



MONARCH BUTTERFLY CANDIDATE CONSERVATION AGREEMENT WITH ASSURANCES

CCAA

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What is the Monarch CCAA?

CCAA = Candidate Conservation Agreement with Assurances

Formal voluntary conservation agreement between U.S. Fish and Wildlife Service (USFWS) and non-federal partners to address and implement conservation needs for this at-risk species.

Goals:

- **Enroll up to 26 million acres of energy and transportation lands**
- **Establish about 2.3 million acres of monarch foraging and breeding habitat (~ 300 million stems of milkweed)**
- **Establish overall net-benefit species conservation measures to avoid a federal listing of the monarch butterfly**
- **Avoid federal listing status**

LISTING DETERMINATION on Dec 15, 2020: Warranted but Precluded



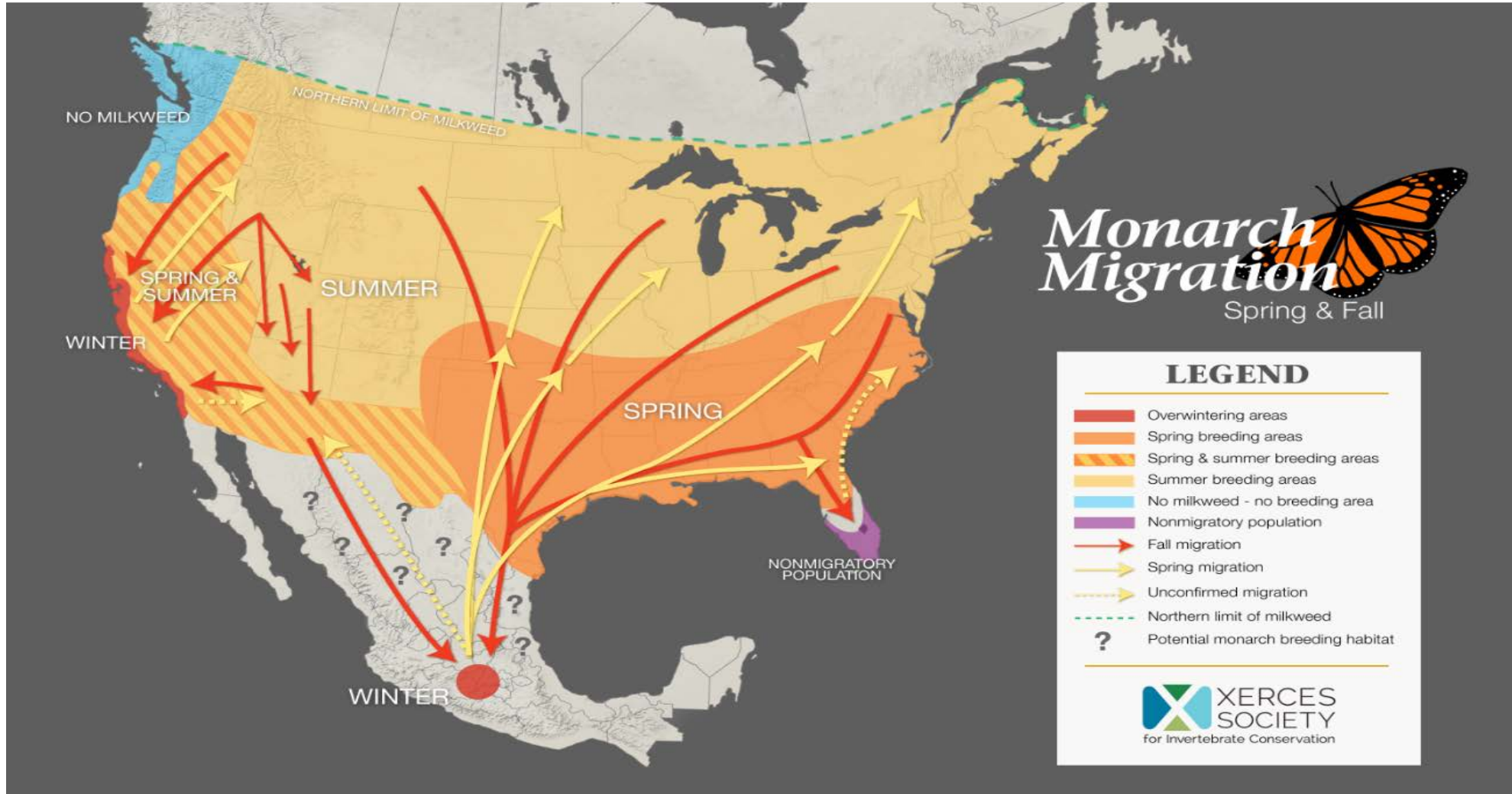
Benefits to VDOT joining the partnership

- Demonstrates conservation commitment
- Regulatory certainty for covered activities
- Avoid project delays
- A voice in the recovery plan development
- Flexibility in lands we enroll

Eight DOTs have committed:

- Georgia
- California
- Minnesota
- Ohio
- Oklahoma
- Texas
- Virginia
- Vermont

Monarch Butterfly Range



Monarch migration routes in VA:

- Spring and Fall migration
- Spring breeding

Key Threats to the Monarch

Declines due to loss of habitat from:

- Land conversion
- Herbicide and pesticide use
- Mowing



Promote conservation measures that reduce or remove key threats through proactive vegetation management practices.

VDOT Conservation Measures that will be taken on a subset of the Enrolled Lands:

- Seeding and planting to restore or create habitat
- Brush removal to promote suitable habitat
- Suitable habitat set-asides or idle lands for one or more growing seasons
- Conservation mowing to enhance floral resources during migration and breeding
- Targeted herbicide treatment of undesirable vegetation using herbicide best management practices

CCAA Definitions

Enrolled Lands: Managed lands where maintenance and construction activities would need incidental take coverage.

Adopted Acres: Lands within the Enrolled Lands where conservation measures and best management are implemented that counts towards monarch conservation.

Goal = 8% of enrolled lands

Covered Activities:

- Roadside maintenance (mowing, herbicide treatment)
- Structure maintenance (culverts, bridges, guardrails)
- Emergency response activities
- Facilities management (rest area, roundabouts, interchanges, ramps)
- Disposal sites
- Construction projects within existing ROWs (does not include new construction outside enrolled lands or ROWs where land acquisition is needed)

Enrollment Decision Process

Consideration of the knowns/unknowns, pros/cons

- **Limited mapping:** What to enroll and how to calculate area of ROW
- **Variations in landscape:** Microclimates and environmental factors across the state
- **Interstate mowing contracts:** Mowing and vegetation management along ROWs for each District
- **Primary Roads or State highways:** Potential to enroll sections where conservation mowing is already done
- **Secondary Roads:** Comprises most of the VDOT maintained roadway system:
 - ROWs typically include the clear zone and are routinely mowed or treated
 - ROWs are often ditched, forested, or influenced by adjacent landowners
- **Pollinator Habitat Program:** 23 pollinator gardens established across the state
- **Various parcels and lots owned and maintained by VDOT:** Safety rest areas, wayside picnic areas, residency & district offices, park & ride lots



Application Process

Submitted: April 29, 2020

Certificate of Inclusion issued: November 4, 2020

VDOT Enrolled:

Interstates: 35,912 acres

Parcels: 3,263 acres

Adopted acres where conservation measures are implemented:

Target Year 1: 4% of enrolled lands = 1,567 acres

Target Year 5: 8% of enrolled lands = 3,134 acres



Biological Effectiveness Monitoring – Year 1



Established 30 sampling sites:

- 28 along Interstate ROWs to represent conservation mowing
- 2 seeded/planted sites (VDOT Pollinator Habitat Program sites and Idle Lands)

Only 11 plots with 6+ milkweed stems (Goal is to meet 90% of sites with 6+ stems)

All sites exceeded nectar target (optional field as we are Eastern U.S)

Maintenance completed the first year's sampling for the 2020 season

Challenges

- **Minimal mapping** currently available
- **ROW** features, area, easements and management
- **Pervious vs. impervious** surface areas
- **Decentralized organizational** structure and internal reporting at District levels
- **Locality concerns** and aesthetic – groomed vs wildflowers
- **Tracking** what's being mowed and when
- **Training**
- **Data collection** - Hardware, software, data storage, scheduling, data management



Things We Are Already Doing!

VDOT's Pollinator habitat program creates naturalized areas at Safety Rest Areas and Park & Rides - planted with native nectar and pollinator plant species.



Modified mowing schedule along segments of interstates to post-season cut between Oct 31-Apr 1.

Next Steps



Working directly with Maintenance through the District Joint Working Group

- Established specifically to address needs for the Monarch CCA
- Updating the Maintenance Best Practices Manual by incorporating AMMs and conservation measures into their operating manual

Submit VDOT's Implementation Plan

- One year from receiving the Certificate of Inclusion
- Public awareness and education
- Mapping
- Training

Monitor Listing Decision

Re-evaluate

Questions?