



Project Impacts

NSRC-FUNDED RESEARCH FINAL REPORT

Impacts of Windstorm and Salvage Harvest on Regeneration and Biodiversity in the Northern Forest

PROJECT AWARD YEAR AND TITLE:

2015

Impacts of Windstorm and Salvage Harvest on Regeneration and Biodiversity in the Northern Forest

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The goal of this research is to evaluate ecological responses of northern forests to windstorm with or without subsequent salvage harvest to inform future forest management. NSRC researchers will quantify the individual and cumulative effects of wind disturbance and salvage harvest on forest composition and structure. They are measuring tree species composition and biomass of remnant canopy trees, abundance of coarse woody debris, and tree regeneration levels by species and density. They will also quantify the effects of wind disturbance with and without salvage harvest on stand-level biodiversity by comparing species richness and diversity of understory vegetation and ground-dwelling arthropods across sites.

Preliminary results indicate within site differences in herbaceous plant community composition between the 2013 and 2014 growing seasons, suggesting an early dynamic response to windstorm and salvage harvest treatments. Researchers are currently comparing differences in insect and plant populations between treatments.

Outcomes of this research will contribute to the expansion and consistency of sustainable forest management in New England. Research findings may prompt forest managers to explicitly plan for post-disturbance management in anticipation of more frequent windstorm events. This advanced planning would allow for management decisions more in line with overall forestry goals ahead of unanticipated windstorm events. Additionally, herbaceous plant and ground-dwelling arthropod biodiversity results of this project will add clarity to our understanding of ecological mechanisms that maintain biodiversity.



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