



# fishlines

Climate Change Affects  
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Why Ship Eggs and  
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Other Duties as  
Assigned:

**FISHERIES ENGINEER**

Outdoor Classroom  
Chronicles - Part 2

That Ice Will Hold  
5...Hundred?!?





U.S. Fish & Wildlife Service

# Fisheries, Midwest Region

Conserving America's Fisheries



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### Climate Change Affects on Sea Lampreys

Sea lampreys have had a substantial effect on both native and other desirable fish populations in the upper...[Read More](#)



**Climate Change Affects on Sea Lampreys**



**Why Ship Eggs and Not Fish?**



**Other Duties as Assigned: FISHERIES ENGINEER**



**Outdoor Classroom Chronicles- Part 2**



**That Ice Will Hold 5...Hundred!**

## Fish Tails

"[Fish Tails](#)" refers to articles that are submitted by field staff that do not appear as a feature 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.

For even more on Midwest Region fisheries activities please see articles entered by field staff in [Field Notes](#). Enjoy!

Last updated: February 28, 2013



## Climate Change in the Upper Midwest Affects Management of Sea Lampreys

BY DORANCE BREGE, MARQUETTE BIOLOGICAL STATION



Field measurement of stream discharge. Credit: Karla Bartelt, USFWS

drop in treatment effectiveness results in excessive numbers of residual (surviving) larval lampreys. Treatments at extreme stream discharge require alternate application tactics and are likely to be less effective in eliminating larval sea lampreys.

Fifteen streams in the upper Midwest within the Marquette Biological Station's region of geographic responsibility (Minnesota, Wisconsin and upper Michigan waters) were selected to analyze trends in water levels and dates of treatment. These 15 streams produce large numbers of larval sea lampreys and are regularly treated with TFM. Treatment data were compared for a base time period, 1980 through 1997, and the most recent period from 1998 through 2012.

Analysis of field data of this nature is not without pitfalls; many variables affect treatments. Low water periods also existed in the base years, during the mid-1980's, making decisions by Service biologists difficult. Average amount of stream discharge during treatments was greater during the base time period in 13 of the 15 selected streams. The average stream discharge in recent treatments, including the two streams with greater average, was also influenced by scheduling to avoid low flow, as discussed below.

Avoidance of TFM treatments during expected low water periods was also examined for each of the 15 selected streams. Biologists avoid scheduling treatments when expected effectiveness is decreased. There are 12 ten-day time periods in our field season when TFM treatments can be scheduled. The time period from July 10th to September 10th includes four of these time periods and is normally the lowest amount of stream discharge. Anticipated low water levels for this time period challenge biologists to schedule the more than 40 TFM treatments normally completed during the field season. A limited number of streams can be scheduled for treatment in each of the 12 time slots. Once prime slots are filled, other streams must go elsewhere in the schedule. This issue has been exasperated during recent years due to the dry weather patterns.

Compared to the base time period (1980-1997), recent treatments of 11 of the 15 streams were less likely to be completed during mid-summer. Of about 50 treatments in each time period, biologists completed 25% of the treatments during the base period at the midsummer flows versus only 10% in the recent time period. Four of the streams were more likely to be treated

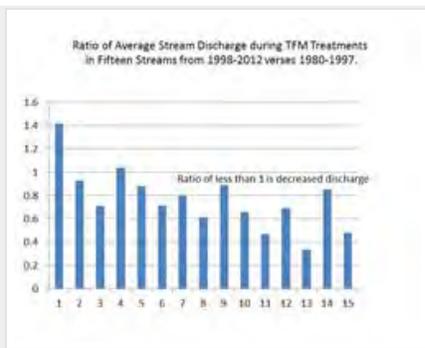
Sea lampreys have had a substantial effect on both native and other desirable fish populations in the upper Great Lakes since the invasion of the exotic species during the 1930's. Management of the sea lamprey depends primarily upon application of pesticides (treatments) to infested tributaries to kill the larval stage of this parasite. The main pesticide used since 1958, a chlorinated nitro-phenol (TFM), is selectively toxic to larval lampreys when applied at the appropriate dosage. Effectiveness of these treatments is dependent upon having suitable amount of stream discharge to effectively deliver the proper strength of TFM to the larval sea lampreys.

During the past two decades, water levels measured during our treatments in the upper Midwest have notably decreased due to extreme weather patterns with little rainfall. During summer, many streams virtually cease flowing, making effective treatment impossible.

Normally, treatments are expected be highly effective in eradicating larval populations; a small



Typical application of TFM at stream site by certified operator using 12 volt pump. Credit: Karla Bartelt,USFWS



Credit: USFWS

require additional personnel and time; in spite of the extra cost, they may not effectively eradicate larval lampreys. Ultimately, the problem of low stream discharge during treatments has and will continue to impact the success of the Sea Lamprey Control Program.

during the mid-summer due to stable summer flows.

What has this low water phenomenon meant to the Sea Lamprey Control Program? Each field season, biologists at Marquette partake in an exercise in jockeying a full slate of treatments into appropriate time slots. Expected water conditions are only one of the scheduling issues. The dry weather pattern has restricted the options for scheduling. Some treatments are now completed during less effective conditions. Alternate application tactics and special efforts like partial treatments of difficult reaches can be used to successfully complete treatments when stream discharge is very low. These techniques



## Why Ship Eggs and Not Fish?... Iron River National Fish Hatchery Explains!

BY CAREY EDWARDS, IRON RIVER NFH

The Iron River National Fish Hatchery (NFH) in Iron River, Wisconsin maintains approximately 4,000 adult lake trout and coaster brook trout. These fish are spawned each fall and eggs are collected for restoration purposes in the Upper Great Lakes. Eyed eggs are shipped to other entities, including federal, state and tribal agencies, in and out of the region.

Why do hatcheries ship eggs? Not every hatchery is a brood facility, meaning that not every facility holds adults and completes the egg-taking process. These non-brood facilities need a source of fish or fish eggs to fulfill their mission and fish production goals. That is where the brood facility "takes their order" and plans for the amount of eggs and which strain will be given to the other facilities. At Iron River NFH, we rear certain strains for Great Lakes restoration. However, the strain that fish managers want for the south end of Lake Michigan is not always the particular strain of brood that Iron River NFH rears. Therefore, we also "receive" eggs from other facilities, to meet our production goals.



After eggs eye-up, they are run through an egg picker, measured using volumetric displacement and packaged for shipping. Credit: USFWS

This year 190,000 lake trout eggs were shipped to Allegheny NFH in Warren, Pennsylvania, while also providing 360,000 eggs for production needs at Iron River NFH. Almost 800,000 brook trout eggs in total were shipped to the U.S. Geological Survey, Genoa NFH, Redcliff Tribal Hatchery, Grand Portage Indian Community and Keweenaw Bay Indian Community, not including 60,000 eggs to meet goals at Iron River NFH. Instead of destroying surplus eggs, Iron River NFH was able to utilize 365,000 brook trout eggs by sending them to the Eastern Band of Cherokee Indians located in North Carolina.



Eggs are packaged in wet cloth diapers for shipment to other entities in and out of the region. Credit: USFWS

This past year Iron River NFH also received 1.85 million lake trout eggs from Sullivan Creek NFH in Brimley, Michigan and Saratoga NFH in Saratoga, Wyoming. Eggs from Sullivan Creek NFH are Seneca Lake and Parry Sound strains, while Saratoga NFH provides a Lake Michigan strain of lake trout called Lewis Lake.

Why eggs not fish? You can disinfect eggs and not fish. The main purpose of all hatcheries is to culture healthy fish for the public. To reach that goal, we prefer not to ship fish from hatchery to hatchery, because we may also be shipping disease. After the eggs are disinfected for shipping to another facility, they are wrapped in wet cloth diapers and layered on perforated Styrofoam trays and placed in coolers especially made for egg shipping. The top tray is loaded with ice that slowly melts and allows the fish in the eggs to breathe.



U.S. Fish &amp; Wildlife Service

# Fisheries, Midwest Region

Conserving America's Fisheries

## Other Duties as Assigned: FISHERIES ENGINEER

BY JEFF FINLEY, COLUMBIA FWCO



Jeff Finley (left) records fish data as Wyatt Doyle (right) sorts through a sample collected from the Missouri River using the Push Trawl. Credit: Andy Starostka, USFWS

Quite often we find ourselves working in areas outside of our position description; whether by necessity or by talent, our employees frequently perform "other duties as assigned." Fortunately my additional duty is one I dearly enjoy; I call it "Fisheries Engineering."

Some folks have specific abilities for analyzing data, writing scientific reports, working with volunteers, or an affinity for using software programs which make everybody's job easier. Recognizing these unique skills and abilities, supervisors frequently task these specialists to work their craft for the good of the agency. Not all "additional duties" are fun and exciting. Some are just necessary, but when they do align with an individual's particular passion, it results in an awesome day at work!

So, what is a fisheries engineer? Coined from the true definition of engineering; a fisheries engineer can repair, replace, improve, design, fabricate and construct equipment used in sampling and collecting fish and aquatic organisms from the wild.

Fisheries engineering entails physics, mechanics, fabrication, welding and a lot of head scratching during trial and error periods. Whether using steel, wood, plastics, aluminum, wire, line, chain, or netting, they construct equipment using an understanding of the habitats we sample, the behavior of the organisms we are trying to collect and the environmental and human extremes this equipment must endure. Fish biologists are frequently confronted with the challenges of how can we catch species X, more of species Y, exclude species Z in a specific habitat? Or how do we keep this gadget from breaking again? Riverine habitats are often difficult to sample due to currents, flow, debris, grit, mud, rock and weather extremes. These considerations are all blended with field experience, a desire to dream and a preoccupation with tools, to ultimately spawn a fisheries engineer.

Fisheries engineers save their station time and money by circumventing costly trips to the repair shop, getting their crews back on the water as quickly and safely as possible, and creating innovative devices. Not everyone has the mind of an engineer. There are few folks who can diagnose and repair a mechanical problem, imagine a better contraption or that have the experience and skill to bring an idea to a reality, all the while knowing their limitations. They might help figure out why an outboard engine is overheating and correct the issue so crews can finish their work, or get off the water before dark. They can wire multiple components for an electrofishing boat rather than buying an off-the-shelf boat at twice the cost. They'll weld what breaks, patch what leaks, replace what was lost and advance the science of fisheries by developing new gear and techniques or modifying old ones.

Applying Fisheries Engineering at the Columbia Fish and Wildlife Conservation Office has resulted in the development of several techniques and tools for the advancement of fishery science. Here are some examples:



Tracy Hill and Wyatt Doyle demonstrate the push trawl at the 2013 MICRA meeting. Credit: Paul Rister of KY Dept of F&W Resources.

The push trawl uses forward facing, mechanically lifted booms to deploy an envelope style, zipper cod, small board, benthic trawl off of the front of a jet boat. This technique has proved itself as a valuable tool in sampling riverine habitats too deep, too swift or with substrate too soft to seine or too shallow for traditional stern trawls.

The paupier net is modification of techniques used in gulf shrimp fisheries. The paupier uses two frames mechanically deployed perpendicular to the gunnels of a boat to scoop up open water fishes. The intent was to come up with a method to collect Asian carp. While we have developed a solid framing system, a net design to retain these wary, fast swimming fish is still in development. We incidentally discovered the paupier technique is an excellent tool to collect young paddlefish.

Additional modifications forthcoming are to relocate the console on the boat to front and center to allow for more room to store the net and work the catch.



An "on board" look at the push trawl.  
Credit: Andy Starostka, USFWS

Drifting trammel nets in the river can be an arduous task with the vast amounts of small woody debris and sand waves which can repeatedly halt the lead line of a drifting net. A net mule is a chevron shaped device made of dimensional lumber tied with a lead to the far end of the net. It helps plow the net through these lesser snags using the power of moving water in the rivers current.

Keeping a thousand baited ganions for trot lines organized and separated isn't easy. Several attempts were made to prevent them from getting tangled up on a rough river ride. Additionally, pre-baiting the hooks in a heated shop the morning of is preferred to baiting on the water or shore exposed to the elements, and safer than bait-as-you-go with a line in the swift water. To do this we finally settled on a ganion box. Each box holds up to 500 baited hooks, hung sequentially from a steel rod. The large clips hang below and are clamped to the side of the box with a flap. The lid is closed for a neat, tidy and space saving method to safely deploy and retrieve the ganions

Opportunities arise to cooperate with other branches of the U.S. Fish and Wildlife Service. Currently I am working with another engineer from Ecological Services to solve some mussel sampling conundrums. We are in the process of developing a boat mounted washing and sorting stand for mussel quantification surveys. This stand will incorporate a space saving reel for the surface air supply line for the SCUBA diver and a freshwater pump to wash and sort the substrate sample collected by the diver.

We've tinkered around with other small projects like durable transducer brackets to replace the plastic ones which inevitably break, various types of anchors to hold boats and gear in the swift waters of the Missouri, racks to dry wet gear and drags to find lost nets and trawls. Those before me paved the way for stern trawling safely on the river and have built net wheels for cleaning nets and many space and time saving devices. The ingenuity and application has, and will continue, to help advance fisheries science from those whose minds think a little differently, understand and speak the language of an engineer. I hope to identify the next person and one day pass the engineering torch to the next up and coming "other duties as assigned: Fisheries Engineer."



## Outdoor Classroom Chronicles- Part 2

BY JORGE BUENING, GENOA NFH

As the New Year rolled in it was time for classes involved in the outdoor classroom program to make their winter visit. The outdoor classroom is an area on the hatchery that has been restored to a native prairie and wetland ecosystem. This place allows students from various cultural backgrounds to coexist with nature and hopefully ignites a spark inside of them as to the wonders our natural world has to offer.

One of those classes is the 5th grade class of Susan Houlihan from Southern Bluffs Elementary School of the La Crosse School District. Susan has been instrumental in the foundation of this program and her class visits the hatchery during each of the seasons during which they are in session: fall, winter, and spring. During this, their winter visit, they learned that there is much more to the slow drab melancholy initially perceived in Wisconsin winters. Susan's class learned about tracking animals in the snow and discovered on their own the tracks of: deer, coyotes, and even stumbled across an otter slide. The class then learned how their tracking skills can be useful in the art of fur trapping. From 330 conibears to coon cuffs the students learned from our maintenance mechanic and resident fur trapper Dan Kumlin the intricacies of fur trapping in the Mississippi River Basin. Dan even skinned a muskrat for the class. This process saw mixed reviews from the students. Finally, the students sat in their own isolated part of the wetland and took in what nature had to offer; allowing them to watch field mice glide across the snow, see bald eagles soar through the sky and hear the methodical tapping of a woodpecker probing a hollow tree trunk.



Students learning about rainbow trout. Credit: USFWS



Trapper Dan teaching his craft. Credit: USFWS

to preserve what we have now for the future. Genoa National Fish Hatchery sees one very prominent way to achieve this goal and that is to provide a place for children to develop a relationship with the natural world. That is what the outdoor classroom is: a place for lasting memories, experiences, and relationships.

The 7th grade class of Tim Sprain from Lincoln Middle School also of the La Crosse School District came for a visit as well. They participated in the tracking and trapping classes but had an added "snack" at the end. Literally they learned how to properly clean, cook, and eventually eat a fresh rainbow trout. The class also took time to read from A Sand County Almanac by Aldo Leopold and compared what they were seeing to what he described in one of his winter passages.

It is Leopold's land ethic idea that is the cornerstone of the curriculum that the outdoor classroom hopes to engage. The idea that we are simply borrowing the opportunity to experience nature from future generations and it is our duty



Students learning about animal tracks and ... resting. Credit: USFWS



U.S. Fish &amp; Wildlife Service

## Fisheries, Midwest Region

Conserving America's Fisheries

### That Ice Will Hold 5...Hundred!

BY AARON VON ESCHEN, GENOA NFH



WOW! A nice trout coming through the ice. Credit: USFWS

The Friends of the Upper Mississippi River Fisheries Services and the three La Crosse area U.S. Fish & Wildlife Service Fisheries Offices put their 7th Annual Kids Ice Fishing Day for children ages 5-12 on January 26th at the Genoa National Fish Hatchery. This year turned out a record attendance of over 560 people, with over 290 kids trying their hand at catching rainbow trout through the ice. A nicer day couldn't be had for the anxious group who were eager to pursue the more than 1,000 hungry rainbow trout that were awaiting them.

A brief overview of ice fishing safety was given by Eric Leis of the La Crosse Fish Health Center to kick off the event. Eric is our ice fishing expert, with many hours each winter put on the ice re-fining his technique. Following the overview the rules and regulations were explained to the anglers and then off to the frozen pond they went in pursuit of catching a rainbow trout. Many first time anglers were in attendance that day and eager and pleased to catch their first fish. Big smiles and happy faces were seen all across the ice as fish bit and nibbles

were felt. Each kid had to opportunity to catch at least one fish and many had gone home with a limit of three of fish. With so many kids ready to fish, more holes had to be drilled. Luckily hatchery staff was on-hand drilling holes to ensure kids had a spot to fish.

Attendees were offered a lunch provided by the Friends Group and everyone took home more than a few memories. The staff at Genoa NFH would like to thank all the volunteers, our Friends Group and the staff from the La Crosse Fish Health Center and Fish and Wildlife Conservation Office for their help in getting all the kids geared up, and out on the ice for a day full of fun and excitement!



A happy young angler displays his catch. Credit: USFWS



## Getting to Know the Green Bay FWCO

BY MARK HOLEY, GREEN BAY FWCO



USFWS continues to work with WDNR and MDNR to establish effective passage for sturgeon over the Menominee dam. Credit: USFWS

USFWS continues to work with WDNR and MDNR to establish effective passage for sturgeon over the Menominee dam. Credit: USFWS

emphases on lake trout, lake sturgeon and lake whitefish. Through these efforts, our office helps develop and implement lake wide stocking and supplementation programs and conducts regular standardized fishery dependent and independent surveys for lake trout, lake sturgeon, whitefish and other important fish stocks to evaluate success of lake wide restoration, rehabilitation and conservation efforts.

Founded in 1992, for the past 20 years the Green Bay Fish and Wildlife Conservation Office (FWCO) has been a major contributor to the management and restoration of native fish in Lake Michigan and throughout the Great Lakes. Project Leader Mark Holey was the only employee in 1992 and he has seen the scope of the office increase and the staff grow to 12 with a satellite office in Elmira, Michigan. The primary area served by the Green Bay office is Lake Michigan, but through various projects provides fisheries management and technical assistance to States and Tribes throughout the Great Lakes basin.

The core program of the Green Bay FWCO focuses on restoration, rehabilitation and conservation of important native fish populations in Lake Michigan and the Great Lakes, with



Green Bay FWCO assessing lake trout abundance during fall spawning. Credit: USFWS

Initiated in 2008, the Great Lakes Fish Tagging and Tag Recovery Laboratory at the Green Bay FWCO

provides coded-wire tagging, tag recovery, and other science support services to state and tribal agencies that stock trout and salmon into the Great Lakes, as well as for the Service's Midwest and Northeast Regions' lake trout restoration programs. This coordinated effort among all jurisdictions will provide greater insight into the levels of natural reproduction of both native and non-native fish, the relative survival and contributions of stocked fish, the ability to manage harvest away from wild fish, and evaluation of hatchery operations.



Stewart Cogswell measuring a perched culvert for a replacement to improve fish passage upstream. Credit: USFWS

The office plays a substantial role in the implementation of the terms of the 2000 Consent Decree. The Decree is a negotiated federal court order that specifies the fish management regime and allocation of fishery resources within the 1836 Treaty waters of lake Michigan, Huron and Superior among five Native American Tribal Governments and the State of

Michigan. The Service represents the United States for the implementation of the Decree. The office staff participates in and contributes to the assessment of fish stocks within the Treaty waters and the developing fish population models using the assessment data to annually determine safe harvest limits for lake trout and lake whitefish for 26 management units.

Healthy fish populations require healthy fish habitat. The Green Bay FWCO implements the National Fish Passage Program and the National Fish Habitat

Partnership to restore quality fish habitat within the Lake Michigan basin. We restore instream, riparian, wetlands, coastal, lake and upland habitats benefiting native species. Partnerships are the key to successful implementation of all projects and we routinely partner with other federal, state and tribal agencies, as well as non-governmental organizations, watershed councils and local governments to leverage resources. In the past 10 years, our office has completed over 72 projects that have opened up over 1,000 miles to fish and aquatic organism passage in the Lake Michigan watershed. [Learn More](#)



Automated tagging and fin clipping of trout and salmon stocked into the Great lakes is completed in this, one of four Great Lakes Mass Marking tagging trailers. Credit: USFWS



U.S. Fish &amp; Wildlife Service

# Fisheries, Midwest Region

Conserving America's Fisheries



## Fish Tails

Articles submitted by field staff that do not appear as a feature within Fish Lines. These articles provide examples of the diverse work that is performed on behalf of aquatic resources.

### Service Biologists Assist WDNR with Sturgeon Fishery

BY ANN RUSTROM, LA CROSSE FWCO

The 2013 Lake Winnebago sturgeon spear fishery in Wisconsin began on Saturday, February 9th. Spear fishers are allowed one sturgeon and must register it at a Wisconsin Department of Natural Resources (DNR) registration station. Stations record length, weight, sex, and check for tags. There are seventeen stations around the lake as the total allowable harvest is over 2000 fish and the lake is large, 137,000 acres, 30 miles in length and ten miles wide. Although the stations are mostly staffed by WDNR employees, Service staff and college students also assist and gather additional data in addition to normal registration data. Samples were collected for fish health analysis at the Service's La Crosse Fish Health Center, Northland college students collected data on fat composition, and a sound engineer from the University of Wisconsin was measured swim bladders to analyze the sturgeons' ability to make sound and communicate by those means. Staff from La Crosse Fish and Wildlife Conservation office collected samples for the Fish Health Center and aided Wisconsin DNR in data collection at the registration station in Winneconne, Wisconsin. [Learn More](#)

### Genoa NFH Mussel Program Receives Flagship

BY NATHAN ECKERT, GENOA NFH

Mussel restoration activities at Genoa NFH often require the use of a boat, either for transportation of gear or for access to remote locations. In the past when the needs arose we used our station's net boat to accomplish program goals. This posed two issues; first, the net boat isn't properly outfitted as a dive vessel because of overall size, layout and diver accessibility. Second, and more importantly, during the spring the net boat spends significant amounts of time on the river spawning fish and is unavailable for the mussel program.

Two regional partners (Green Bay ES Field Office and the La Crosse Fish Health Center) were willing to invest in the Genoa NFH mussel restoration program and solve both of these issues. With their help we ordered a boat that will adequately fulfill the needs of the mussel restoration program. The new boat, which was built by Kann Manufacturing, is 22' X 8' marine grade aluminum with a 90 horse power motor and several features to facilitate SCUBA diving and mussel cage culture. First, a pair of dive platforms with handrails and removable ladders was placed along the transom to provide easy access to the water for divers. A SCUBA tank storage bin was also placed in front of the helm to provide safe storage of compressed air cylinders. The bow features a work deck with scuppers to allow for easy washing of the work surface. A davit and winch were also installed for mussel cage placement and retrieval. The remaining space within the boat was intentionally left open to provide plenty of room for dive gear and mussel cage transport. An additional handrail runs the length of the gunwale to provide multiple tie-down options when a large load of mussel cages needs to be transported. The final touch is a Bimini top to protect the boat operator and surface crew from the sun during dive operations. The mussel staff can't wait to get out and test the new boat and see how it improves efficiency. [Learn More](#)

### Retired Brood Fish Find a Home

BY CAREY EDWARDS, IRON RIVER NFH

Iron River National Fish Hatchery (NFH) raises approximately 2 million lake trout and coaster brook trout for restoration purposes in the upper Great Lakes. Roughly 4,000 adult fish are maintained to produce these numbers. Adult brood fish are "retired" as their efficiency at producing eggs declines, egg/fish requests decline or space is needed for new brood fish. The hatchery staff makes every effort to place these fish in the local fishery. Working with the Wisconsin Department of Natural Resources, Iron River NFH was able to stock over 1,400 two to four pound coaster brook trout in four area lakes (Wanoka, Perch, Beaver and Anderson) located in Bayfield and Douglas Counties.

Over a five week period, a local hiking group would meet hatchery staff and assist with unloading the fish into the water. Some of the treks were strenuous and included loading fish in travel coolers and lugging them down an eighth of a mile rocky trail, walking down steep embankments which were often times icy or shuttling fish in otter sleds to a hole chopped in the ice. Iron River NFH staff was very appreciative of the help from the hiking group. Iron River NFH staff is happy to put these fish to

good use, while forging stronger ties with local fisherman and we enjoy hearing stories about “lunkers” caught and the one that got away! [Learn More](#)

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### **Pendills Creek Fish Babies**

*BY TIMOTHY FACLCONER, PENDILLS CREEK NFH*

Many people were present at Sullivan Creek National Fish Hatchery (NFH) for the momentous day of October 3, 2012. It was the day for fertilization of the 2002 year class Seneca Lake Wild (SLW) Lake Trout eggs. Sullivan Creek NFH was the temporary home for the eggs destined for the tanks at the Pendills Creek NFH. Over the course of the spawning season there were over nine million eggs taken and fertilized.

Due to space constraints and the number of fish planned for release, only a special “few” (255,744 eyed eggs) are chosen for the Pendills Creek NFH. On December 19, 2012, this select group of eggs made their first road trip - travelling in specially made Styrofoam egg shipping crates - to the Pendills Creek NFH. On New Year's Eve, the first fish began to emerge from their shells. What they are called changes at this point from eyed eggs to sac fry. They are called this because even though they mostly look like the normal fish body shape, there is also a yolk sac attached that they are using for food. This yolk sac makes them look like they have a large protruding belly. Growing on the food from their yolk sacs in the 45 degree water, they lived in their trays until February 13, 2013. It was on this day the sac fry-all of which were now completely hatched-were moved from the trays they called home for so long into three mall rearing tanks.

The sac fry are learning to control their muscles and air bladder so they stay close to the bottom of the tank. Gradually, hatchery staff will begin introducing more and more food sprinkled on the water surface as the young fish begin to swim up into the water column. Now, the sac fry will continue to use up their yolk sac and “button up” or lose the protruding belly, and will be known as fry. By the end of February, the fry should all be swimming up and feeding. Now that all the fry are in the tanks and once they are all feeding, the task of growing fish (and sometimes limiting their growth) begins. This season of growing in our facility will conclude in the spring of 2014 when these babies we have come to know and love are released into the wild waters of Lake Michigan. [Learn More](#)

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### **Menominee Conservation and Cultural Museum Host Fishing Derby Fundraiser**

*BY ANN RUSTROM, LA CROSSE FWCO*

La Crosse Fish and Wildlife Conservation Office staff aided the Menominee Tribe with a fundraiser for their cultural museum and for the new Menominee Sturgeon Guard program. On a blustery February morning, volunteers set up the fish check in station, plugged in the crock and coffee pots, and hung out t-shirts for sale outside the Thunderbird Casino in order to raise funds for these worthy causes.

The Sturgeon Guard program began in 2012 with the first sturgeon spawning run at Keshena in 100 years. A small group of dedicated tribal members patrolled the shores of the Wolf River, protecting their revered sturgeon for 24 hours a day over a four week period as the sturgeon finally returned home to Keshena Falls. This year, the Conservation Department and the Museum want to provide hot meals and an appreciation gift for each Sturgeon Guard participant. Thus, Menominee Conservation and museum staff volunteered to host the Legend Lake Fishing Derby on February 9, 2013. Cash prizes were awarded to the biggest fish in four categories, northern pike, yellow perch, largemouth bass, and crappie. Raffle tickets were sold for donated prizes, including a nice portable ice fishing shack. Many hungry anglers took advantage of the hot food, fresh fry bread, coffee, and pop that was available for purchase. Unique artistic sturgeon shirts were also for sale (and are still available by calling 715-799-5116. Staff from La Crosse FWCO participated in educational outreach at the event and measured fish that came into the registration station. Menominee Conservation is looking for volunteers for the 2013 Sturgeon Guard. Anyone interested can call 715-799-5116 for details. [Learn More](#)

# 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

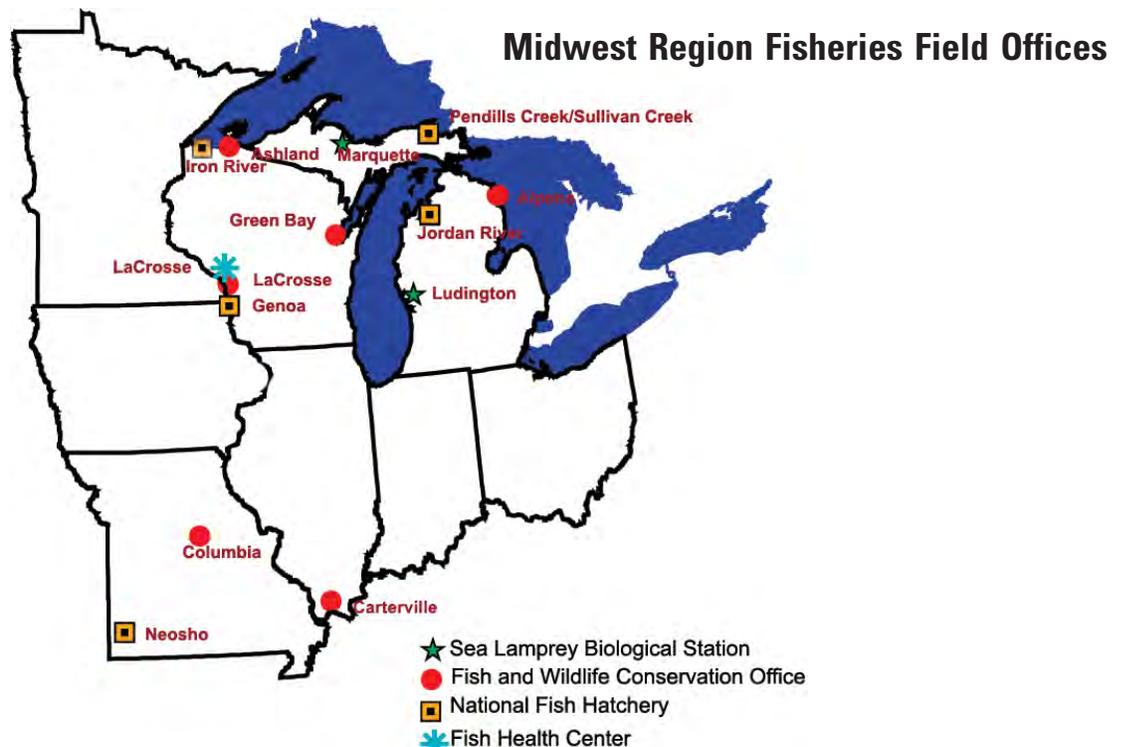
technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and relicensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

## 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

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