

Great Lakes Fish and Wildlife Restoration Act

FINAL Project Report Template

** Note that the GLFWRA legislation mandates that this report be made available on a public website once USFWS and Sponsor Review has been completed and the Report has been officially accepted.

Project Title: Restoring Wetland Habitat for the Federally-Threatened Northern Distinct Population (DPS) of the Copperbelly Water Snake

Project Sponsor: Ohio Department of Natural Resources, Division of Wildlife (ODOW)

FWS Agreement Number: F11AP00106. This agreement was amended on 9/14/2012 to extend the period of performance one-year. The amendment number was F11AP00570.

Principal Investigator(s): (1) Russ Terry, (Principle Applicant), Ducks Unlimited, Inc., 1220 Eisenhower Place, Ann Arbor, MI 48108, rterry@ducks.org; (2) Scott Butterworth, Ohio DNR-Division of Wildlife, 952-A Lima, Ave. Findlay, OH 45840, Scott.Butterworth@dnr.state.oh.us; (3) Bruce Kingsbury, Indiana-Purdue Univ. Ft. Wayne. Science Building, Indiana-Purdue University, Fort Wayne, Indiana 46805-1499, kingsbur@ipfw.edu

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Study Objectives:

1. Restore five acres of seasonal wetlands.
2. Improve wetland hydrology to five acres of existing mature forest by disabling sub-surface drain tiles and/or by enhancing natural contours.
3. Reforest twenty-seven acres of row crop agricultural land (uplands).
4. Restore seven acres of row crop agricultural land (uplands) to native grassland habitat.

Description of Tasks:

1. Establish project agreements. (a) Ducks Unlimited (DU) and the U.S. Fish and Wildlife Service (FWS) entered into cooperative agreement number F11AP00106 on 9/27/2011, (b) DU and the Ohio Division of Wildlife (ODOW) entered into cooperative agreement number US-OH-93-1 on 1/24/2012, (c) Cooperative agreement F11AP00106 was amended on 9/24/2012 to extend the period of performance by one-year. This amendment number was F11AP00570.
2. Secure NEPA and NHPA clearances.
3. Restore seasonal wetlands and improve wetland hydrology (Study Objectives 1 and 2). (a) DU's engineering staff used GPS-based survey equipment to conduct a topographic survey of the entire project area, (b) DU's engineering and biological staff and ODOW staff used the topographic survey data as the basis for selecting wetland restoration sites. DU's engineers then worked with biological staff from DU and ODOW to develop the restoration design that maximized the amount of wetland restored and provided optimal ability to manage wetland water levels, (c) DU bid this project component to multiple

contractors in October 2012. Dragline Works was the successful bidder and was hired to conduct the wetland and hydrological restoration components of the project, (d) Dragline works disabled sub-surface drain tiles, constructed low-level earthen berms, performed shallow excavation of soils, and installed water control structures to restore 6 seasonal wetland basins and restore hydrology to mature forest totaling approximately 9.7 acres toward an objective of 10 acres, (e) DU engineering staff provided construction management services for this project component.

4. Enhance restored wetland habitat for copperbelly water snakes. (a) The ODOW cut, hauled and placed approximately 20 trees in the restored wetland basins to provide additional habitat for copperbelly water snakes and other wildlife, (b) DU hired Reforestation and Wildlife Services (see item 5 below for additional details) to plant 200 buttonbush shrub plugs in the restored wetland basins.
5. Reforest upland agricultural land (Study Objective 3). (a) DU bid this project component to multiple contractors in April 2013. Reforestation and Wildlife Services was the successful bidder and was hired to provide the tree planting services, (b) Reforestation and Wildlife Services mechanically planted 12,550 bare-root tree seedlings and hand-planted 200 container trees (including pin oak, bur oak, swamp white oak, white oak, northern red oak, sugar maple and shagbark hickory) that led to the reforestation of 26 acres of upland agricultural land toward an objective of 27 acres, (c) the contractor applied herbicide at the time of planting to assist with weed control and seedling survival, (d) the ODOW mowed in-between planting rows to suppress weeds.
6. Restore native warm season grass habitat (Study Objective 4). (a) The ODOW used a no-till drill to plant a mix of big and little bluestem, Indian grass and a variety of forbs in 6 acres of upland agricultural land toward a goal of 7 acres, (b) ODOW applied Plateau herbicide post-planting to suppress weeds and reduce competition with the planted grasses.
7. Public relations. (a) ODOW erected a GLRI sign on site that was provided by the USFWS, (b) DU and ODOW created a project-specific sign that lists all project partners and describes the details of the project and erected it on site, (c) DU presented information about this project at the annual Ohio DU state convention in 2012 and 2013, (d) This project is referenced in the 2012 annual Ohio Conservation Report (and will be featured in the 2014 report as well). This report is made available to DU members, volunteers, major donors and partners in Ohio.

Executive Summary/Abstract for Project:

With funding support through the U.S. Fish and Wildlife Service's Great Lakes Fish and Wildlife Restoration Act, Ducks Unlimited and the Ohio Division of Wildlife restored approximately 41.7 acres of habitat on the Petee property of Lake LaSuAn Wildlife Area in Williams County, Ohio. The 41.7 acres of habitat work includes the restoration of six basins totaling 9.7 acres of seasonal wetlands and restored hydrology to mature forest, the reforestation of 26 acres of uplands adjacent to the restored wetlands, and 6 acres of native warm season grass establishment. Habitat restoration on the Petee property will benefit the federally-threatened northern distinct population of the copperbelly water snake, waterfowl, and a diversity of other wetland and upland-dependent wildlife, will improve water quality, and provides additional places for public recreation and wildlife viewing.

Major findings and accomplishments:

This was a habitat restoration project and therefore the accomplishments are listed as acres restored. The project resulted in 41.7 acres of habitat restoration toward an overall objective of 44 acres restored as displayed in the table below.

Study Objective	Proposed Acres	Actual Acres	Difference
Restore seasonal wetlands/Improve wetland hydrology to mature forest*	10	9.7	-0.3
Reforestation of uplands	27	26	-1.0
Restore native warm season grasses	7	6	-1.0
TOTAL	44	41.7	-2.3

*These study objectives were combined.

The proposal indicated that 44 acres would be restored by this project. This goal was not met. The entire property where the restoration work is occurred is 44 acres in size and not all of it is available for restoration (for example, the old homestead was not restored). In addition, in the proposal acres were ‘double-counted’ because some of the 5 acres of seasonal wetland restoration are the same acres as the 5 acres of enhanced hydrology in mature forest. This project resulted in the restoration of 41.7 acres of wetlands, forest and native grasses toward a 44-acre goal (95%).

Management implications of your work:

The northern distinct population of copperbelly water snake is a federally-threatened species. The largest remaining population occurs in Williams County, Ohio where this project was conducted. Copperbelly water snakes have specific habitat requirements, requiring extensive complexes of small, isolated wetlands distributed among forested uplands. To provide suitable foraging habitat, the wetlands should be free of fish, contain woody debris, and have irregular, shallow shorelines. Adjacent forested uplands provide cover for snakes moving among wetlands. This project is thought to be the only known attempt to restore a habitat complex specifically for the largest remaining population of copperbelly water snakes in the northern distinct population. The restoration of 9.7 acres of seasonal wetlands completed under this project was specifically designed to ensure they provided optimal foraging habitat for copperbelly water snakes. Furthermore, the habitat restored through this project will have direct application to the multi-state habitat restoration and population recovery efforts identified in the U.S. Fish and Wildlife Service’s Recovery Plan for this species.

Additional restoration work needed and/or areas for future research:

None identified.

List of presentations delivered and outreach activities:

1. GLRI signage displayed on the project site (sign was provided by the U.S. Fish and Wildlife Service).
2. Project-specific signage that includes a list of partners and funding sources and describes the details of the project was created by DU and ODOW and is displayed on the project site.
3. DU presented information about this project at the annual Ohio DU state convention in 2012 and 2013 (and will again in February 2014).

4. This project is referenced in the 2012 annual Ohio Conservation Report (and will be featured in the 2014 report as well). This report is made available to DU members, volunteers, major donors and partners in Ohio.

Include relevant pictures or images associated with the project: Please submit pictures as separate electronic image files.

Digital images of the project are provided separately on a CD.

Geographic region project occurred in or effects:

This project is located on the Petee property of Lake LaSuAn Wildlife Area in Williams County, Ohio. The approximate center of the Petee property is: 41⁰ 41' 22.07" Longitude and -84⁰ 42' 42.78" Latitude.

List of reports and peer-reviewed papers completed or in-progress:

None.