

(Almost) lost worlds of the Santa Clara Valley

GIST-11 Foothill College

Kimberly Nicholls

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In 1800, the Santa Clara Valley looked very different than it does today. Salt marsh ringed the bay, transitioning to seasonal freshwater wetlands.

Riparian corridors divided oak woodlands, and grassland blanketed lower slopes. Chaparral took over at higher elevations. Today, the valley is developed: housing, office parks, and pavement fill the valley. Yet pockets remain: Santa Clara County park trails allow everyone to experience the variety and beauty of Santa Clara Valley habitats.





Earths... 20 km Powered by Esri



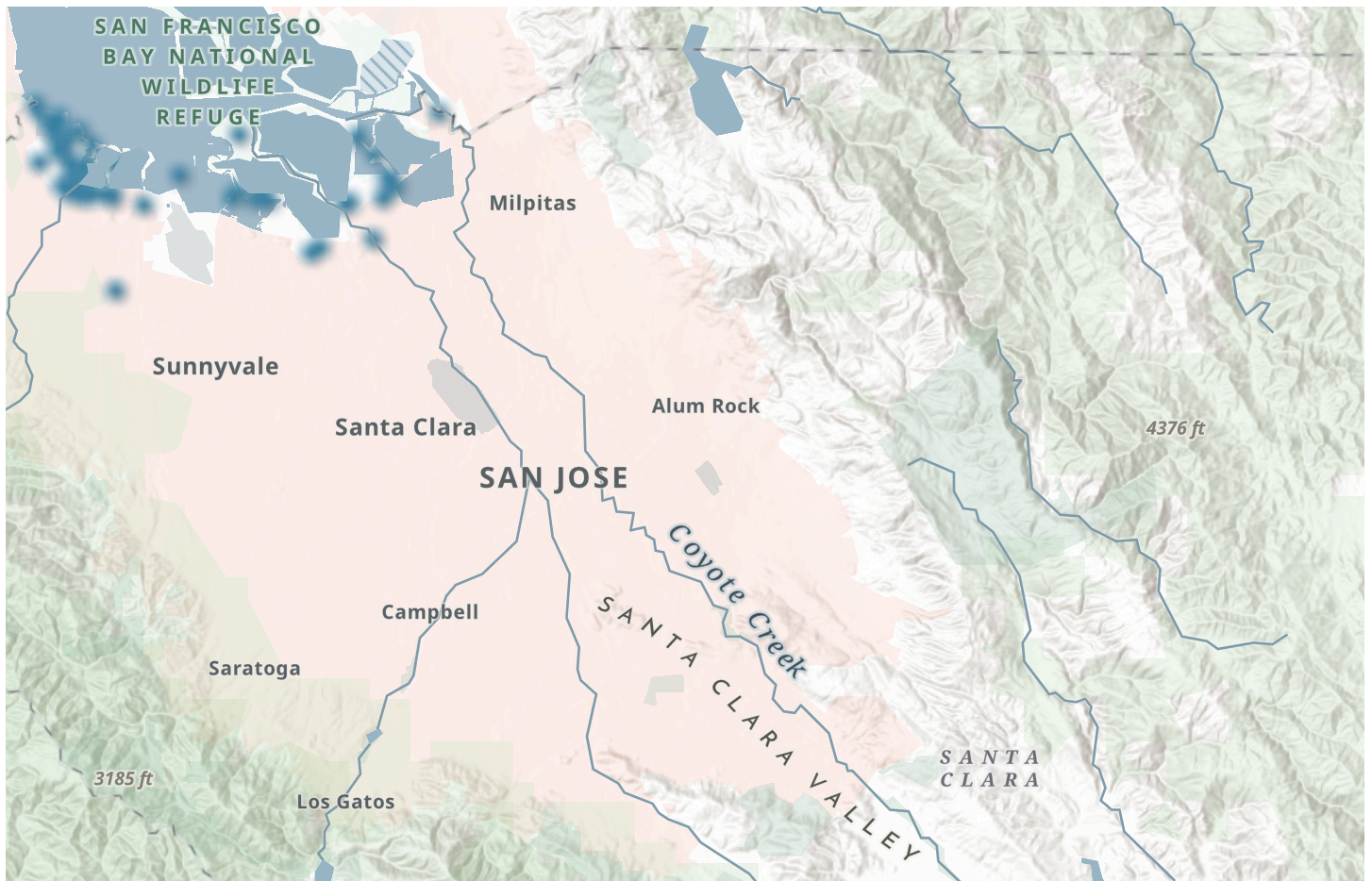
Count... 20 km Powered by Esri

Pre-European and modern views of Santa Clara Valley. This map combines and reduces the 23 habitat types in the SFEI dataset to 6, suitable for a general audience.



Photo: [Rhododendrites](#), [CC BY-SA 4.0](#), via Wikimedia Commons

Red-tailed hawks are year round residents throughout the valley, resting in oak trees and atop light poles. A red-tailed hawk hunting over Santa Clara Valley in 1800 could have flown over all six habitats in a day. Today, it's still possible. [iNaturalist observations](#) of key species provide a bird's eye view of where salt marsh, freshwater wetland, riparian, grassland, oak woodland, and chaparral habitats still flourish.



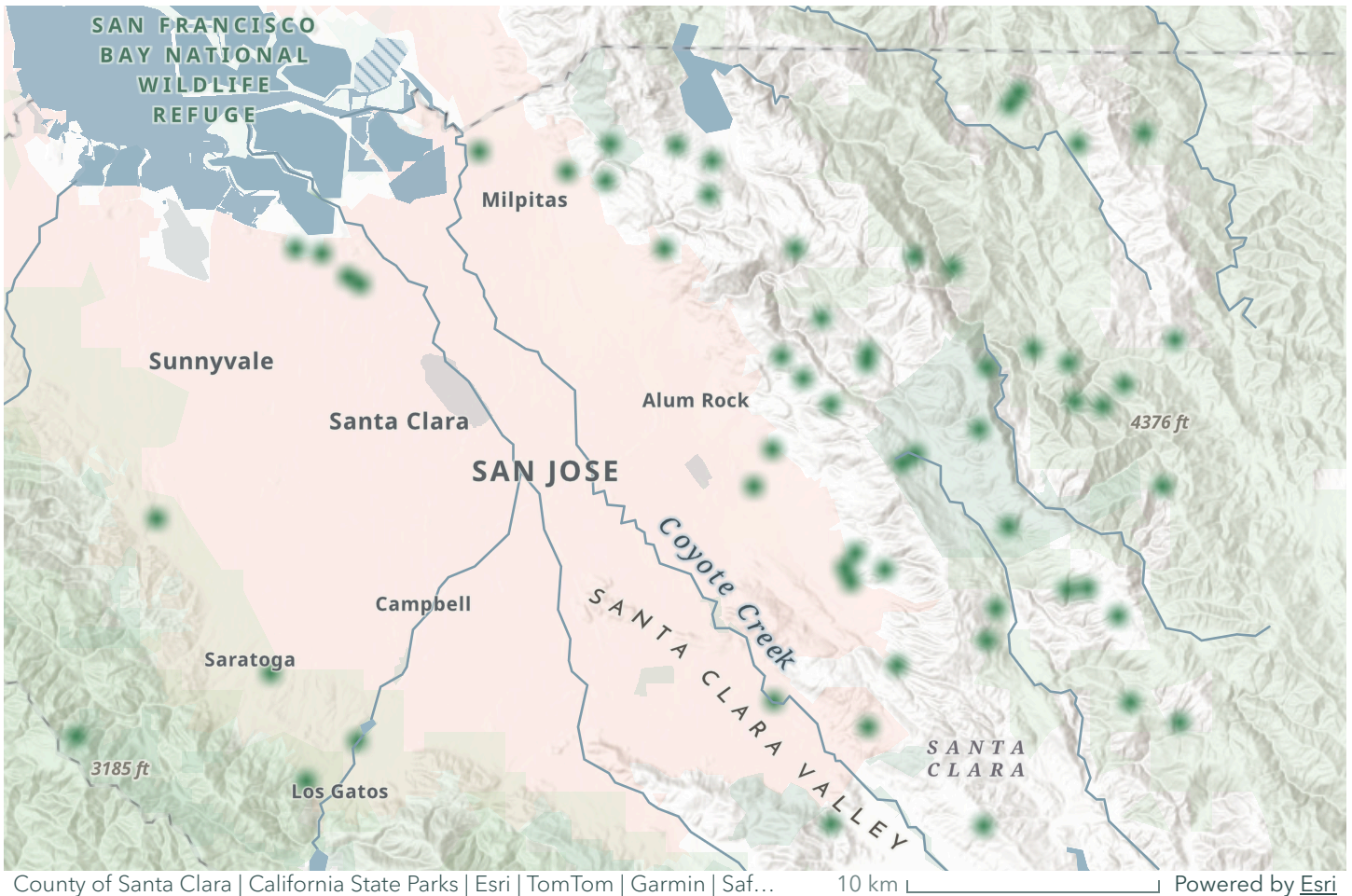
County of Santa Clara | California State Parks | Esri | TomTom | Garmin | Saf... 10 km Powered by Esri

Map: North of the city of San José, salt marsh fringes the bay. iNaturalist observations show where pickleweed (aka California swampfile), Ridgway's rail, and elusive salt marsh harvest mice inhabit a maze of tidal channels and mud flats. Click an observation for details.



Photo: USFWS photo/Steve Martarano, [CC BY 2.0](#), via Wikimedia Commons

A hawk lifts off a fence post at the edge of the salt marsh, riding the first thermal of the morning. The shallow South Bay gradually becomes a maze of narrow channels lined by grey-green pickleweed. Piping shorebirds scurry across the mud flats ahead of the incoming tide.

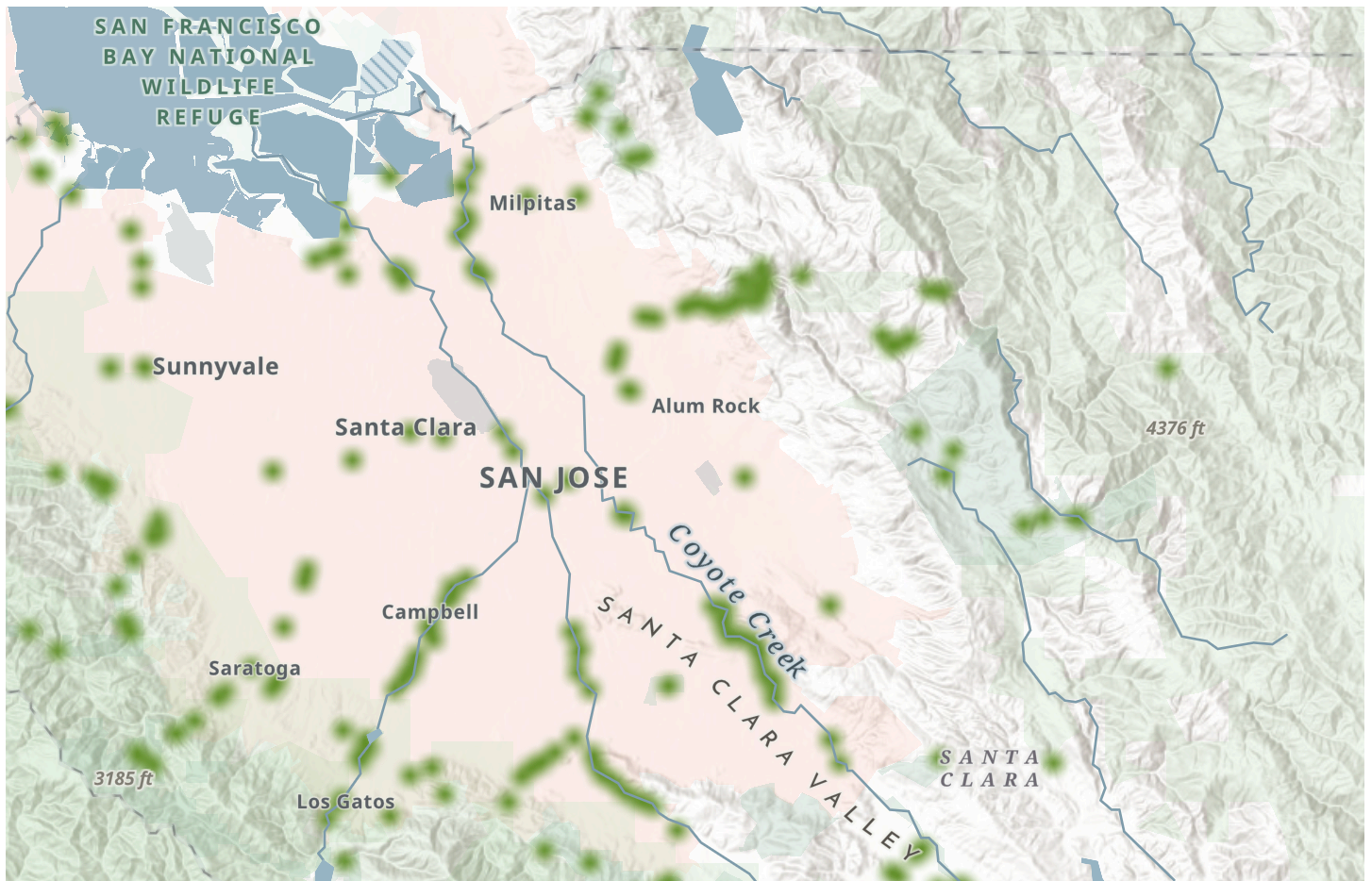


Map: iNaturalist observations indicate freshwater wetlands where baltic rush and Pacific willows provide cover for California red-legged frogs. Click an observation for details.



Photo: King of Hearts, [CC BY-SA 4.0](#), via Wikimedia Commons

Beyond the reach of the tides, the hawk flies inland over dense thickets. A red-legged frog slips into the cover of rushes and willows as the hawk's shadow crosses the water. Wet meadows, seasonal lakes, and permanent lagoons once created a network of freshwater wetland habitats.



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Map: iNaturalist observations show where arroyo willow line creeks, Swainson's hawks nest in trees, and western sycamore anchor riparian communities. Click an observation for details.

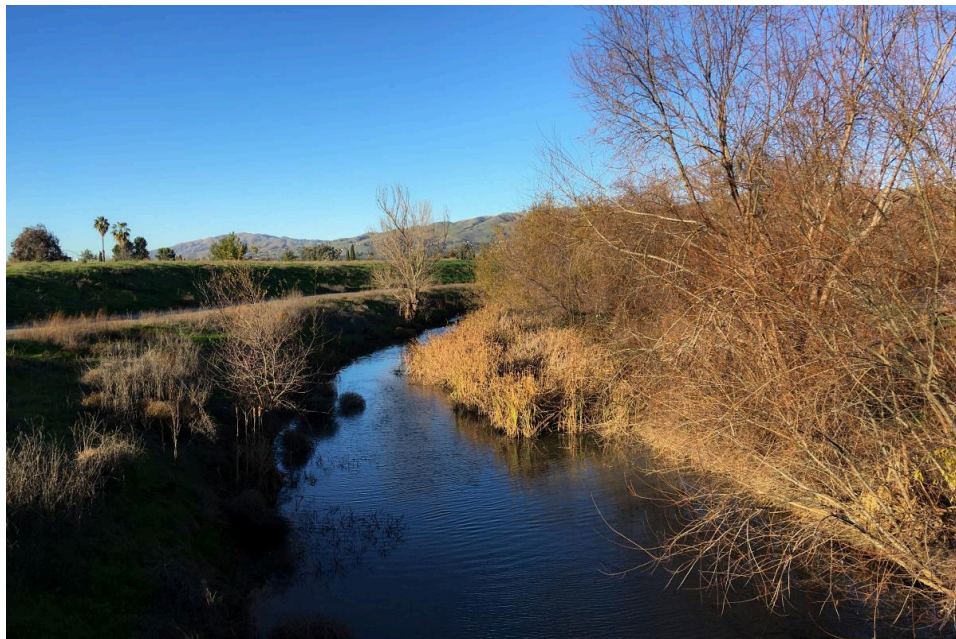
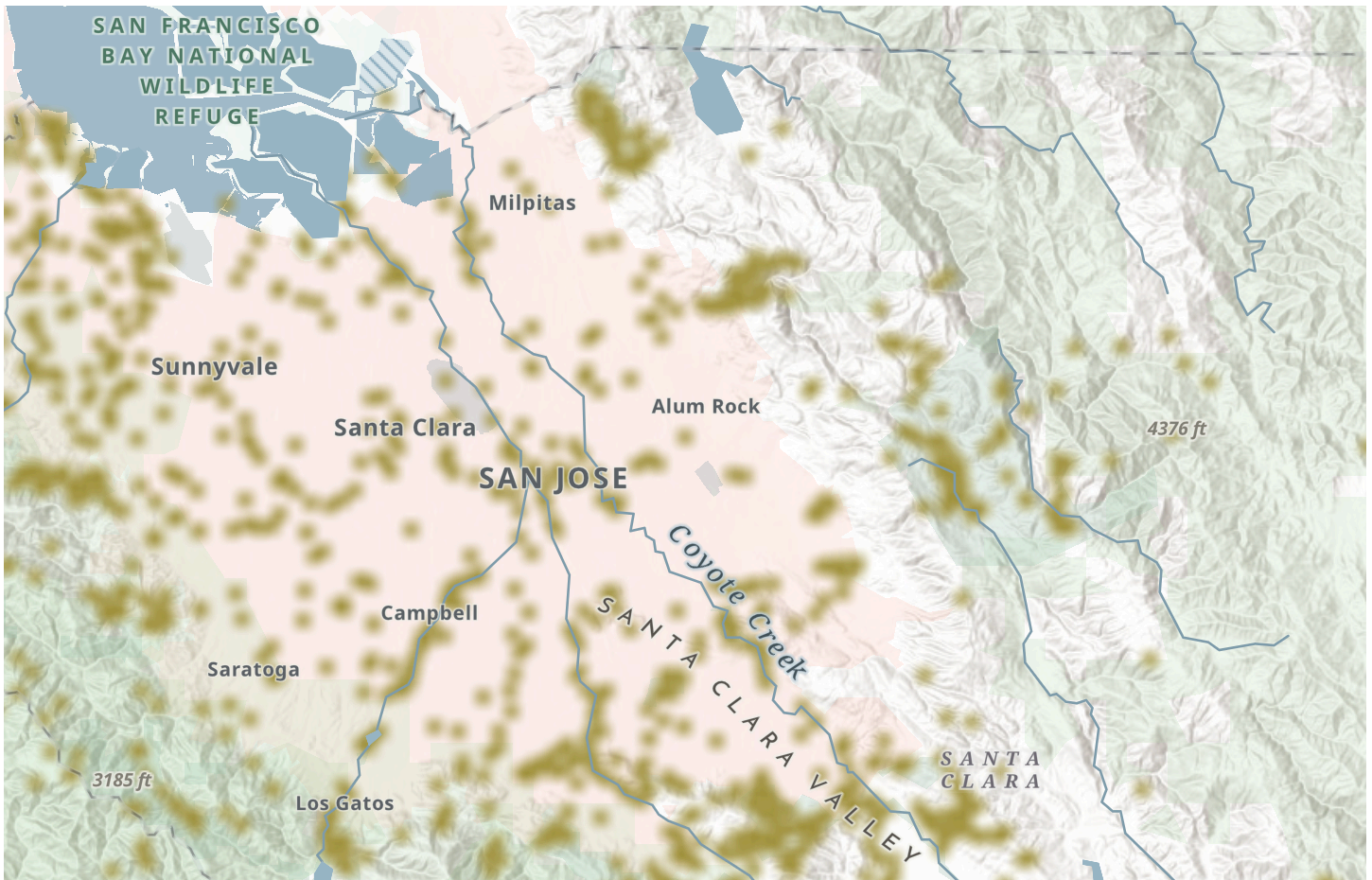


Photo: Clyde Charles Brown, [CC BY-SA 4.0](#), via Wikimedia Commons

The hawk follows a ribbon of creek inland, along a narrow corridor of riparian habitat. Dense stands of arroyo willow line gravel channels, and invisible birds cheep from cover. Western sycamore trunks gleam like silver along the water.



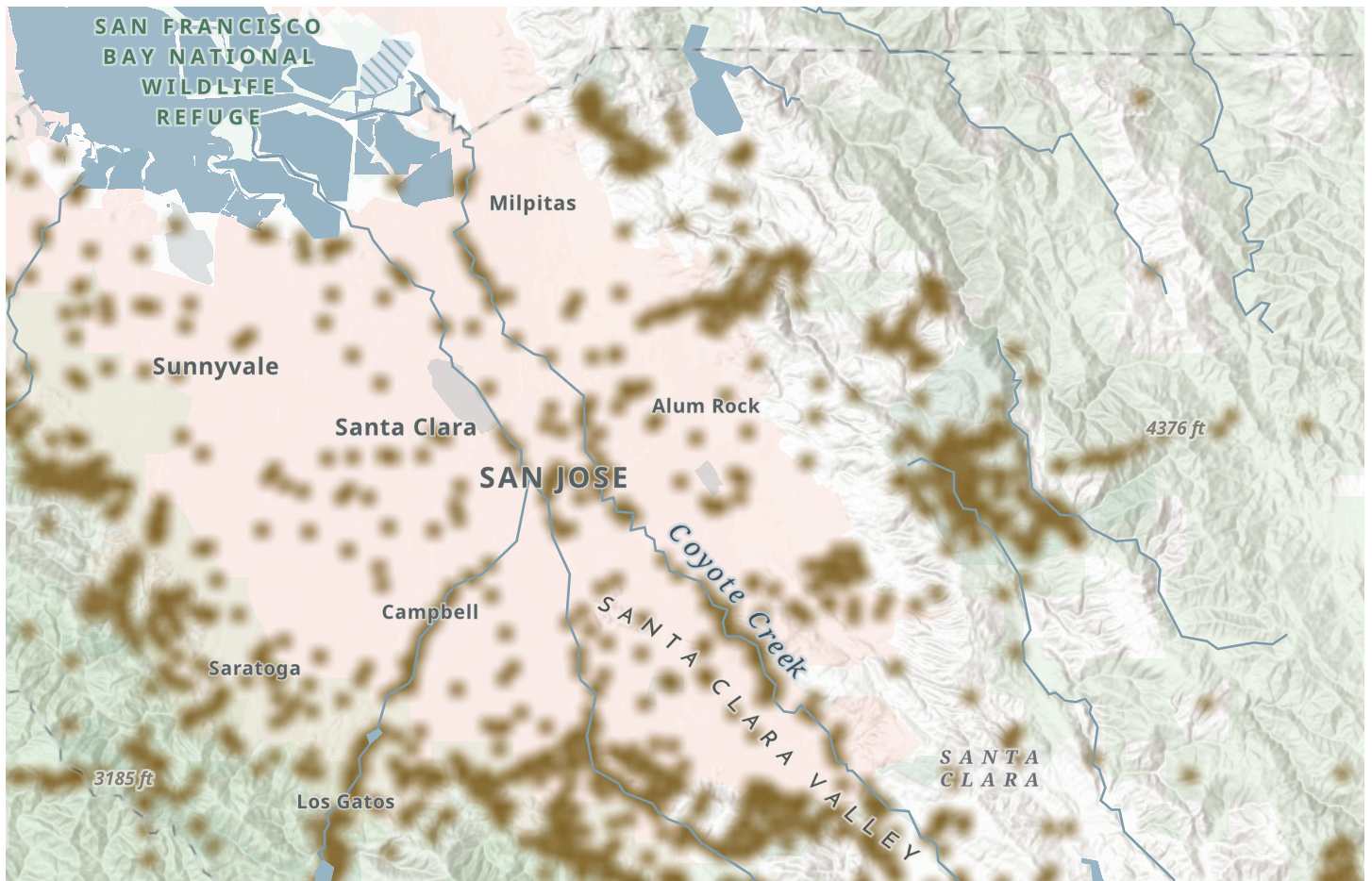
County of Santa Clara | California State Parks | Esri | TomTom | Garmin | Saf... 10 km | Powered by Esri

Map: iNaturalist observations show grasslands blanketed by purple needlegrass and California poppies. California voles scurry away from overhead predators. Click an observation for details.



Photo: Clyde Charles Brown, [CC BY-SA 4.0](#), via Wikimedia Commons

The hawk crosses the creek corridor and the landscape opens into grasslands, perfect for hunting voles. The valley floor was once mostly carpeted by perennial bunchgrasses, dotted by wildflowers in spring. The rich soil was perfect for fruit orchards and then for building.



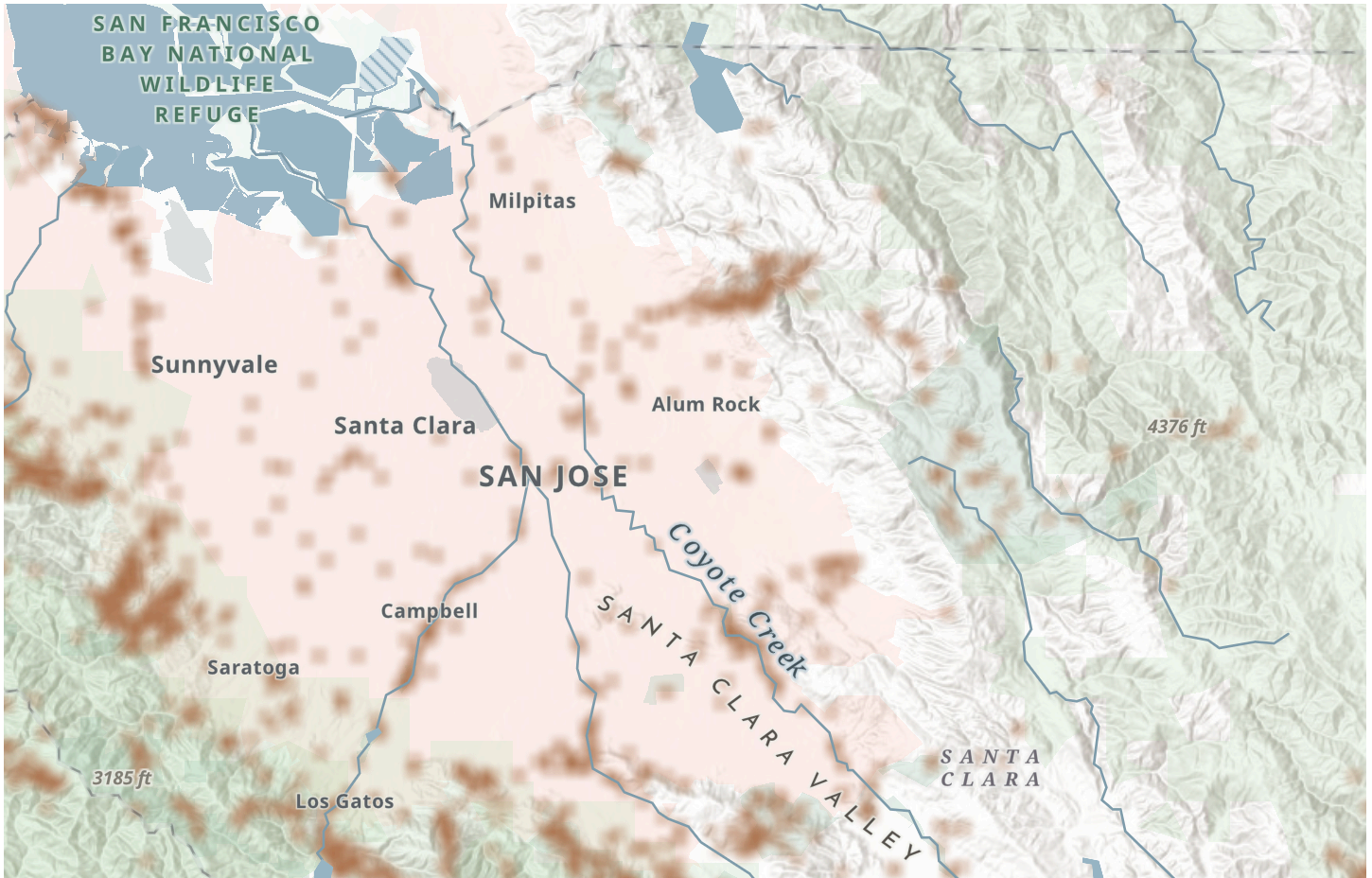
County of Santa Clara | California State Parks | Esri | TomTom | Garmin | Saf... 10 km Powered by Esri

Map: iNaturalist observations show oak woodlands, where valley oaks spread twisting branches, acorn woodpeckers stash acorns for the future, and mule deer browse. Click an observation for details.



Photo: [jkirkhart35](#), [CC BY 2.0](#), via Wikimedia Commons

The hawk rises on a thermal and crosses into oak woodland, then settles in the spreading branches of a majestic valley oak. A group of acorn woodpeckers squawks loudly, guarding their acorn cache. With a lifespan of more than 600 years, some massive oaks have witnessed a succession of human changes around them, from ranchos, to orchards, to office parks and housing.



County of Santa Clara | California State Parks | Esri | TomTom | Garmin | Saf... 10 km | Powered by [Esri](#)

Map: iMap: iNaturalist observations show where chaparral species California sagebrush, chamise, and toyon cling to steep hillsides on the margins of the valley. Click an observation for details.

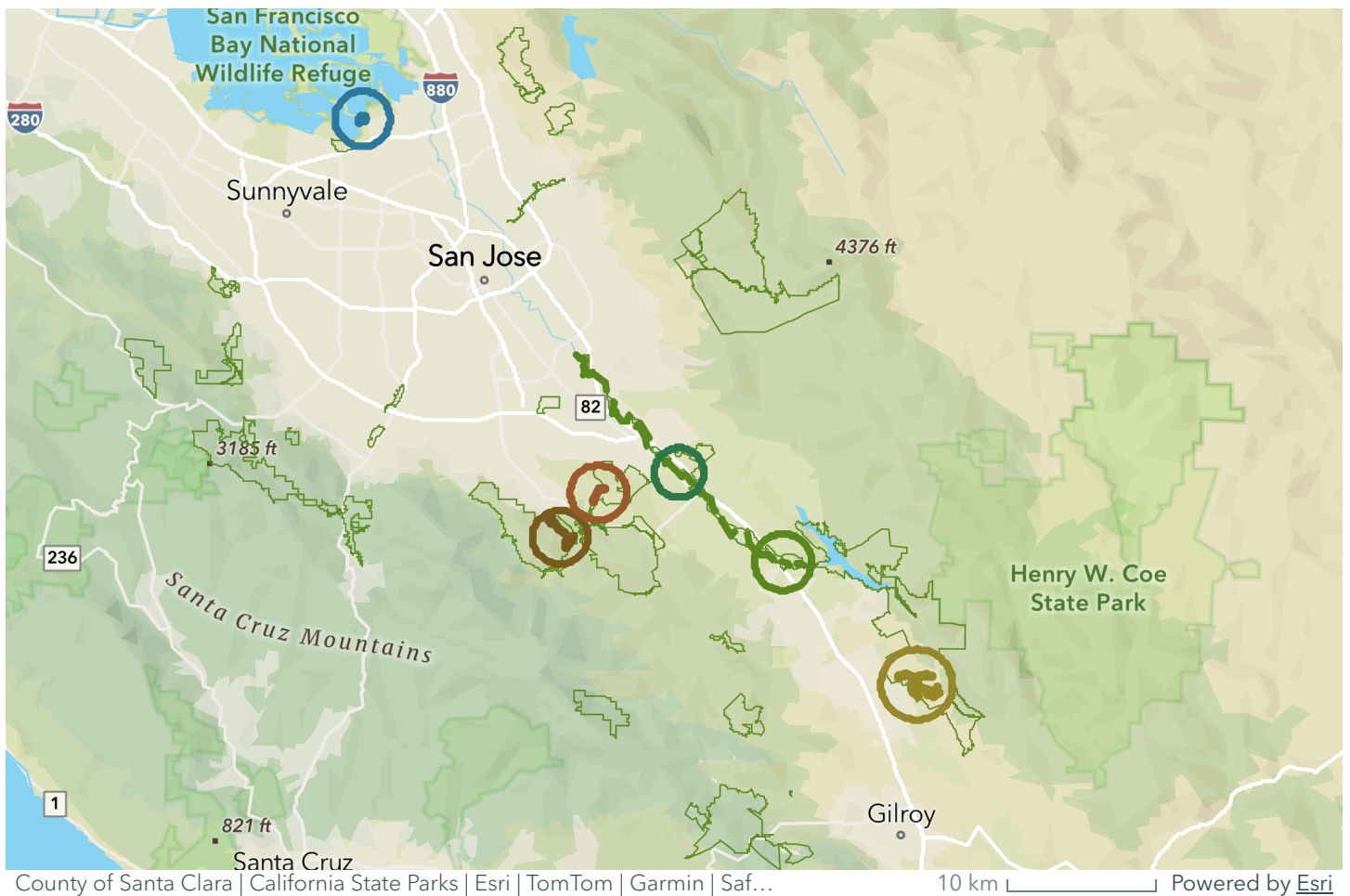


Photo: Matt Lavin [CC BY 2.0](#), via [Flickr](#)

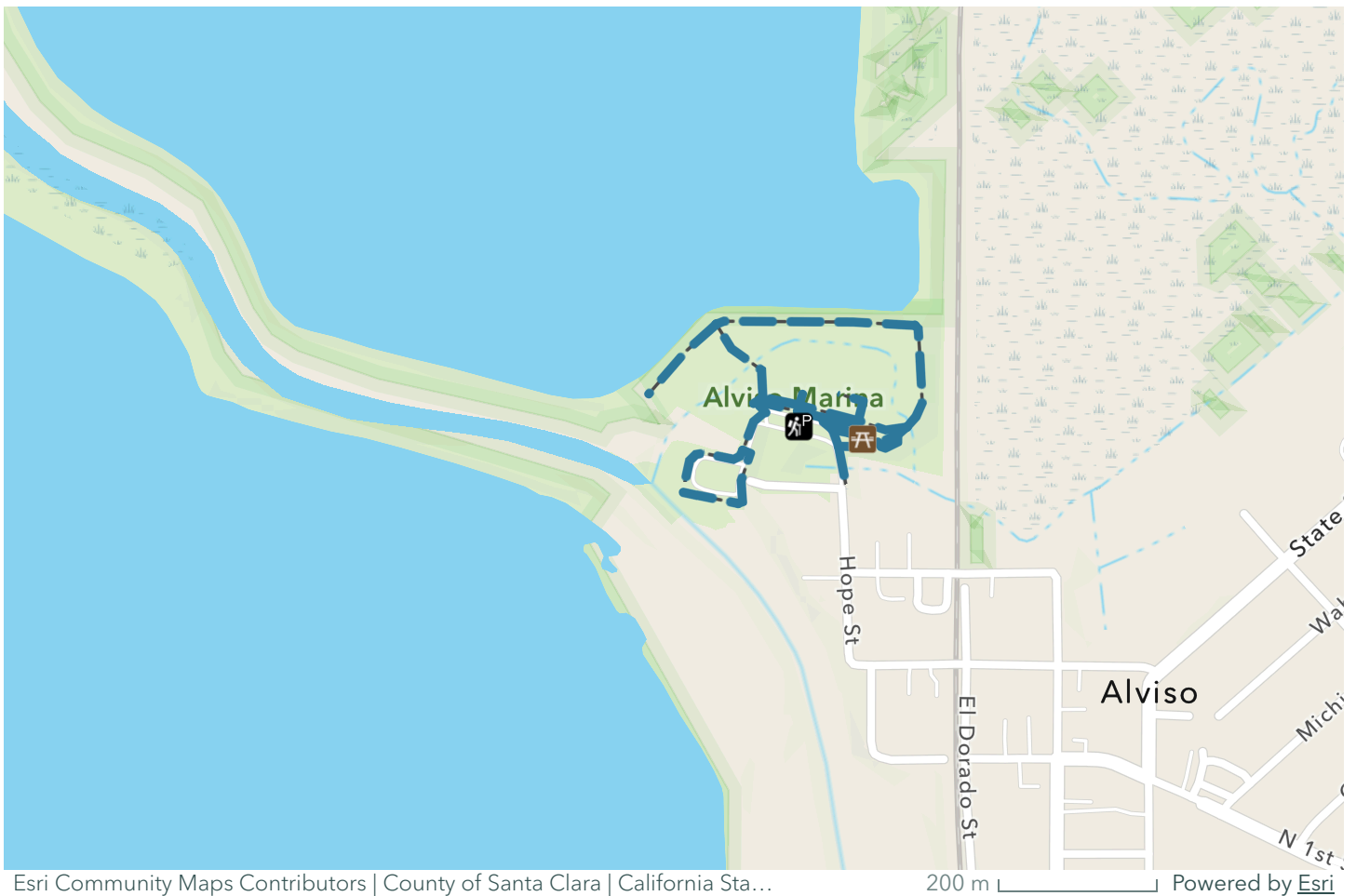
The valley floor rises into steep slopes, the soil thins, and chaparral takes over. The hawk hangs motionless over a ridge, the air smelling of sage and dry grass. Dense and low chamise covers the slopes, but provides little shade. As the afternoon heat fades, birds feast on bright red toyon berries. The hawk alights on a utility pole that powers nearby houses, and provides the perfect spot to watch for small prey.

Santa Clara County Parks maintains a network of parks and trails where you can experience these habitats yourself. All are easily accessible from San José; most have free parking. Leave the traffic behind and get outside: smell the salt air, hear raucous acorn woodpeckers arguing, watch the hillsides come alive with spring wildflowers, and look for hawks soaring overhead.

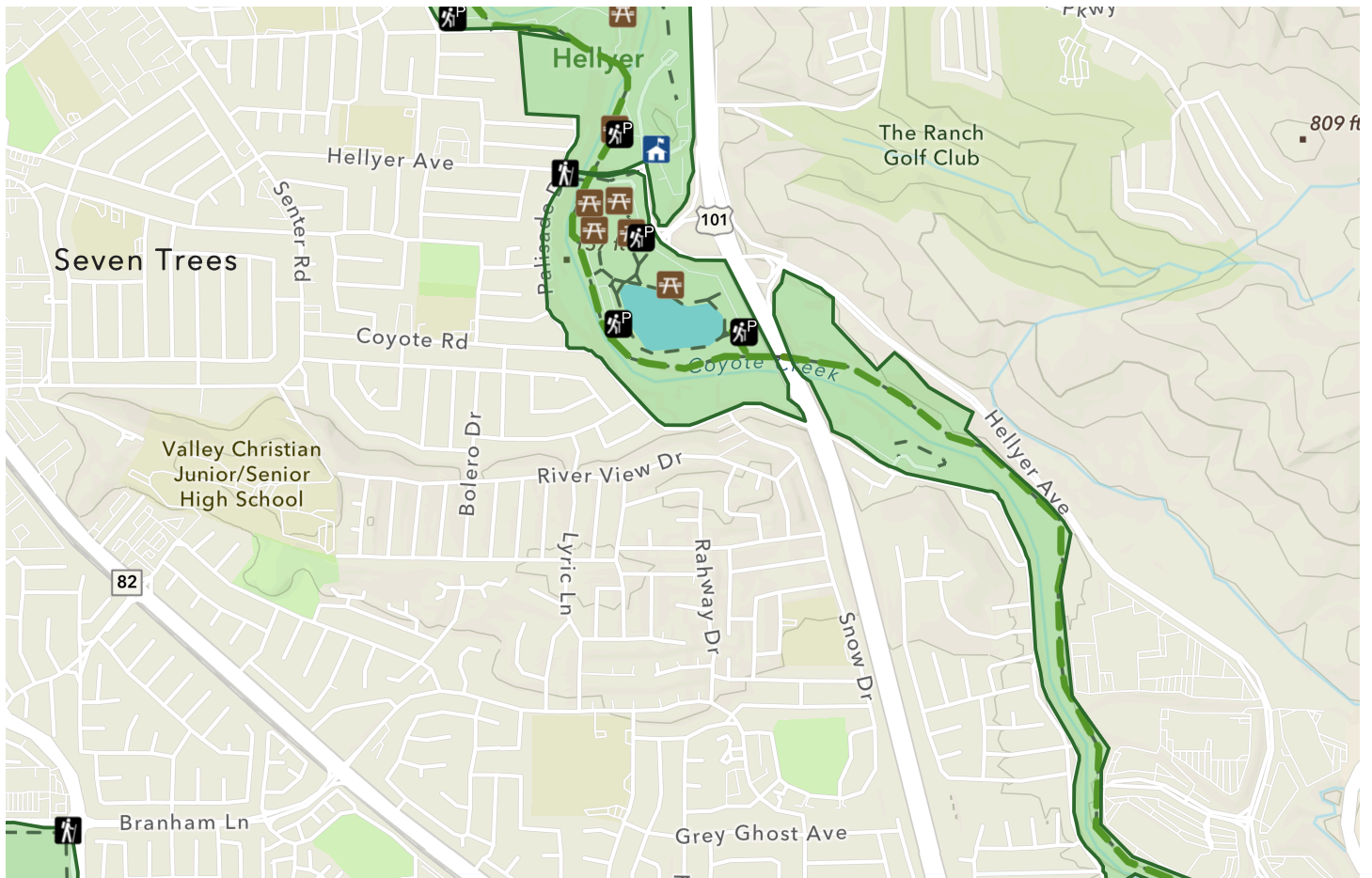




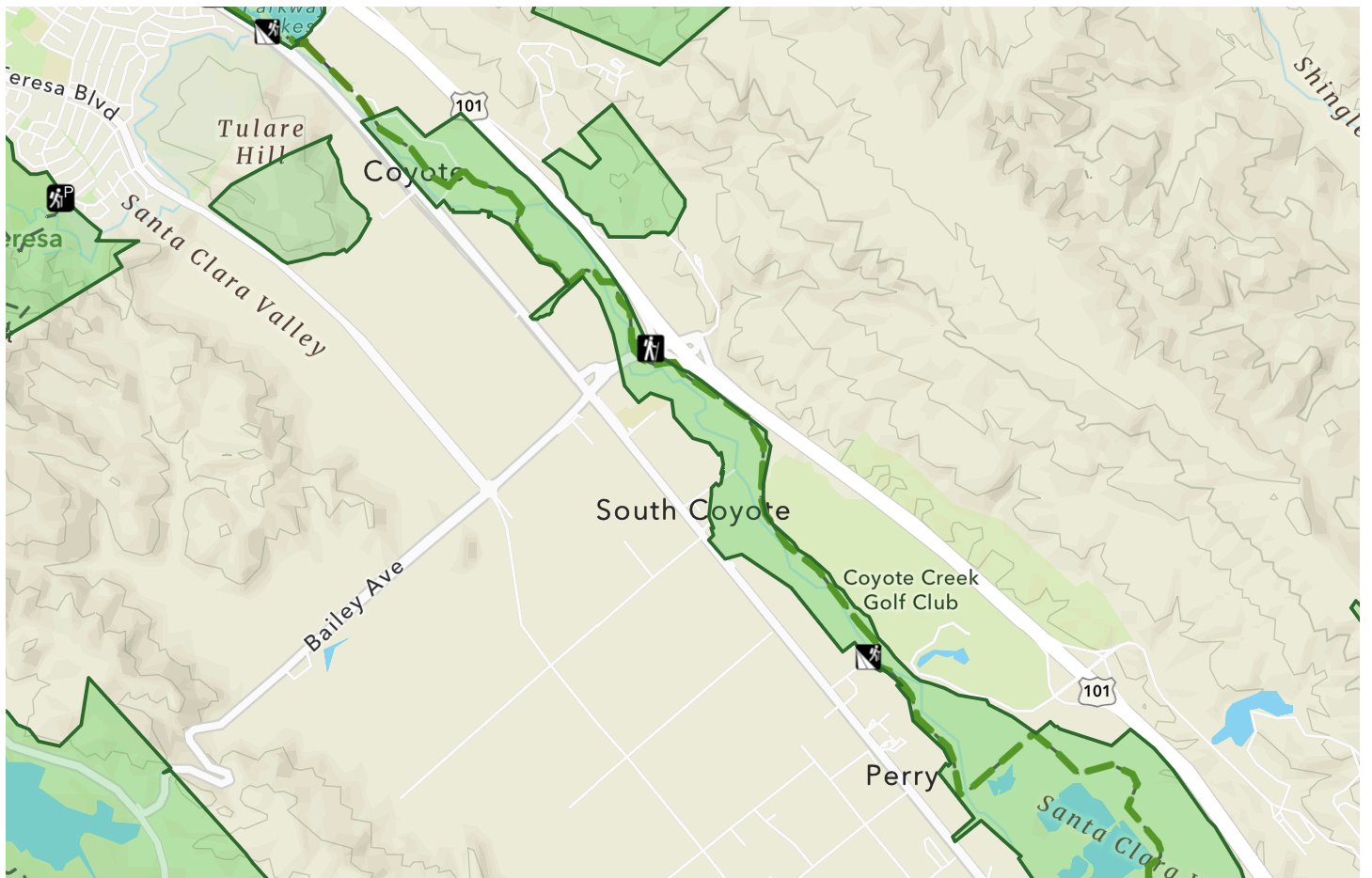
From Alviso to Morgan Hill, explore the varied habitats of the Santa Clara Valley on foot, bicycle, or horseback trails through protected county parklands. Download trail maps and get more information directly from [Santa Clara County parks](#).



Step onto the [Alviso Marina Boardwalk](#) for a short walk through the salt marsh. Smell the salt mud, listen for piping shorebirds on mud flats, and watch the tide come in under a wide open sky.



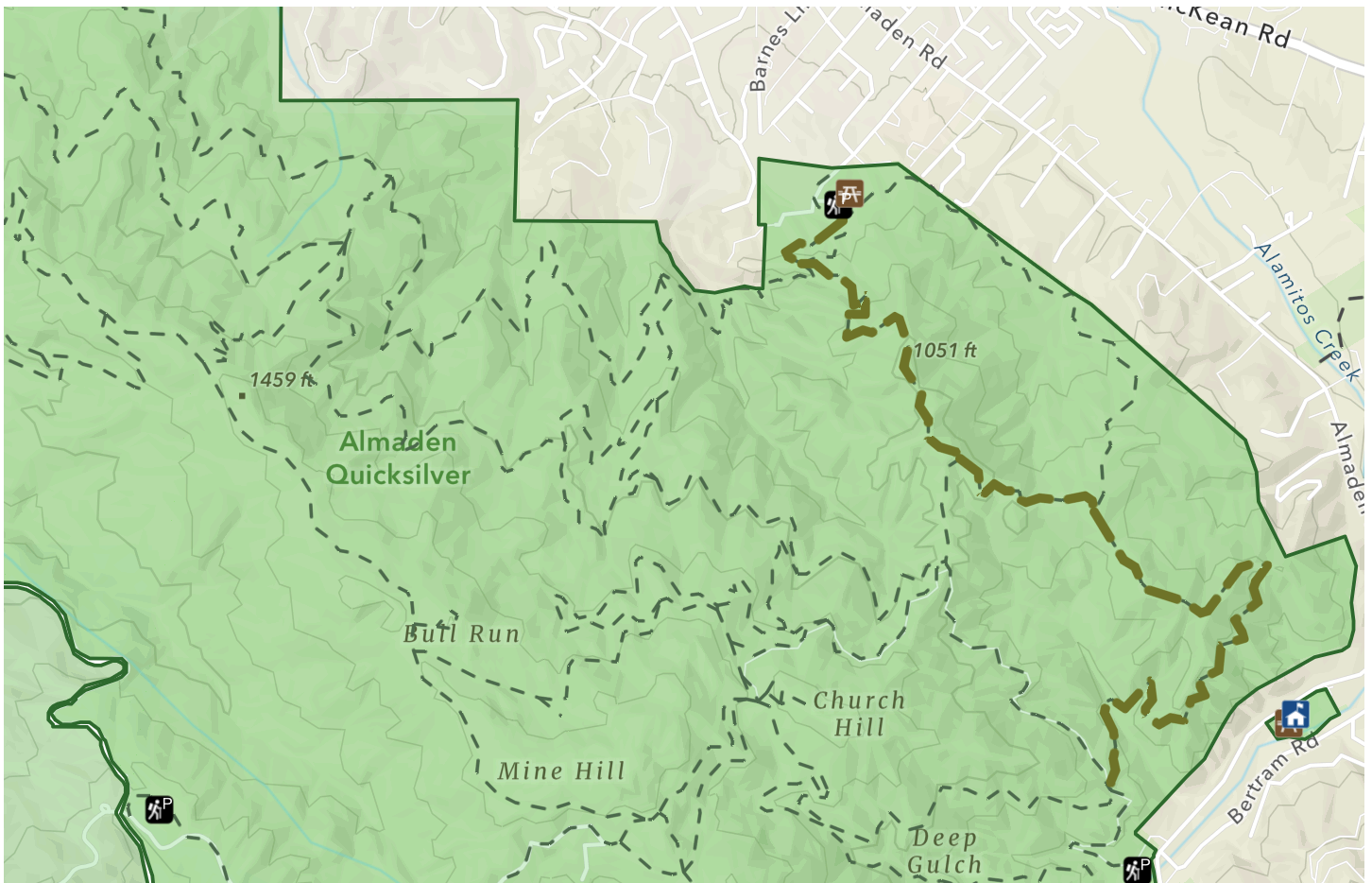
Follow the Coyote Creek Trail south from [Hellyer County Park](#) for a glimpse of freshwater wetland. Cattails and willows close in along the water's edge. The creek widens into quiet backwater channels, dense with reeds and alive with birds.



County of Santa Clara | California State Parks | Esri | TomTom | Garmin | Saf...

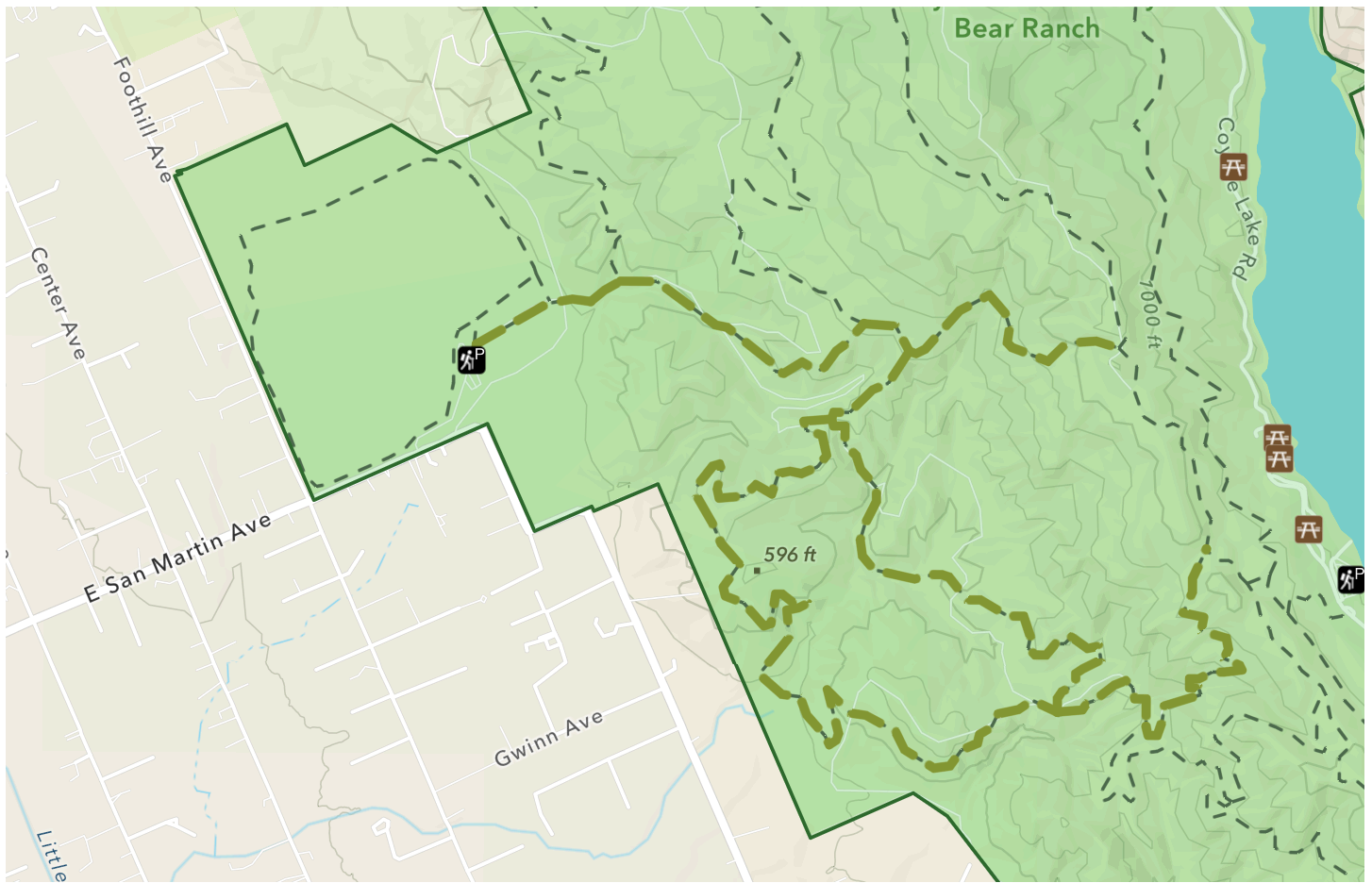
1 km  Powered by Esri

Leave suburban San José behind and stop along a quieter section of the [Coyote Creek Parkway](#). Listen for the soft burbling of the creek as it passes through gravel channels, and enjoy shaded stretches of riparian habitat under a canopy of California sycamores.

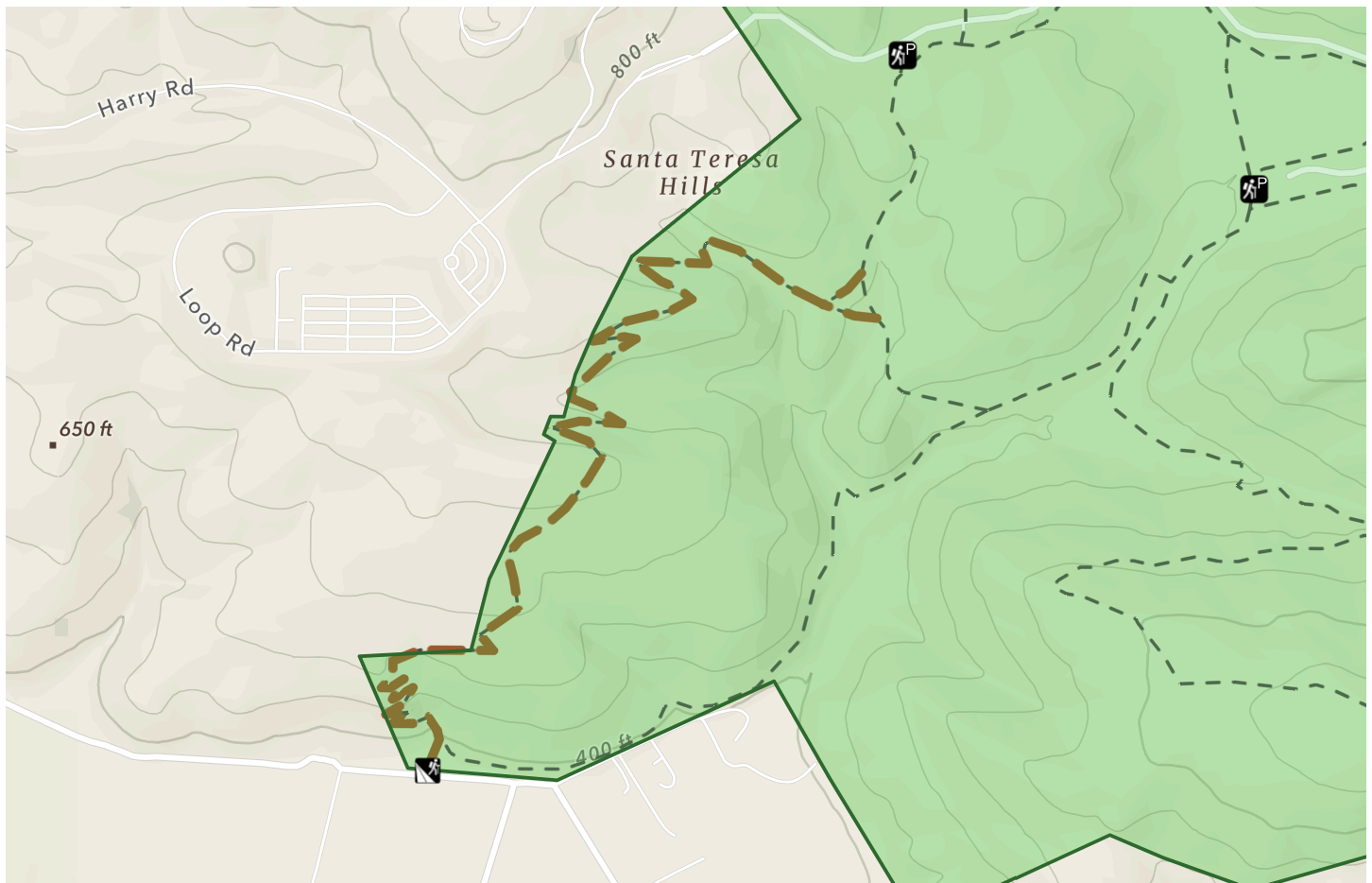


County of Santa Clara | California State Parks | Esri | TomTom | Garmin | Saf... 500 m Powered by Esri

Only a few minutes east of downtown San José, the oak woodlands of Almaden County Park feels like a different world. After a steep climb up Hacienda Trail, catch your breath among widely spaced valley oaks. Follow the sounds of squawking acorn woodpeckers to catch a glimpse of their bright red heads.



Before the grasslands turn golden in the dry summer heat, hike the [Savannah Trail](#) at Harvey Bear Coyote Lake for sweeping views of rolling hills. In spring, cattle munch on introduced yellow mustard flowers, but poppies still dot the hillsides.



Esri Community Maps Contributors | County of Santa Clara | California Sta... 500 m Powered by Esri

Stile Ranch trail switchbacks up through chaparral in [Santa Teresa County Park](#). Sagebrush and chamise press in on both sides, and the smell of dry grass rises with the heat. Go early and bring water: the dense chaparral plants are too low to provide shade.

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For this project, I used Claude (Anthropic) as a research and workflow assistant. The AI helped me identify appropriate datasets available in ArcGIS Online and Living Atlas, develop a story concept and map structure, troubleshoot technical issues with ArcGIS online, generate hex color codes, and identify trails relevant to each habitat. All cartographic decisions, data processing, and final map design were carried out by me in ArcGIS Online. I reviewed and verified AI suggestions against source materials and my own experiences.

