

Background:

The plan responds to the Presidential Memorandum and request from the Pollinator Summit respectively:

From Presidential Memorandum -- Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators (2014)

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...

From Executive Office of the President. Transportation Leaders' Summit: Restoring the Nation's Pollinator Habitat, December 3-4, 2015, Eisenhower Executive Office Building, Washington D.C.

Advancing regional and in-state efforts to expand and improve pollinator habitat on transportation assets across the Nation, emphasizing the I-35 Corridor as a model for coordination and outreach. (<https://www.nwf.org>)

Introduction and Mission

The Colorado Department of Transportation (CDOT) is committed to Transportation Corridors or Roadside Vegetation Management Strategies that fit the context of the physical setting. A key strategy of context sensitive solutions is the Integrated Roadside Vegetation Management (IRVM).

The following FHWA web link has resources for federal pollinator habitat strategies:

https://www.environment.fhwa.dot.gov/env_topics/ecosystems/pollinators.aspx

The following information is a narrative from part of a literature search from FHWA entitled "Pollinator Habitat Enhancement and BMP in Highway Rights-of-Way" (FHWA 2015) which pertains to IRVM, with an emphasis of Pollinator Habitat Management, can be used to implement cost effective and efficient roadside management strategies:

"Incorporating All the Tools: Integrated Roadside Vegetation Management (IRVM) is an outgrowth of Integrated Pest Management (IPM), a science-based framework for making decisions about pest control. IPM programs involve identifying pest problems, establishing thresholds at which treatment is needed, and then utilizing a variety of biological, cultural, mechanical, and chemical tools in the most sustainable

manner possible. In the same way that IPM is an alternative to routine calendar-based insecticide spraying on crops, IRVM is an alternative to intensive mowing and blanket herbicide spraying on roadsides. IRVM incorporates the planting of native vegetation with site-appropriate management strategies to achieve cost-effective and more environmentally sustainable management practices for roadsides. The National Roadside Vegetation Management Association defines IRVM as “a decision-making and quality management process for maintaining roadside vegetation that integrates the needs of local communities and highway users; knowledge of plant ecology (and natural processes); design, construction, and maintenance considerations; monitoring and evaluation procedures; government statutes and regulations, and technology with cultural, biological, mechanical, and chemical pest control methods to economically manage roadsides for safety plus environmental and visual quality” (Harper-Lore et al. 2013

CDOT Pollinator Habitat Enhancement Goals and Implementation Strategies

In concurrence with FHWA Strategies, CDOT will work towards pollinator habitat enhancement strategies to increase pollinator habitat along roadways, improve resiliency of the plant communities and implement improvements following IRVM principles.

The following policy and State of Colorado documents provide program direction and contributes to CDOT Pollinator Habitat Enhancement:

1. CDOT Procedural Directive (PD) 503.1: *CO Native Plant Species and Managing the Colorado Pollinator Highway*, Updated, July 20, 2018.
https://drive.google.com/file/d/1FGTNSZuvwN-g3HZ1frMGE_6WhlvRdZkc/view
2. Colorado Legislative Session 2017: *CO House Joint Resolution, CO HJR 17-1029*,
https://leg.colorado.gov/sites/default/files/documents/2017A/bills/2017a_hjr1029_enr.pdf

Under consideration: Document providing Volunteer access and guidelines while working with CDOT to enhance pollinator habitat.

CDOT environmental stewardship means preservation and restoration of native habitat that integrates the needs of community, resources and pollinator protection. Given the national goal to promote pollinator habitat, CDOT’s program applies IRVM to Roadside Vegetation Management and furthermore promotes pollinator habit through four key strategies:

I Enhancing and Protecting Remnant Habitat

CDOT Office of Maintenance and Operations has developed an Integrated Roadside Vegetation Manual (currently under development) to CDOT personnel to use while managing the adjacent Right of Way.

II Pollinator and Reclamation Plant database

CDOT Landscape Architecture Section Native Seed Calculator

<https://www.codot.gov/programs/environmental/landscape-architecture/native-seed-calculator>

CDOT HQ has developed a design Eco zone database. The seed mixes and plant lists can be used during construction projects, restoration and as public outreach information. In addition, seed collection practices can be considered when enhancing existing habitat as mentioned in objective I. Plant practices:

- Develop and maintain a native plant database containing flower period and pollinator/plant relationships for use on projects and pollinator enhancement efforts meeting the Pollinator and Aesthetic Objectives.
- Develop and maintain a seed collection construct growing process to promote the use of native ecotypes. Involve local groups to achieve this effort.
- Survey and monitor adjacent plants within the R-O-W and coordinate with seed companies to promote the availability of desirable species for Pollinator, Erosion Control and Visual Quality

III Partner with Advocacy Groups

Given the sources of funding and expertise, a third objective is for CDOT to partner with other state and local agencies, as well as private partners such as the Colorado Pollinator Network, National Fish and Wildlife Foundation, Colorado Groups, People and Pollinators Action Network, Butterfly Pavilion and XERCES Society on all conservation efforts. These groups mentioned can provide expertise via training and review, restoration work, seed collection and funding.

Partnering practices:

- Meet Annually with Pollinator Groups
- Attend Pollinator Habitat Conferences and Webinars
- Identify a Pollinator Coordinator in each Region to partner with Specialty groups and Manage Program
- Develop Outreach programs for education benefit via a CDOT website.
- Promote awareness within Rest Areas and Roadside Information.
- Volunteers working with CDOT: I-76 Pollinator Pilot planting project

The I-76 Colorado Pollinator Highway Volunteer Project Summary Report:

https://drive.google.com/file/d/1z1MIF522oVe7KMgfX_StD4A_khbGeE--/view?usp=sharing

IV Funding Opportunities CDOT Maintenance Managers:

In the process of implementing Pollinator Enhancement, CDOT will identify long term funding and resource needs to aid management in policy and budget

Maintenance managers working with Region Environmental Staff and Environmental Programs can manage and fund pollinator planting and management projects (living snow fence, roadside plantings and interseeding) For more information contact CDOT Office of Maintenance and Operations, State Maintenance Engineer, Denver

Summary

Transportation right of way (R-O-W) has been identified in the Presidential Memorandum -- Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators (2014) as a great asset in the effort to improve habitat. Furthermore, the Transportation Leaders' Summit: Restoring the Nation's Pollinator Habitat, December 3-4, 2015, Eisenhower Executive Office Building, Washington, D.C. defined the State DOT mission of "Advancing regional and in-state efforts to expand and improve pollinator habitat on transportation assets across the Nation..."

From this National Guidance, CDOT will implement a Program that works with communities, promotes the health of pollinators, considers other Federal, and State Legislative Designations, promotes the use of desirable maintenance practices and promotes the native ecology. It is urgent to preserve, expand and improve pollinator habitat throughout the State of Colorado

References

CDOT Pollinator Videos: available on the CDOT Landscape Architecture website, support the information in this document.

<https://www.codot.gov/programs/environmental/landscape-architecture/pollinator-program/new-cdot-pollinator-videos-and-plan>

Federal Hwy Admin. Literature Review: Pollinator Habitat Enhancement and Best Management Practices in Highway Rights-of-Way, May 2015:

https://xerces.org/sites/default/files/2018-05/15-055_01_pollinators_BMPs_in_highway_ROW.pdf

Presidential Memorandum -- Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators (2014):

<https://obamawhitehouse.archives.gov/the-press-office/2014/06/20/presidential-memorandum-creating-federal-strategy-promote-health-honey-b>

Executive Office of the President. Transportation Leaders' Summit: Restoring the Nation's Pollinator Habitat, December 3-4, 2015, Eisenhower Executive Office Building, Washington, and D.C.

https://www.environment.fhwa.dot.gov/env_topics/ecosystems/Pollinators_Roadsides/BMPs_pollinators_roadsides.aspx

CDOT Landscape Architecture Manual 2014:

https://www.codot.gov/programs/environmental/landscape-architecture/landscapearchitecturemanual_081814_final.pdf