

# Research Summary

## Pollinator Habitat Along Highway Right of Way

Pollinators are important components of our ecosystems, as well as being important contributors to agricultural production. Highway right of way (ROW) is one potential habitat for pollinators. The objectives of this study were to assess existing practices of other agencies for promoting pollinator habitat within the ROW and to identify potential locations for pollinator habitat in Missouri. The study methodology included a review of academic and practitioner literature, survey of state departments of transportation (DOTs), DOT interviews, and geographic information system (GIS) analysis.

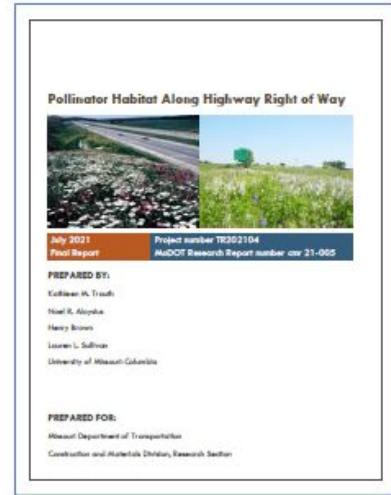
The academic literature review found a lot of interest in understanding how ROWs can be used as pollinator habitat. In general, the review found that planting pollinator habitat along roadways tends to increase pollinator abundance and diversity, and thus is recommended. The practitioner literature review found that various practitioner resources are available regarding site assessment, best management practices (BMPs), planting guidance, and other topics related to promoting pollinator habitat within the ROW.

Pollinators have a role in the agricultural economy in Missouri. This role is important, whether in producing the fruit or other plant parts that we eat, allowing plants to produce seeds, enhancing genetic diversity, or improving the size, shape, and quality of the fruit that is produced. The impact is on both specialty (i.e.,

fruits, tree nuts, vegetables, nursery and floriculture crops and other horticultural goods) and non-specialty crops (including soybeans, cotton), and on both large and small producers.

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In addition to the literature review, an assessment of DOT practices for promoting pollinator habitat within the ROW was undertaken through an online survey and DOT interviews. The survey, which included 16 questions, was reviewed by the Technical Advisory Committee before being sent to the DOTs for each state and the District of Columbia. The contact list for the survey was developed based on the member list for the AASHTO Committee on Maintenance. Responses were received from 46 DOTs for a 90% response rate. Results from the review of DOT practices indicate that the most frequently utilized methods for promoting pollinator habitat in the highway ROW are planting native species that benefit pollinators, limiting the frequency of mowing, and vegetation management practices.



Highway ROWs provide ample opportunities to enhance pollinator services which may also help improve biodiversity in adjacent areas.

Landscape connectivity and diverse vegetation are important for pollinators as they provide food, shelter and nest sites. GIS files transmitted with this report will allow MoDOT to examine the locations of upcoming projects to identify those warranting further consideration as pollinator habitat.



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Figure 1: Example information for milkweed from the Maine guide

### ***Project Information***

**PROJECT NAME:** TR202104—Pollinator Habitats Along Right of Way

**PROJECT START/END DATE:** December 2020-July 2021

**PROJECT COST:** \$60,000

**LEAD CONTRACTOR:** University of Missouri-Columbia

**PRINCIPAL INVESTIGATOR:** Kathleen Trauth

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### ***Project Manager***



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