

## INDOT's Vegetation Management Program Recognized as Bee Friendly

INDOT's Vegetation Management policy – which guides how INDOT mows and manages more than 40,000 acres of right-of-way (ROW) along Indiana interstates, U.S. highways and state routes – has been lauded as “pollinator friendly” in a Federal Highway Administration case study.

You could say the federal government recognizes that INDOT's policy is “bee-utiful” to hummingbirds, honeybees, butterflies, and other animals and insects that are the main pollinators of wildflowers, crops and other plants.

“Doing right by the taxpayers also means doing the right thing for Mother Nature,” said Bill Fielding, roadside services coordinator. “Pollinator loss is a national crisis right now – it's affecting our food supply.

“Our Vegetation Management Policy – while reducing INDOT mowing and maintenance costs on highway ROWs – also improves the habitat for native plants, animals, and insects. This is a win-win situation for INDOT and the environment,” he said.

INDOT's policy also supports the federal government's pollinator program goals, which include reducing winter mortality for pollinators, increasing monarch butterfly populations, and restoring or enhancing 7 million acres of land for pollinators.



*INDOT's Vegetation Management program has increased native habitat while reducing the cost of maintaining roadway rights-of-way. Shown are native wildflowers blooming along I-70 in Clay County.*

Over the past three decades, INDOT, recognizing the need to promote native habitat and control invasive species, has studied ways to control weeds and increase native species along roadsides. In addition to these decade-long studies, INDOT recently conducted more intensive studies, leading to new vegetation management practices that have demonstrated habitat improvement benefits and cost savings.

As a result, INDOT last year adopted a vegetation management policy that includes reduced mowing and selective herbicide use to control invasive and noxious weeds that suppress native plants. Native plants are essential to ecosystem health and habitat for wildlife, including many species of pollinators. Noxious weeds include invasive plants that injure agricultural crops, natural habitats or ecosystems.

For example, black swallowwort is a threat to milkweed species, which monarch butterflies need to reproduce. Invasive species, such as Canada thistle, also out-compete many native plants that support pollinators, including monarch butterflies and honeybees.

In the 1990s, INDOT established the [Hoosier Roadside Heritage Program](#) to promote and incorporate native plants and wildflowers into Indiana's roadside landscape. Goals of the program are to enhance

plant pollination and the beauty of the environment, reduce erosion, minimize costs associated with mowing, lessen storm runoff, control invasive plant species and improve soil quality. In achieving these goals, the program has enabled more native grasses and wildflowers to be planted, which has resulted in reduced roadside mowing and decreased herbicide applications.

Although the Hoosier Roadside Heritage Program was successful in increasing native plants and wildflowers alongside our roadways, INDOT sought to identify new methods to expand and improve its roadside management program. To that end, INDOT solicited Purdue University in 2010 to study alternative vegetation management practices.

Based on positive research results, INDOT in July 2014 unveiled a plan for increasing the health of desirable vegetation to better manage roadsides, decrease long-range cost, and reduce invasive species in ROWs. The plan established four distinct primary mowing and vegetation management zones: Zone 1, which is essentially the paved road; Zone 2, a safety or clear zone; Zone 3, a selective zone; and Zone 4, where minimal vegetation management is used.

Zone 2 is now the only area INDOT mows. In Zone 3, INDOT manages for invasive weeds and woody vegetation. Zone 4 management practices are similar to those in Zone 3, except that the only woody plants managed are hazard trees.

INDOT also raised its mowing height from 4 inches high to 6 inches high to allow native plant roots to establish better and to reduce stress on native plants from mowing.

“As a result of our dedication to researching and testing different practices, we found that reduced mowing resulted in measurable cost savings and efficiencies from previous practices,” Fielding said. “For example, from 2012 to 2013, mowing dropped from INDOT’s third-most labor-intensive agency maintenance activity to the ninth-most labor-intensive activity.

“As a result, we were able to divert labor resources to other priorities – and save more than \$1 million in a single year,” he said.

Limiting mowing has provided more space for native vegetation and habitat, including pollinator habitat. These corridors attract ground-nesting birds, song birds, small mammals, and pollinators. Milkweed along roadsides provides monarch butterflies with more places across Indiana to lay eggs. In addition to milkweed, pollinator attractors like the monarda wildflower have helped increase bumblebee and honeybee populations along our roads.

“We’re going to continue using native plantings along ROWs and also continue working with experts to determine which native plants will best weather Indiana’s changing seasons,” said Fielding. “Overall, INDOT plans to continue expanding our vegetation management ‘toolbox’ to save money while preserving and enhancing Indiana’s natural environment.”

More information about INDOT’s [vegetation management policy](#) is available on our website.