

Lightning Talk Round

Rights-of-Way as Habitat Working Group

May 3, 2017



Texas DOT & Monarch Highway

Dennis Markwardt

Texas Department of Transportation

National Wildlife Federation

Lekha Knuffman

National Wildlife Federation

Na Bee & Butterfly Fund

Pete Berthelsen

Pheasants Forever



**The Bee & Butterfly
Habitat Fund**

A Unique Conservation Solution.

NextGen Habitat Projects

Key Partners



Project Apis m.



NextGen Habitat Projects



NextGen Habitat Projects



Monarch Conservation Science Partnership

Wendy Caldwell

Monarch Joint Venture

MONARCH JOINT VENTURE



www.monarchjointventure.org

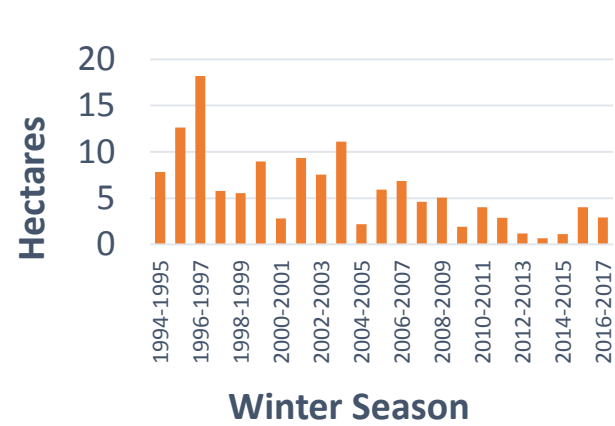
MCSP Integrated Monitoring Strategy



Fort Collins, 2016

1. Engage **broad audiences** (citizen scientists, federal and state agencies, NGOs)
2. To monitor monarchs and their habitat with **protocols**
3. At **spatially balanced sites**

1. Monarch Conservation Target



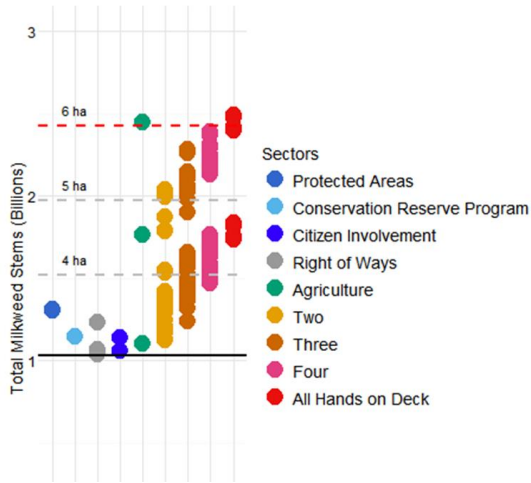
6 hectares of overwintering monarchs

2. Milkweed Conservation Target



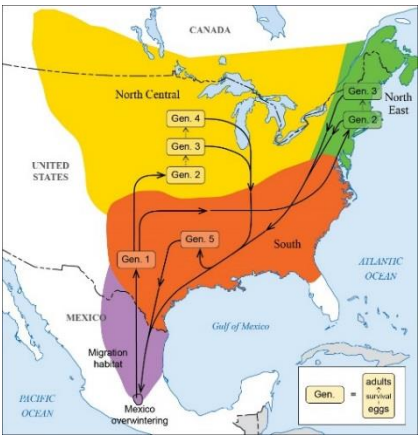
Add ~1.4 billion stems of milkweed

3. Milkweed Storylines Analysis



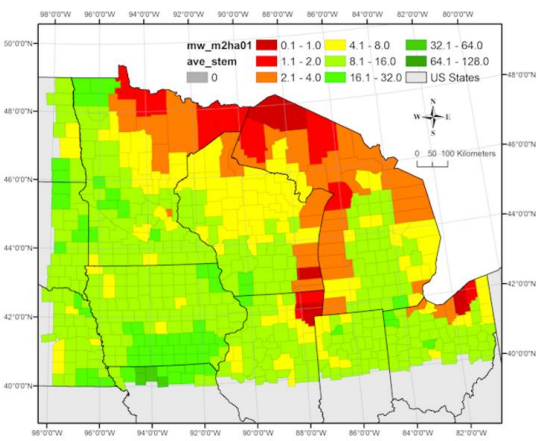
All hands on deck!

4. Demographic Model



All regions on deck!

5. USGS Conservation Tools



Practitioner recommendations

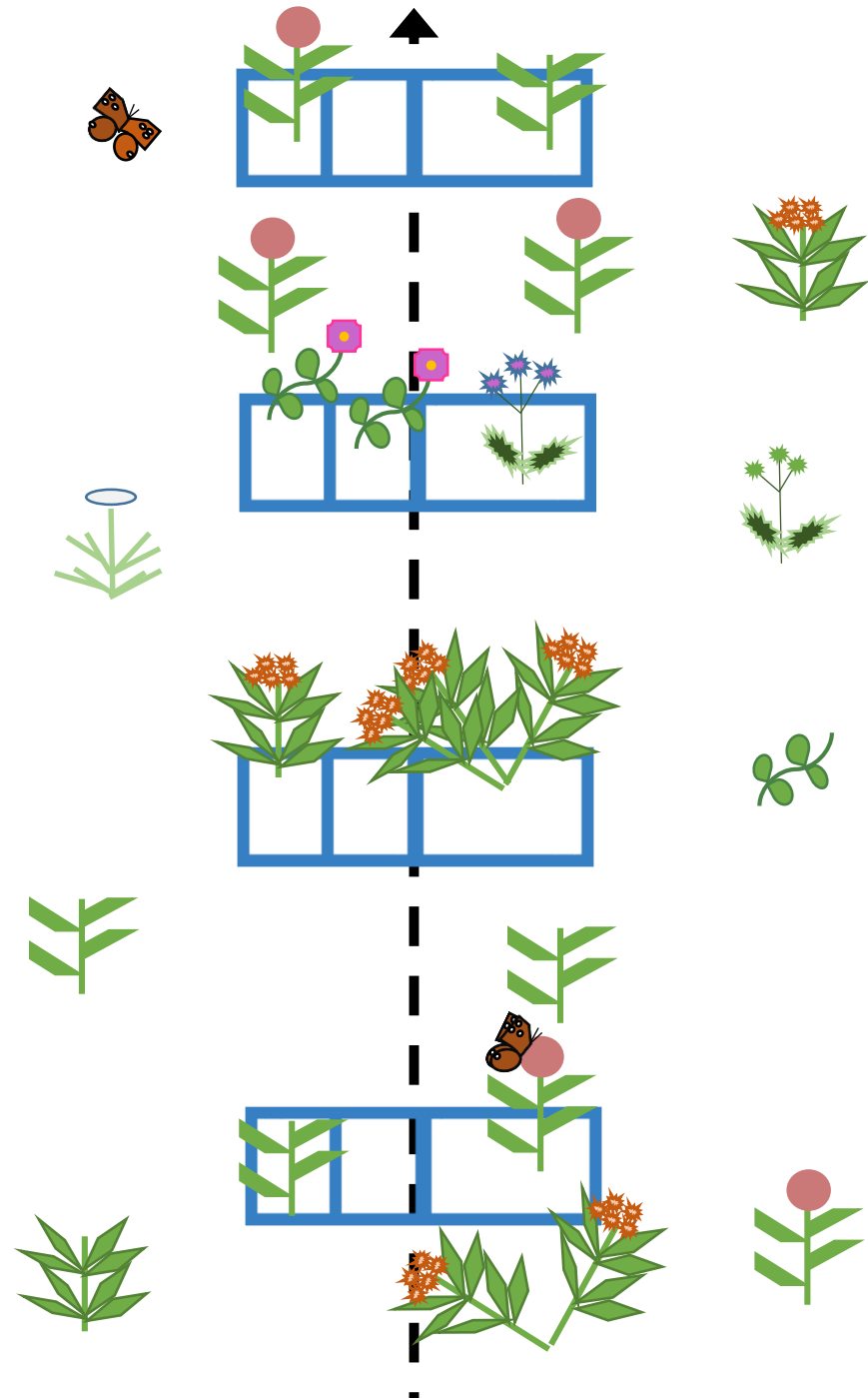
6. Threats Analysis



In progress

Protocols/SOPs

- **SOP 1:** Site selection, establishment and description
- **SOP 2:** Counting adult butterflies (*modified Pollard Walk*)
- **SOP 3:** Counting plants and immature monarchs (*MLMP*)
- **SOP 4:** Monarch survival and parasitism (*MLMP, Project Monarch Health, Monarch Watch*)
- **SOP 5:** Counting red imported fire ants
- **SOP 6:** Data management

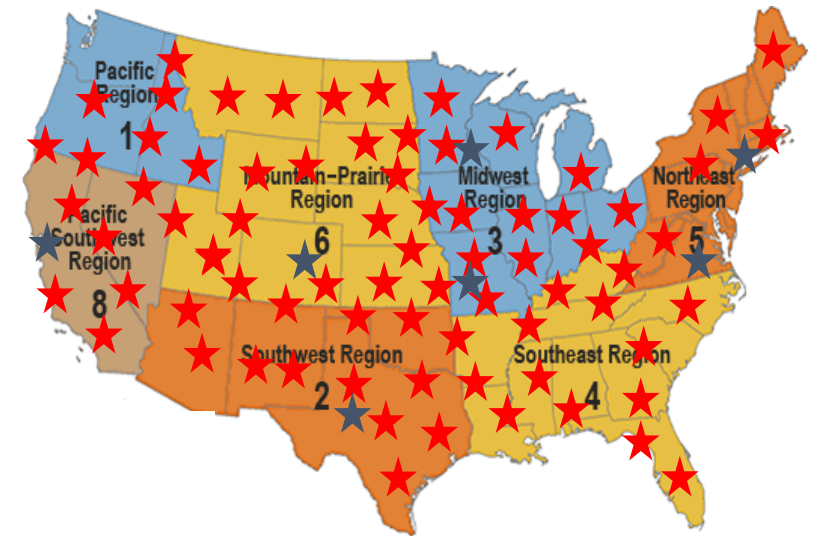
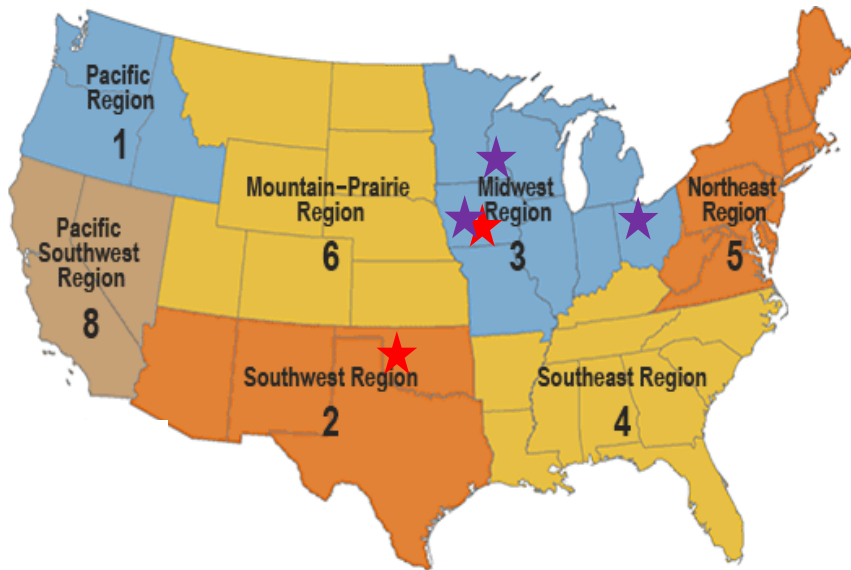


Monitoring Strategy: Next steps

2017



Broad-Scale Implementation



Monitoring Strata



Protected grassland



Unprotected grassland



CRP



Agricultural lands



ROW habitats



**Urban/suburban
spaces**

National Cooperative Highway Research Program

**Evaluating the Suitability of Roadway Corridors for
Use by Monarch Butterflies**

Product	Deliverables	Outcomes
A. Priority roadside filtration computer model	<ul style="list-style-type: none"> Model to identify sites with greatest potential to contribute monarch habitat across geographic scales 	Remote identification of priority sites for monarch habitat.
B. Monitoring protocols and data to evaluate roadside habitat quality for monarchs	<ul style="list-style-type: none"> Protocols to assess habitat quality Model parameters, proxies for habitat quality, uncertainty and sensitivity analyses 	Practitioners assess habitat quality easily and cheaply, and models are parameterized and validated.
C. Computer model to score habitat potential for monarch production	<ul style="list-style-type: none"> Calculator for roadside habitat quality based on landscape context and current attributes 	Practitioners evaluate effects of management actions on monarch population.
D. Context sensitive management recommendations and cost estimates	<ul style="list-style-type: none"> Structured decision framework prototype detailing regionally appropriate BMPs, costs and benefits, feasibility of creating software-based platform 	Practitioners select context-specific management practices.

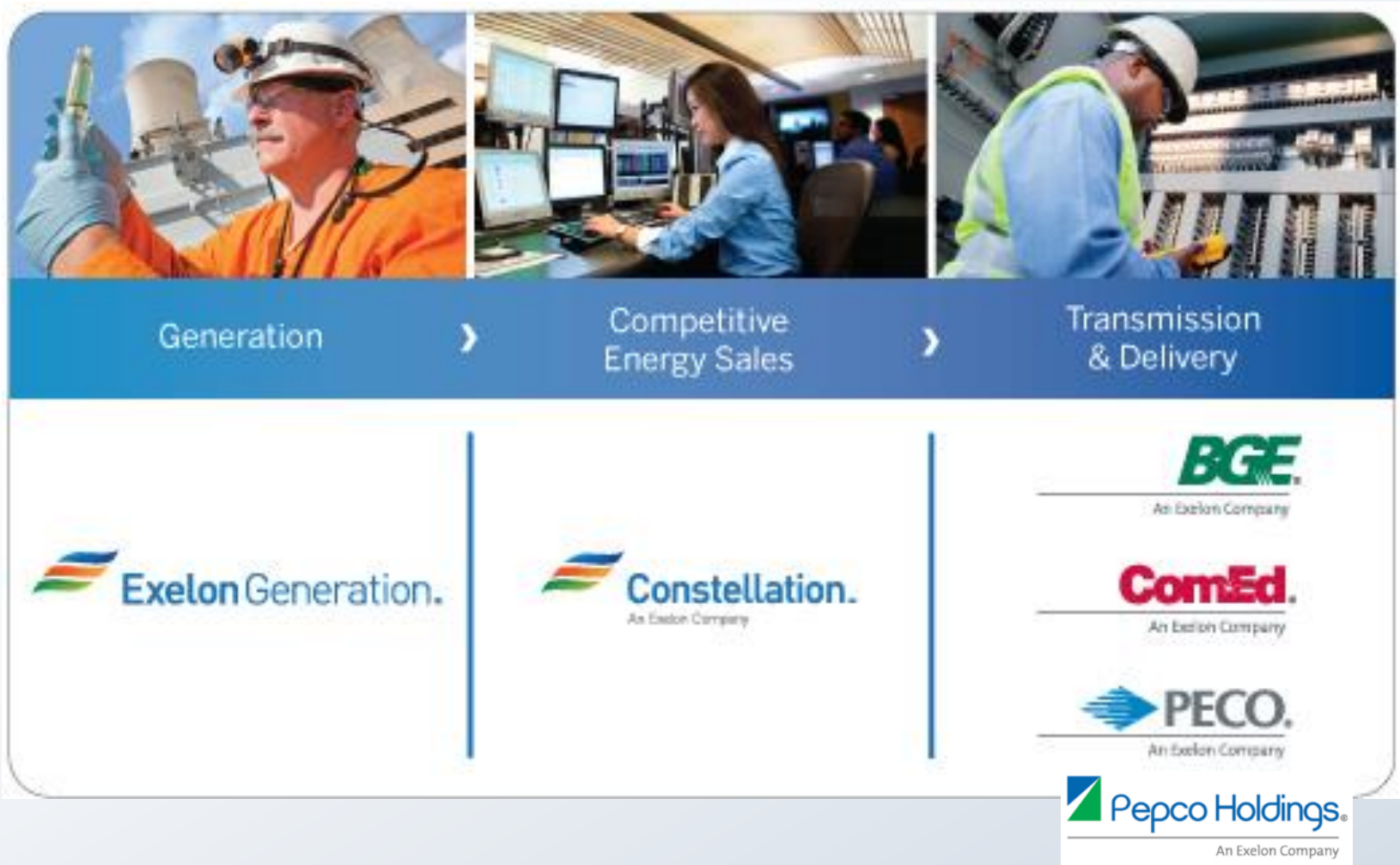
Exelon Nuclear Pollinator Initiative

Heather Meyer

Exelon Generation

Pollinator Conservation Efforts - Exelon Generation

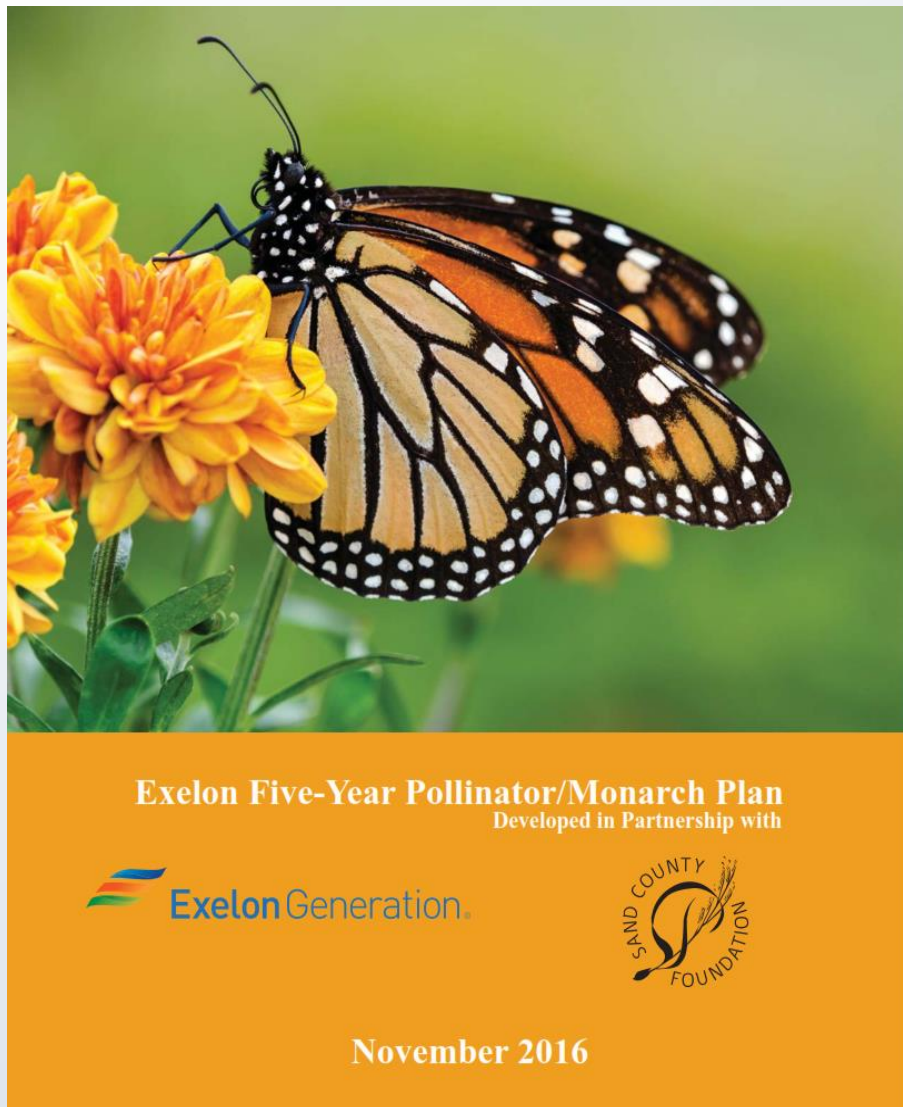
Who We Are – Exelon Corporation



✓ Exelon Utilities = ComEd, PECO, BGE + PHI

Generation (Nuclear)

- Station survey in 2015
- Stations wanted support for stewardship programs
- Not their core business
- Collaborated with Sand County Foundation on our 5 year plan
- Resource for the stations and their stewardship groups to develop their own plan
- To date, qualitative vs quantitative
- Expertise in other BUs but not readily available within Generation
- Identify ways to work across business units/facilitate sharing information/lessons learned



Generation



- 13 of 14 sites - 0.5 acre to 60 acres
- Byron – Conservation Club converting farmland
 - adding another 15 acres to the 45 acres already planted
 - 4 different types of milkweed, warm season grasses and other supporting plants
- Braidwood – 30-40 acre pond area restoration
 - Development of a conceptual model
 - Includes walking trails with pollinator restoration area, educational opportunities
- Quad Cities
 - Total of 60 acres of fields
 - Utilizing IVM to support current population
- Gabby Green

“We don’t need millions of acres of land for pollinator habitat. What we need is millions of small patches of habitat along the thousands of miles of flyways.”

*Dr. Chip Taylor, professor at Kansas University
and founder of Monarch Watch*



Commonwealth Edison Pollinator Initiative

Sara Race

Commonwealth Edison

Union Pacific Pollinator Initiative

Bob Toy

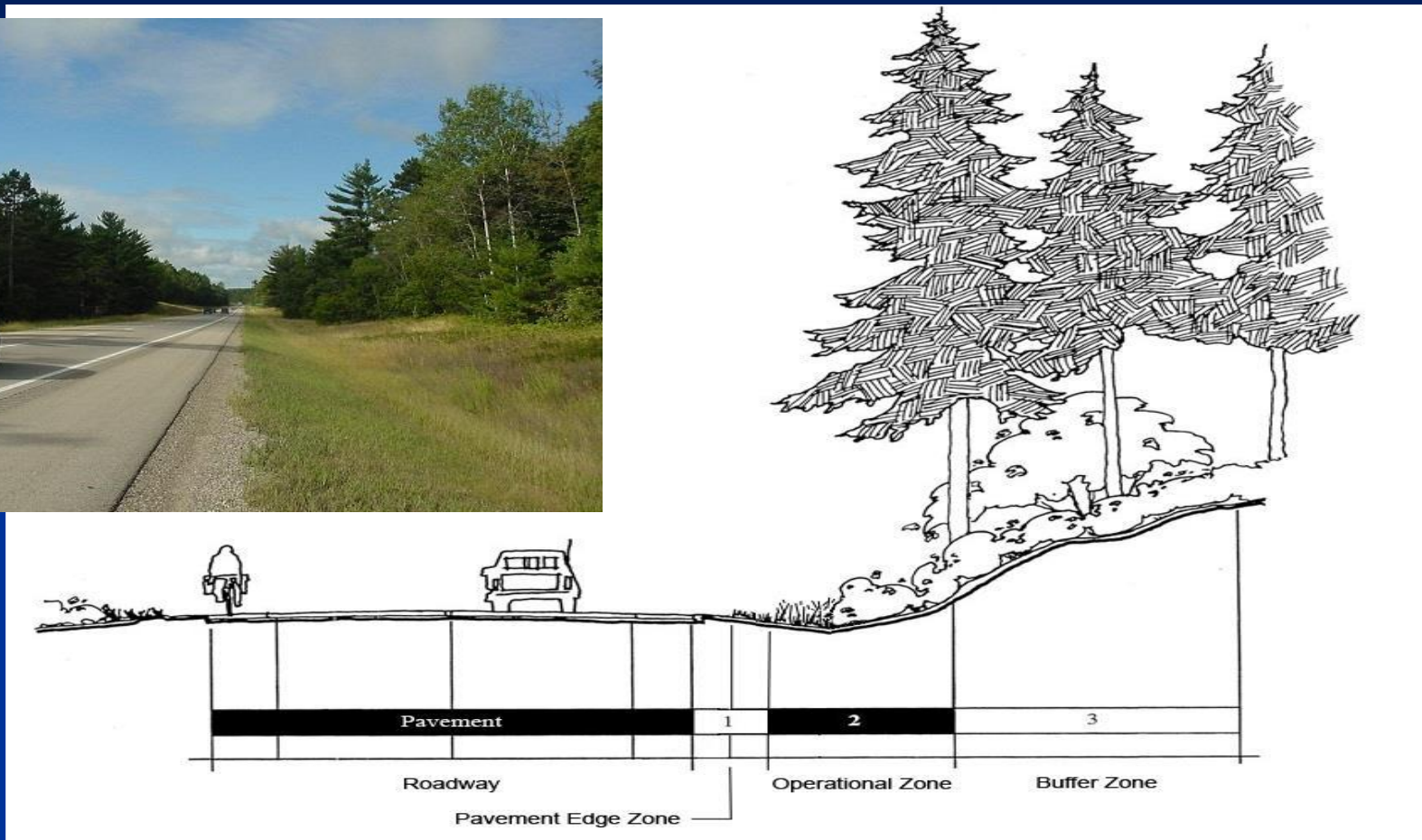
Union Pacific

Michigan DOT Pollinator Initiative

Chris Vera

Michigan Department of Transportation

MDOT Roadside Operational Zones



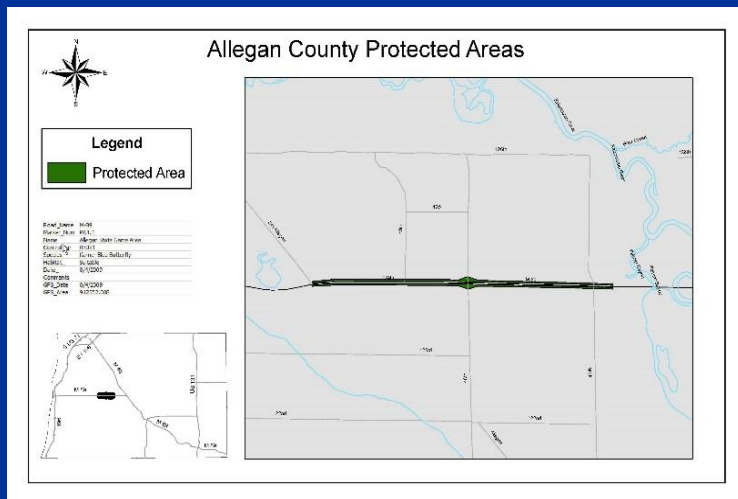
1. Low plant diversity
2. Medium plant diversity
3. Highest plant diversity

Pollinators low
Pollinators increasing
Pollinators numerous

High maintenance
Medium maintenance
Low maintenance

MDOT Protected Area - Allegan Co.

- M-89 near Fennville Maintenance Garage
- Karner Blue Butterfly habitat (Endangered)
- Allegan State Game Area - MDNR
- Connectability, green corridor, one plan
- Depend on wild lupine for food and reproduction
- About 200 sites statewide



MDOT Habitat Creation - Calhoun Co.

- **Marshall Rest Area -**
Nearly 5 Acres of native plants were installed along with the site landscaping
- **New Special Provision for Wildflower Planting's**
 - Site preparation
 - Native species seed mix
 - Site seeding and mulching
 - Weeding and watering
 - Monitoring to assure success



RSD:JLB

6 of 6

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Table 1: Native Pollinator Seed Mix

Kinds of Seeds	Quantity of PLS in ounces/acre
Grasses	
Bouteloua curtipendula - SIDEOATS GRAMA	8.0
Elymus canadensis - CANADA WILD RYE	8.0
Schizachyrium scoparius - LITTLE BLUESTEM	16.0
Sorghastrum nutans - INDIAN GRASS	16.0
Total	48.0
Kinds of Seeds	Quantity of PLS in ounces/acre
Forbs	
Aquilegia Canadensis - WILD COLUMBINE	8.0
Asclepias syriaca - COMMON MILKWEED	6.5
Asclepias tuberosa - BUTTERFLYWEED	6.5
Aster laevis - SMOOTH ASTER(a)	6.5
Coreopsis lanceolata - SAND TICKSEED	6.5
Echinacea purpurea - PURPLE CONEFLOWER	8.0
Kuhnia eupatorioides - FALSE BONESET	8.0
Liatris aspera - ROUGH BLAZING STAR	6.5
Monarda fistulosa - BERGAMOT	8.0
Monarda punctata - HORSEMINT	5.0
Penstemon digitalis - FOXGLOVE BEARDSTONGUE	6.5
Pycnanthemum virginianum - MOUNTAIN MINT	1.5
Rudbeckia hirta - BLACK-EYED SUSAN	12.0
Solidago rigida - STIFF GOLDENROD	8.0
Tradescantia ohiensis - SPIDERWORT	6.5
Verbena stricta - HOARY VERVAIN	8.0
Total	112.0

a. The seed must be debarbed and free of awns.

Xcel Energy Pollinator Initiative

Tom Hillstrom

Xcel Energy

Xcel Energy

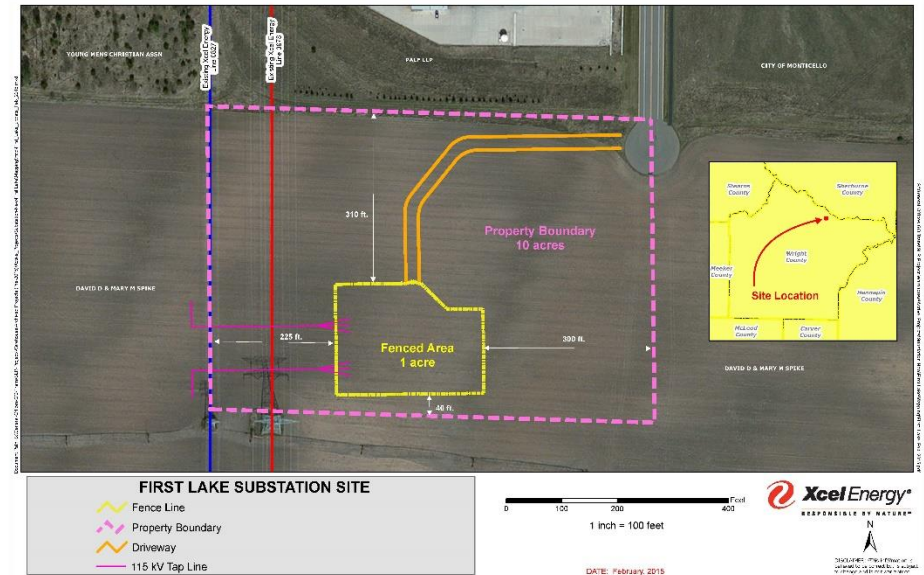
Supporting Pollinator Habitat

May 4, 2017



First Lake Substation, Monticello, Minn.

- Located 30 miles NW of Twin Cities on Mississippi River
- New Substation site
- Seven acres of land available for pollinator habitat



Community Connection!





Illinois Tollway Pollinator Initiative

Bryan Wagner

Illinois Tollway

Monarch Conservation Fund

Caroline Oswald & Todd Hogrefe

National Fish & Wildlife Foundation

Regional Monarch Strategy

Claire Beck & Ed Boggess

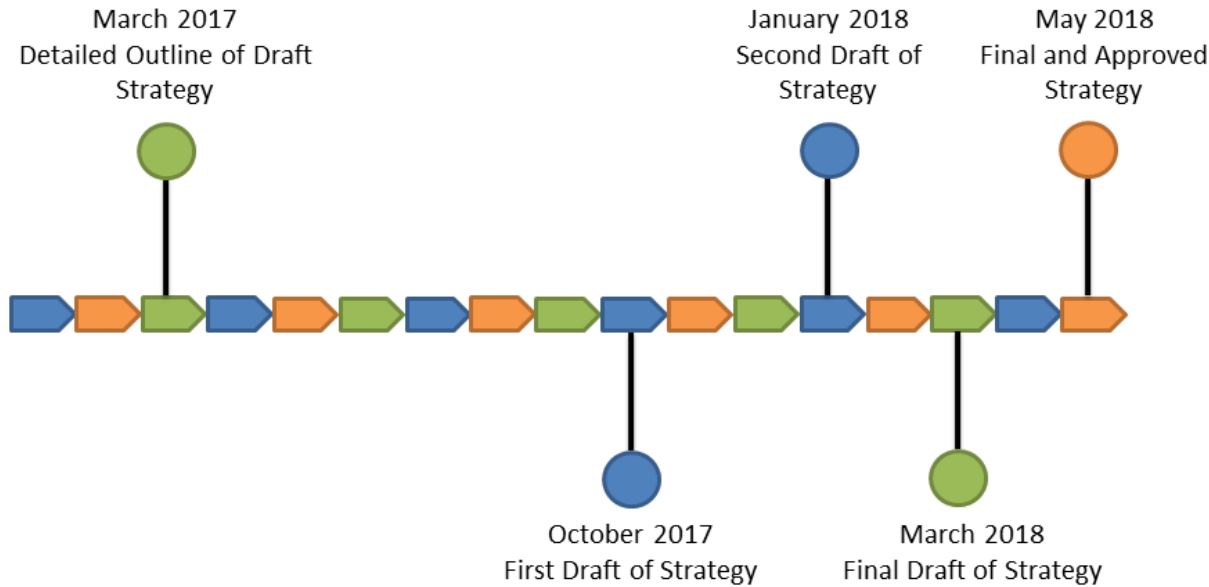
Midwest Association of Fish & Wildlife Agencies

Developing a Regional Monarch Conservation Framework

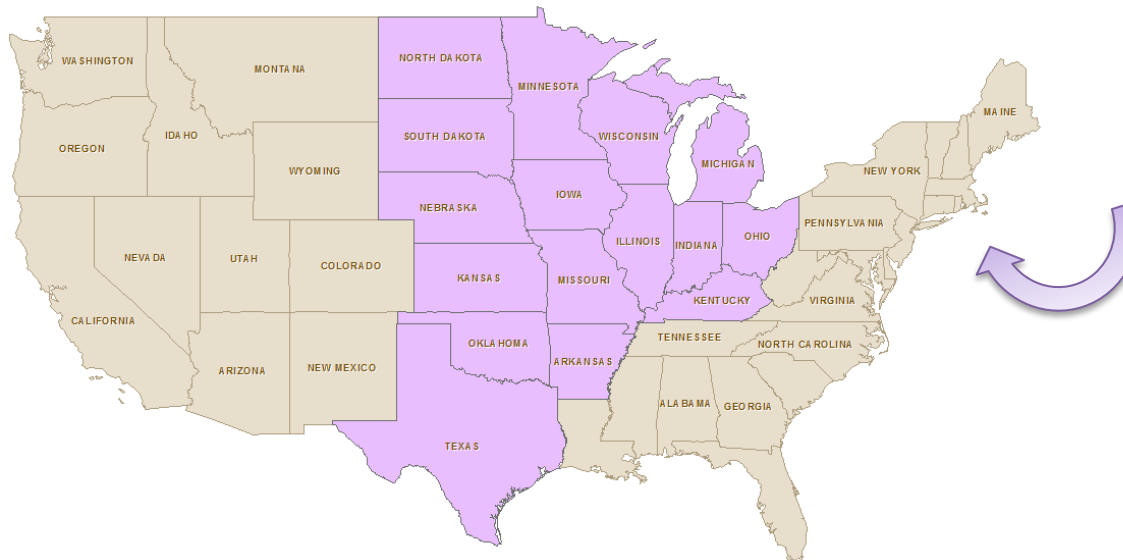
- The **Mid-America Monarch Conservation Strategy** will help inform the USFWS PECE analysis and monarch listing decision.
- The Mid-America Monarch Conservation Strategy framework will include the following outcomes:
 - Shared priorities across states
 - Decision making structure and oversight of technical committees to develop, implement, monitor, and report on the Strategy
 - Collaboration and information sharing with partners



Mid-America Monarch Conservation Strategy: Timeline and Geography



...Final USFWS listing
determination June
2019



+ Northeastern states
represented through
NEAFWA

All Hands on Deck: Sector-based Habitat Restoration Strategy

Cover	Corn and Soy	CRP non-wet	CRP- wet	Exurban	Fallow	Marginal Crop	Other Crops	Pasture/Hay	Powerline ROW	Protected Grassland	Rail ROW	Roadside (Freeway/Hwy)	Roadside (Secondary Road)	Roadside (Small Road)	Unsuitable	Urban- High Intensity	Urban- Low Intensity	Urban- Medium Intensity	Urban open core	Wetland
Current	0.1	112.1	61.4	1.0	3.1	0.1	3.1	0.0	3.1	3.1	3.1	57.2	57.2	57.1	0.0	0.0	0.0	0.0	0.0	0.0
Amended	0.1	153.5	65.5	3.1	4.0	112.1	9.9	16.3	42.5	129.7	10.4	100.0	78.6	78.6	0.0	0.4	6.2	3.1	3.1	0.0
Improvement	0.01	41.36	4.09	2.09	0.96	112.09	6.84	16.31	39.38	126.62	7.35	42.87	21.44	21.45	0.00	0.40	6.18	3.09	3.09	0.00
Rank	18	4	12	15	16	2	10	8	5	1	9	3	7	6	20	17	11	14	13	19



- Over 10.6 million acres of ROW land in Midwest region (Thogmartin et al. 2017, in press)
- Significant potential contribution to milkweed stem targets