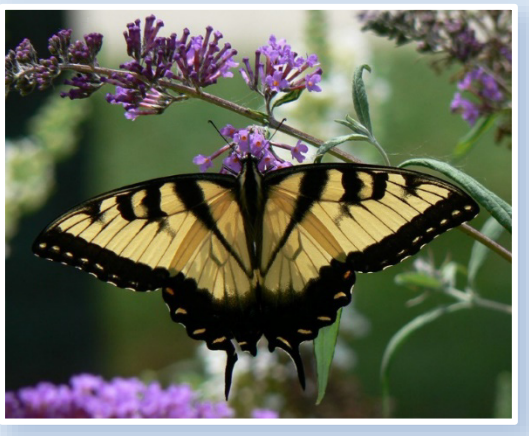
Supplemental Project Notice

POLLINATOR RESPONSES TO VEGETATION MANAGEMENT PRACTICES IN RIGHTS-OF-WAY



Papilio glaucus (Eastern Tiger Swallowtail)

PROJECT HIGHLIGHTS

By reducing critical scientific uncertainties regarding pollinator dynamics on transmission line Rights-of-Way (ROWs), this project will:

- Inform transmission line vegetation managers on the diversity of pollinators present on their ROWs
- Develop cost-effective Best Management Practices (BMPs) for the protection and promotion of pollinators on transmission line ROWs
- Provide a broad understanding of how to manage transmission vegetation to promote and protect pollinators across a wide variety of ecological settings throughout the country

Background, Objectives, and New Learnings

Insects, including bees, flies, wasps, beetles, butterflies, and moths, provide critical ecosystem services by pollinating flowering plant species and food crops. Global declines in pollinators, especially the highly visible decreases in honey bees, bumble bees, and butterflies, have brought into focus the importance of pollinator conservation. Electric transmission line rights-of-way (ROWs) have been proposed as early successional habitat that is likely very important for pollinators. Yet, little research has been done to demonstrate this.

EPRI has initiated a major study as part of Research Program 51: Transmission and Distribution Environmental Issues to learn how transmission ROW vegetation management affects pollinators. This research has included development of a preliminary field study protocol and testing on New York and Ohio study sites. We are now ready to apply the field study protocol to many more sites to build a national database of pollinator data that will inform ROW management for pollinators.

Objectives

Given the importance of this topic, studies are needed to investigate the relationship between ROW vegetation management techniques and the quality and abundance of pollinator habitat and assemblages. Research is needed to address foundational and fundamentally important questions, as follows:

- What is the baseline diversity of pollinators on powerline corridors?
- How do vegetation management treatments affect insect pollinators on transmission ROWs?
- What are cost-effective transmission vegetation management practices that can promote and protect pollinators?

New Learnings

Pollinator studies that implement EPRI's field study protocol have the potential to contribute to a broad understanding of how to manage vegetation to promote pollinators.

Each pollinator study contributes to an understanding of the importance of early-succession habitats to pollinators in a given ecological setting and region.

However, repetition of the same field study protocol in many different settings can clarify the importance of transmission ROWs to pollinators and how to manage vegetation to promote them.

As more companies apply the same study design and assess pollinators on their own sites, data can be shared and compared across individual studies in the base program. This creates a currently unavailable opportunity to merge datasets.

Benefits

Each study will include site-specific field studies in targeted transmission line ROW spans designed to yield an understanding of floristic and pollinator assemblages in each company's transmission line ROWs. Manipulative studies will allow utilities to gain an understanding of how specific vegetation management techniques affect pollinators. Adjustments to vegetation management strategies in response to new learnings will assist utilities in optimizing habitat for pollinator benefit within the framework of Integrated Vegetation Management (IVM) practice. In so doing, companies can meaningfully inform the conservation of pollinators in a cost-effective manner. Studies demonstrating a robust pollinator response to vegetation management may also be useful in informing federal and state protection plans for particular species, including protected species listings.

Project Approach and Summary

Year One: Systematic floristic and pollinator assemblage baseline observational studies will occur in measurement plots centrally located within three to four large operationally-treated plots of at least two to three acres in size in three separate and distinct blocks (defined as a collection of three or more treatment plots with uniform vegetation conditions on- and off-ROW).

Year Two: Planned manipulative vegetation treatment experiments will be conducted in the treatment blocks using herbicides and mechanical treatments. The approach assumes that electric utilities will conduct vegetation treatment, as indicated in the field protocols. Vegetation and pollinator response will be measured.

Years Three and Four: Vegetation and pollinator inventories will continue as vegetation and pollinators in the study plots respond to treatments implemented. Changes to the diversity and richness of pollinator assemblages are expected to continue as the low succession vegetation matures.

Deliverables

- Interim Reports - Interim reports in each year will describe study results and interim findings.
- Information Exchange/Webcasts - Bi-annual webcasts will be held to review draft results and solicit input from study participants.
- Final Report - Draft Final Report for review and comment by study participants. Final EPRI Report synthesizing findings and lessons learned for all study sites.

Price of Project

The price of participation in this project is $150,000 per year for four years, for a total commitment of $600,000. Partnership opportunities can offer significant cost savings for this project. Note that the price is sensitive to local market conditions and may be more or less. Companies that fund any EPRI program can use Self Directed Funds (SDF) funds for up to half their contribution or companies that have not purchased any EPRI program may participate through co-funding.

Project Status and Schedule

Work can begin immediately.

Who Should Join

This project is open to all EPRI members. Electric utilities and other companies, such as pipeline companies, currently implementing vegetation management studies on their ROWs are encouraged to participate.

Contact Information

For more information, contact the EPRI Customer Assistance Center at 800.313.3774 (askepri@epri.com).

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