Migration and Preservation of Monarchs in California

Emma Pelton
Dena Spatz
Stephanie Little

February 25, 2026

Breeding Monarchs

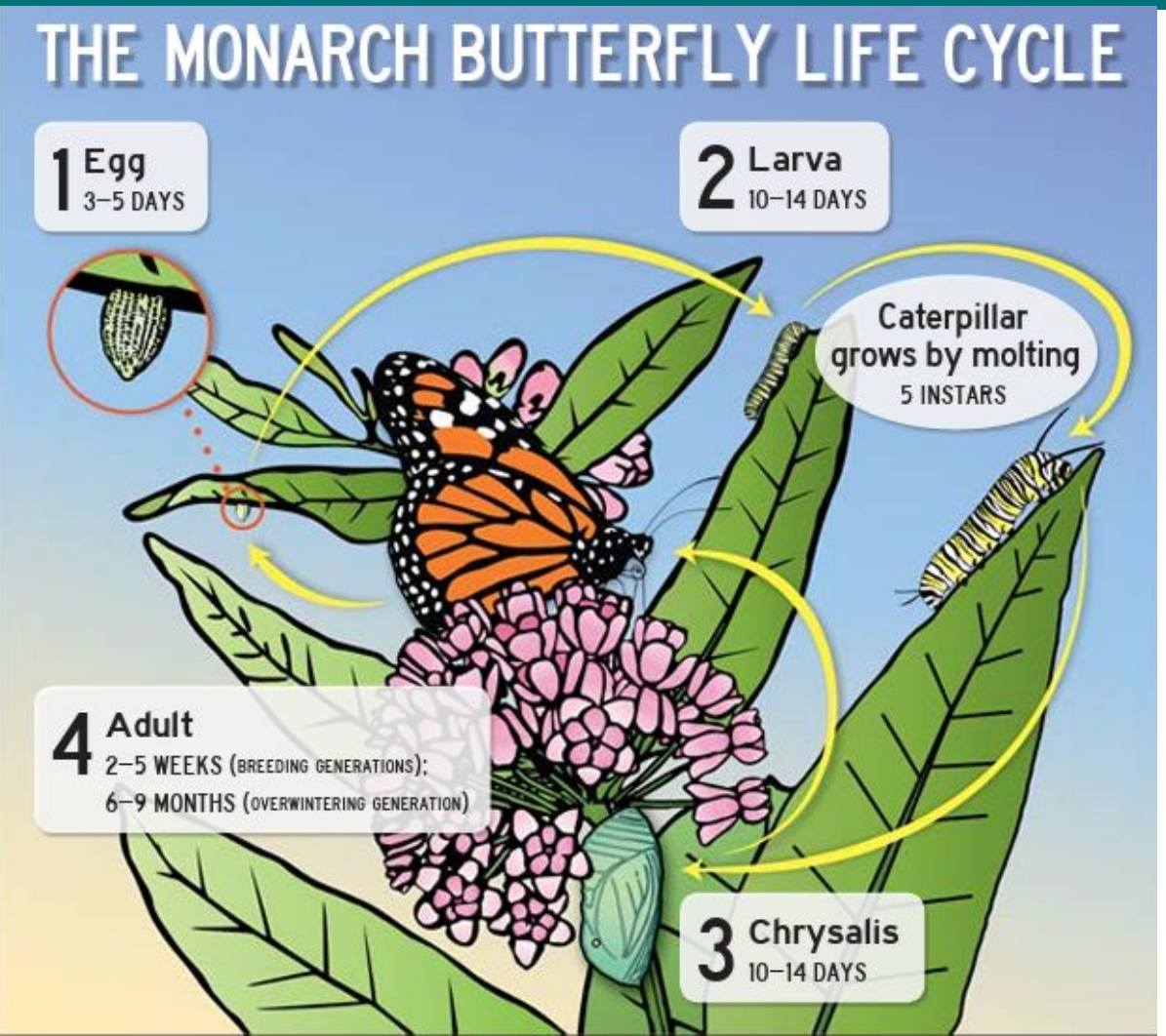
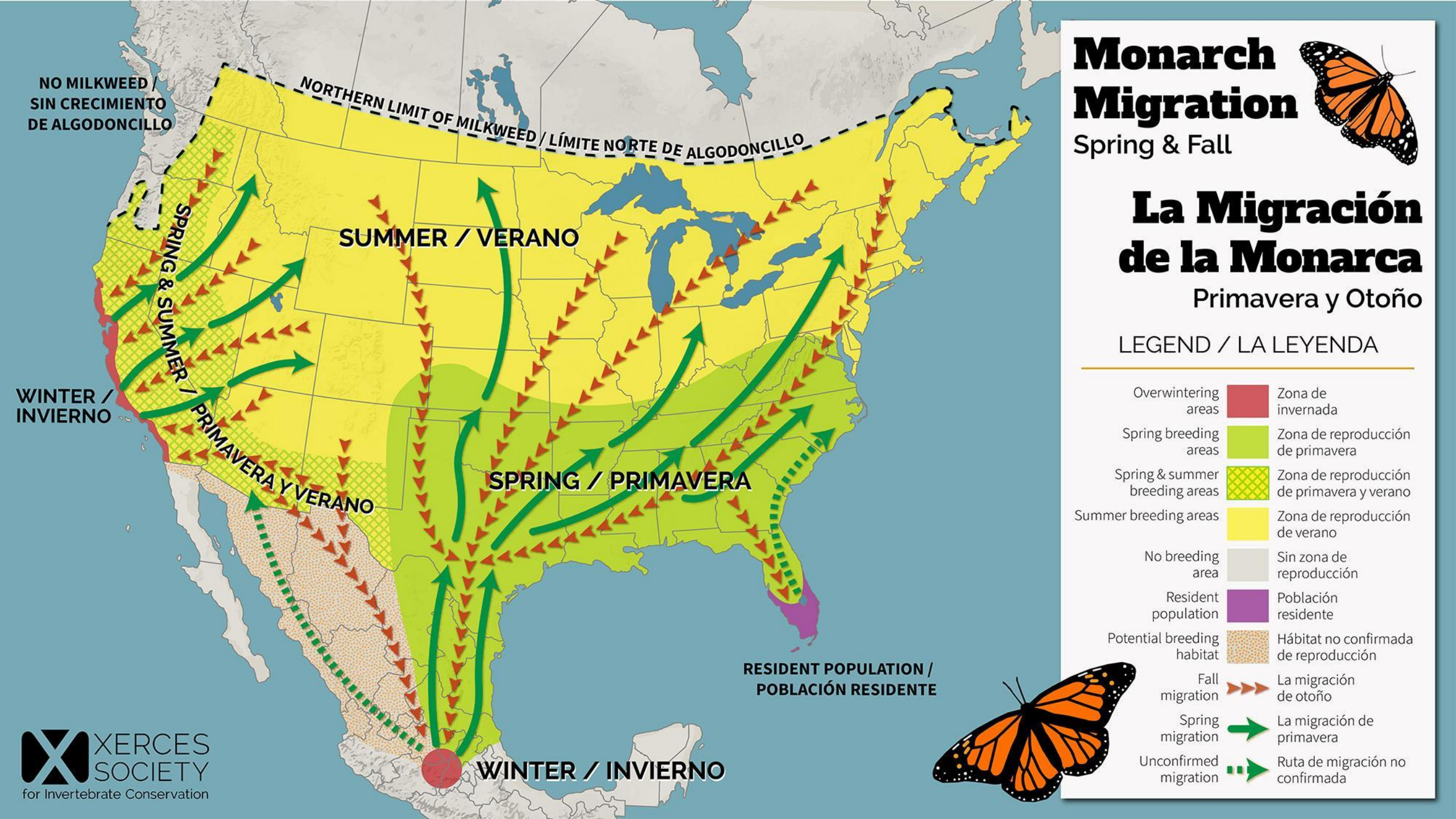


Photo: Isis Howard / Xerces Society


NO MILKWEED / SIN CRECIMIENTO DE ALGODONCILLO
NORTHERN LIMIT OF MILKWEED / LÍMITE NORTE DE ALGODONCILLO
SUMMER / VERANO
SPRING & SUMMER / PRIMAVERA Y VERANO
WINTER / INVIERNO
SPRING / PRIMAVERA
RESIDENT POPULATION / POBLACIÓN RESIDENTE
WINTER / INVIERNO
Monarch Migration
Spring & Fall
La Migración de la Monarca
Primavera y Otoño
LEGEND / LA LEYENDA
Overwintering areas
Zona de invernada
Spring breeding areas
Zona de reproducción de primavera
Spring & summer breeding areas
Zona de reproducción de primavera y verano
Summer breeding areas
Zona de reproducción de verano
No breeding area
Sin zona de reproducción
Resident population
Población residente
Potential breeding habitat
Hábitat no confirmada de reproducción
Fall migration
La migración de otoño
Spring migration
La migración de primavera
Unconfirmed migration
Ruta de migración no confirmada
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for Invertebrate Conservation

Overwintering Monarchs

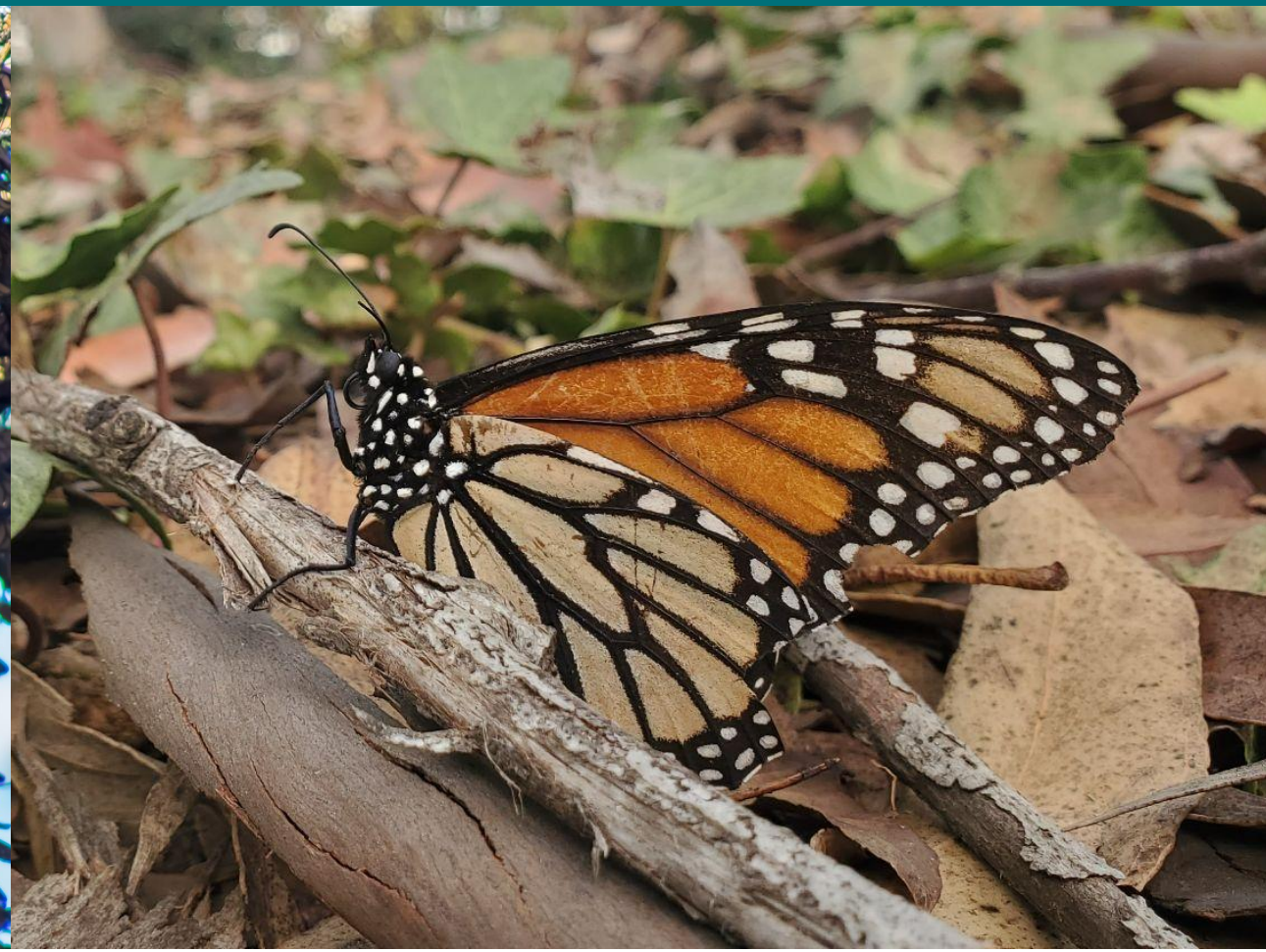


Photo (left): Bob Danziger; Photo (right): Isis Howard / Xerces Society

Western Monarch Count

- Xerces staff led
- Volunteer and partner-powered since 1997
- westernmonarchcount.org

Photo: Traci Ikegami, Xerces volunteer

Western Monarch Count

- Xerces staff led
- Volunteer and partner-powered since 1997
- westernmonarchcount.org

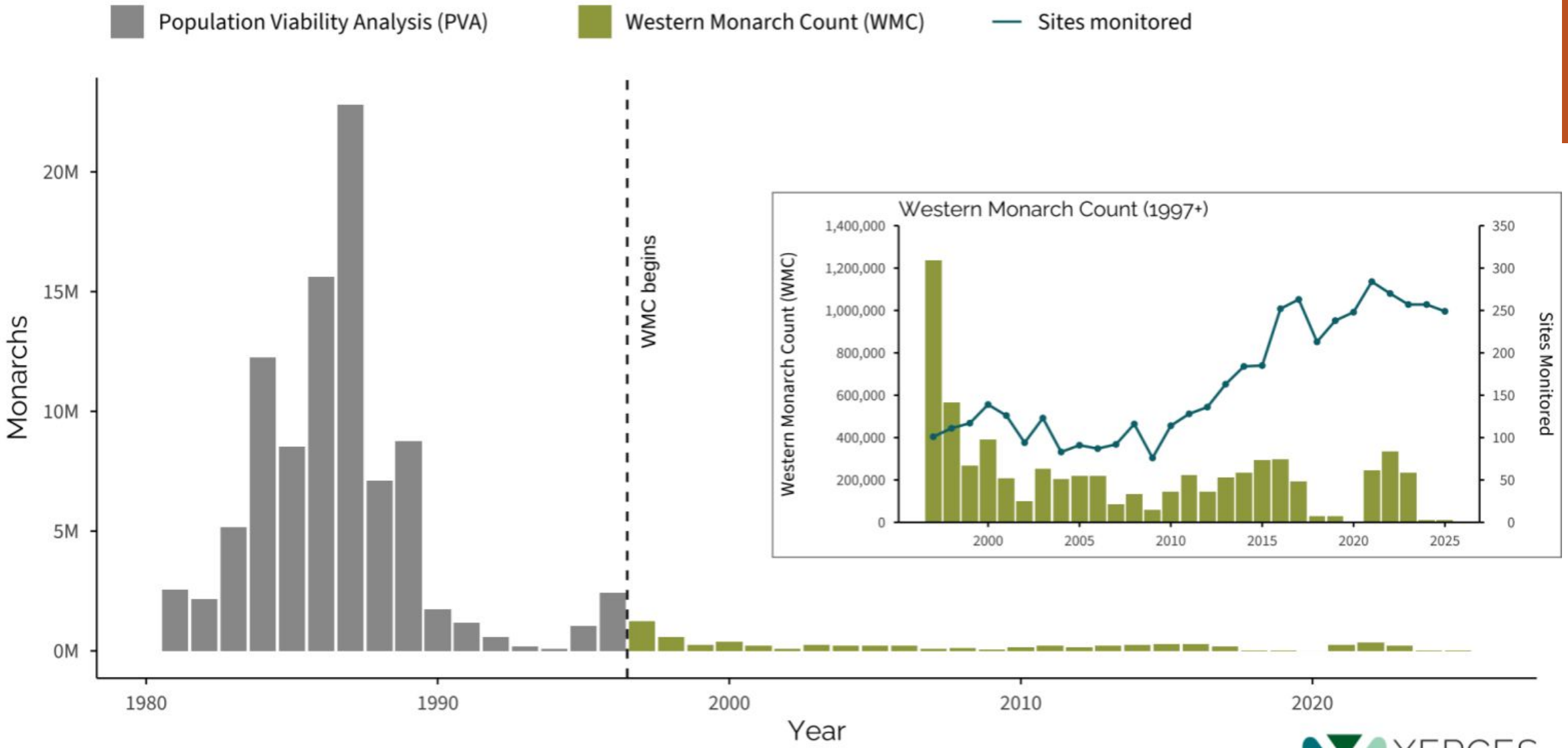
Community powered

The WMC relies on support from groups & individuals, including:

- Hundreds of volunteers
- Regional coordinators
- Local, state & federal partners
- Xerces Society funders
- Xerces Society members

Western Monarch Overwintering Abundance (1980–2025)

Population Viability Analysis (1980–present) and Western Monarch Count (1997–present)



PVA estimate source: Schultz, C.B., Brown, L.M., Pelton, E., & Crone, E.E. (2017). Citizen science monitoring demonstrates dramatic declines of monarch butterflies in western North America. *Biological Conservation*, 214, 343–346.

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Conservation status

- **IUCN Red List:** vulnerable
- **Federal ESA:** candidate species
- **California:** Species of Greatest Conservation Need; overwintering sites in the Coastal Zone considered Environmentally Sensitive Habitat Areas
- Local, state, regional, national, tribal and trinational recovery efforts underway, but more is needed!

GLOBAL THREATS TO INVERTEBRATES

California State Parks Role in Monarch Overwintering Site Management

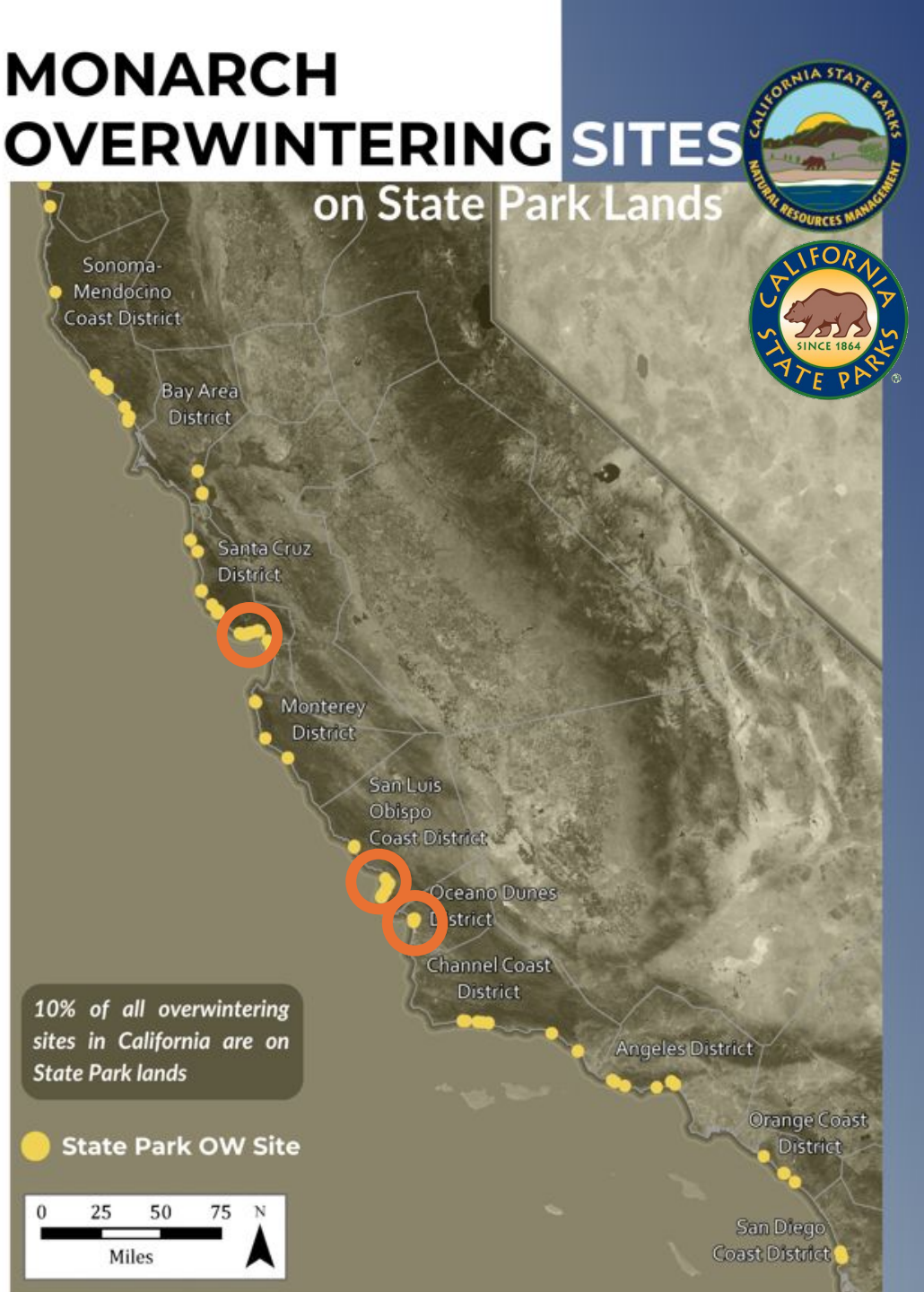
Importance of State Parks for Overwintering Monarchs

~50 sites in 40 parks

(10% of all overwintering sites)

25% in Xerces' top priority sites

(e.g., Pismo, Santa Cruz, Morro Bay sites)

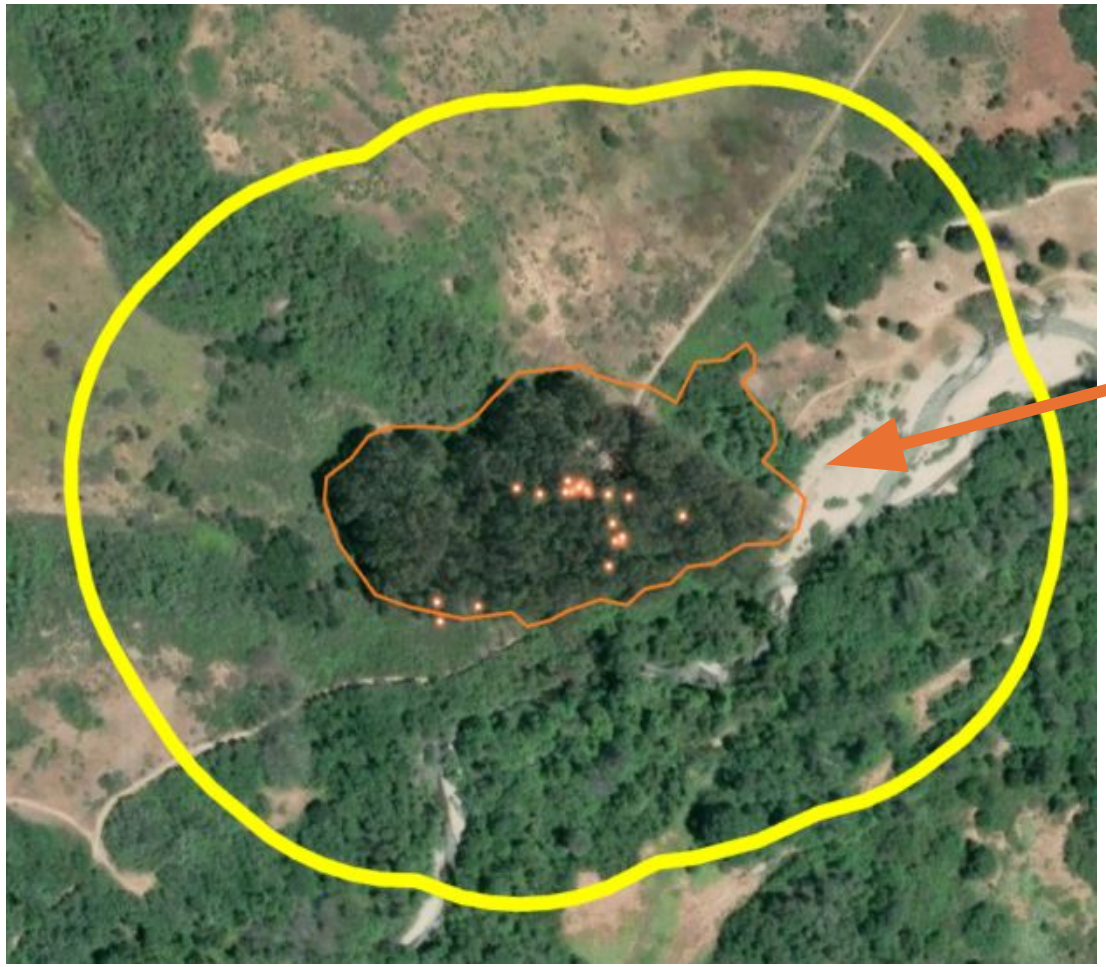


Lighthouse Field State Park

Andrew Molera State Park

Groves are a small footprint in a larger managed landscape

Western Monarch Site Boundaries



Major Threats in Overwintering Sites

- Tree loss
- Fuels hazards, fires
- Invasive plants
- Habitat disturbance

Other monarch threat

Predators (yellow jackets)

Monarch Conservation at Overwintering Sites

Habitat **assessments**

↓

Management **plans**

↓

Management **actions**

Topanga Canyon State Park

CALIFORNIA STATE PARKS SINCE 1864

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Monarch Conservation at Overwintering Sites

Example Actions

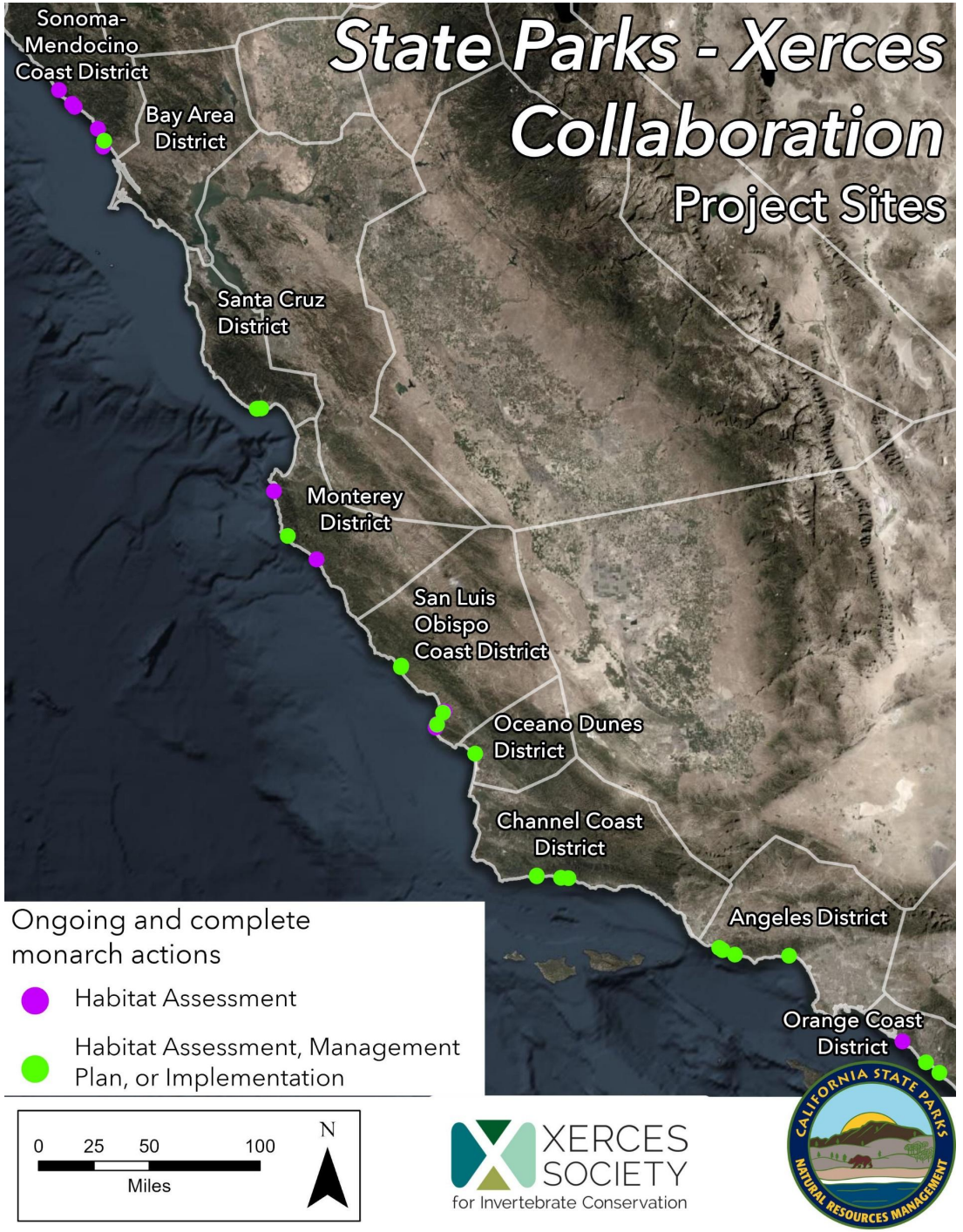
- Monitoring
- Habitat enhancement
- Hazard tree removal
- Native tree & nectar planting
- Visitor management

Point Mugu State Park

Lighthouse Field State Park

Monarch Conservation at Overwintering Sites

- **32** sites - Habitat **assessments**
- **19** sites - Management **plans**
- **13** sites - Management **actions**



Point Mugu State Park
(RCD of Santa Monica Mountains)

Lighthouse Field State Park
(Groundswell Coastal Ecology)

Topanga Canyon State Park
(Xerces Society/RCD of the Santa Monica Mountains)

California Monarch & Pollinator Collaborative:

Multi-agency report

(coming soon!)

Recommended actions in 6 focal areas:

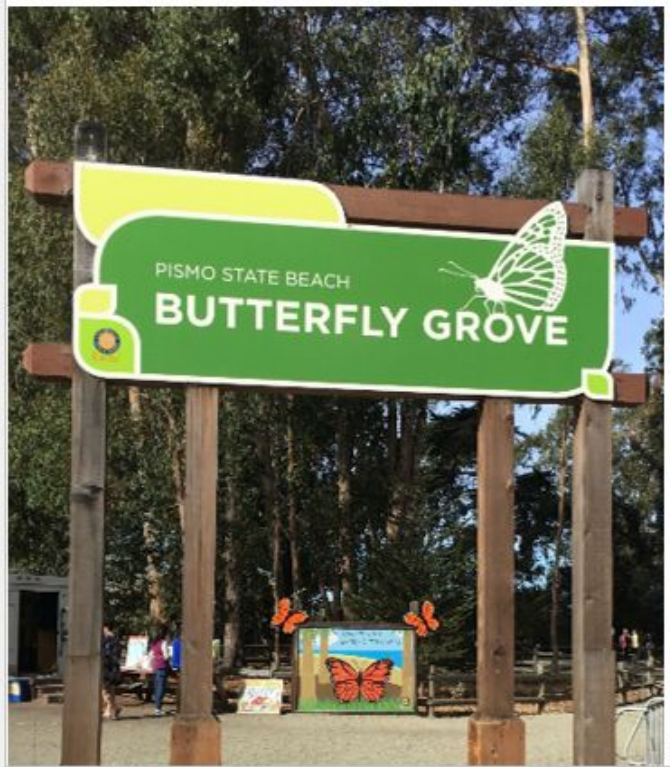
- Habitat
- Research
- Monitoring
- Outreach
- Funding
- Collaboration


PISMO STATE BEACH
BUTTERFLY GROVE

Monarch Butterfly Overwintering Site Management Plan for Pismo State Beach 5-Year Update

Oceano Dunes District

January 2026



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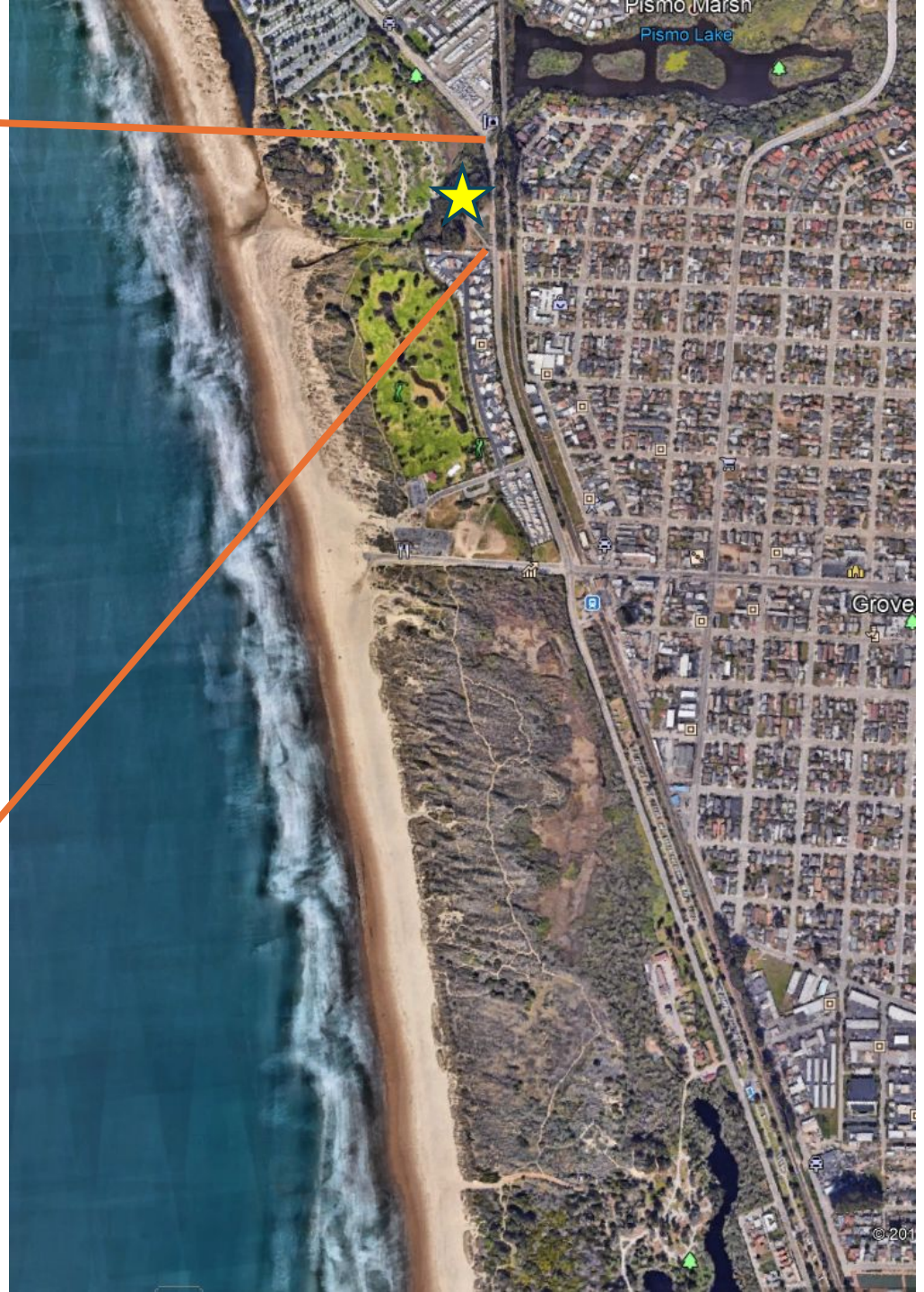
PISMO STATE BEACH
BUTTERFLY GROVE


Pismo Marsh
Pismo Lake
Grove


PISMO STATE BEACH
MONARCH BUTTERFLY GROVE

Cancel Collect Submit

Count: 275, Tree:1408, on :

35.138277°N 120.625020°W

Take Photo Attach

Butterfly# *

275

Tree#

1408

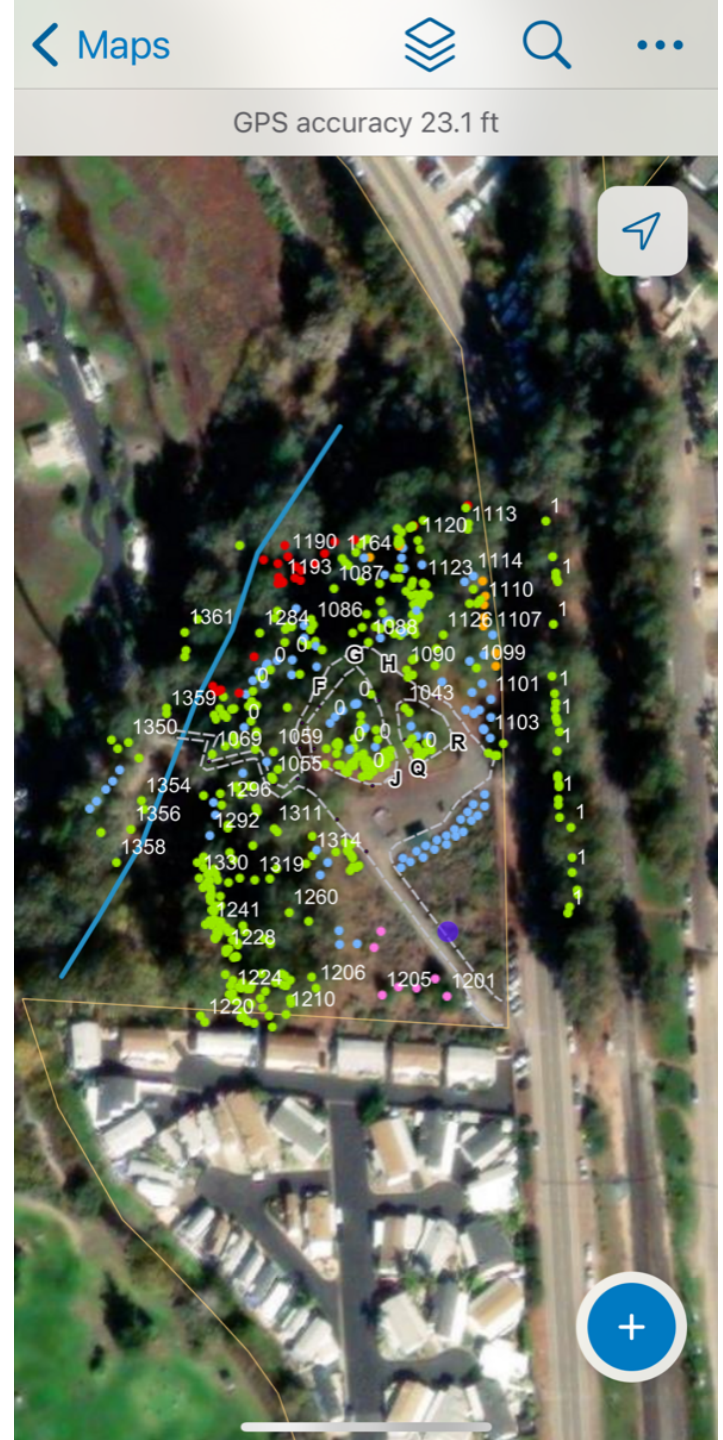
Height (m)

12

Notes

Lower Height (m)

Higher Height (m)

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Bloom		Common Name	Scientific Name	Flower Color	Max. Height (Feet)	Water Needs Low, Med, or High	Notes
		Forbs					All species perennials, unless otherwise noted. Entire genus is likely attractive to monarchs, visit Calflora.org to find native species best adapted to site conditions.
Spring to Summer	1	Nettleleaf giant hyssop	*Agastache urticifolia*	Purple / red	2	L	Establishes better from transplant than seed. Tolerates clay soil and wet or dry conditions.
Spring to Fall	2	Coastal sand verbena	*Abronia latifolia*	Yellow	1	L	Tolerates salt spray and prefers sandy soils. Can bloom year-round.
	3	Cobwebby thistle	*Cirsium occidentale*	Pink / white / purple	4	L	Biennial. Attracts bees, butterflies, and hummingbirds. Larval host for several butterfly species.
	4	Common sandaster	*Corethrogyne filaginifolia*	Pink / white / purple	3	L	Leave it alone in summer: too much watering can kill it.
	5	Desert globemallow	*Sphaeralcea ambigua*	Orange	3	L	Drought tolerant. Supports various specialist bees.
	6	Milkweeds	*Asclepias* spp.	Pink / white / purple	2–4	L / M	Monarch host plant. *Do not plant milkweeds within 1 mile of western monarch overwintering sites or outside of its historic range.*
	7	Western vervain	*Verbena lasiostachys*	Purple	3	L	Good butterfly plant. Tolerates seasonal flooding, sand, and clay. Can be used for erosion control.
Summer	8	Coyote mint	*Monardella villosa*	Pink / purple	2	L	Requires good drainage.
	9	Mountain monardella	*Monardella odoratissima*	White / purple	1	L	Does best at mid to high elevations. Attracts many species of butterflies.
	10	Pacific aster	*Symphyotrichum chilense*	Yellow / violet	4	L	Tolerates clay soils and wet or dry conditions. Supports various specialist bees.
Summer to Fall	11	Goldenrods	*Solidago* spp.	Yellow	3	L	Important late-season forage for bees, butterflies, wasps, beetles, and more.
	12	Smooth beggartick	*Bidens laevis*	Yellow	3	H	Prefers wet areas and can be used in bioswales. Attracts beneficial insects and butterflies in the fall.
	13	Sunflowers	*Helianthus* spp.	Yellow	5–8	M	Excellent butterfly nectar plant. Attractive to many pollinators and beneficial insects.
	14	Western goldentop	*Euthamia occidentalis*	Yellow	6	H	Wetland-riparian. Attractive to many pollinators and beneficial insects.

This list of monarch nectar plants for California was produced by the Xerces® Society. For more information about monarch conservation, please visit www.xerces.org

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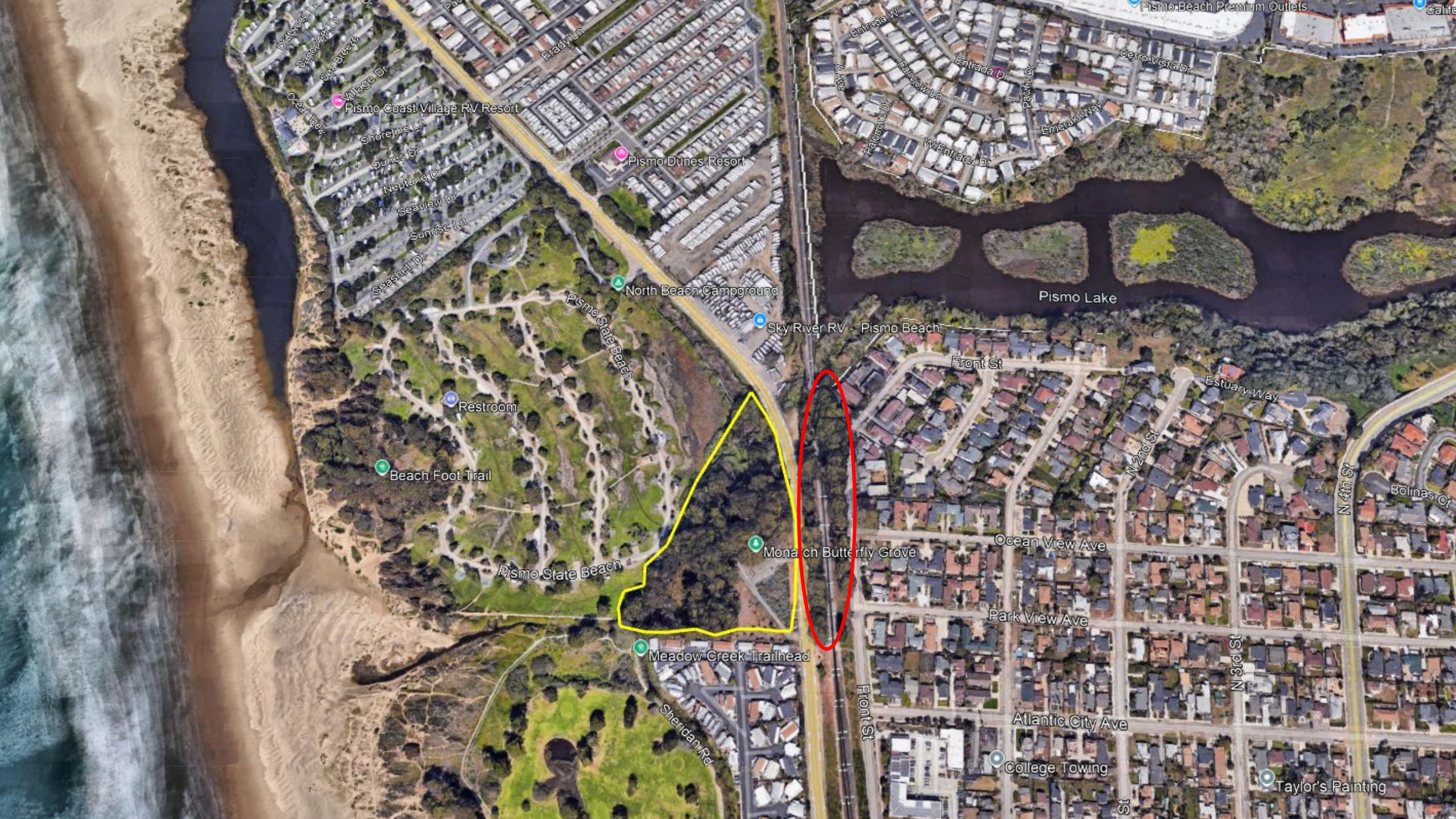
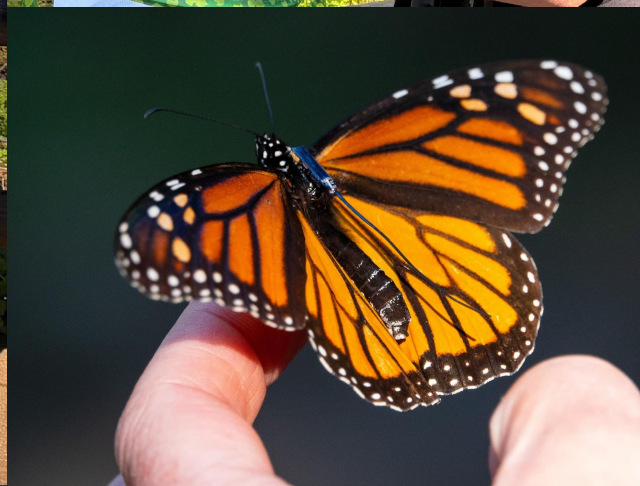
Nectar Garden


Pismo Beach Premium Outlets
Entrada Ln
Entrada Dr
Cerro Vista Dr
Paseo Dr
Emerald Way
Palisades Dr
W Entrada Dr
Fairview Ln
Fradyl Ln
Village Dr
Pismo Coast Village RV Resort
Ocean View
Shoreline Ln
Dunes Dr
Neptune Dr
Seaview Dr
Sunrise Ln
Seashell Dr
Pismo Dunes Resort
North Beach Campground
Pismo State Beach
Sky River RV - Pismo Beach
Pismo Lake
Front St
Estuary Way
Restroom
Beach Foot Trail
Monarch Butterfly Grove
Pismo State Beach
Ocean View Ave
Park View Ave
Meadow Creek Trailhead
Sheridan Rd
Front St
Atlantic City Ave
College Towing
Taylor's Painting
N 2nd St
N 3rd St
N 4th St
Bolinas Ct

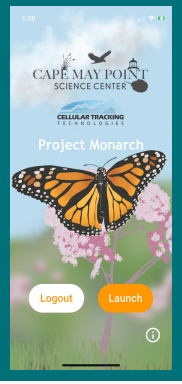

CCC



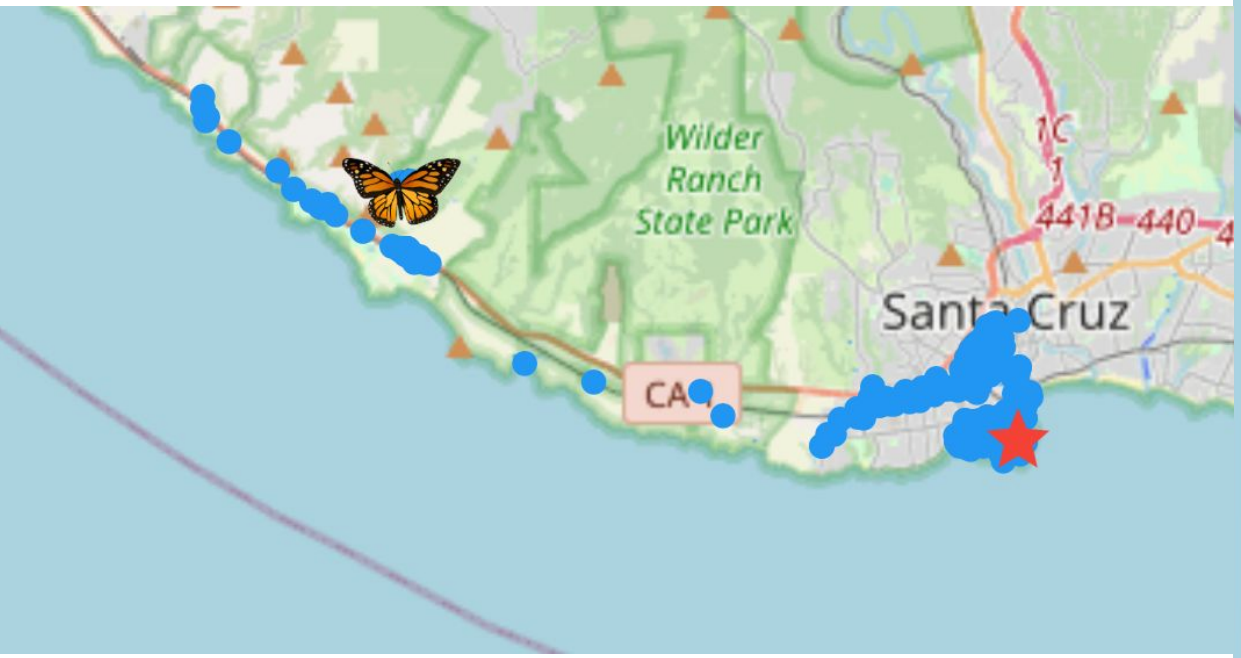
Radiotagging Study on State Parks

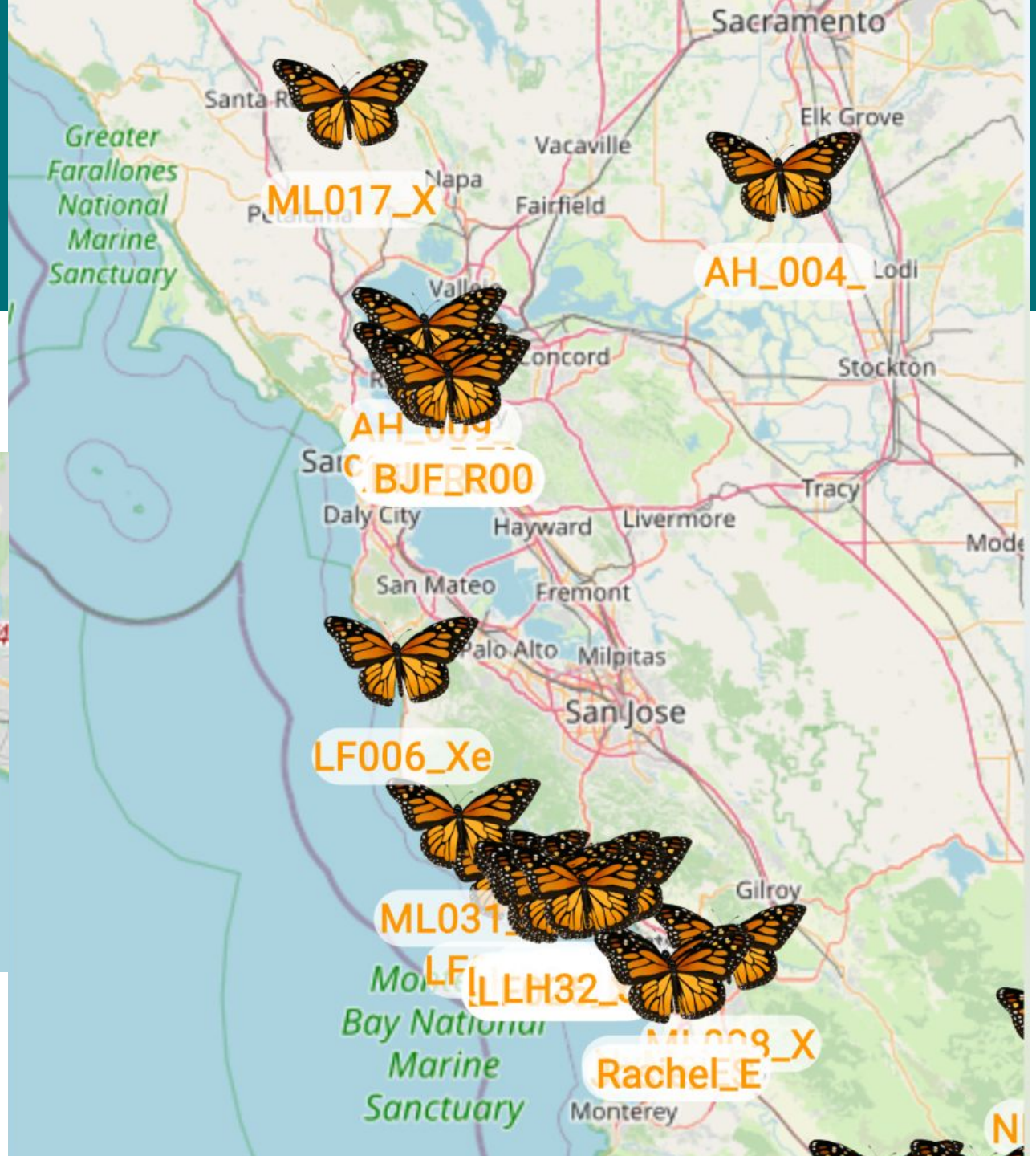
Learn more at our website!

Photo: Elena Oey/Point Blue Conservation Science



Project Monarch App



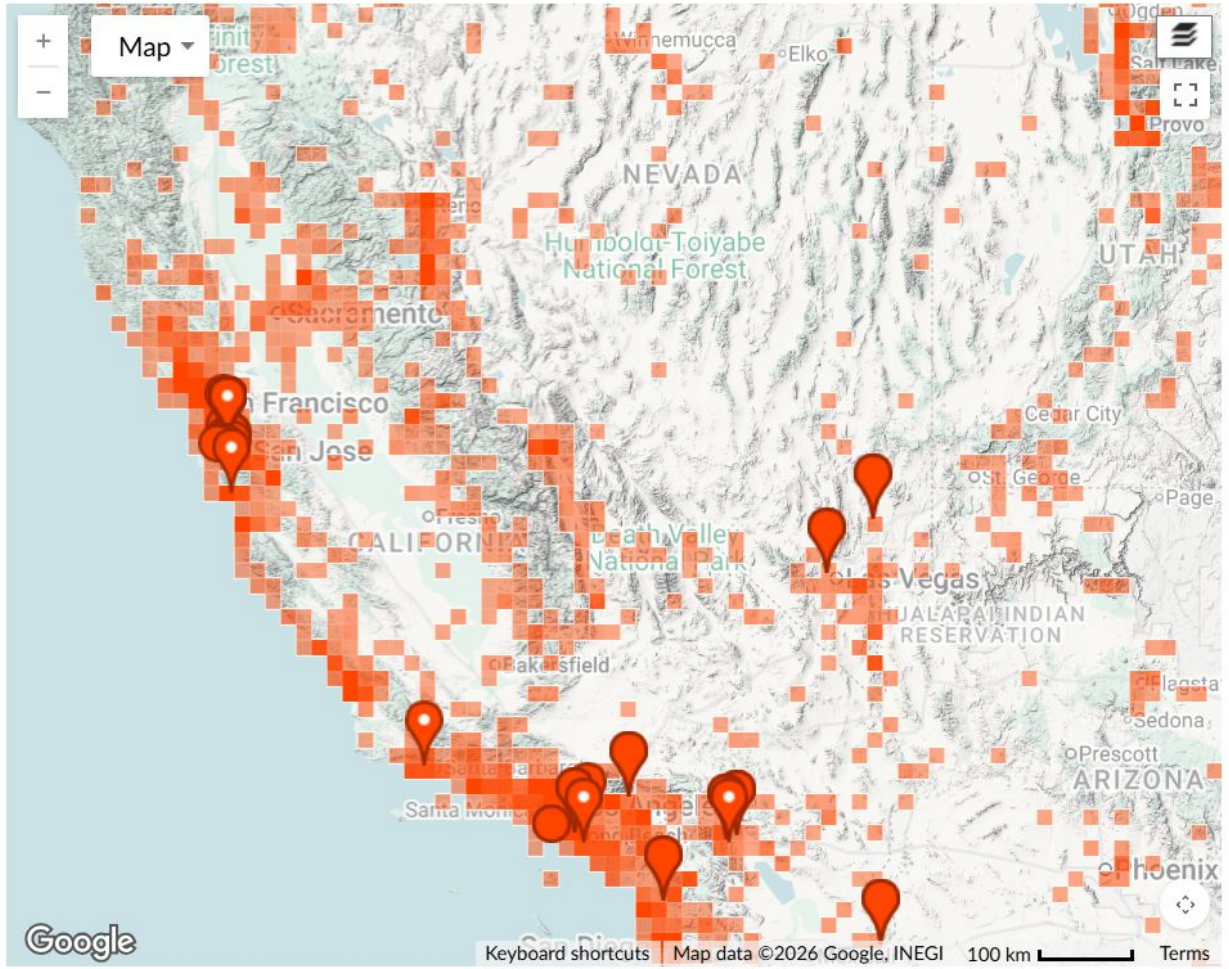


Community Science

Help us track monarchs and milkweeds using iNaturalist

WESTERN MONARCH MILKWEED MAPPER

iNaturalist.org



Xerces.org Resources

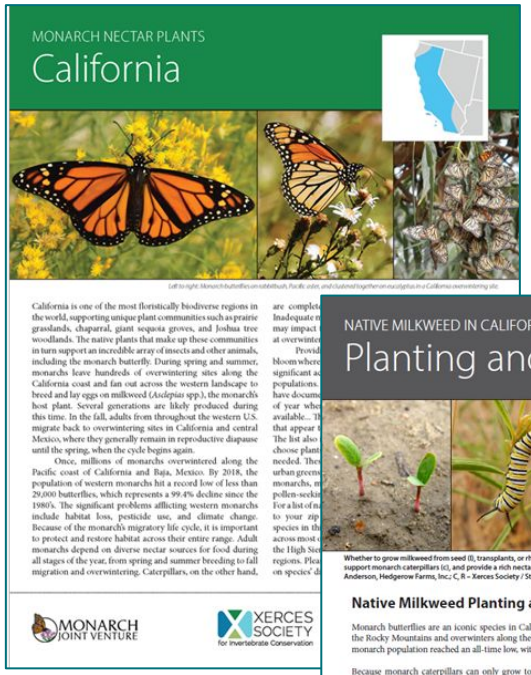
XERCES SOCIETY
for Invertebrate Conservation

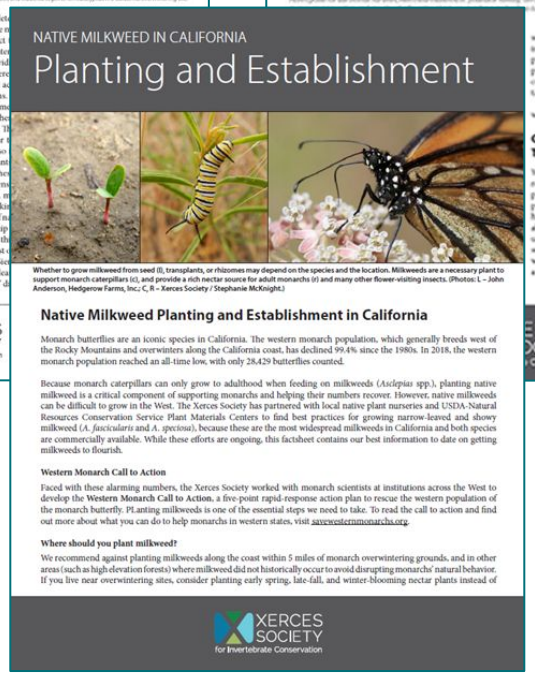
OUR WORK GET INVOLVED GIVE RES

Xerces Society - Pollinator Conservation Program - Native Plant, Seed And Services Directory

Native Plant, Seed and Services Directory

Native plants are the foundation of diverse habitats that support pollinators, beneficial invertebrates, and other





Xerces.org Resour

Priority Action Zones in California for Recovering Western Monarchs

Priority #1

- **Coastal areas where monarchs overwinter**: Protect and restore overwintering habitat and plant pesticide-free native nectar plants. *Avoid planting milkweed at or near overwintering sites.* (See "Where to Plant Milkweed" on back.)
- **Early breeding zone**: Protect and plant pesticide-free early season native milkweed and nectar plants.

Priority #2

- **North coast areas where monarchs do not overwinter**: Plant pesticide-free native nectar plants.
- **Summer breeding zone**: Identify and protect existing native milkweed and nectar plants. Plant pesticide-free native milkweed and nectar plants.

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Xerces Habitat Kit Pro

Proposal window is open!

Kit Types & Regions

Provide for ecological diversity with kits developed for different landscapes and regions

Project Types

Public lands, working lands, urban gardens, schools, tribes, natural areas

Community

Support community-oriented projects & under-resourced individuals and communities

Photos: Michele Blackburn, Jade Menchaca

How to help

- Plant locally appropriate native plants
- Protect monarchs from pesticides
- Eliminate food resources for predators
- Spread the word – monarchs are in decline
- Participate in community science
- Volunteer
- Engage local community groups and politicians to protect and restore monarch habitat

Photo: Bee Campus USA -UC Davis

Questions