |
|-----------------------------------------------------------|------------------|-------------------------|
| Within Permit Area | | |
| San Jose International Airport | 4 | 10 |
| San Jose – Santa Clara Water Regional Wastewater Facility | 12 | 9 |
| Permit Area Subtotal | 16 | 19 |
| Within Expanded Burrowing Owl Conservation Area | | |
| Shoreline at Mountain View | 11 | 6 |
| Don Edwards NWR – Warm Springs Unit | 0 | 0 |
| NASA Ames Moffett Airfield | 5 | 7 |
| Ohlone (Captive Breeding Facility) | 4 | 4 |
| Expanded Area Subtotal | 20 | 17 |
| Grand Total | 36 | 36 |



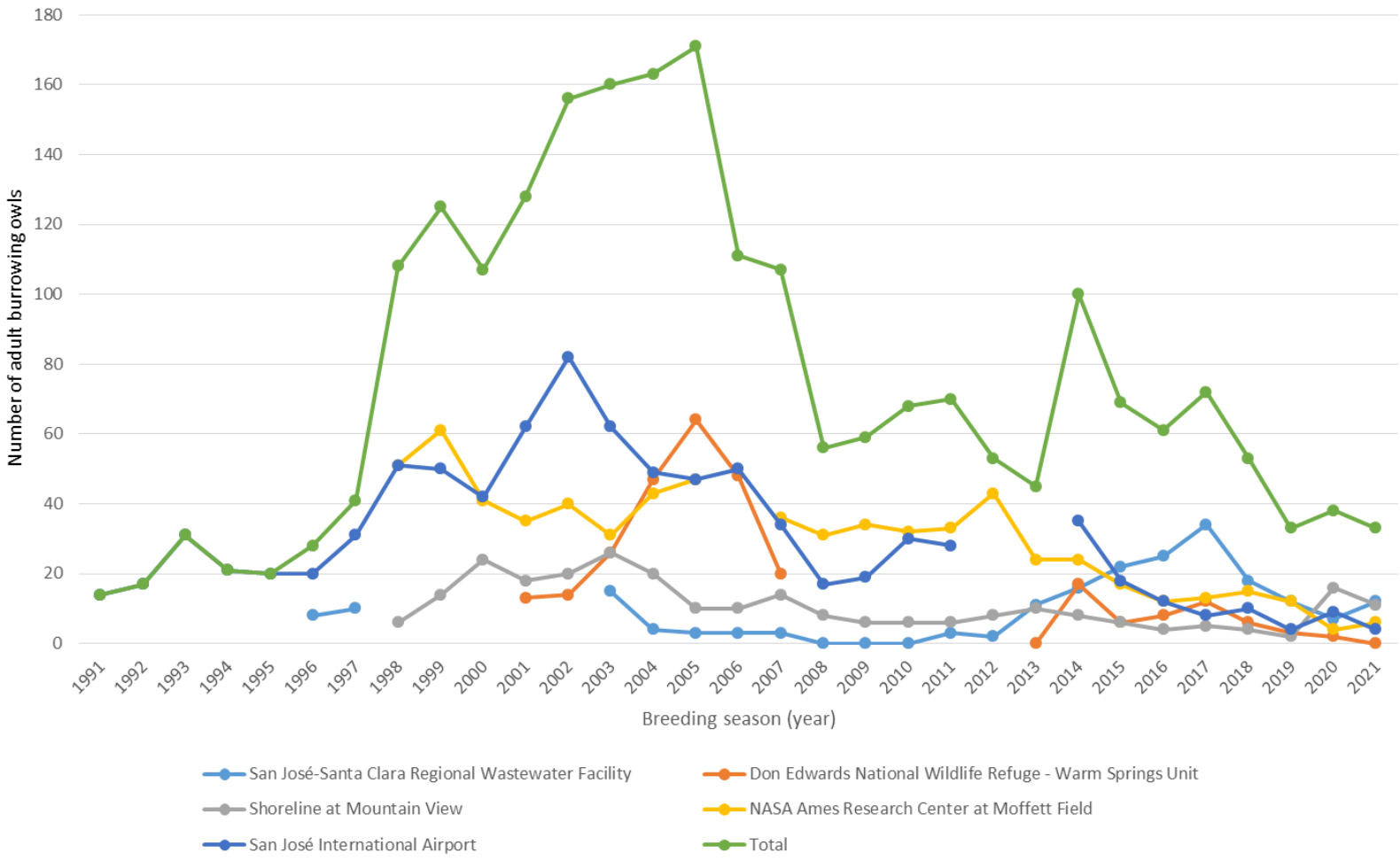
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Number of Adult Burrowing Owls 1991 - 2021

South Bay Area Annual Burrowing Owl Survey Results





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Burrowing Owl Conservation Projects

- ❖ Habitat Enhancement
- ❖ Captive Breeding
- ❖ Juvenile Overwintering
- ❖ Banding
- ❖ Supplemental Feeding



Shoreline Habitat Enhancement



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Fence



No-mow
areas



Native
Plantings



Irrigation



Removal
of tall trees



New artificial
burrows



Shoreline in Mountain View



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Six-foot tall chain link fence



Low-growing native plant islands



Irrigation-areas using water cannons



Ground Squirrel relocation program

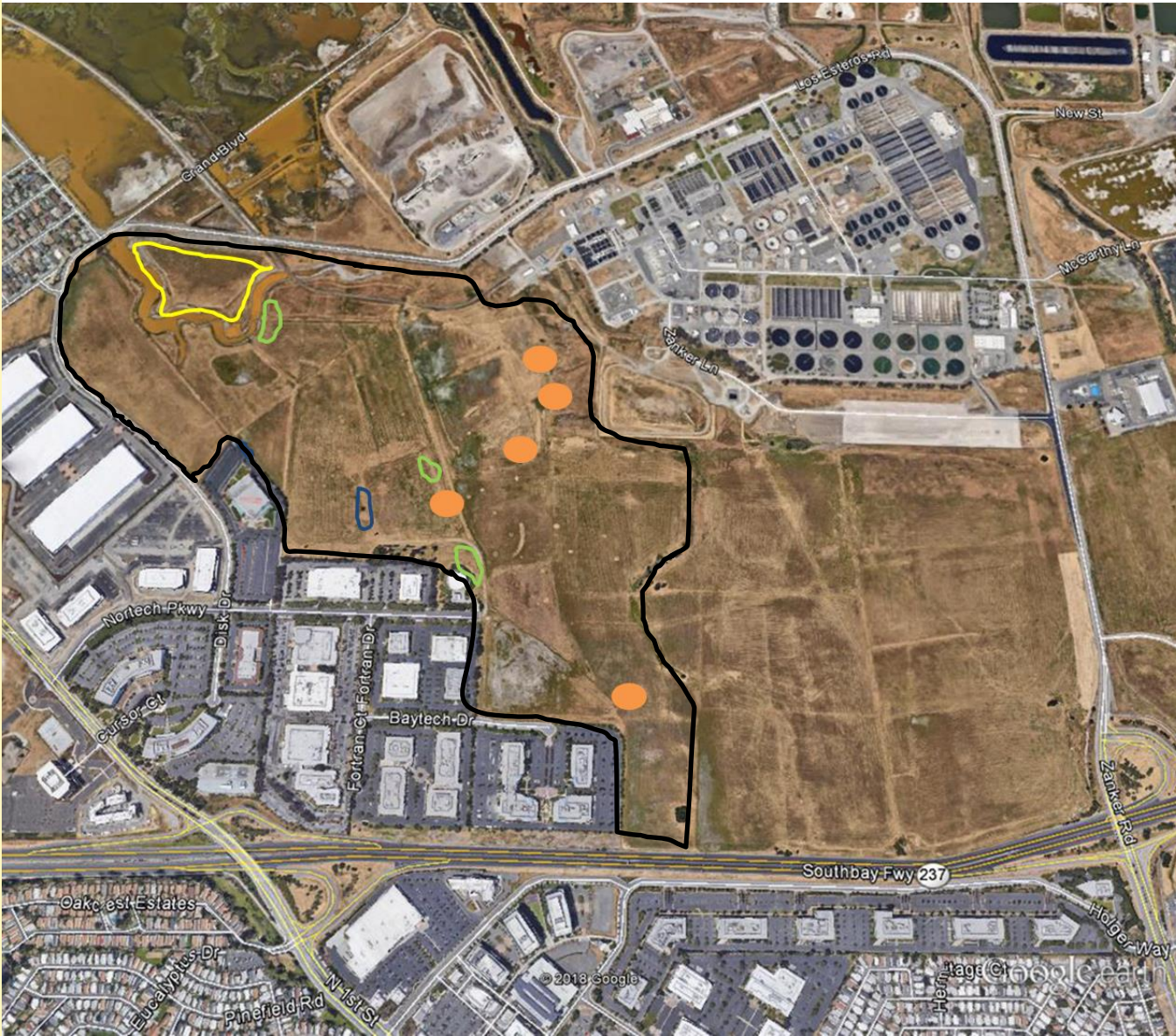


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RWF in Alviso



No-mow area



Native
Plantings



Removal of
trees



New artificial
burrows





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RWF in Alviso

Spraying



Native Plants



Artificial Burrows



Weed Removal



Moffett Habitat Enhancement



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Increased mowing
& spraying



Artificial Burrows



Moffett



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Mowing



Artificial Burrows



Signs & cones



Spraying



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Spray Areas



Artificial Burrows





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Spraying



Grazing





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Captive Breeding - Ohlone Humane Society Wildlife Rehabilitation Center



Juvenile Overwintering Project

- 2019** **13 Juveniles taken into captivity, PHS**
- 2020** **5 pairs released at Shoreline, 3 females released at Alviso.
21 chicks at Shoreline & 4 chicks at Alviso**
- 2020** **12 Juveniles taken into captivity, PHS**
- 2021** **3* pairs released at Alviso and 3 males
2 pairs for captive breeding program.
6 chicks produced at Shoreline, 9 chicks at Alviso & 4 chicks at Ohlone**
- 2021** **17 Juveniles taken into captivity, PHS & WERC**



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Peninsula Humane Society - Burlingame



2020-07-06 19:10:35
OwlCam2



Wildlife Education & Rehabilitation Center – Morgan Hill



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Alviso 2021 – Juvenile Overwintering



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73 F 30.33 inHg

ALV3

03/23/2021 11:51AM



89 F 30.21 inHg

AL90

06/14/2021 01:37PM



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Wildlife Education & Rehabilitation Center

Burrowing Owl Breeding & Overwintering Facility



Banding Study 2020 & 2021

| | Number of BUOW's Banded in 2020 | | | Number of BUOW's Banded in 2021 | | |
|------------------|---------------------------------|------|-------|---------------------------------|------|-------|
| Breeding Site | Female | Male | Chick | Female | Male | Chick |
| Shoreline | - | - | 29 | - | 1 | 2 |
| Moffett | - | 1 | 5 | - | - | 4 |
| RWF, Alviso | - | 1 | 7 | - | - | 7 |
| Warm Springs | - | 1 | - | - | - | - |
| San Jose Airport | - | - | - | - | - | 7 |
| Captive Breeding | - | - | - | - | - | 4 |
| | | | | | | |
| Total | - | 3 | 41 | | 1 | 24 |



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Supplemental Feeding Project

| Location | 2020 | 2021 |
|--------------|---------|--------------|
| Shoreline | 8 pairs | 5 pairs |
| Moffett | 2 pairs | 2 of 3 pairs |
| RWF | 3 pairs | 6 pairs |
| Warm Springs | - | - |



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Trail Cameras at Nest Burrows

19 Motion-detection Cameras ~ 190,000 photos per week



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Factors Impacting Current Breeding Sites

- Habitat Loss
- Habitat Quality
 - Predation Pressure
 - Impacts of Climate Change

All leading to declining breeding populations





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Predation...

...is becoming a bigger factor.

More predators – more predation events

Developed sites and sites adjacent to urban development have double the number of predators as agricultural or open space sites (Tomes, 2019).



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Predation over the Years





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Questions



Special Thanks To All The Following:



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OHLONE
HUMANE SOCIETY
EST. 1983

