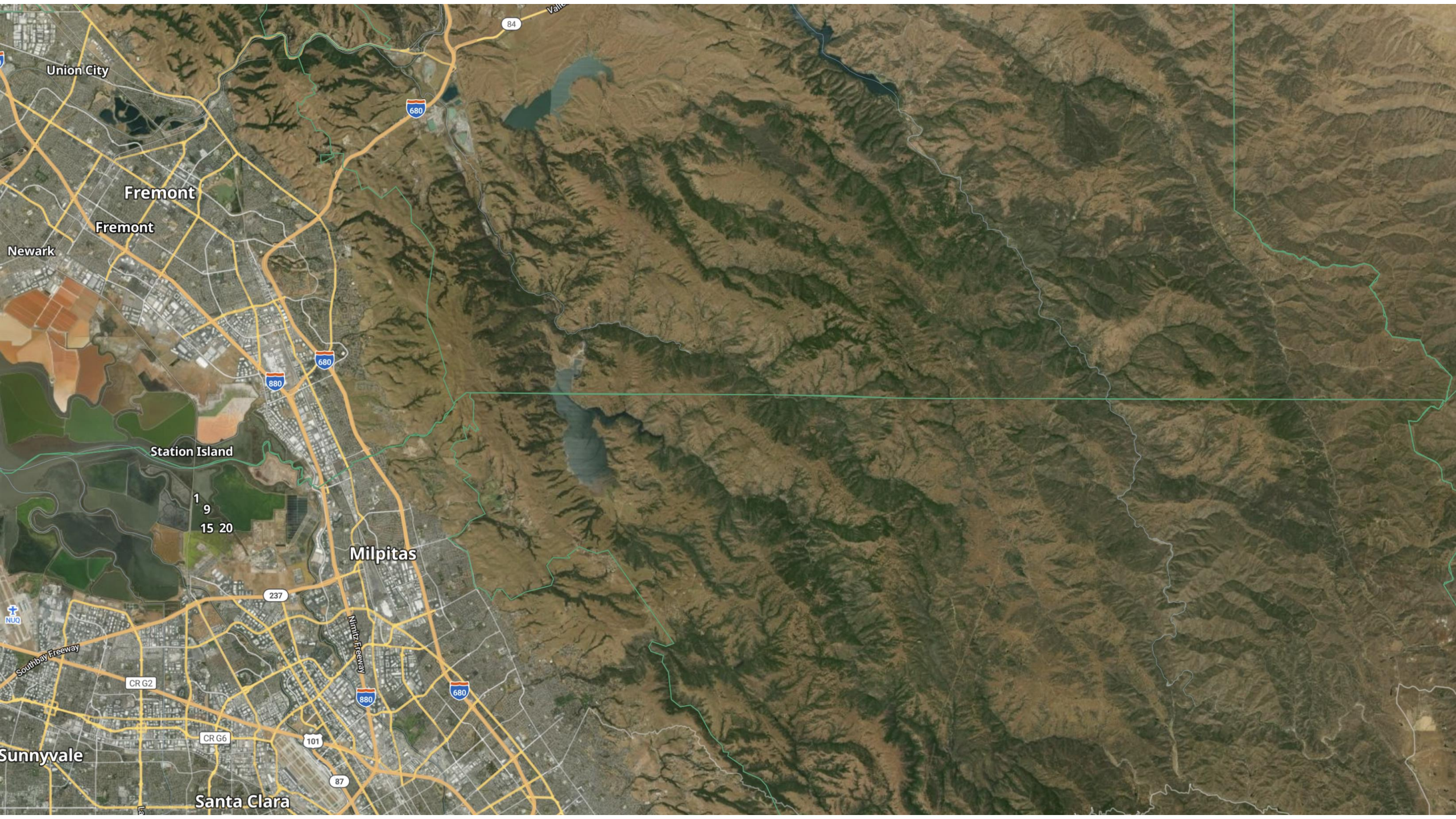
Black Mountain Ranch

Wildlife and Coastal Watershed Conservation Opportunity

Milpitas, CA


Union City
Fremont
Fremont
Newark
Station Island
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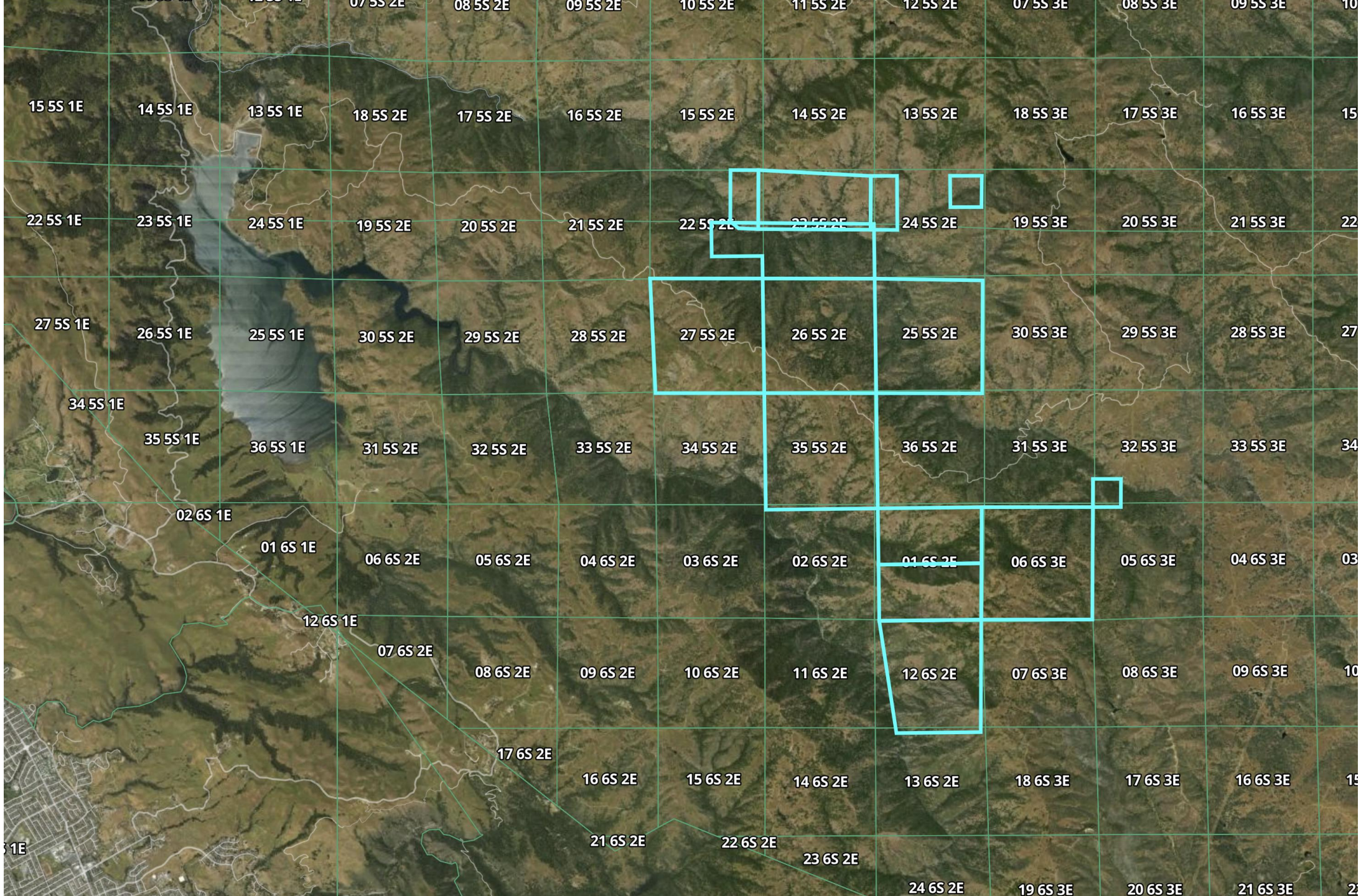
15 20
Milpitas
Sunnyvale
Santa Clara
Southbay Freeway
Nimitz Freeway
CR G2
CR G6
NUQ
84
680
880
237
101
87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Elevation

1,042.3 ft 3,947.0 ft

Opacity

0% 100%

Contour Interval (feet):

50

Range

2,904.6 ft

Min 1,042.3 ft

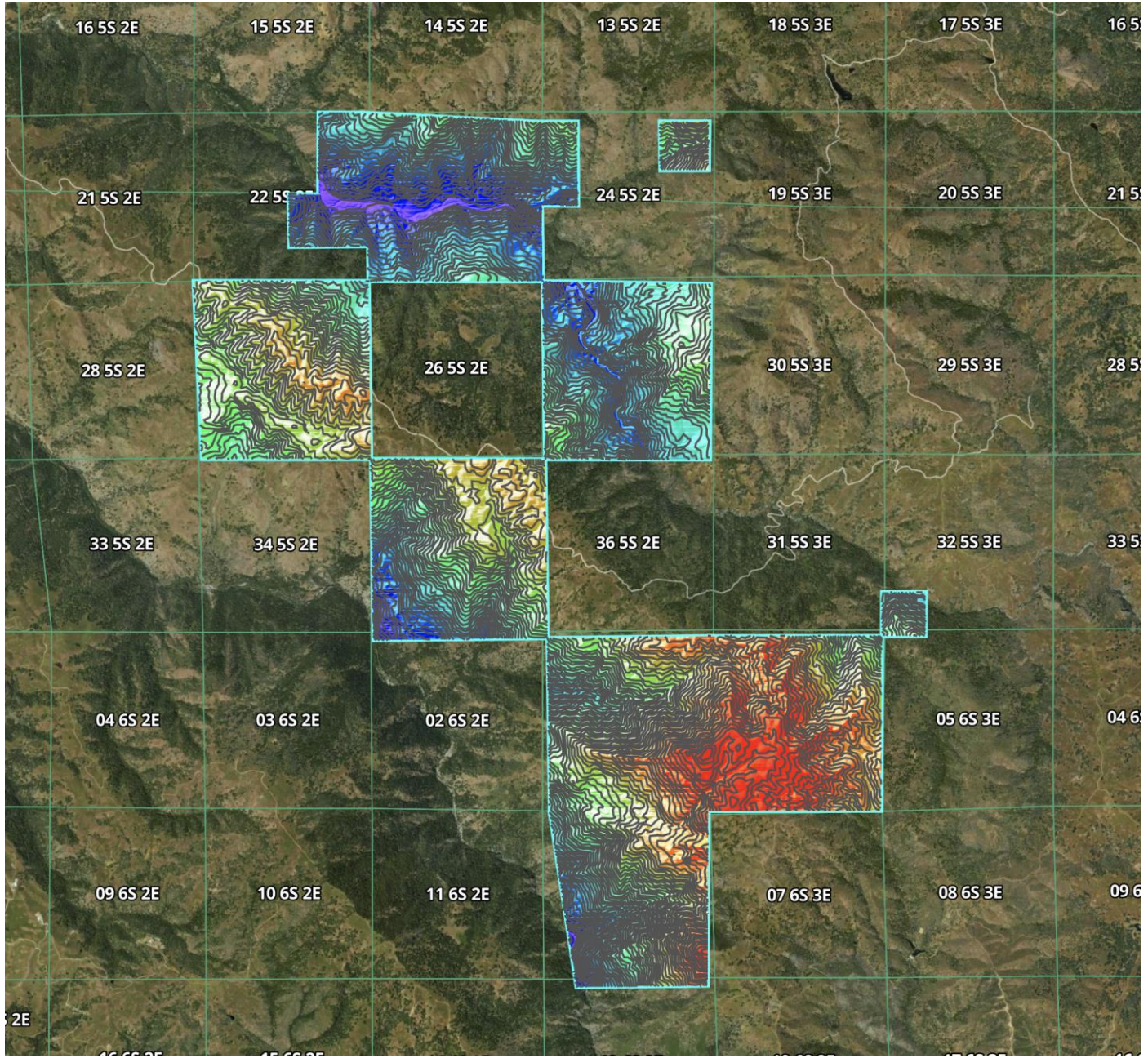
Max 3,947.0 ft

Slope

46.0 %

Min 0.1 %

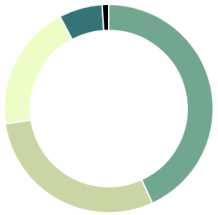
Max 225.2 %

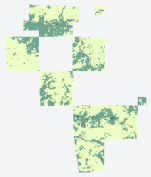


Land Cover

All Years

Mixed Forest	43.1%
Shrubland	29.5%
Grassland/Pasture	19.6%
Evergreen Forest	6.7%
Other	1%





2024

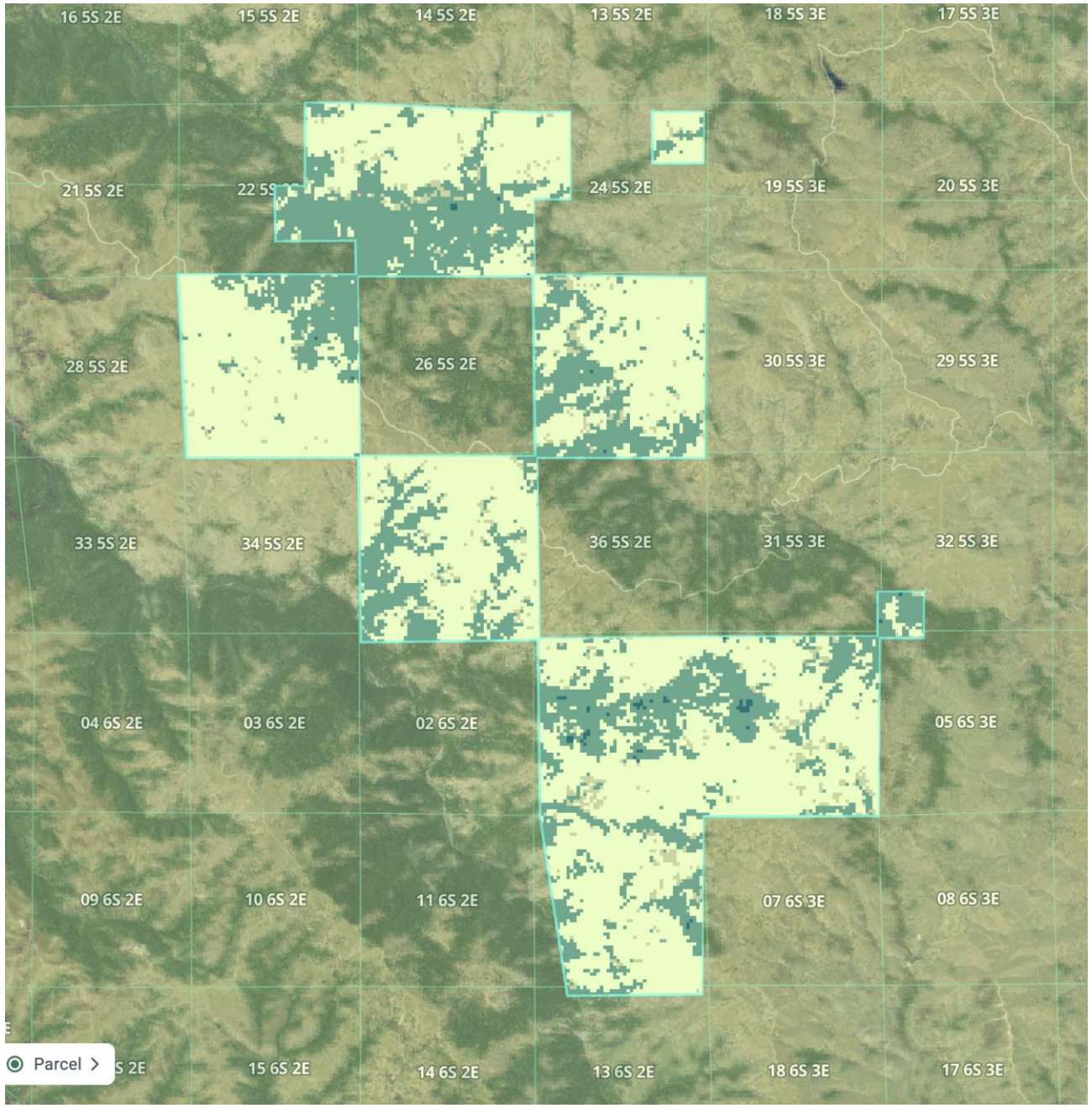
Grasslan...	65.5%
Mixed Fo...	30.2%
Other	4.4%

2023

Mixed Fo...	45%
Shrubland	34.5%
Grasslan...	12.6%
Evergree...	7.7%
Other	0.1%

2022

Mixed Fo...	46%
Shrubland	34.7%
Grasslan...	12.6%
Evergree...	6.6%
Other	0.1%



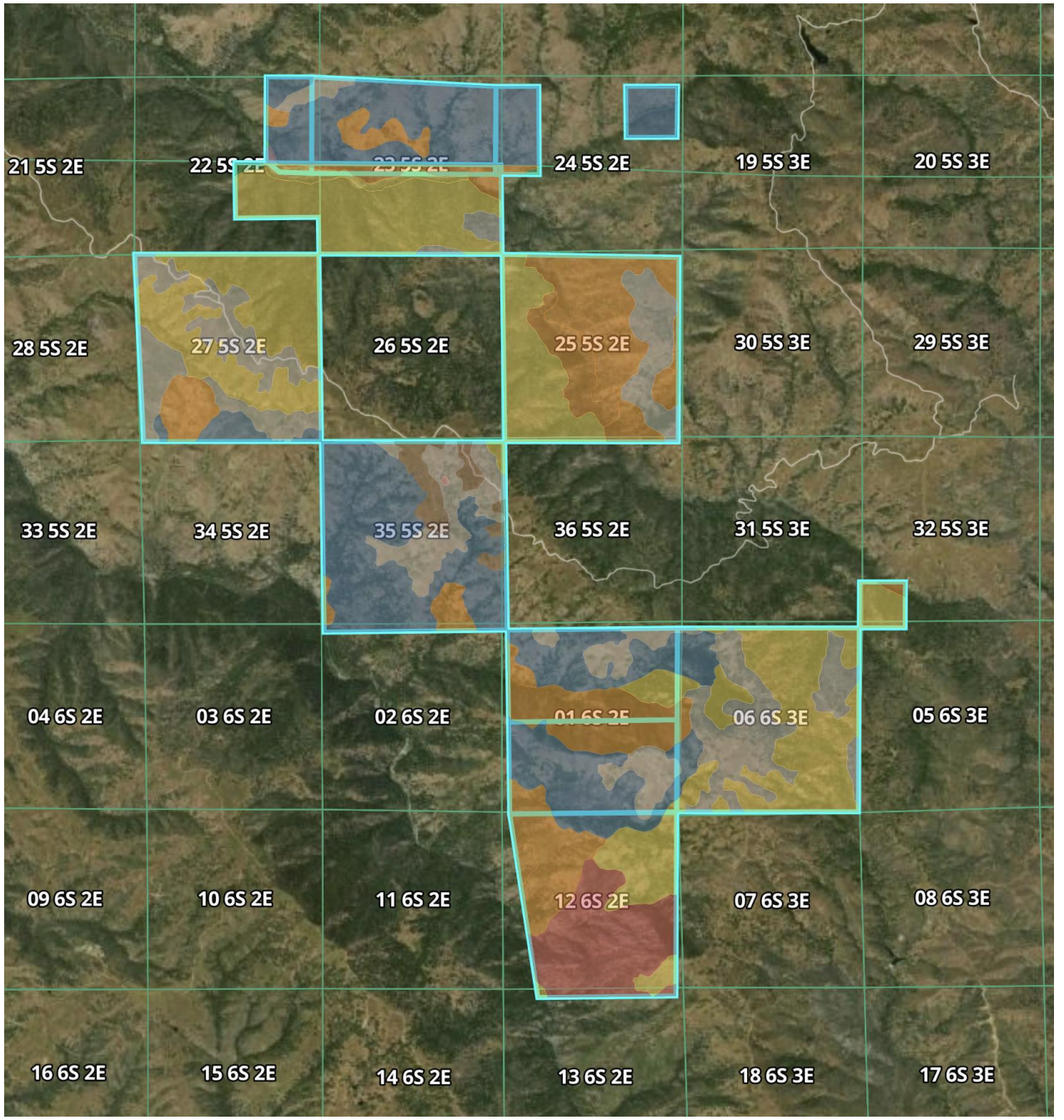
Soil Types

Average Soil Score

10 / 100

NCCPI | Storie

Soil Code	Soil Description	% of Field	Storie Score	Non-IRR Class
LhG	Los Gatos-Gaviota complex, 5...	29.0	10.6	7
GcG	Gaviota loam, 30 to 75 percent...	17.5	4.7	7
GmF	Gaviota-Los Gatos complex, 3...	14.1	15.3	7
VaF2	Vallecitos loam, 30 to 75 percent...	8.3	-	7
RnG	Rock land	7.7	-	8
VaG2	Vallecitos loam, 30 to 75 percent...	6.0	-	7
GhG3	Gaviota gravelly loam, 30 to...	5.4	0.8	7
VaE2	Vallecitos rocky loam, 30 to 45...	4.0	11.1	6

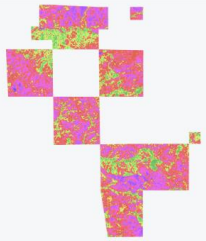


Vegetation Index

0 (Unhealthy) — 100 (Healthy)

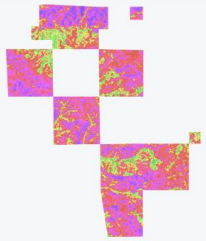
2024

Mean	65
Std Dev	12
Max	97
Min	12



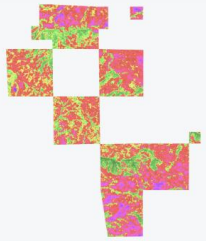
2023

Mean	56
Std Dev	16
Max	100
Min	7



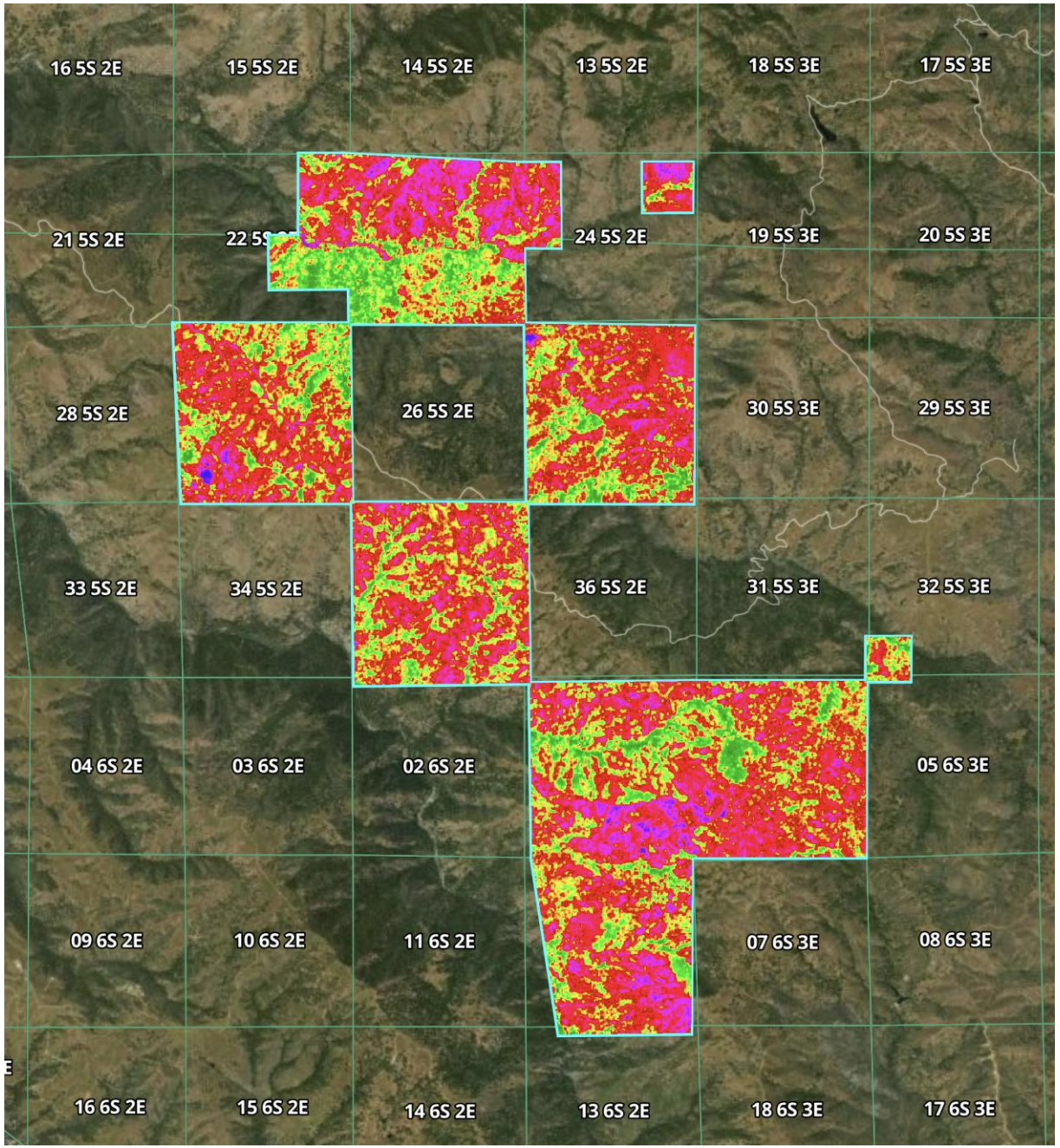
2022

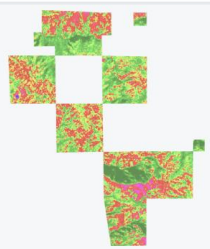
Mean	54
Std Dev	16
Max	92
Min	10



2021

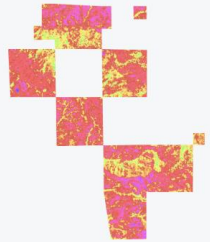
Mean	64
Std Dev	14
Max	100
Min	13





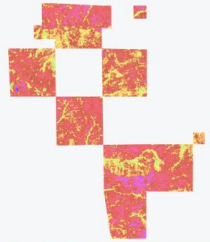
2019

Mean	75
Std Dev	13
Max	100
Min	7



2018

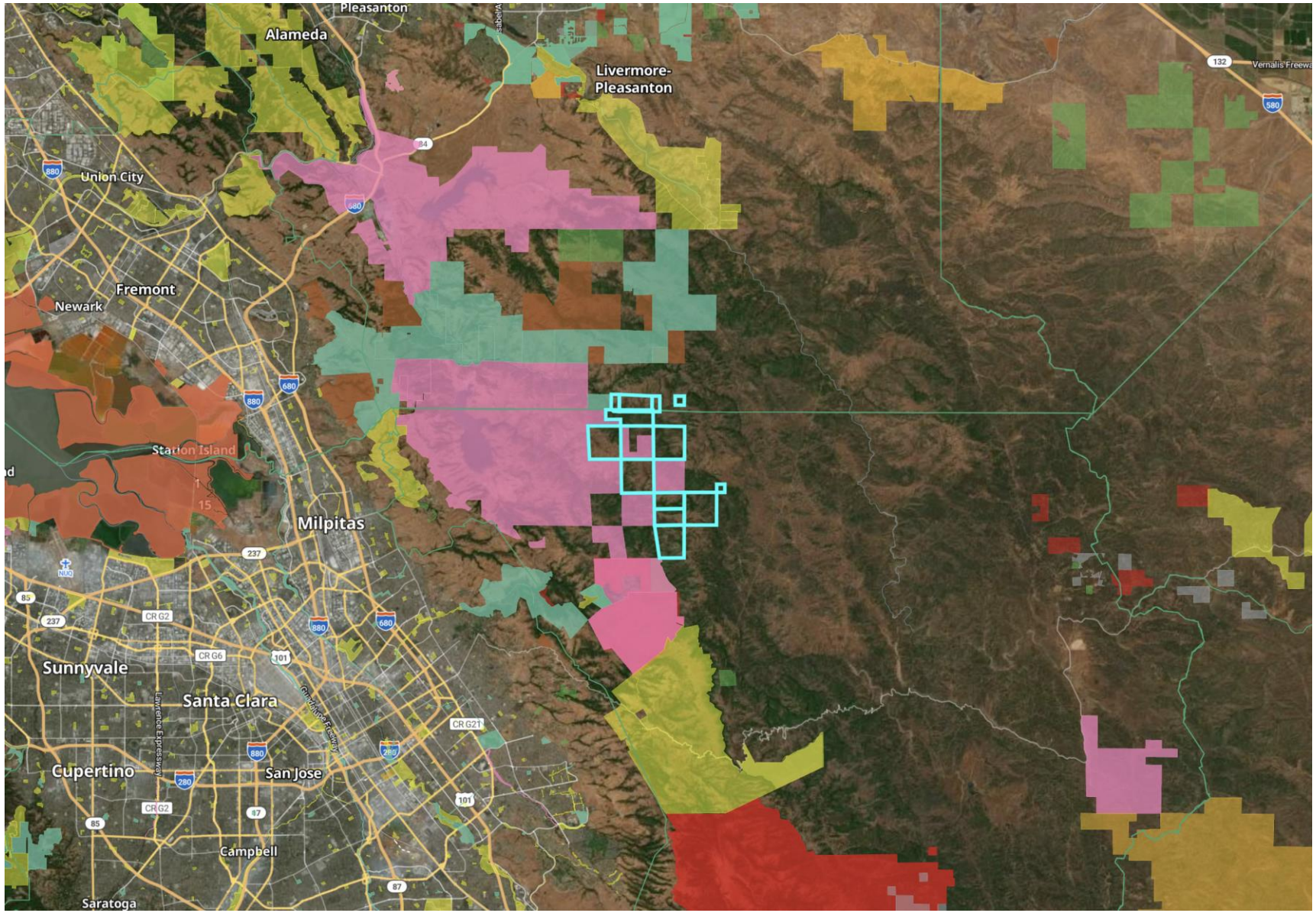
Mean	61
Std Dev	10
Max	83
Min	12



2017

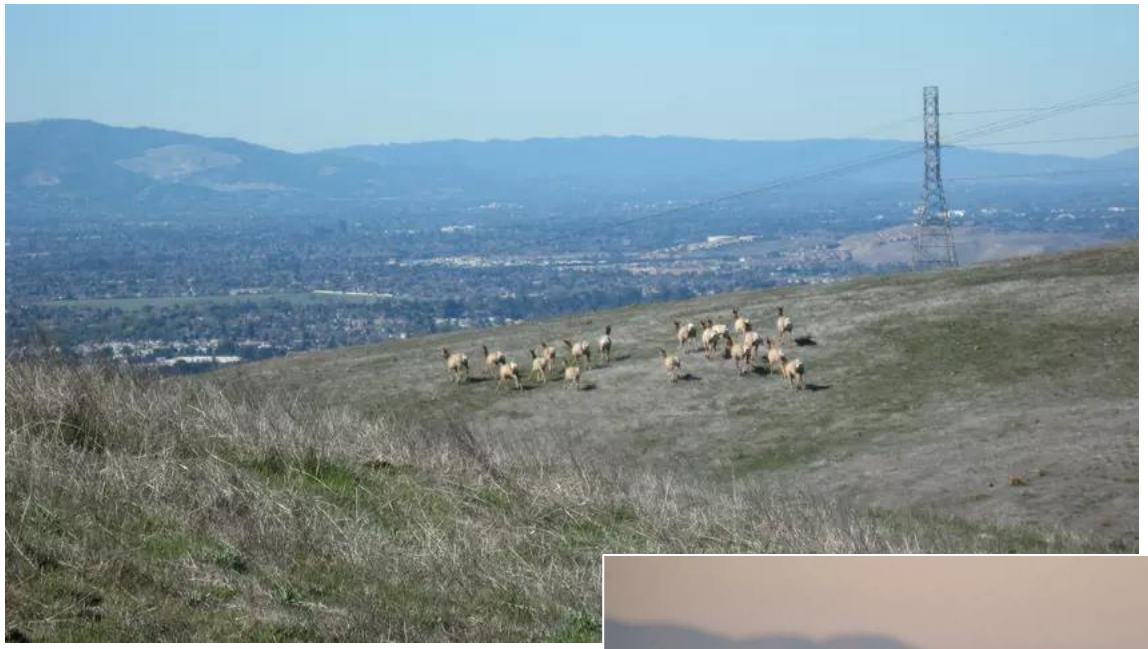
Mean	62
Std Dev	9
Max	84
Min	6

Conservation Lands



Tule Elk and Sunflower

Tule elk in California's Diablo Range face habitat fragmentation from urban sprawl, development, roads, and drought, limiting forage and movement despite slow population recovery from near-extinction. Wild sunflowers supplement their grass/herb diet with nutritious seeds, foliage, and late-season blooms, boosting calories and resilience in dry conditions to accelerate habitat restoration and herd revival.



Currently there are only 90 individuals in five to six separate herds as of 2019, living in the Diablo Range near Mt. Hamilton.

California Condor

California condors are returning to the **Diablo Range** and Sunol Wilderness after over a century's absence. Exploratory flights from the Pinnacles National Park release site have brought individuals and small flocks northward since 2021, with repeated visits now in their fifth year, signaling natural range expansion as the overall population grows.

Challenges to flourishing include **lead poisoning** from scavenged hunter-killed carcasses—the leading cause of death—plus microtrash ingestion, powerline collisions, habitat loss, and slow reproduction rates. Continued monitoring, lead-free ammunition programs, and protected foraging/nesting habitat are essential for self-sustaining populations.

Ideal habitats for **California condor reproduction** are remote, rugged landscapes with steep rocky cliffs containing natural caves, crevices, or ledges for nesting, typically in chaparral, oak woodlands, or conifer forests at elevations of 600–6,000 feet. Nearby high perches on cliffs or large trees provide roosting and takeoff points, with strong updrafts essential for their massive 9.5-foot wingspan.

Salmon and Beaver

Timed releases of cold water from **Calaveras Reservoir** support the return of **Chinook salmon** and beavers to the Alameda Creek watershed by improving summer/fall flows, water quality, and habitat connectivity. Recent fish passage projects have reopened over 20 miles of stream, allowing salmon to reach upper stretches near Sunol for the first time in 70 years.

The key challenge remains creating suitable spawning conditions—adequate gravel, depth, velocity, and stable flows—in the far upper Alameda Creek beyond the reservoir-influenced sections, where natural hydrology is limited and barriers historically blocked access.

Fog Harvesting for Reforestation

Fog net water harvesting is a sustainable, passive reforestation strategy that uses mesh nets to catch moisture from coastal or mountain fog, yielding 200–600 liters of water daily per large net (depending on distance from bodies of water, inland breezes, altitude, and humidity). It can provide crucial water for irrigating saplings in arid regions, significantly boosting survival rates and supporting biodiversity, carbon sequestration, and soil stabilization.

- **High Survival Rates:** Studies show that after 15 years, over 65% of trees can survive when initiated with fog water.
- **Carbon Sequestration:** The method fosters reforestation in arid zones, creating valuable carbon sinks.

Fog net water harvesting demonstrations in California, notably in the Bay Area and Santa Cruz, use specialized mesh screens to capture moisture from coastal fog. Demonstrations in the Bay Area and Santa Cruz use specialized mesh screens to capture moisture.

Proximity to Other Major Conservation Opportunities