



Project Impacts

NSRC-FUNDED RESEARCH FINAL REPORT

Powerline Rights-of-Way Provide Habitat for Declining Bird Species



PROJECT AWARD YEAR AND TITLE:
2013

*Powerline Rights-of-Way and Population
Declines in Early Successional Bird Species:
Making Connections with Private Landowners*

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Wildlife species that rely on early successional habitat are showing long-term declines in the Northeast region. This includes songbirds such as Eastern Towhee, Field Sparrow, Prairie Warbler, Blue-winged Warbler, Golden-winged Warbler, and Brown Thrasher. In areas where vegetation structure is actively maintained in early successional stages, such as along powerline rights-of-way, there is an opportunity to provide habitat for these species over long time frames.

NSRC researchers investigated habitat use of these six early successional bird species in the Champlain Valley of Vermont along powerlines. Researchers established 34 study sites with potential suitable habitat along Vermont Electric Company rights-of-way. At each site during the songbird breeding season, trained citizen scientist volunteers used a spot-mapping technique to record bird species' distribution patterns along transects at all sites. Where these bird species were encountered, landcover types were recorded every 20 meters. Researchers evaluated fine scale habitat use by GPS mapping individual bird use areas during timed field observations. Detailed 1-square-meter vegetation plot data were collected for all sites where bird species were mapped to measure used and available habitat characteristics.

Preliminary analyses show bird species-specific relationships with vegetation composition. For instance, Blue-winged Warblers may be outcompeting Golden-winged Warblers for higher quality native shrub habitat versus lower quality invasive shrub habitat. This research provides preliminary habitat use patterns that can be integrated into vegetation management strategies. Management of early successional shrubland on powerline rights-of-way can provide essential habitat for declining shrubland songbirds. Findings will also help to promote habitat corridors for critical songbird migration pathways in the Northeast region.

