



Candidate Conservation Agreement with Assurances for the Monarch Butterfly (Monarch CCAA) Webinar

Hosted by Caltrans

Feb. 27, 2025 | 10-11 a.m.

Ground Rules & Reminders

A monarch butterfly with orange and black wings is perched on a cluster of yellow and orange flowers. A semi-transparent white box is overlaid on the butterfly's wing, containing the text 'Ground Rules & Reminders'.

- Meeting is being recorded
- Attendees automatically muted upon entry
- Chat box deactivated for duration of meeting
- May comment/ask questions via Q&A box
 - Questions will be answered during facilitated Q&A session after presentation
 - Instructions will be displayed onscreen



Nationwide Candidate Conservation Agreement for Monarch Butterfly on Energy and Transportation Lands

An integrated Candidate Conservation Agreement with Assurances (CCAA) and Candidate Conservation Agreement (CCA)

Coordination and Implementation

Meet the Monarch Butterfly



Monarch Butterfly Life Cycle

Egg to Adult

22-37 days

If temperatures are 72°F - 82°F

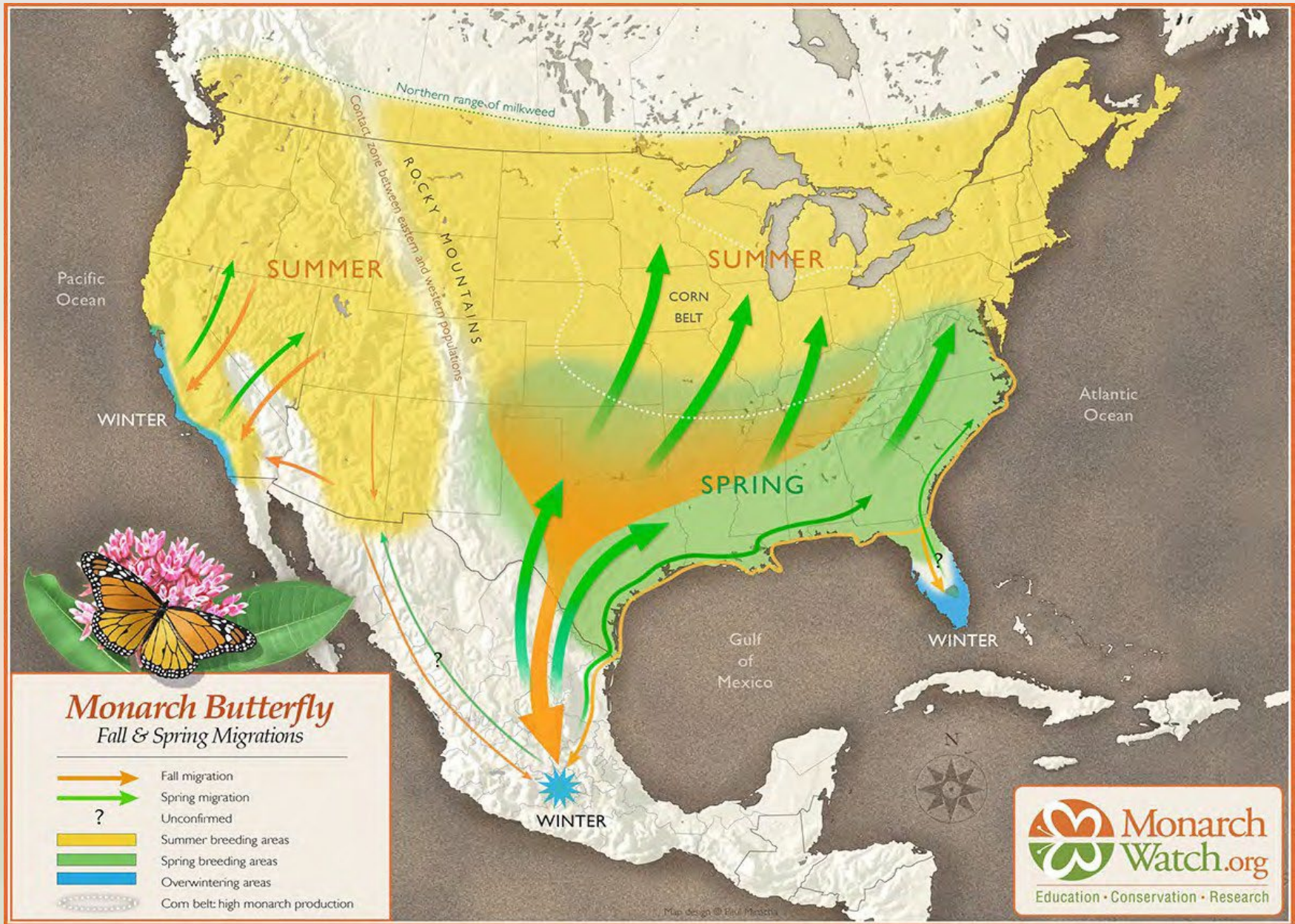


Stage	# Days at 28°C (82°F)	# Days at 22°C (72°F)
Egg	3	5
Larva	11	18
Chrysalis	8	14
Total	22	37

Development rates are temperature dependent. Monarchs develop more quickly in warm temperatures and more slowly in cool temperatures.

Adapted from Zalucki, M. P. 1982. Temperature and rate of development in two species of *Danaus*, *D. plexippus* and *D. chrysippus*. J. Aust. Entomol. Soc. 21:241-46.





MILKWEEDS OF CALIFORNIA

ROADSIDE HABITAT FOR MONARCHS

Milkweeds (*Asclepias* spp.) are herbaceous perennial plants named for their milky sap. These plants occur in a wide range of habitats, including many natural communities on roadsides and highly disturbed roadsides. As required host plants for monarch (*Danaus plexippus*) caterpillars, milkweeds play an essential role in the butterfly's life cycle (see reverse). Vegetation management that allows milkweeds to persist can support monarchs. This guide can help you recognize the most common native species found on roadsides in your region.

KEY

- Yellow diamond: RARE
- Green diamond: COMMON
- Yellow triangle: ENDANGERED
- Green triangle: COMMON

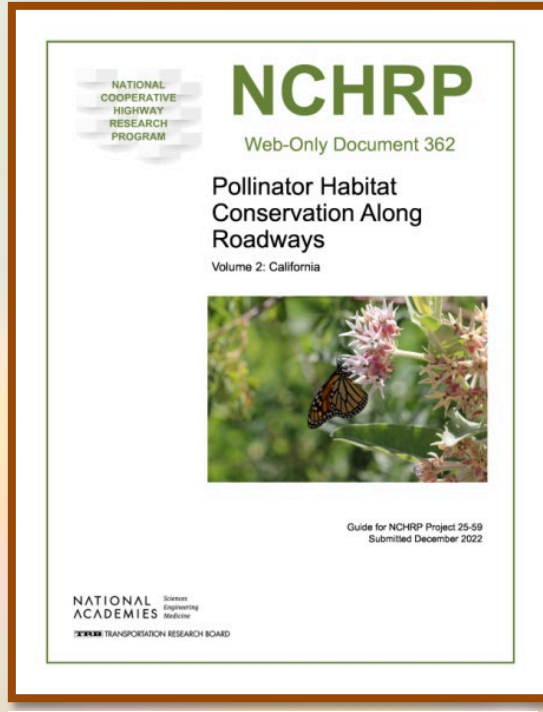
The most common milkweeds in roadsides in California (in alphabetical order):

<p>Heartleaf milkweed (<i>A. cordifolia</i>)</p> <p>PLANT: Spreading to upright stout stems; mostly hairless. LEAVES: Opposite, heart to lance-shaped, with waxy coating. HABITAT: Slopes and hillides in foothill woodland, chaparral, and evergreen forest. SOILS: Rocky, gravelly, dry. BLOOM: Apr-Jul, red-purple to violet with pink or white tinges.</p>	<p>Woollypod milkweed (<i>A. eriocarpa</i>)</p> <p>PLANT: Upright, usually unbranched stems; densely hairy but may be less so with age. LEAVES: Opposite, lance to oval-shaped; may be waxy at edges; hairy but may be less so with age. HABITAT: Valley grassland, chaparral, foothill woodland, stream banks, disturbed areas. SOILS: Rocky, dry. BLOOM: May-Oct, cream to yellow with white or tinges of purple or pink.</p>
<p>Desert milkweed (<i>A. erosa</i>)</p> <p>PLANT: Upright, unbranched to branched stout stems; with fine hairs; grows in clumps. LEAVES: Opposite; oval to lance-shaped; smooth to with</p>	<p>Narrowleaf milkweed (<i>A. fascicularis</i>)</p> <p>PLANT: Thin, upright branched stems; smooth. LEAVES: Opposite to whorled; narrow to lance-shaped; pointed and folded lengthwise; mostly smooth. HABITAT: Valley grasslands; wetland-adjacent areas, open</p>

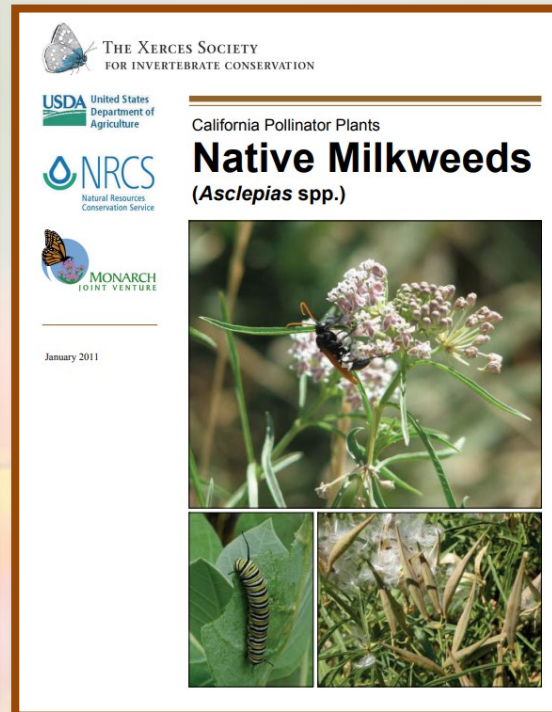
Xerces Society
<https://www.xerces.org/milkweed/milkweed-guides>



These are some handy guides specific to California milkweeds



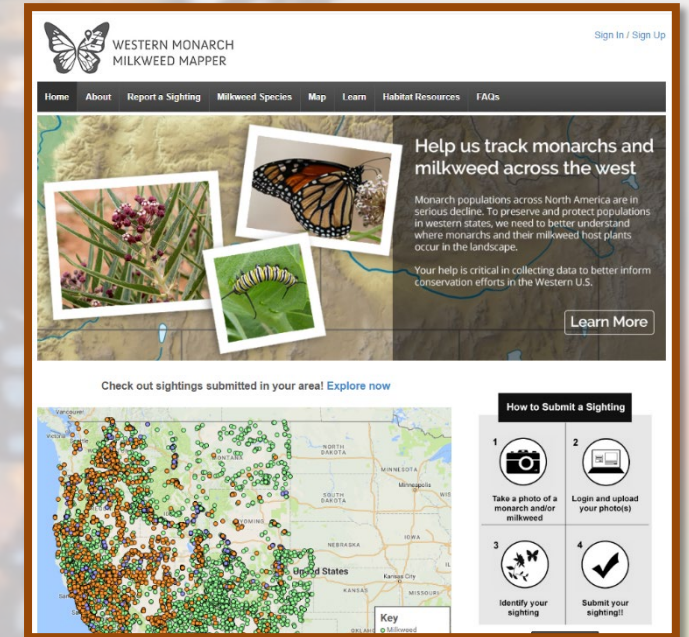
<https://nap.nationalacademies.org/catalog/27060/pollinator-habitat-conservation-along-roadways-volume-2-california>



<https://www.xerces.org/sites/default/files/publications/15-006.pdf>



https://mjv.nyc3.cdn.digitaloceanspaces.com/documents/monarchsandmilkweed_may29.pdf



<https://www.monarchmilkweedmapper.org/>

Primary Threats to Monarch

Habitat loss and degradation

- Urban development
- ~90% of historic milkweeds eradicated due to changes in agricultural practices
- Loss of overwintering sites. Xerces Society's monitoring of the western monarch groves suggests it is the second lowest overwintering population since the late 1990s.

Pesticides

- Neonicotinoid insecticides, often used on seed coatings, have also been linked to declines

Climate change


- Wildfires, flash floods, and other extreme weather events. Drought
- Plant emergence and blooming becoming mismatched to monarch presence



What is the MONARCH CCAA

1. **WHAT?** Unprecedented Nationwide Programmatic Agreement to encourage participation in the **voluntary conservation of transportation lands that results in a net benefit to monarchs.**
2. **WHERE?** Enrolled lands under the Monarch CCAA have assurances and incidental take if the monarch is listed. <https://www.fws.gov/press-release/2024-12/monarch-butterfly-proposed-endangered-species-act-protection>
3. **WHO?** Caltrans continues its O&M activities, ensuring these are covered activities per the Monarch CCA criteria. HQ DEA manages the CCAA and will work with District Staff to implement the Monarch CCAA.
4. **HOW?** Conservation measures are grounded in Caltrans Standard Practices and provide Section 7 streamline for O&M activities. Implementation will include modifying vegetation management practices and will require monitoring adopted acres.

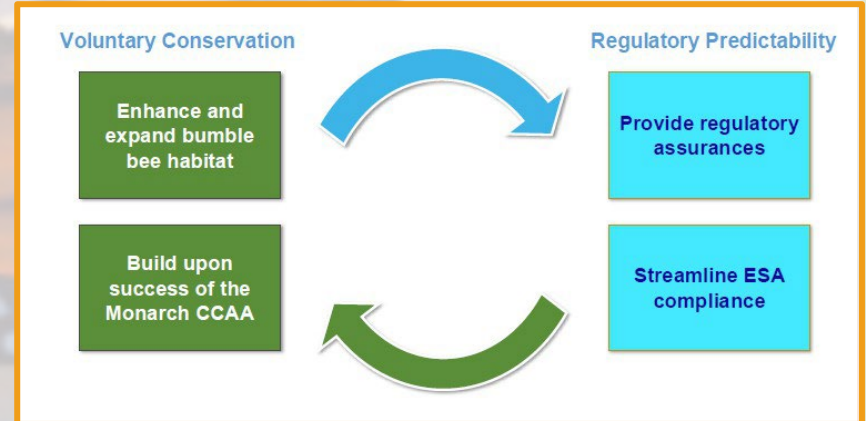
Key Benefits

1. Protection for Caltrans related to regulatory uncertainty
 2. Avoid project delays or added maintenance costs
 3. Streamline regulatory processes that can add costs and time during construction
 4. Generate positive public perception by highlighting monarch and pollinator conservation on the ROWs
 5. Caltrans's commitment to pollinator conservation by continuing partnerships, e.g., CDFW Monarch MOG
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How does the Monarch CCAA work?

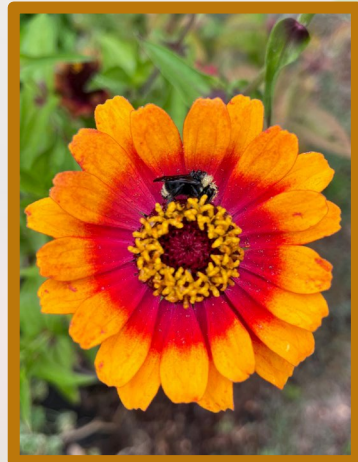
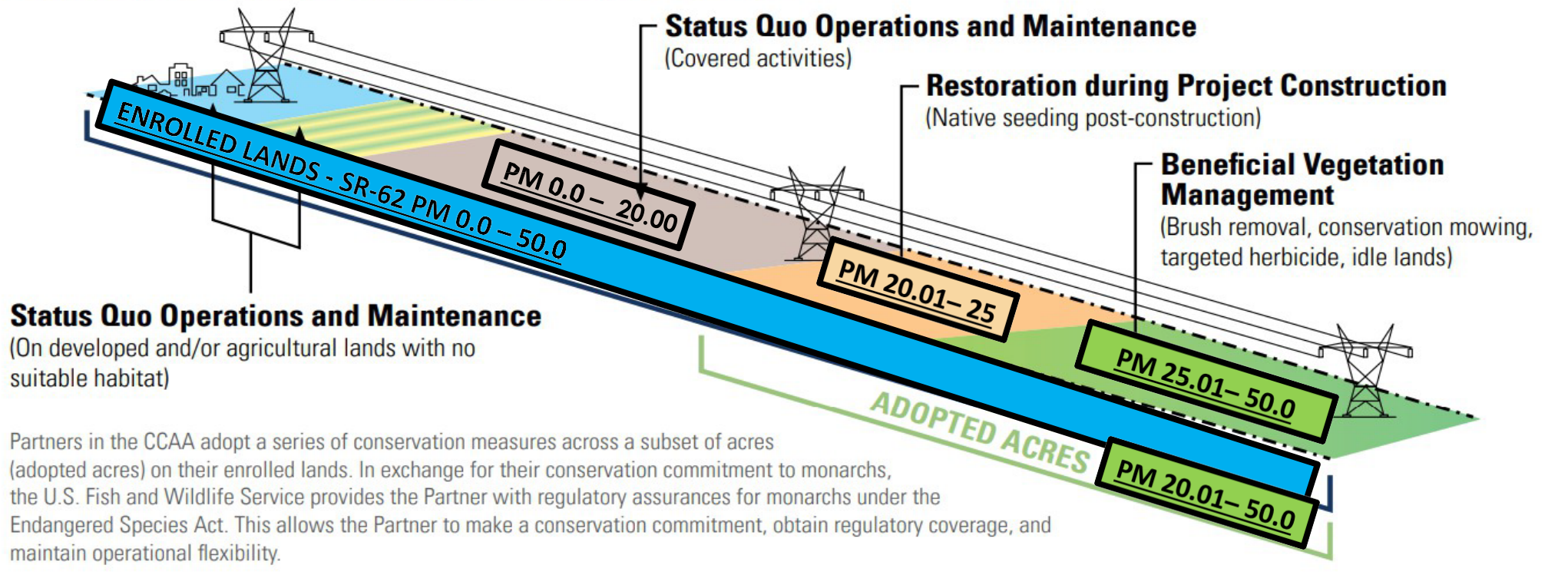
The goal of this Agreement is to encourage participation in the **voluntary conservation** of transportation lands that results in a net benefit to monarchs.

1. Is your District enrolled in the Monarch CCAA
2. Do the proposed general operations and routine maintenance activities take place on **enrolled lands and suitable monarch butterfly habitats**? Additionally, do the O&M activities meet all the criteria outlined in the Monarch CCAA as a Covered Activity?
3. District Monarch Coordinator and Vegetation Management Leads have been informed that the Monarch CCAA will be utilized for O&M activities and reporting has been completed
4. CCAA Annual Reporting will be completed by the HQ DEA Pollinator Lead. Do you know your District Monarch Coordinator, District Maintenance Vegetation Management Leads, and HQ DEA contact?



What are enrolled acres and adopted acres?

What the CCAA Looks Like On the Ground



Caltrans
Enrolled Acres – 36,653
Adopted Acres – 2,932

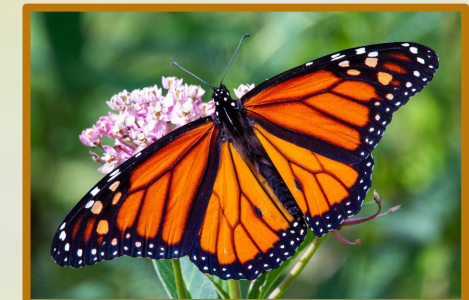
Table 6-1. Sector-specific Adoption Rates Required for Enrollment in the Agreement.

Adoption Rate By Sector	Transmission	Distribution	Generation	Highways (Interstate, U.S., State)	Roadways (County, Local)	Rail
Agreement Adoption Rates	18%	1%	9%	8%	5%	5%

Enrolled Lands

1. District Management enrolled lands
2. Caltrans commits to conduct and track conservation activities on 8% of those enrolled lands annually. These lands are known as “adopted acres.”
3. District Management assignments for District Monarch Coordinator and District Maintenance Vegetation Lead. Participation in training, outreach, meetings, etc.
4. Monarch CCAA website - <https://rightofway.erc.uic.edu/national-monarch-ccaa/>

DISTRICT ENROLLED	Routes	Enrolled Acres	Adopted Acres
1	Entire District	2,656	212
2	Entire District	12,930	1,034
3	Entire District	16,755	1,340
4	SM-280	352	28
7	Entire District	2,568	205
8	RIV-10; RIV-62; RIV-74; RIV-79; RIV-243; SBD-62; SBD-40; SBD-	1,924	154

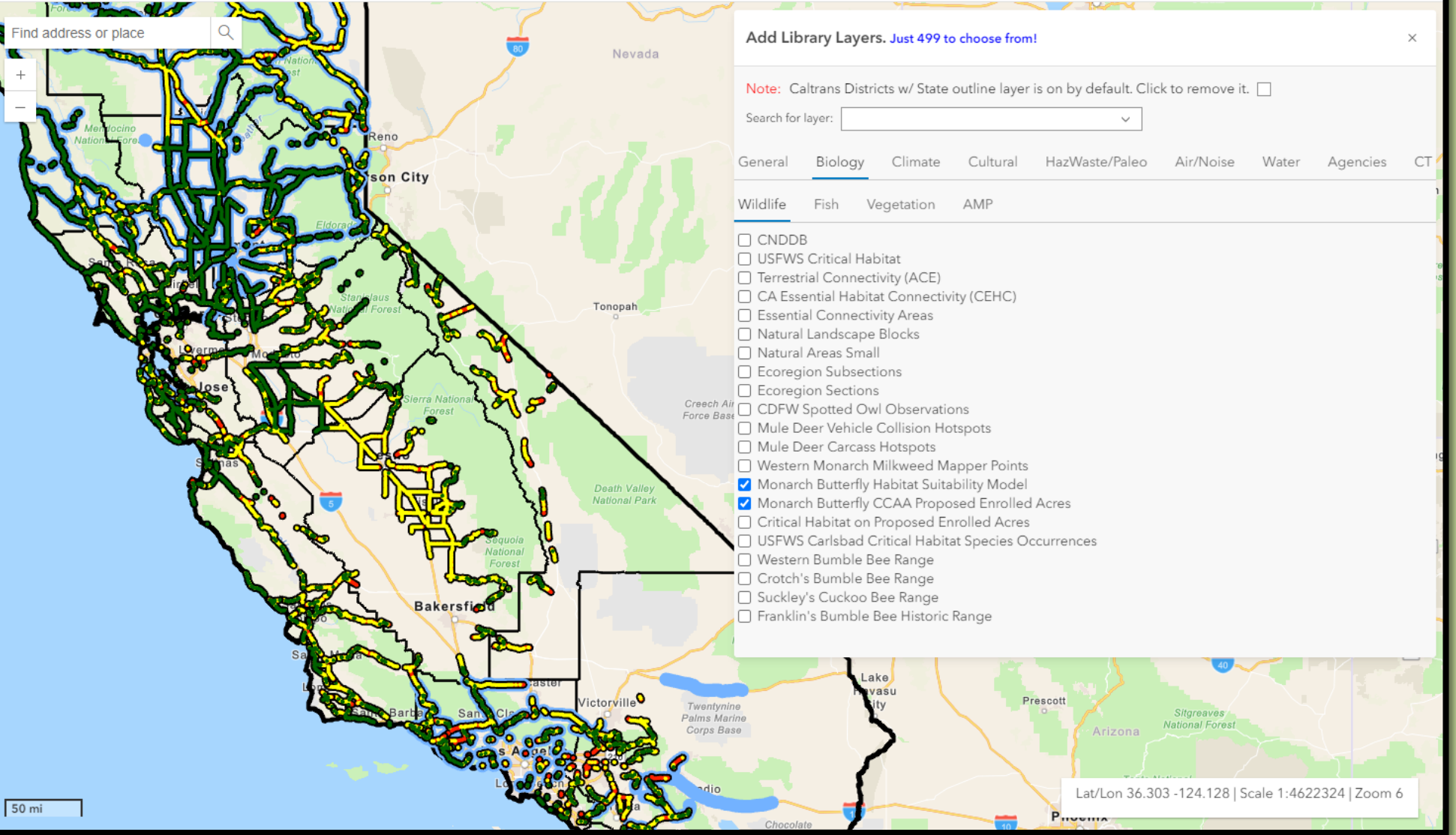


Caltrans
Enrolled Acres – 36,653
Adopted Acres – 2,932

Active Layers

- Monarch Butterfly Habitat Suitability Model
- Monarch Butterfly CCAA Proposed Enrolled Acres

Find address or place



Add Library Layers. Just 499 to choose from!

Note: Caltrans Districts w/ State outline layer is on by default. Click to remove it.

Search for layer:

- General
- Biology**
- Climate
- Cultural
- HazWaste/Paleo
- Air/Noise
- Water
- Agencies
- CT

- Wildlife**
- Fish
- Vegetation
- AMP

- CNDDDB
- USFWS Critical Habitat
- Terrestrial Connectivity (ACE)
- CA Essential Habitat Connectivity (CEHC)
- Essential Connectivity Areas
- Natural Landscape Blocks
- Natural Areas Small
- Ecoregion Subsections
- Ecoregion Sections
- CDFW Spotted Owl Observations
- Mule Deer Vehicle Collision Hotspots
- Mule Deer Carcass Hotspots
- Western Monarch Milkweed Mapper Points
- Monarch Butterfly Habitat Suitability Model
- Monarch Butterfly CCAA Proposed Enrolled Acres
- Critical Habitat on Proposed Enrolled Acres
- USFWS Carlsbad Critical Habitat Species Occurrences
- Western Bumble Bee Range
- Crotch's Bumble Bee Range
- Suckley's Cuckoo Bee Range
- Franklin's Bumble Bee Historic Range

What activities are Covered?

■ Operations

- Line or facility operation
- Highway and road use
- Access and inspections
- Emergency response

■ Maintenance

- Vegetation management
- Maintenance and repairs
- Facilities maintenance
- Staging and storage

■ Modernization

- Rebuilding facilities
- Replacement projects
- Upgrading existing facilities
- Expanding existing facilities

■ New Construction!

- This includes realignments of routes through previously undisturbed ground, new onramps, bridge widenings, culvert

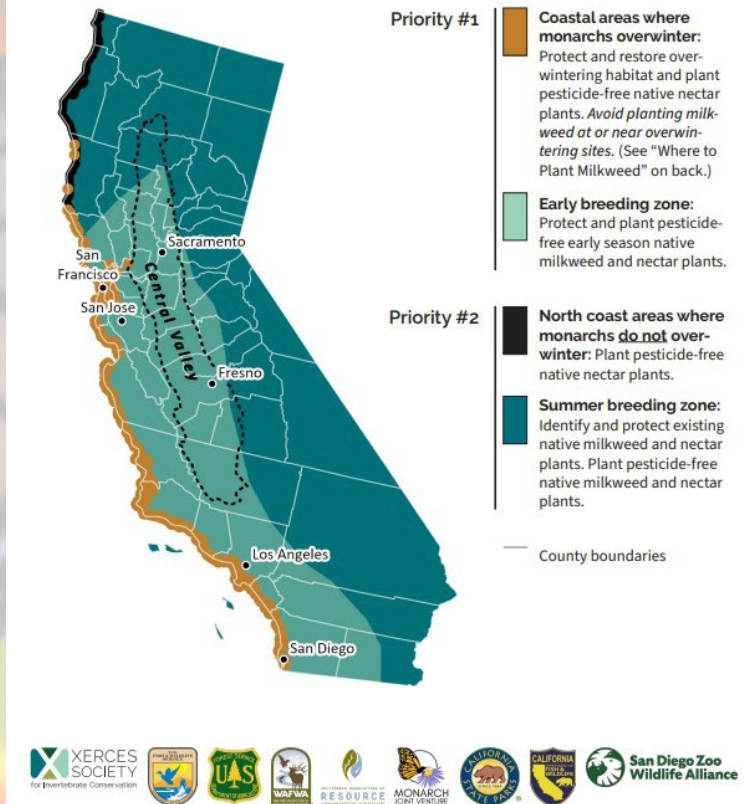
■ **Activities conducted on lands not enrolled in the CCAA**



How will Caltrans track conservation activities on the “adopted acres” Conservation Strategies – Examples

- Timed Mowing Practices/Brush Removal
- Targeted Mowing Practices
- Suitable habitat set-asides/idle lands for one or more growing seasons
- Seasonal Opportunities to promote pollinator resources during migration and breeding
- Allowing native landscapes to seed/germinate
- Monarch Overwintering Habitat Conservation Measures/Overwintering Buffer
- District Vegetation Management
- ESAs

Priority Action Zones in California for Recovering Western Monarchs



Conservation Measures



CREATE

Plant a variety of milkweed and native flowering plants to restore or enhance habitat

PLAN

Time mowing, brush removal, and herbicide use when monarchs, eggs, or caterpillars are not present

AVOID

Reduce mowing and spraying, use targeted herbicide practices where possible to enhance suitable habitat

MANAGE

Adopt grazing, burning, and other management practices to promote beneficial plants

SET ASIDE

Allow certain areas to remain in a natural state with as little active management as possible

CCAA Effectiveness Monitoring

- Annual **effectiveness monitoring** occurs on a subset of adopted acres
- Annual **compliance report** summarizing conservation measures, monitoring, and adaptive management

Survey123 for ArcGIS

Pollinator Scorecard

Survey Tier *
Please select the assessment tier you are using. The selected tier will determine what data fields are visible/required.

Tier 1: Basic
 Tier 2: Qualitative
 Tier 3: Detailed

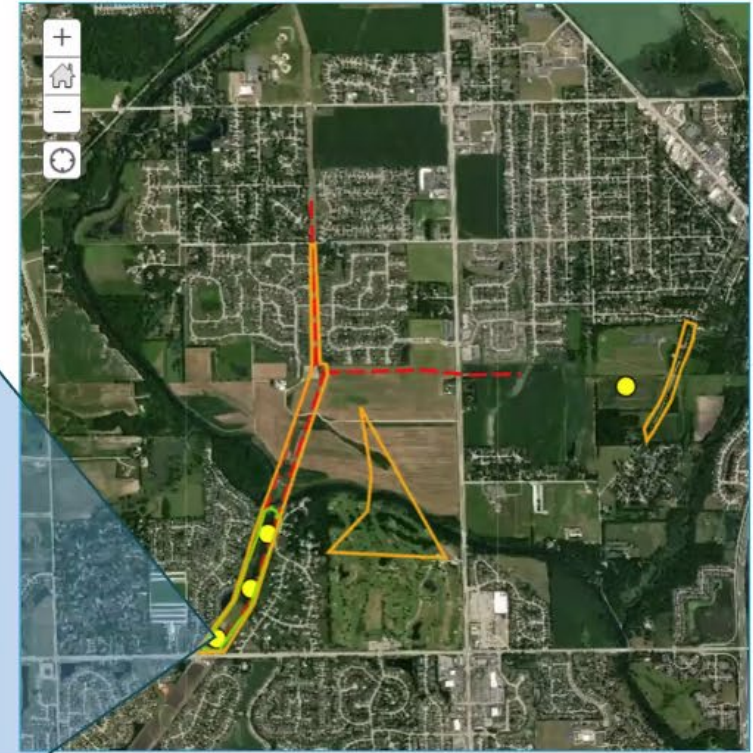
Plot Information
Collect the GPS coordinates of your plot *

Start Time *
The start time for plot assessment

Plot Number *
A unique identifier for the plot.

Plot Location *
The coordinates of the plot and/or sufficient information to re-identify the plot in subsequent visits.

Plot Description *
A general description of the type of right-of-way it is local



Compliance Tracking Table for the Monarch CCAA/CCA

Site ID	Acres	State	County	Region (Acres/State)	Conservation Measure	Status	Date Completed	Further Overlap	Data Source(s)	Additional Notes
ECIL 2020-1	3,000	IL	Mtjpe	Midwest & Eastern U.S.	Targeted herbicide treatments	Monitoring Complete	6/16/2020	Yes	GIS Data	Energy Co. implemented targeted herbicide applications beginning in July 2019 on approximately 3,000 adopted acres of ROW. Typical ROW habitat consists of transmission corridor containing non-targeted grasslands. Targeted herbicide treatments targeted woody regrowth and noxious weed populations. Acres estimated from annual tracking and work reporting from contractors.
ECIL 2020-2	25	IL	Carbois	Midwest & Eastern U.S.	Seeding and pairing to restore or create habitat	Implemented	7/1/2020	No	Project Records	Native seeding was installed along structure locations, pipe installations, laydown areas, and access routes disturbed as part of construction projects. Acres estimated based on seed quantities and recommended application rates.
ECIL 2020-3	2000	IL	Mtjpe	Midwest & Eastern U.S.	Suitable habitat side lands, or wet areas	Monitoring Complete	12/30/2020	No	Annual tracking software	Set-aside consisted transmission corridor and naturalized portions of owned parcels that do not contain construction or vegetation management activities this year. Acres established by reviewing previous vegetation management records for conservation planning and targeted herbicide, and verifying/removing where construction work occurred.

What is the next step?

How it Works?

Authorization of CCAA

- **USFWS** authorizes the agreement and issues an EOS Permit.
- The **Program Administrator** agrees to uphold the agreement and permit compliance requirements.

Certificate of Inclusion Enrollment

- The **Program Administrator** enrolls partners into the agreement terms via Certificates of Inclusion.
- **Partners** adopt voluntary conservation measures, compliance, tracking, and monitoring required to fulfill the agreement terms.

Implementation

- **Partners** implement conservation measures and conduct tracking and effectiveness monitoring.
- Partners annually report compliance to **Program Administrator**.

Reporting

- The **Program Administrator** gathers and cumulatively reports an agreement compliance to **USFWS**.
- USFWS verifies compliance and discusses any needs with **Program Administrator**.



Nationwide CCAA for MONARCH BUTTERFLY

- Since approval in April 2020:
 - 61 applicants across 43 states
 - 33 energy companies
 - 28 transportation agencies
 - More than 7 million enrolled acres
 - More than 1.1 million adopted habitat acres committed



MONARCH CCAA IMPLEMENTATION PLAN

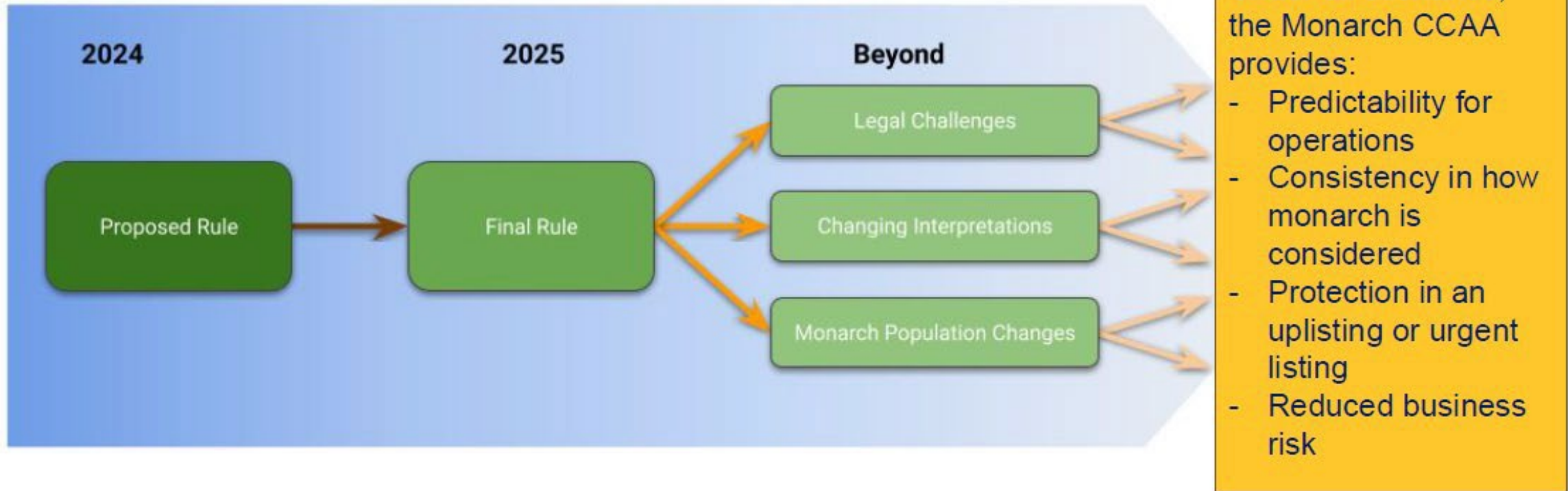
HQ DEA Pollinator Lead - Monarch CCAA Implementation Plan

1. HQ DEA → District Monarch Coordinator, Vegetation Leads, Landscape Architects will collaborate on the implementation plan
2. HQ DEA → will work with HQ Maintenance and District Leads to integrate the Monarch CCAA into the District's Vegetation Management Plans, ESAs, and various vegetation management practices
3. HQ DEA → District Monarch Coordinators Quarterly Meetings to integrate the Monarch CCAA
4. HQ DEA → Spring 2025 Monarch and Milkweed Surveys
5. HQ DEA → will host trainings, outreach, oversight, and engage with District Staff to further implement the Monarch CCAA
6. HQ DEA → Engage with enrolled districts to determine Adopted Acres
7. HQ DEA → – Annual Report, Monitoring, and Adaptive Conservation Measures

Office	Staff	Responsibilities
HQ DEA Fish and Wildlife Connectivity	Pollinator Lead	Manage, Monitor, and report back to the Districts, USFWS, and UIC. Development of the Implementation Plan and Annual Report
HQ – Office of Natural Resource Management	District Maintenance Vegetation Lead	Integrate the Monarch CCAA into the District VMP and collaborate with the District Monarch Coordinator
District Environmental	District Monarch Coordinator	Collaborate with the District Vegetation Lead to integrate the Monarch CCAA into the District VMP and delineate ESAs. Coordinate with the HQ DEA to report utilization of the Monarch CCAA
District Maintenance	Maintenance Area Supervisor, Senior Engineer	Coordinate with the District Vegetation Lead, District Monarch Coordinator, and HQ DEA for utilization of the Monarch CCAA

Looking Ahead to the Monarch Listing Decision

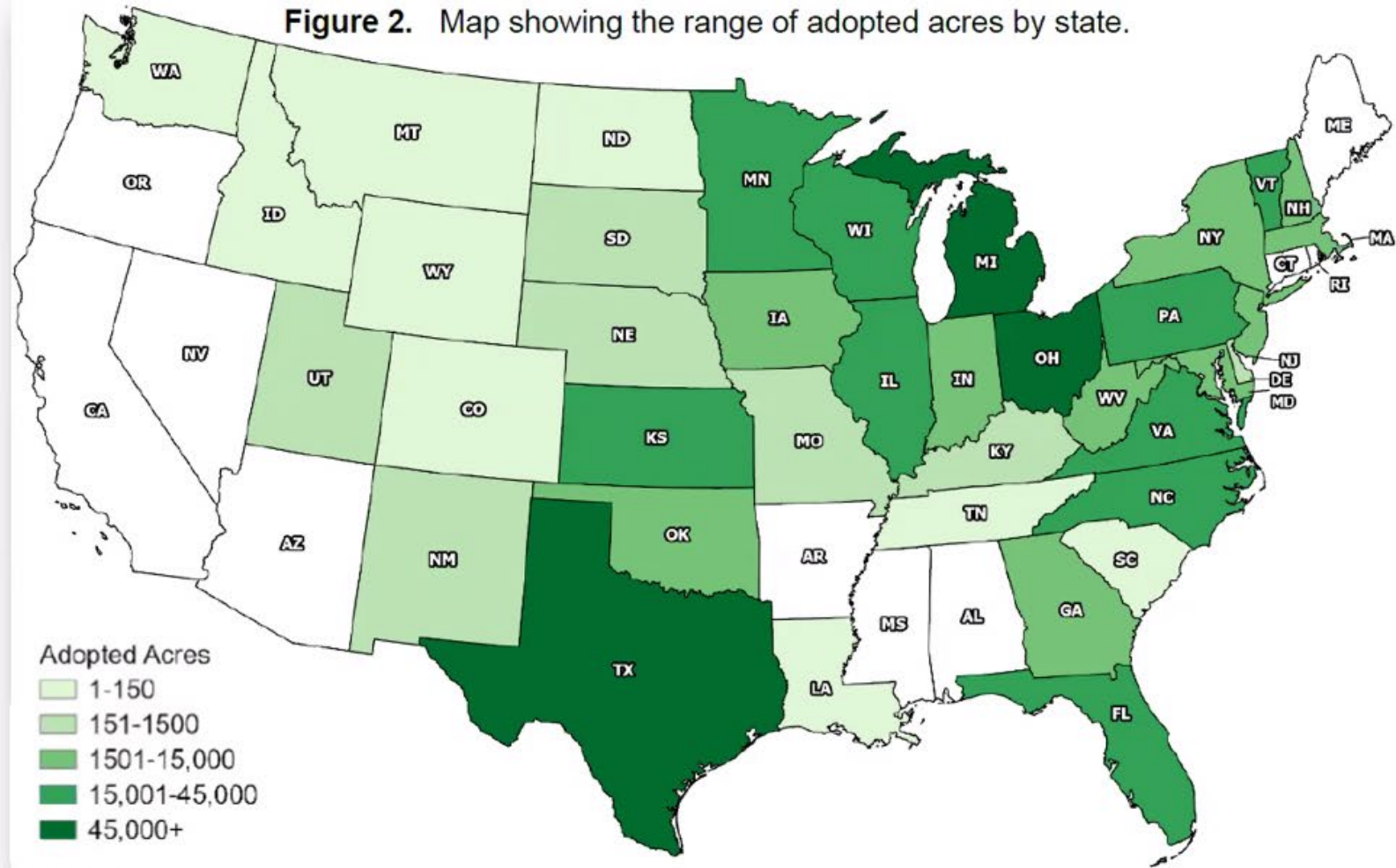
What will happen in December, and what happens after?



2023 By the Numbers – Conservation Achieved

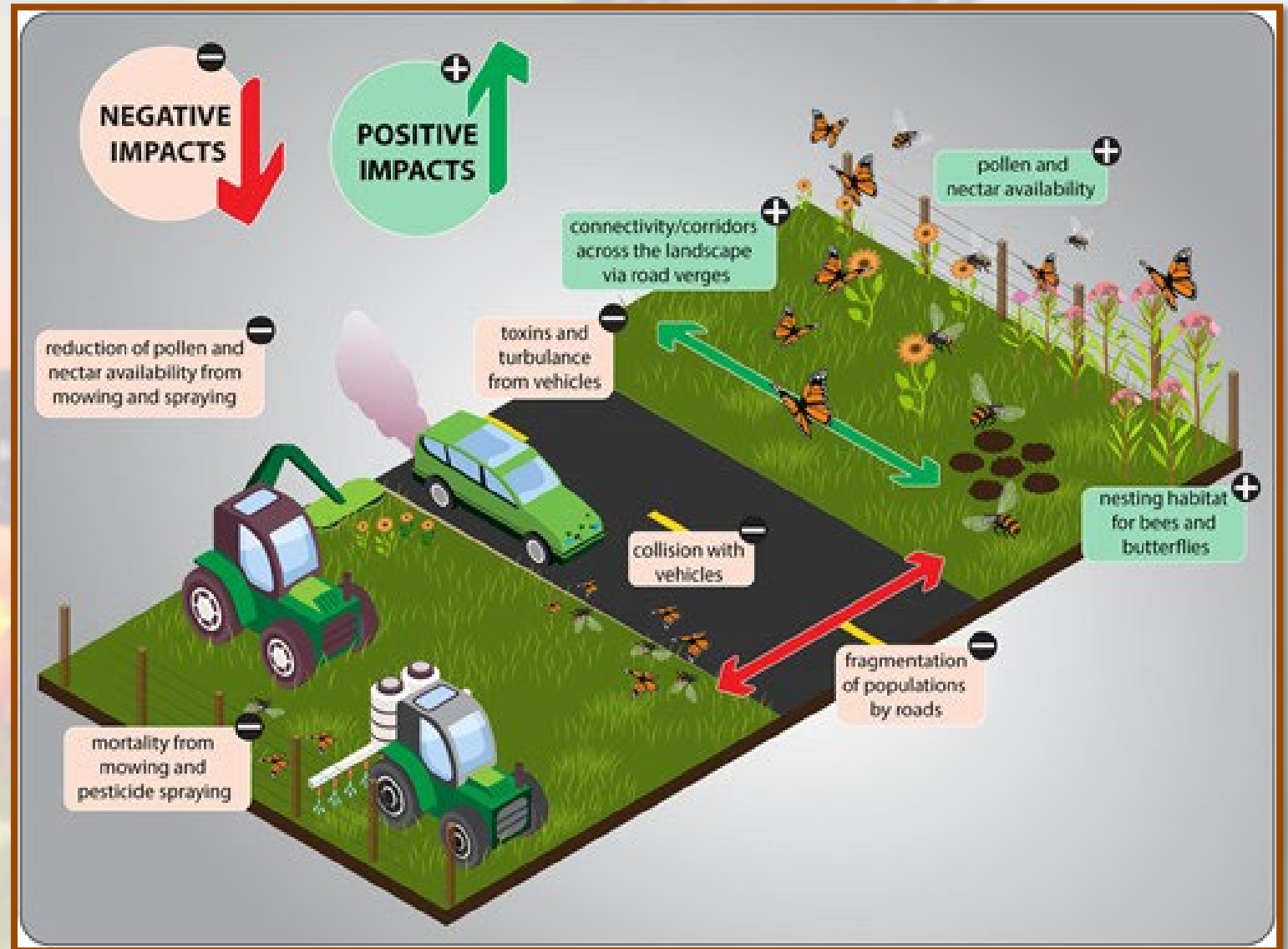
- **5,418,585** enrolled acres
- **982,410** adopted acres
 - 238% above the target for adopted acres
 - 598.5 overlapping acres
- **All conservation measures and supplemental measures** were implemented by Partners in 2023
- Conservation measures were conducted across **38**

Figure 2. Map showing the range of adopted acres by state.



Monarch Questions

1. What are the threats to Monarchs associated with roads?



Monarch Questions

2. How are the District Biologists providing monitoring, tracking, and reporting?

3. Has there been training offered to District Maintenance to recognize and manage milkweed populations?

4. Are there training materials available, such as webinars?

<https://rightofway.erc.uic.edu/resources/>
<https://rightofway.erc.uic.edu/webinars>

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Resources Library

This online library is a clearinghouse of tools and information related to habitat on rights-of-way and other lands. From seed mix calculators to mowing guidelines and everything in between, you'll find it here.

View Resources By Type

- BEST MANAGEMENT PRACTICES ▾
- CASE STUDIES ▾
- FUNDING OPPORTUNITIES ▾
- INTERACTIVE SEED MAP ▾
- TOOLS ▾
- OTHER RESOURCES ▾
- WEBINARS ▾

Search All Resources

Search

Monarch Questions

5. If Caltrans plants milkweed and it is removed, is Caltrans required to implement conservation measures?

6. What are the regulatory requirements for Districts not enrolled?

How and When does a District decide to enroll lands?

What is the District's discretionary authority where monarch conservation measures occur?

7. What are the next steps for Caltrans?
When will the Implementation Plan be effective?



- **Caltrans received** its Certificate of Inclusion in December 2024. Enrolled Acres – 36,653
- Implementation Plan is being drafted and identifying potential acres to adopt.
- Excluded impervious surfaces, medians, and the first 10-15' from edge of pavement.
- 2,932 acre adoption target w/ 5-year ramp-up option

Questions?

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THANK YOU!