



LEWS NEWS



Photo: M. Seymour, USFWS

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Protecting Lake Erie's Natural Heritage

LEWS, the Endangered Species Act, and Private Landowners—What Does it All Mean?

Probably everyone on the islands knows that the LEWS is a threatened species. Likewise the bald eagle (which nests on several islands) was a threatened species until a few weeks ago. Maybe you are also familiar with some other endangered or threatened species like the manatee, gray wolf, and spotted owl. Many people have heard of controversies surrounding endangered species, or have heard that endangered species stopped development projects or prevented landowners from doing what they want on their property. So what is the real truth? What does the Endangered Species Act (ESA) say and how does it apply to different projects? If you're like me, government high school class was a very long time ago, and not all that interesting, so the legal authorities of the ESA probably escape you at this time. This issue of LEWS News will briefly introduce some basics of the ESA and how it applies to you, the island landowner. We'll also see how the ongoing LEWS research relates to the ESA.

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The law in question is the Endangered Species Act of 1973, as amended. This is a federal law "To provide for the conservation of endangered and threatened species of fish, wildlife, and plants, and for other purposes." Basically the ultimate goal of listing a species under the ESA is to recover it so it no longer needs the protection of the ESA. The ESA is administered by the Department of the Interior—Fish and Wildlife Service (FWS).

Once a species is listed as either endangered or threatened, the ESA prohibits the following actions:

- 1) import and export of the species
- 2) "take" of listed fish and wildlife species (defines take as: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct)
- 3) possession, transportation, and sale of the species

These prohibitions apply to every person and entity. Exceptions can, however, be authorized with a permit from the FWS in some cases: for scientific study of the species; for activities that enhance the propagation or survival of the species; or for take that is incidental to carrying out an otherwise lawful activity if a conservation plan was first agreed upon and if the take would not appreciably reduce the likelihood of survival and recovery of the species in the wild.

The government holds itself to a higher standard: The ESA requires that all federal agencies consult with the FWS to utilize their authorities to carry out programs for the conservation of endangered and threatened species and to insure that any action (see ESA pg. 2)

(ESA from pg. 1)

a federal agency authorizes, funds or carries out does not jeopardize the continued existence of any endangered or threatened species.

When a federal agency authorizes a permit or funds a project, they must first evaluate how that action will impact federally-listed species and their habitat. On the islands, this is particularly applicable when a project impacts Lake Erie or the shoreline, which requires a permit from the U.S. Army Corps of Engineers (Corps). The Corps must consult with the FWS to determine if adverse effects to, or take of LEWS will occur. In many cases, all adverse effects and take can be avoided by implementing measures, such as excavating only during the summer and using snake-friendly structures (such as crib docks). In other cases, all adverse effects and take cannot be avoided, and a more detailed consultation process ensues.

How does the ESA apply to private landowners?

- 1) You cannot take, import, export, transport, possess or sell LEWS
- 2) If you are proposing work that requires a permit from the Corps you will have to incorporate measures into your project to avoid and/or minimize adverse effects to LEWS
- 3) If you are proposing an "otherwise lawful activity" within an area where the LEWS occurs, and that activity could cause take, you should contact FWS to see how to implement measures that will avoid incidental take, or if take cannot be avoided, develop a conservation plan.

Can the ESA or the presence of a listed species stop a project? No. In situations where the take associated with a project would jeopardize the continued existence of the species the FWS cannot authorize the proposed take, and advises the federal agency that they may cause jeopardy and of the potential consequences if they proceed. The FWS is then required to work with the project proponent to devise an alternative that would not cause jeopardy. Developing a conservation plan or implementing measures to protect a species can take time to complete. Therefore anyone proposing a project that may cause take should contact FWS early to determine how best to address the issue.

~Megan Seymour
U.S. Fish and Wildlife Service

Nerodio 2007 Summary and North Bass Island Population Update

Nerodio 2007, our annual Lake Erie Watersnake population census, took place from 28 May – 10 June. This year's census demonstrated the continued recovery of this federally threatened species. Nearly 1700 watersnakes were captured, measured, marked, and released during the two week census period and more than 20 individuals participated, including current and former NIU students, students from other colleges and universities, professional herpetologists, area naturalists, and island-region residents. Among new participants this year were Dr. Bruce Kingsbury, professor of biology at Indiana University-Purdue University Fort Wayne, and Dr. Bob Brodman, professor of biology at Saint Joseph University. In addition, Dr. Francisco ('Paco') Moore and 18 members of his University of Akron herpetology class joined us for a day of snake and salamander hunting on Kelleys Island. *Nerodio 2007* ended with a one-day *Kid's Nerodio* and *Herpetology Open-House*. See the related articles on pages 4-5 for a summary of these events.

One objective of *Nerodio 2007* was to obtain especially complete census data for North Bass Island. This island is of special interest because of the four large U.S. islands (Kelleys, South Bass, Middle Bass, North Bass), it is the only one for which some question remains regarding whether the island-specific population criteria specified in the Lake Erie Watersnake Recovery Plan has been met. North Bass Island was censused three times during *Nerodio 2007*. Together with one census conducted before *Nerodio 2007* and one following *Nerodio 2007*, 379 Lake Erie watersnake captures were recorded. These data were used to generate updated estimates of the watersnake population size on North Bass Island through 2006.

The good news is that the current watersnake population size clearly exceeds the population size criterion of 410 adults for North Bass Island. Once field work is completed for the year, updated population estimates will be generated for all study sites censused during 2007.

~Dr. Rich King
Northern Illinois University



Nerodio 2007 focused on ensuring complete census data for North Bass Island. Researchers are now confident that North Bass is meeting its LEWS population recovery goal. Photo: M. Seymour, USFWS

LEWS Recovery—How Soon Can LEWS be Delisted?

As described in the cover article, the ultimate goal of listing a species under the Endangered Species Act (ESA) is to eventually be able to delist the species. To this end, the ESA requires that a recovery plan be developed for each listed species. The recovery plan must identify objective, measurable criteria which, when met, would result in the species' removal from the list. The LEWS recovery plan was completed in 2003 and set out three criteria for delisting:

Criterion 1: Population Persistence: Estimated adult LEWS population size reaches or exceeds ALL of the following numbers for a period of six or more consecutive years:

Total U.S. population: 5,555
 Kelleys: 900
 South Bass: 850
 Middle Bass: 620
 North Bass: 410

Criterion 2: Habitat Protection and Management: Minimum amount of habitat protected and/or managed to benefit the LEWS in perpetuity is distributed among the islands as follows:

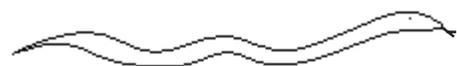
Total protected habitat: 4.6 mi of shoreline and 126 ac of inland habitat within 226 ft of the shoreline
 Kelleys Island: 0.75 mi shoreline, 20.5 ac inland
 South Bass: 0.70 mi shoreline, 19.3 ac inland
 Middle Bass: 0.51 mi shoreline, 14.1 ac inland
 North Bass: 0.34 mi shoreline, 9.1 ac inland

Criterion 3: Reduction of Human-induced Mortality: Objective analysis of public attitude on the islands indicates that intentional human persecution is no longer a significant threat to the continued existence of LEWS and accidental human-induced mortality has been reduced to the maximum extent practicable and no longer represents a significant threat to the population.

In order to achieve these Criteria, FWS has been working with ODNR, researchers, non-profits, and island landowners. For example, “Nerodio” is done to get the information needed to estimate population size. Agreements between ODNR and FWS resulted in all ODNR island properties counting towards the “habitat protection and management” goal. Easements on private land through Lake Erie Islands Chapter of Black Swamp Conservancy will also count toward the habitat goal. Distribution of educational materials, signage, and LEWS News, and the presence of the Island Snake Lady have all focused on decreasing human-induced mortality.

Recovery of LEWS has been progressing at record speed. The populations are on track and as of 2006, all LEWS populations have met the goals for three consecutive years. The only habitat still needed to fully achieve the protected habitat criterion is 4.91 acres within 69 meters of shore on South Bass. Surveys of public opinion are planned in 2008 to gauge whether or not human-induced mortality is a significant threat to the LEWS. If all continues to go well, it is possible that the FWS will begin the delisting process for the LEWS in the fall of 2009.

~Megan Seymour
 U.S. Fish and Wildlife Service



Nerodio Kids Day 2007 Educating the Next Generation

When Stone Lab's Kristin Stanford started Nerodio in 2002, it was a way to collect as many Lake Erie Watersnakes as possible. "We needed to track the number of these federally threatened, state-endangered snakes around the Lake Erie islands to determine if the species was rebounding," says Stanford. She got a group of volunteers together, named it "Nerodio," and a two-week tradition of snake wrangling began. The word, Nerodio, itself is a clever combination of the snake's genus name, "Nerodia" and the word "rodeo" since as Kristin points out, they're roundin' up snakes. Over the years, her Nerodio crew has grown to more than 30 loyal volunteers who, within a two-week period every May, scour the nine U.S. Lake Erie islands to track, catch, and tag more than 1,500 watersnakes.

With her recent exposure on Discovery Channel's *Dirty Jobs*, however, Stanford realized her snake audience not only got bigger, but also much younger. "I had kids 3, 7, 12-years old over the last year come up to me completely enthralled with what we did on the show," says Stanford. "They knew every minute (of the episode) by the dozens of times they watched it and they still wanted to learn more about the snakes. We thought why not broaden Nerodio to include the next generation of snake conservationists?" And so a new tradition, Nerodio Kids Day, began.

Sponsored by Ohio State's Stone Laboratory and Ohio Sea Grant, Northern Illinois University, Cincinnati's Herpetology Club, and Northern Ohio Association of Herpetologists, Stanford and her Nerodio crew took 18 kids ages 10 to 13 to Middle Bass Island for a day to do the same type of snake catching, tagging, and releasing that Mike Rowe, the *Dirty Jobs* host, had done.

Equipped with their snake-catching gloves and pillowcases to hold their slithering treasures, the kids hiked from one snake mat to another, hoping to snag a few snakes and help add to the snake census count. After catching more than 20 snakes, Stanford showed the kids how to determine the snakes' sex, weigh them, and scan them. While one group of kids peeked under rocks for snakes by the shoreline, the other group took their turn learning how to track

snakes using radio telemetry. "Each snake's tag has a specific number that we can input into the tracker and follow the snake's tag," explains Meg Crary, Nerodio volunteer and Stone Lab student. "The closer you are to that snake, the closer and louder the beep."

As the morning wound down, the Nerodio Kids joined the rest of the public at the Stone Lab Herpetology Lab Open House, where they helped process the snakes and had the opportunity to see and hold more than 30 different species of amphibians and reptiles brought in by the event sponsors.

At the end of the day, the kids left sporting their new Nerodio Day t-shirt, a Stone Lab back pack and a "Respect the Snake" temporary tattoo. With the success of this year's event, plans are already in the works for a Nerodio Kids Day 2008!

~Jill Jentes Banicki
Ohio Sea Grant Communications



"It didn't even really hurt", says Arthur Wolf as he and Kristin Stanford check out a snake bite he received after helping researchers catch LEWS during Nerodio Kids Day. Photo: Jill Jentes-Banicki, Ohio Sea Grant

Frogs, Turtles, and Snakes . . . Oh My!

Put-in-Bay was crawling with reptiles and amphibians Saturday, June 9th, as Ohio State's Stone Lab hosted the first ever Herpetology Lab Open House. The Open House, led by the Island Snake Lady, Kristin Stanford, and her research team along with volunteers from the Greater Cincinnati Herpetological Society (GCHS), and the Northern Ohio Association of Herpetologists, invited children of all ages to learn about reptiles and amphibians from around the world, including the federally threatened, state-endangered Lake Erie Watersnake.

"Lake Erie Watersnakes are the nastiest, dirtiest, and smelliest snakes out there," explains Stanford. "But it's important for the public to see the recovery of this species. This Open House is a great way to educate people by using hands-on conservation activities."

The lab, located in a long, high-ceiling room in a century-old building overlooking the bay, was crowded with small glass tanks, large aquariums, giant fish-filled tanks, jars filled with formaldehyde-preserved specimens, laptops, and scientific equipment. Throughout the day, visitors wandered through the doors and were able to witness a firsthand glimpse of scientific research. Undeterred by the snake-filled pillowcases lying on workbenches and on the floor, or the peculiar odor of the Lake Erie Watersnake (when it feels threatened it sprays musk and feces as a defense) visitors were fascinated. Among the scaly creatures on display were California king snakes, Pueblan milk snakes, plated lizards, yellow water snakes, Honduran milk snakes, blue-tongued skinks, and bearded dragons.

"I'm very happy with the turnout," says Todd Rosenhoffer, one of four members of the GCHS who volunteered to help at the Open House. "I'd estimate that we had well over 500 people come through." Rosenhoffer and other GCHS members staffed the upper floor of the lab while curious folks came and went throughout the day. Among the snakes and amphibians on display were more than 30 species from Australia, Africa, and South America. Visitors as young as three years old came through to look at, ask questions about, and even handle the snakes.

Later that afternoon, the Nerodio Kids Day participants spent the last few hours fishing off the Stone Lab docks. "Right now I'm fishing for the program, for gobies," states 10-year old Elise Torrence from Bexley, Ohio. "They're a favorite of the Lake Erie Watersnake. We're going to take them and feed them to the snakes," she says, explaining another scientific experiment about digestion rates that Stanford and her team would conduct later that week.

"These kids really stepped up to the plate," Stanford emphasizes, during the afternoon fishing. "It's important because these kids are our next generation. Our work won't matter unless they embrace what we're doing now."

~ James Proffitt
Ohio Sea Grant Communications



Photo: Valerie Mettler

The Lake Erie Islands Chapter of the Black Swamp Conservancy held five sessions of its ever popular Nature Camp for local students ages 4 to 15. Hands down the most popular segment is Snakes with Kristin Stanford. In July the group of twenty Environmental Adventure Campers, ages 9 and 10, were treated to a morning beach walk with Kristin in search of their favorite, the Lake Erie Watersnake. Once captured, the snakes were placed in bags for transport. Arriving back at the camp with several bags of snakes, Kristin and the campers set about to weigh, measure and identify the snakes before releasing them back to their habitat. In this photo, Kristin scans a LEWS found on South Bass Island State Park's beach. They discovered that this snake was born in Kristin's lab almost three years ago and then released.

Respect the Snake and Win Cool Stuff!

Visit <http://Respectthesnake.com> and use the website to answer the questions below. **The first ten people to submit their answers to: Megan_Seymour@fws.gov will win a cool Respect the Snake magnet!**

1. The goal of Respectthesnake.com is not necessarily to convert the masses into ‘snake lovers’, but rather to encourage and promote mutual respect for _____?
2. What is the Lake Erie Watersnake’s scientific name? (Hint: it is 3 words long)
3. In the “Landowner Guidelines for Living with LEWS” there are several methods for dealing with problem LEWS. Name two.
4. In which Volume of LEWS News did the article, “The Meaning of the Endangered Species Act” appear?
5. Early research on LEWS sought to find where the snakes spent the winter. These areas are called what?

Good Luck!



U.S. FISH AND WILDLIFE SERVICE
6950 AMERICANA PKWY.
SUITE H
REYNOLDSBURG, OH 43068-4127

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