



U.S. Fish & Wildlife Service - Midwest Region

Fisheries & Aquatic Resources Program

# *Fish Lines*



It's Time to Look for  
Winged Mapleleaf

Silver Creek Super  
Project Completed

A Day Stern  
Trawling on the  
Missouri River

Sturgeon at the  
Extremes

Hatchery Fall Fest  
at Jordan River  
NFH



Vol. 10 No. 12



U.S. Fish & Wildlife Service

# Fisheries, Midwest Region

Conserving America's Fisheries



VOL. 10 NO. 12

*In this Issue*

## Field Focus

### [Ashland, WI Fish and Wildlife Conservation Office](#)

Understanding Lake Trout Population Diversity at Lake Superior's Isle Royale ....[Read More](#)

## 2012 Issues

### [Current Edition PDF](#)

[Vol. 10 No. 9 - Sept 2012](#)

[Vol. 10 No. 8 - August 2012](#)

[Vol. 10 No. 7 - July 2012](#)

[Vol. 10 No. 6 - June 2012](#)

[Vol. 10 No. 5 - May 2012](#)

[Vol. 10 No. 4 - April 2012](#)

[Vol. 10 No. 3 - March 2012](#)

[Vol. 10 No. 2 - February 2012](#)

[Vol. 10 No. 1 - January 2012](#)

## Archive

[2012](#) [2011](#) [2010](#) [2009](#) [2008](#)

[2007](#) [2006](#) [2005](#) [2004](#) [2003](#)

## Editorial Staff

[Tim Smigelski, Editor](#)

[Katie Steiger-Meister, Assistant](#)

[Karla Bartelt, Webmaster](#)

## Subscribe

[Subscribe Now!](#)



### It's Time to Look for Winged Mapleleaf

September brings the beginning signs of fall. Along with cooler temperatures...[Read More](#)



**It's Time to Look for Winged Mapleleaf**



**Silver Creek Super Project Completed**



**A Day Stern Trawling on the Missouri**



**Sturgeon at the Extremes**



**Hatchery Fall Fest at Jordan River NFH**

## Fish Tails

"Fish Tails" refers to articles that are entered by field staff in the U.S. Fish and Wildlife Service's Field Notes website, but are not published in the current edition of Fish Lines. These articles provide examples of the diverse work that the Service's Midwest Fisheries Program and partners perform on behalf of our aquatic resources and for the benefit of the American public. To view these articles, click on the links below. Enjoy!

1. [Fish Habitat Partnerships and Landscape Conservation Cooperatives Drive Science to Predict Changes in Aquatic Systems](#)
2. [Creating Efficient Conservation Actions Through Collaboration and Sound Science](#)



## Understanding Lake Trout Population Diversity at Lake Superior's Isle Royale

BY MARK BROUDER ASHLAND FWCO

### Ashland Wisconsin Fish and Wildlife Conservation Office



Ashland FWCO fish biologist Henry Quinlan compares notes and personal accounts about Isle Royale lake trout with retired commercial fisherman Stewart Sivertson. Credit: Chuck Krueger

In the late 1800s, commercial fisherman of Lake Superior's Isle Royale would set out in wooden boats from their fish camps tucked away inside the protected harbors of the island, and row to their favorite fishing grounds of the open waters in hopes of catching lake trout and other species. Back then, 350 to 400 foot cotton twine nets, weighed down with stones and kept afloat by wooden floats, were set and retrieved by hand on the shallow reefs adjacent to deeper water – the spawning grounds for lake trout.

With the National Park Service, the Ashland Fish and Wildlife Conservation Office (FWCO) is working to delineate and describe the genetics and morphological characteristics of the spawning lake trout populations around Isle Royale National Park. Based out of one of the historic fishing camps of the Sivertson Fishery, Ashland FWCO biologists set out in the aluminum-welded R/V Chub, powered by twin 200 HP Mercury outboard engines, outfitted with radar, marine radios, and other electronics, to set

gangs of multi-filament nets, weighed down with metal weights and kept afloat with plastic floats.

Retrieval of these nets is with a diesel-powered, hydraulic lifter. Biological information such as length, weight, sex, and maturity is collected for each lake trout captured. A digital photograph of each lake trout collected is also taken, which will later be used back in the lab along with computer software to help describe the morphological (i.e., body size and shape) differences of spawning lake trout. Lastly, a tissue sample is taken from each fish and preserved for later examination of the genetic makeup of each spawning lake trout population.

The lake trout has long been an iconic species at Isle Royale National Park, supporting a thriving commercial fishery prior to the establishment of the park, and for decades since a popular recreational fishery within park boundaries. Populations of lake trout from Isle Royale very likely support recreational fishing outside of park boundaries, as well.



The R/V Chub docked outside Sivertson Fish Camp. Wooden boats like the ones at left, were rowed out to lake trout spawning reefs before modern boats, motors and electronics became available. Credit: Great Lakes Fishery Commission

Information gathered from this project will allow Fish and Wildlife Service, National Park Service and Michigan Department of Natural Resources managers to assess the potential impacts of fishing pressure and harvest, environmental changes, or catastrophic decline due to stressors such as habitat change, invasive species, and pathogens. In addition, a greater understanding of the aquatic landscape features contributing to the diversity of lake trout populations around Isle Royale National Park will contribute greatly to lake trout restoration efforts elsewhere across the Great Lakes.



Ashland FWCO fish biologist Josh Schloesser measures lipid content of lake trout, testing the hypothesis that different stocks of lake trout can be distinguished by their lipid content. Credit: Mike Seider



U.S. Fish &amp; Wildlife Service

## Fisheries, Midwest Region

Conserving America's Fisheries

### When the Leaves Begin to Change it's Time to Look for Winged Mapleleaf

BY NATHAN ECKERT GENOA NFH

September brings the beginning signs of fall. Along with cooler temperatures and a wonderful palate of red and orange in the trees comes the spawning season for the federally endangered winged mapleleaf. Most mussels that are propagated at Genoa National Fish Hatchery (NFH) in Wisconsin spawn in the fall and hold their larvae over-winter until they are released in the spring. However, the winged mapleleaf only holds its larvae for a few weeks and then releases them during the month of September. Several years of research indicate that the mussels will begin their displays as the water temperature drops from 70 degrees Fahrenheit (F) down to 60F.

Several factors make propagating the winged mapleleaf problematic. The first is that in the Upper Mississippi River drainage, winged mapleleaf can only be found in a short reach of the St. Croix River. Second, the mussels only display about 48 hours before releasing their larvae. This means that biologists must be prepared to dive every other day during the winged mapleleaf brooding period. Finally, individual host fish for the winged mapleleaf (channel catfish) have to be longer than eight inches to serve as a suitable host for the winged mapleleaf larvae. This means that hatchery raised host catfish require two growing seasons to reach a sufficient size. All of these factors make propagation of the winged mapleleaf a challenge.

This September all of the factors in the field lined up well and we were able to collect ten gravid female winged mapleleaf, double the number observed in previous years. These mussels were carefully transported to Genoa NFH where they expelled their larvae and hatchery biologists placed them on over 300 channel catfish. The catfish will be held over the winter and placed out in mussel culture cages next spring. If all goes well the juveniles may be the size of a grain of rice at this time next year and marble size at this point two years from now. At that point, the recovery team will determine the best locations for the animals to be released, a place that will foster good growth and survival as well as moving us closer to achieving the goals set forth in the recovery plan for the species.



The full display of the winged mapleleaf indicates to divers that this mussel is ready to release larvae for propagation.  
Credit: USFWS



U.S. Fish &amp; Wildlife Service

# Fisheries, Midwest Region

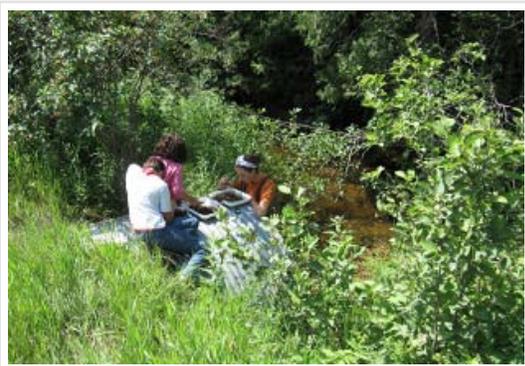
Conserving America's Fisheries

## Silver Creek Super Project Completed!

BY ANDREA ANIA ALPENA FWCO

The last culvert in the Silver Creek Super Project was replaced late September 2012. After three years of planning, coordination, data collection, design, engineering, monitoring and a lot of dirt moving, a total of ten road/stream crossings have been improved (eight full culvert replacements, two road surface treatments), reconnecting ten river miles in Silver Creek and reducing sediment pollution by more than 100 tons per year. In addition to providing fish and other aquatic species passage, the project also benefitted the creek and overall watershed by reducing sediment entering the stream, restoring the shape and dimension of the stream channel, decreasing water temperature, and improving aquatic insect habitat.

The project expanded over the past three years to include monitoring and removal of key invasive plant species, and working with private landowners to implement conservation strategies. Silver Creek is a high quality, cold-water tributary to the Ocqueoc River, which is located in northeastern Michigan. Based on Michigan Department of Natural Resources (DNR) fish community analysis, there are a number of native species present in the system that we anticipate will benefit from the project, including brook trout, slimy sculpin, blacknose dace, pearl dace, white sucker, creek chub, Johnny darter, logperch, brassy minnow, and yellow perch.



Engaging local homeowners with aquatic insect identification.  
Credit: Andrea Ania, USFWS



A driveway crossing that was replaced because it was a velocity barrier to fish and aquatic organism passage on Silver Creek.  
Credit: Andrea Ania, USFWS

There was a lot of interest and support for this stream restoration effort. Project funding and support was provided by National Fish and Wildlife Foundation, U.S. Fish & Wildlife Service, Headwaters Chapter of Trout Unlimited, MDNR, Michigan Fly Fishing Club, Ocqueoc River Watershed Commission, Paul H. Young Chapter of Trout Unlimited, Presque Isle Conservation District, and Wolverine Power Cooperative. Patrick Ertel of Huron Pines lead the effort and the Presque Isle County Road Commission did an excellent job with the construction portion of the project.

In late October 2012 a celebratory event is planned to acknowledge the success of this holistic stream restoration project and the partnerships developed. Post-construction monitoring of water temperature, stream channel shape and dimension, water velocities, and aquatic insects is planned for next year. This information will help document the positive benefits of the Silver Creek Super Project.



U.S. Fish &amp; Wildlife Service

## Fisheries, Midwest Region

Conserving America's Fisheries

### A Day Stern Trawling On the Missouri River with Columbia Fish and Wildlife Conservation Office

*BY ZACK BROCK COLUMBIA FWCO*

Great Blue Heron Credit: Zack Brock, USFWS

The morning started off grand, a beautiful sunrise with promise of a great day of trawling for larval fish. After a few morning preparations we were ready to go out on the Missouri river. We hopped into the truck and made our way through the Missouri countryside bordered on both sides with green fields, their promising yields lit by the sun. The last mile was a dusty lane beside the Missouri river and through the trees you could glimpse the seemingly calm waters we were about to traverse. At the edge of the waters we saw a great blue heron with a stoic pose, waiting for some ill-fated wanderer.

Finally we arrived at the ramp. A rumble from the boat's engine and we were off. Water sprays from either side of the boat as it glides effortlessly through the current. After a short time of the wind unsuccessfully trying to remove our hats, we arrived at a location suitable for trawling.

Many of small young-of-the-year fish are so small that they are not able to withstand the mighty currents of the Missouri river. So they quite literally, "go with the flow." Occasionally the river allows them some relief as they drift into some backwater slow enough to allow their little undeveloped fins to be effective. This is exactly what the heron is hoping for, an easy meal. And so it is where we too try our hand at collecting these young fish. These areas are not without hazard for us, as this happens to be the same areas where the river likes to toss large snags when it floods. This always makes it more interesting as we attempt to drag a net along the bottom, looking to the fish-finder for help with snags.

Our first net came back to us without issue. We started the careful work of looking through the debris/gravel for fish not much longer than your fingernail. It is amazing how through genetics, you can determine to whom these little fish belong. After several trawls, getting stuck on a sandbar, tearing a net and retrieving it from a snag, we decided to limp back towards the boat ramp. We may have had a victory in numbers over the stoic heron, but perhaps it ultimately won in its calm serenity of waiting patiently for a catch along the peaceful shores of the Big Muddy.



## Sturgeon at the Extremes

BY COLBY WRASSE COLUMBIA FWCO

What a difference a year can make on the Missouri River. The flooding that lasted much of last year gave way to drought this year. The Missouri River of 2012, with its lazy flows and large, beach-like sandbars, scarcely resembled the turbulent, roiling beast of 2011.

Areas that had torrential flows and were nearly devoid of fish during the flood are now characterized by modest flows teeming with fish. Conversely, what was great fish habitat during the 2011 flood was better suited this year for raccoons and cottonwood trees. However, at these polar extremes the Missouri River fish community adjusted as it always has. In fact, adaptability and toughness are hallmarks of big river fish species that call the Missouri River home.

While changes in habitat from last year to this year may seem extreme, these changes are but a trifle when compared to the radical shifts that have occurred across the millennia. Portions of the present day Missouri River were once covered by a huge inland sea. Glaciers have advanced and receded, drastically altering the landscape. During more modern times, the construction of dams, levees, and wing dikes has altered flows, changed channel morphology, disrupted natural processes, and reduced silt transportation. In response to these changes, both natural and manmade, species composition within the river has also changed.

Amazingly some species, such as the shovelnose sturgeon, have been able to scratch out a living for millions of years in this harsh, ever fluctuating environment. While shovelnose sturgeon have seemingly been able to adapt to these modern changes to the river, the closely related pallid sturgeon is struggling. It is believed that poor recruitment, possibly due to lack of appropriate nursery habitat for small sturgeon, is partially to blame. An understanding of how sturgeon, especially small, young sturgeon, utilize habitat at differing flows may be critical for recovery of pallid sturgeon.

The stark differences in river conditions from last year to this year provided us with an excellent opportunity to examine how these fish respond to different flows. The benthic otter trawl we utilized on the Pallid Sturgeon Population Assessment Project allowed us to catch numbers of small sturgeon while sampling a diversity of habitats. Anecdotal observations over the last couple years suggest that young sturgeon may shift locations under differing water levels to find habitats which provide the type of flows they prefer. Given the highly variable flows which characterize the Missouri River, it appears that any single habitat type may not be adequate. Instead a suite of habitat types may be required to provide necessary nursery habitat for young sturgeon. Understanding how small sturgeon utilize habitat under differing flows will hopefully add to our overall understanding of these unique fish and aid in making decisions regarding habitat construction and flow modifications on the Missouri River.



Small sturgeon captured from Missouri River during a trawling survey.  
Credit: Colby Wrasse, USFWS



U.S. Fish &amp; Wildlife Service

## Fisheries, Midwest Region

Conserving America's Fisheries

### Friends Group Supports “Free Family Fun” at Jordan River National Fish Hatchery “Fall Fest”

BY ROGER GORDON JORDAN RIVER NFH

Jordan River National Fish Hatchery (NFH) located in northwest Michigan, hosted its annual “Hatchery Fall Fest” Saturday, October 13th on the facility grounds. This yearly event is sponsored by the Friends of the Jordan River NFH organization, as well as area NGO’s, businesses, and a cadre of dedicated volunteers.

The 2012 festivities were hampered by unseasonably cool and wet weather, but over 400 intrepid visitors enjoyed a variety of free family activities supported by the event organizers. The public was treated to a free children’s pumpkin patch, hay rides, chili pot, guided tours, informational booths, games, and much more. The main goal of this great public outreach event is to provide a safe, no cost activity for families to enjoy the out-of-doors while learning something about the various fishery programs carried out by the U.S. Fish and Wildlife Service within the Great Lakes region.



Loading Up for the Hay Ride Tour; The blustery weather did not dampen the spirits of those who attended the 2012 Fall Fest. Credit: Janet Smigielski

Words like Awesome! Cool! Neat! Interesting! and Thank You! Could be heard all around you as you took in the sights and sounds of the 2012 Fall Fest.

The Hayride Hatchery Tours are always very popular, and this year was no exception. Visitors enjoyed the beautiful fall colors of the Jordan River Valley, while sipping freshly made apple cider and getting a crash course on lake trout restoration, hatchery operations and fish biology. Fish Biologist John Johnson (a talented story teller) was tour guide for the day.



Official Apple Smasher; Jordan River NFH Fish Biologist produced many gallons of fresh apple cider for the crowd at the 2012 Fall Fest. Credit: Janet Smigielski

Partner sponsors such as Friends of the Jordan River NFH, North Country Trail Association and Star Township Fire Department have been instrumental in carrying out these and other events on the hatchery over the years.

Hatchery manager Roger Gordon is proud of the partners and friends and indicated that, without their assistance, as well as youth volunteers from several area school districts, the Service simply could not provide the funding, manpower, or energy to carry out these valuable public education events.

For more information about this or any other program at Jordan River NFH please contact Roger Gordon at the hatchery at 231-584-2461, or by email at: [roger\\_gordon@fws.gov](mailto:roger_gordon@fws.gov).

# Midwest Region Fisheries Divisions

## National Fish Hatcheries

The Region's National Fish Hatcheries primarily focus on native fish restoration/rehabilitation by stocking fish and eggs, such as pallid and lake sturgeon and by developing and maintaining brood stocks of selected fish strains, such as lake trout and brook trout.

Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, stock rainbow trout in fulfillment of federal mitigation obligations and assist with recovery of native mussels and other native aquatic species.

## Fish and Wildlife Conservation Offices

Fish and Wildlife Conservation Offices conduct assessments of fish populations to guide management decisions, perform key monitoring and control activities related to invasive, aquatic species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisheries databases; provide

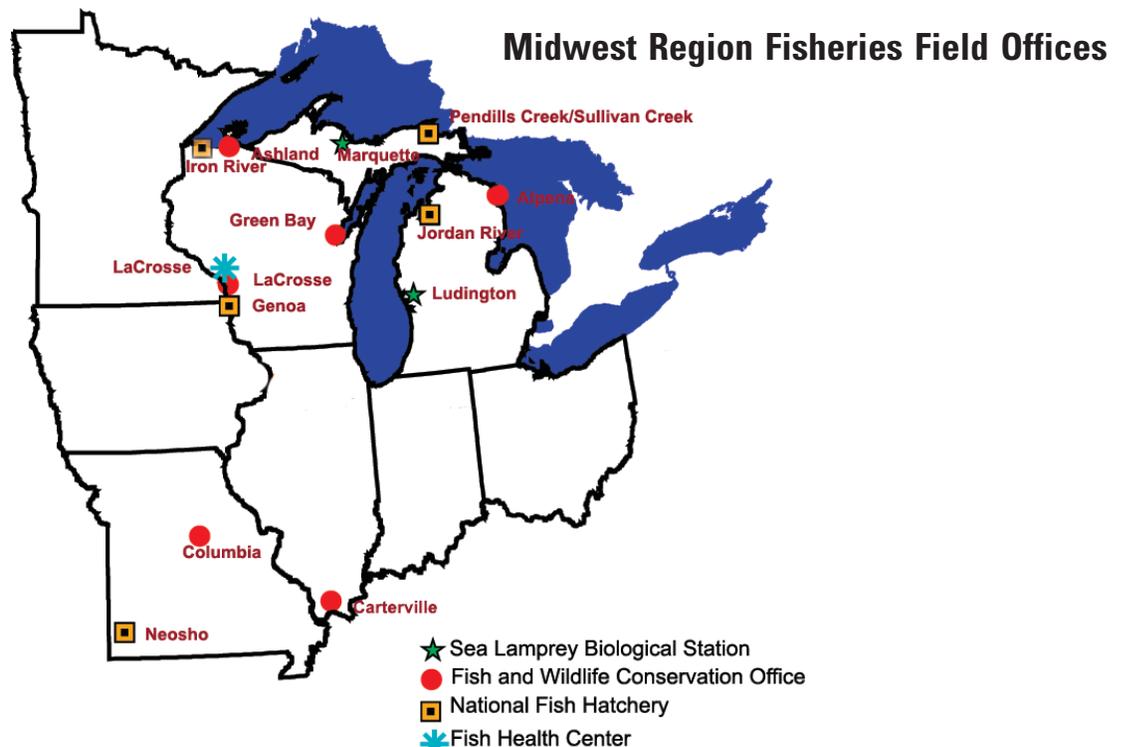
technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and relicensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

## Sea Lamprey Biological Stations

The Fish and Wildlife Service is the United States Agent for sea lamprey control, with two Biological Stations assessing and managing sea lamprey populations throughout the Great Lakes. The Great Lakes Fishery Commission administers the Sea Lamprey Management Program, with funding provided through the U.S. Department of State, U.S. Department of the Interior, and Fisheries and Oceans Canada.

## Fish Health Center

The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state and tribal hatcheries in the region; conducts extensive monitoring and evaluation of wild fish health; examines and certifies the health of captive hatchery stocks; and, performs a wide range of special services helping to coordinate fishery program offices and partner organizations.



# Midwest Region Fisheries Contacts

Todd Turner ([todd\\_turner@fws.gov](mailto:todd_turner@fws.gov))

## Michigan

Alpena Fish and Wildlife Conservation Office  
480 West Fletcher St.  
Alpena, MI 49707  
Scott Koproski ([scott\\_koproski@fws.gov](mailto:scott_koproski@fws.gov))  
989/356-3052  
Area of Responsibility (Michigan, Ohio)

Jordan River National Fish Hatchery  
6623 Turner Road  
Elmira, MI 49730  
Roger Gordon ([roger\\_gordon@fws.gov](mailto:roger_gordon@fws.gov))  
231/584-2461

Ludington Biological Station  
229 South Jebavy Drive  
Ludington, MI 49431  
Jeff Slade ([jeff\\_slade@fws.gov](mailto:jeff_slade@fws.gov))  
231/845-6205

Marquette Biological Station  
3090 Wright Street  
Marquette, MI 49855-9649  
Katherine Mullett ([katherine\\_mullett@fws.gov](mailto:katherine_mullett@fws.gov))  
906/226-1235

Pendills Creek/Sullivan Creek  
National Fish Hatchery  
21990 West Trout Lane  
Brimley, MI 49715  
Curt Friez ([curt\\_friez@fws.gov](mailto:curt_friez@fws.gov))  
906/437-5231

## Missouri

Columbia Fish and Wildlife Conservation Office  
101 Park Deville Drive; Suite A  
Columbia, MO 65203  
Tracy Hill ([tracy\\_hill@fws.gov](mailto:tracy_hill@fws.gov))  
573/234-2132  
Area of Responsibility (Iowa, Missouri)

Neosho National Fish Hatchery  
East Park Street  
Neosho, MO 64850  
David Hendrix ([david\\_hendrix@fws.gov](mailto:david_hendrix@fws.gov))  
417/451-0554

## Illinois

Carterville Fish and Wildlife Conservation Office  
9053 Route 148, Suite A  
Marion, Illinois 62959  
Rob Simmonds ([rob\\_simmonds@fws.gov](mailto:rob_simmonds@fws.gov))  
618/997-6869  
Area of Responsibility (Illinois, Indiana, Ohio)

## Wisconsin

Ashland Fish and Wildlife Conservation Office  
2800 Lake Shore Drive East  
Ashland, WI 54806  
Mark Brouder ([mark\\_brouder@fws.gov](mailto:mark_brouder@fws.gov))  
715/682-6185  
Area of Responsibility (Michigan, Minnesota, Wisconsin)

Genoa National Fish Hatchery  
S5689 State Road 35  
Genoa, WI 54632-8836  
Doug Aloisi ([doug\\_aloisi@fws.gov](mailto:doug_aloisi@fws.gov))  
608/689-2605

Green Bay Fish and Wildlife Conservation Office  
2661 Scott Tower Drive  
New Franken, WI 54229  
Mark Holey ([mark\\_holey@fws.gov](mailto:mark_holey@fws.gov))  
920/866-1717  
Area of Responsibility (Illinois, Indiana, Michigan, Wisconsin)

Iron River National Fish Hatchery  
10325 Fairview Road  
Iron River, WI 54847  
Dale Bast ([dale\\_bast@fws.gov](mailto:dale_bast@fws.gov))  
715/372-8510

LaCrosse Fish Health Center  
555 Lester Avenue  
Onalaska, WI 54650  
Becky Lasee ([becky\\_lasee@fws.gov](mailto:becky_lasee@fws.gov))  
608/783-8441

LaCrosse Fish and Wildlife Conservation Office  
555 Lester Avenue  
Onalaska, WI 54650  
Pamella Thiel ([pam\\_thiel@fws.gov](mailto:pam_thiel@fws.gov))  
608/783-8431  
Area of Responsibility (Illinois, Iowa, Minnesota, Wisconsin)