

Pollinator-Friendly Roadside Vegetation Management

Presenters

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FHWA Pollinator Web Page

http://www.environment.fhwa.dot.gov/ecosystems/vegmgmt_pollinators.asp

Program Overview

Agricultural Lands

Environmental Laws and Regulations

Wetlands and Aquatic Ecosystems

Ecosystem and Vegetation Management

- Habitat Management
- Plants and Invasive Species
- **Pollinators**
- Links
- Training

Wildlife and Habitat

Awards

Wildlife Vehicle Collision Reduction Training

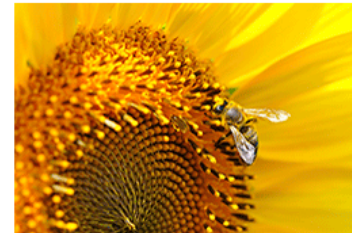
ESA Webtool



Submit Feedback

Ecosystem and Vegetation Management

Pollinators



In June of 2014, the White House released a Presidential Memorandum (PM) – Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators. The Memorandum directs U.S. government agencies to take additional steps to protect and restore domestic populations of pollinators, including honey bees, native bees, birds, bats, and butterflies—critical contributors to our nation's economy, food system, and environmental health.

FHWA's approach to implementation of this PM is to continue to support native plantings and integrated vegetation management (IVM) practices to reduce pesticide use and mowings, and increase native plantings. Based on FHWA's guidance, many States already follow an IVM approach that combines multiple forms of control (mechanical, chemical, cultural, and biological). An IVM plan can result in reduced long-term cost, and increased safety, while promoting native plantings that encourage ecological diversity. Although these practices may not be specifically aimed at pollinator health, they are the same practices (e.g. reduced mowing and pesticide use, native species plantings) that promote pollinator health and habitat.

FHWA's primary role is as a leader in providing best management practices (BMPs), supporting research, distributing information, and coordinating State efforts. A summary of associated FHWA regulations, programs, and publications is included below.



Legislation/Regulation/Guidance



FHWA Pollinator Publications



Resources for Pollinator-friendly Practices



FHWA Funding Eligibilities for Vegetation Management



U.S. Department of Transportation
Federal Highway Administration

Questions and feedback should be directed to Deirdre Remley (deirdre.remley@dot.gov, 202-366-0524).

Presidential Memorandum

June 20, 2014 Presidential Memorandum, “Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators”

Directive for USDOT: “The Department of Transportation shall evaluate its current guidance for grantees and informational resources to identify opportunities to increase pollinator habitat along roadways and implement improvements, as appropriate. The Department of Transportation shall work with State Departments of Transportation and transportation associations to promote pollinator-friendly practices and corridors. The Department of Transportation shall evaluate opportunities to make railways, pipelines, and transportation facilities that are privately owned and operated aware of the need to increase pollinator habitat.”



Other Laws and Guidance

- Federally listed pollinators (Endangered Species Act):
<http://www.fws.gov/pollinators/programs/endangered.html>
- Stormwater laws and green infrastructure:
<http://water.epa.gov/infrastructure/greeninfrastructure/index.cfm>
<http://www.epa.gov/greenacres/nativeplants/factsht.html>
<http://www2.epa.gov/pollinator-protection>
- National Pollinator Health Strategy:
<https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator%20Health%20Strategy%202015.pdf>
- Council on Environmental Quality guidance:
https://www.whitehouse.gov/sites/default/files/docs/supporting_the_health_of_honey_bees_and_other_pollinators.pdf and
<https://www.whitehouse.gov/administration/eop/ceq/sustainability/landscaping-guidance>



FHWA Pollinator Studies/Products

Pollinator Habitat Information and Tools from FHWA

- FHWA Pollinator Content Web Page:
http://www.environment.fhwa.dot.gov/ecosystems/vegmgmt_pollinator_s.asp
- Best management practices (BMPs) for pollinator-friendly vegetation management in development (under contract to ICF and Xerces Society)
- Pollinator literature review as part of BMP work
- Interviews with 9 State DOTs to inform BMP work
- State DOT pollinator case studies – State of the practice from interviews with 3 State DOTs
- eBook: “Vegetation Management: An Ecoregional Approach”



FHWA Pollinator Studies/Products (BMP excerpt)

Ways to adjust roadside vegetation management practices to benefit pollinators

- Reduce mowing to no more than twice during the growing season and reduce the area mowed to the clear zone for safety.
- Time mowing to minimize disruption to the life cycles of pollinators.
- Delay mowing until after first frost, allowing flowering plants to bloom uninterrupted.
- Reduce herbicide use, use selective herbicides, spot-spray, and time applications to the most vulnerable life stage of the weed.
- If using grazing to control invasive weeds, consider timing of the life cycles of pollinators, especially rare, endemic, or sensitive and declining species.
- If using prescribed burns rotate burning every 3 to 5 years to allow for recovery.
- If using biological control agents for weeds, use only those agents that have not demonstrated plant host expansion beyond the target weed.



FHWA Pollinator Studies/Products



The screenshot shows a web page with a green header and four main sections, each with a green bar and a plus icon:

- Legislation/Regulation/Guidance**
- FHWA Pollinator Publications**
 - [Literature Review: Pollinator Habitat Enhancement and Best Management Practices in Highway Rights-of-Way](#) – This document is a first step in FHWA's effort to provide practicable best management practices for transportation agencies to develop pollinator programs in their jurisdictions and enhance these programs where they already exist.
 - **Pollinator-Friendly Practices Case Studies** – FHWA developed case studies to highlight how different State DOTs are supporting pollinator-friendly practices, such as reduced herbicide use, reduced mowing, and increased native plantings. The case studies focus on practices in [Indiana](#), [Texas](#), and [Washington](#).
 - [Western Federal Lands, "A Manager's Guide to Roadside Revegetation Using Native Plants"](#)
 - [Vegetation Management: An Ecoregional Approach](#)
- Resources for Pollinator-friendly Practices**
- FHWA Funding Eligibilities for Vegetation Management**

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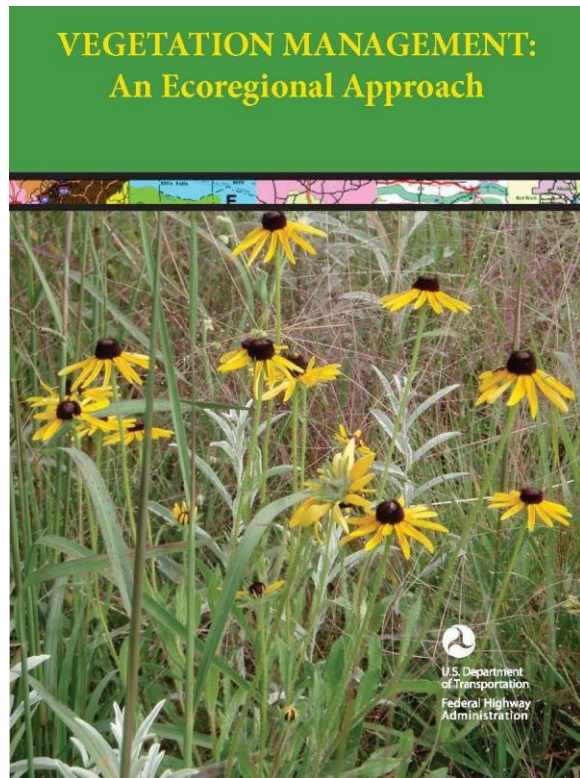
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FHWA Vegetation Management Tools

eBook: Vegetation Management: An Ecoregional Approach



- Available on FHWA Environmental Toolkit
- Provides State-by-State ecoregion maps and local preserves to inform successful site-specific plantings and ongoing maintenance
- Promotes managing roadsides and other lands for native plants and overall ecosystem health



What FHWA has Heard from State DOTs about Needs

Things Some State DOT Roadside Managers Have Said They Need

- Training tools for field staff (e.g. regionally specific ecosystem and plant identification guides, tools to learn how to establish and maintain native plants)
- Integrated vegetation management decisions tools for roadside maintenance managers
- Affordable, good quality native plant material sources
- Ways to fund native vegetation management
- Public education – the culture change of natural vs. manicured landscapes
- Ways to address concerns by the agricultural community



FHWA Federal Funding for Vegetation Management

FHWA Funding Eligibilities

23 U.S.C. 329, “Eligibility for control of noxious weeds and aquatic noxious weeds and establishment of native species” is an eligibility available under the following:

- Federal-aid highway funds
- Surface Transportation Program funds

Guidance is at: (<http://www.fhwa.dot.gov/hep/guidance/noxweeds.cfm>).

23 U.S.C. 101(a)(29), Transportation Alternatives Program

- An eligibility for community improvements including “vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control” – State and local governments, other than DOTs and MPOs, are eligible for these funds. For a list of eligible entities, go to <http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm>



DOT-Related Pollinator Activities

Pollinator Events for State DOTs

- I-35 Monarch/Pollinator Highway technical effort, fall 2015 (USFWS) – Target audience will be technical experts in the six I-35 States – TX, OK, KS, MO, IA, and MN
- I-35 Monarch Summit at White House, November 2015 (USDOT) – Culmination of previous interagency efforts – Target audience is highest level decisionmakers from all State DOTs, with emphasis on I-35 States and using I-35 States' activities as a model





U.S. Fish & Wildlife Service

Monarch Butterfly: Fall & Spring Migrations



Web Resources

Examples:

[Xerces Roadsides](#)

[Xerces Bee-Friendly
Plant Lists by
Ecoregion](#)

[Native Seed
Network](#)

[U.S. EPA Level III and
IV Ecoregion maps
and GIS shapefiles](#)



U.S. Department of Transportation
Federal Highway Administration



Legislation/Regulation/Guidance



FHWA Pollinator Publications



Resources for Pollinator-friendly Practices

- [Xerces Society for Invertebrate Conservation, "Roadsides" web page](#)
- [Pollinator Partnership Ecoregional Planting Guides](#)
- [Project Milkweed](#)
- [Native Seed Network](#)
- [Xerces Society Pollinator Conservation Resources Center](#)
- [Bee Smart™ Pollinator Gardener smartphone app](#)
- [Monarch Watch, Monarch Waystation Program](#)
- [U.S. Forest Service Pollinator-Friendly Best Management Practices for Federal Lands](#)
- [USDA, Natural Resources Conservation Service, Insects and Pollinators web page](#)
- [U.S. Forest Service, Pollinators web page](#)
- [U.S. EPA, Level III and IV Ecoregions of the Continental United States](#)
- [Xerces Society, "Pollinator Conservation" web page](#)





FHWA Funding Eligibilities for Vegetation Management

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Washington State DOT Pollinator Web Page

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- [Environmental Mitigation](#)
- [Erosion Control](#)
- [Green Infrastructure](#)
- **Pollinators and the Roadside**
- [Restoration Materials](#)
- [Roadside Restoration](#)
- [Soil Bioengineering](#)

Pollinators and the Roadside

Managing WSDOT Roadsides to Benefit Pollinators

What is Pollination?

Pollination is the act of transferring pollen grains from the male anther of a flower to the female stigma. The goal of every living organism, including plants, is to create offspring for the next generation. One of the ways that plants can produce offspring is by making seeds. Seeds contain the genetic information to produce a new plant. Flowers are the tools that plants use to make their seeds.

Seeds can only be produced when pollen is transferred between flowers of the same species. A species is defined as a population of individuals capable of interbreeding freely with one another but because of geographic, reproductive, or other barriers, they do not interbreed with members of other species.




Photo Credit: Kelly McAllister



FHWA Best Management Practices (BMPs) for Roadside Pollinator Habitat

BMP Overview

- ICF/Xerces contract to prepare BMPs and related documents for FHWA
- BMPs for Roadside Vegetation Managers
- BMPs for field practitioners
- Target date for publication – 2016
- Literature review already published on FHWA website



Questions?

For More Information

Email:

deirdre.remley@dot.gov

http://www.environment.fhwa.dot.gov/ecosystems/vegmgmt_pollinators.asp

