



# Illinois Department of Transportation

## Research Need for Sustainability Technical Advisory Group

Effective/Updated: August 14, 2015

**ISSUE:** *Highways as Nectar Corridors for Pollinators*

Pollinator losses have been severe. The number of migrating monarch butterflies sank to the lowest recorded population level in 2013–14, and there is an imminent risk of failed migration. The continued loss of commercial honey bee colonies poses a threat to the economic stability of commercial beekeeping and pollination operations in the United States, which could have profound implications for agriculture and food. Severe yearly declines create concern that bee colony losses could reach a point from which the commercial pollination industry would not be able to adequately recover. Scientists believe that bee losses are likely caused by a combination of stressors, including poor bee nutrition, loss of forage lands, parasites, pathogens, lack of genetic diversity, and exposure to pesticides (Presidential Memorandum 2014).

**SUMMARY OF PROBLEM:** Butterfly–pollinator numbers have dropped as a result of habitat loss and other stressors. The problem is serious and requires immediate attention to ensure the sustainability of our food production systems, avoid additional economic impact on the agricultural sector, and protect the health of the environment (Presidential Memorandum 2014).

**EXPECTED IMPLEMENTABLE OUTCOME:** On June 20, 2014, a presidential memorandum—Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators—was issued. Section 1 of the memorandum established the Pollinator Health Task Force. Section 2 outlines the mission and function of the task force, which includes development a National Pollinator Health Strategy. Section 3 addresses the need to increase and improve pollinator habitat and (at subsection *I*) directs the U.S. Department of Transportation (USDOT) to work with state departments of transportation and transportation associations to promote pollinator-friendly practices and corridors.

On May 15, 2015, the National Strategy to Promote the Health of Honey Bees and Other Pollinators was issued. The strategy touches on four themes, one of which is increasing and improving pollinator habitat. Within that theme, habitat opportunities were identified including expanding pollinator habitat on rights-of-way (p. 28). Rights-of-ways are of particular interest for pollinator habitat because they constitute large land acreage on a cumulative basis, are generally maintained in sunny areas with low vegetation height (ideal pollinator habitat), and often extend for considerable distances, thereby potentially acting as corridors for species movement and adaptation to climate change (p. 32).



# Illinois Department of Transportation

USDOT is supporting efforts to protect and enhance pollinator habitat. The Federal Highway Administration (FHWA) has contracted to create a number of materials to support best management practices (BMPS) for pollinator health in roadside vegetation management. BMP materials will provide transportation agencies with practical tools to promote increased pollinator habitat along roadways through improved plant material selection, mowing practices, and other roadside habitat maintenance practices (p. 32).

Along with the federal government, the Illinois Department of Transportation (IDOT) and the Illinois Center for Transportation (ICT) recognize the need to increase and enhance habitat for pollinators and that this need could be met in part through the use of land within highway rights-of-ways. IDOT and ICT seek proposals to study the idea of establishing nectar corridors\* within the Interstate 55 and 57 rights-of-ways in Illinois. A second part of the study would be to prepare a plan to implement measures to create a nectar corridor. The study would include field work to characterize vegetation within highway rights-of-ways. Close consideration would be given to the use of highway infields to create a series of habitat patches within the nectar corridor. There would be an emphasis on the creation (or enhancement) of habitat patches where rights-of-ways cross the central corn and soybean growing region of the state.

-----

\*Nectar corridors are a series of habitat patches containing plants that flower at the appropriate times during the spring and fall migrations. These patches provide stopping-off points for the migrating butterflies to refuel and continue their journey. Having these islands of nectar sources is particularly important within large areas of urban and agricultural development. The discontinuous patches of nectar sources are “corridors” that monarchs will follow, like stepping-stones across a stream to complete their migration

([http://www.fs.fed.us/wildflowers/pollinators/Monarch\\_Butterfly/habitat/index.shtml](http://www.fs.fed.us/wildflowers/pollinators/Monarch_Butterfly/habitat/index.shtml))

*To submit a research idea for consideration at the spring 2016 Executive Committee meeting, prepare and submit a Proposed Research Idea form to IDOT ([DOT.BMPR.RESEARCH@illinois.gov](mailto:DOT.BMPR.RESEARCH@illinois.gov)) no later than October 1, 2015.*

Research Idea form available at: <http://ict.illinois.edu/files/2014/07/Proposed-Research-Idea-form-2015.docx>