

Project #: T-23-P-001 – Final Report

Project Title: Critical grassland/savanna habitat for Eastern Massasauga Rattlesnake and other grassland species.

Purpose:

The purpose of this project is to expand the range of the Eastern Massasauga Rattlesnake (EMR) and other grassland species at South Shore State Park and Eldon Hazlet State Park on Carlyle Lake by: 1) Managing and enhancing existing known Massasauga habitat; and 2) restore additional habitat, dominated by autumn olive and other exotics, which is adjacent to known EMR habitat into grasslands. The increase in habitat will expand the range of the EMR, a state-endangered species, as well as other grassland species. Carlyle Lake is the last stronghold of this state-endangered species.

Summary of Progress:

1 - Managing and enhancing existing Massasauga habitat (with a focus on follow-up treatment of 200 acres in original project):

An estimated 650 acres received winter mowing during this project to control succession. These areas are either known hibernation sites, or adjacent to hibernation sites or show historical snake hits according to Illinois Natural History Survey data base for the EMR. (A snake hit is either a confirmed road kill or a confirmed sighting of an EMR).

Approximately 1,029.78 acres were controlled burned during this project to control successional growth and to increase grassland habitat.

Follow-up treatment and hand-cutting on autumn olive sprouts, garlic mustard, sericea lespedeza and Japanese silt grass was applied to the main hibernation site and adjacent areas at South Shore State Park through contractual work with BackForty Landscaping and park staff during this project. IDNR also cleared additional 40 acres with the bullhog at Eldon Hazlet State Park around known EMR habitat to increase habitat. BackForty Landscaping followed with herbicide treatment of the stumps and regrowth in this 40 acres.

In August of 2013, Kash Helicopter Services conducted aerial spraying at South Shore State Park. Over 35 acres of habitat next to the largest known EMR hibernation site in the Midwest was treated to control exotic/invasive species as well as successional growth. This project was a huge success. The spraying was conducted in a safe, efficient and professional manner and after searching the area and reviewing aerial photos I estimate 80% brown-out.

A variety of native prairie flowers (approximately 1,200 plants) were hand-planted at Eldon Hazlet State Park to supplement the prairie restoration throughout the project. Approximately, 800 pounds of prairie forbs/grass seed was frostseeded or drilled into the SWG areas.

2 – Restoring 80 acres of successional growth, dominated by autumn olive and other exotics, that is adjacent to known EMR habitat, into grasslands):

IDNR staff and contractors cleared 302 acres during this project exceeding the goal of 280 acres using a variety of methods. Using the bullhog, handclearing, winter mowing, and aerial spraying were the methods used, with aerial spraying being the most efficient.

Part of this objective was to clear 14.4 acre sweet-gum plantation that was planted 35 years ago. This objective was not completed as a result of staff retirements and transfers. However, as a result of the bullhog efforts and winter mowing over 100 acres of successional growth and exotic/invasive growth were cleared next to known EMR habitat to meet and surpass the goals of the SWG objectives.

Chemicals used during project:

60 gallons of Element 3a

90 gallons of glyphosate

80 gallons of Pastureguard

75 gallons of Element 4a

Contractor for aerial spraying also supplied 30 gallons of Pastureguard.

Providing the work was DWB Kent Boyles, Forester Mark Koch, Master Gardener Volunteer Tom James, NHB Mark Phipps, retired NHB Marty Kemper, Dr. Mike Dreslick and his staff, park staff and myself. Tom James maintains a prairie forb seed propagation nursery in the park so they can collect, grow and plant native wildflowers at the park to supplement the prairie restoration efforts.

I would like to thank all IDNR staff (current and retired) and the Illinois Natural History Survey for the labor and technical support during this project.

It is extremely important that follow-up work continue in these SWG areas to maintain and improve the upland habitat that was created during this project.