U.S. Fish & Wildlife Service - Midwest Region

Fisheries Program

Fish lines

May 21, 2016
World Fish Migration Day!

Study Reveals Patterns of Lake Trout

Spring Loaded!

Reports of Lake Sturgeon… They're Doing Well!

Removing Barriers in the Marengo River

CONSERVING AMERICA'S fisheries

U.S. Fish & Wildlife Service

Fisheries, Midwest Region

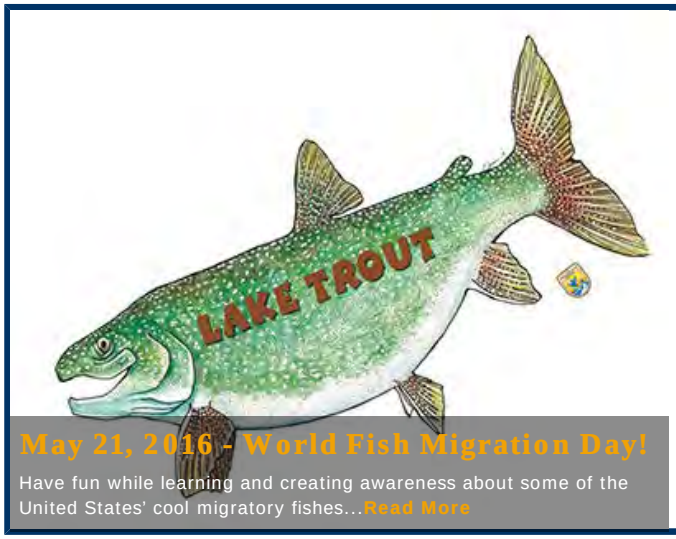
Conserving America's Fisheries

Search

Fish Lines

May 19, 2016

In this Issue



May 21, 2016 - World Fish Migration Day!

Have fun while learning and creating awareness about some of the United States' cool migratory fishes...Read More

May 21, 2016 - World Fish Migration Day!

Study Reveals Patterns of Lake Trout

Spring Loaded!

Lake Sturgeon...They're Doing Well!

Removing Barriers in the Marengo River

Subscribe Today

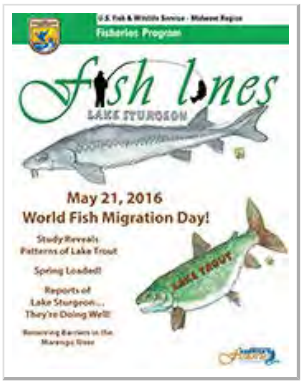
Subscribe Now!

Field Focus

Neosho National Fish Hatchery

Things at the Neosho National Fish Hatchery (NFH) have been heating up lately, in more ways than one. We've been busy with our sturgeon, mussels...Read More

Current Edition PDF



Archive

2016 2015 2014 2013
2012 2011 2010 2009

Editorial Staff

Tim Smigielski, Editor
Karla Bartelt, Webmaster

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.

Field Notes

"Field Notes" is an online searchable database that showcases hundreds of employee-written summaries of field activities and accomplishments of the U.S. Fish and Wildlife Service from across the nation.

Last updated: May 19, 2016

U.S. Fish & Wildlife Service

Fisheries, Midwest Region

Conserving America's Fisheries

Search

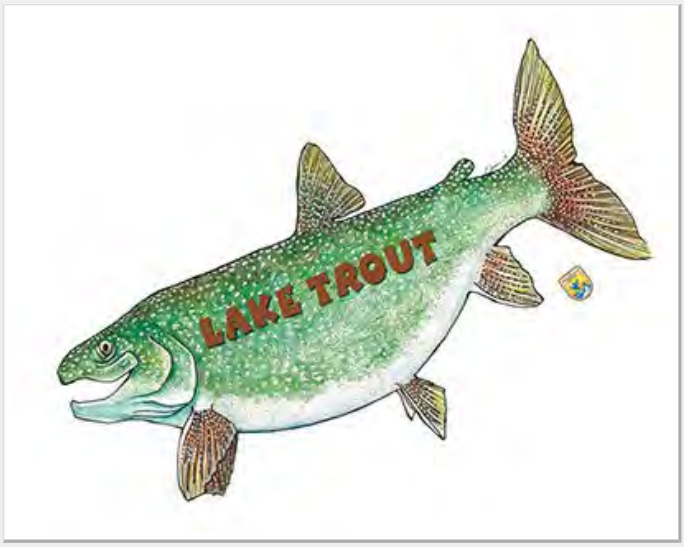
Got Flat Fish?
May 21, 2016 - World Fish Migration Day!

BY CATHERINE GATENBY, REGION 5-FISH AND AQUATIC CONSERVATION PROGRAM

Have fun while learning and creating awareness about some of the United States' cool migratory fishes.

- Get on board at **Migration Station**.
- Check out **Fish Facts**! Help teach kids about migratory fish. Adults will learn something too! They are great for the visitor center, the classroom and outreach.
- Enjoy posters by Laury Zicari, artist and retired FWS. Hang them in the classroom, visitor center or at home. Laury painted 17 species of migratory fishes, featured on Fish Facts, and in **Migration...All Dressed UP And Someplace To Go**...
- **What Makes Migration Tough** teaches us about the many obstacles fish encounter in their migratory travels. Use as a matching game in the classroom or hang on the wall (choose 8x11 or 11x17).
- Print some migratory **fish art**. Then, try **Flat Fish Migration**, #fishmigration. It's easy! Snap a selfie with a fish and help them "migrate"!

For more information contact **tim_smigielski@fws.gov** Midwest Region | Conservation Education Coordinator | Fish and Aquatic Conservation Program



Lake sturgeon Flat Fish migration art work. Credit Laury Zicari

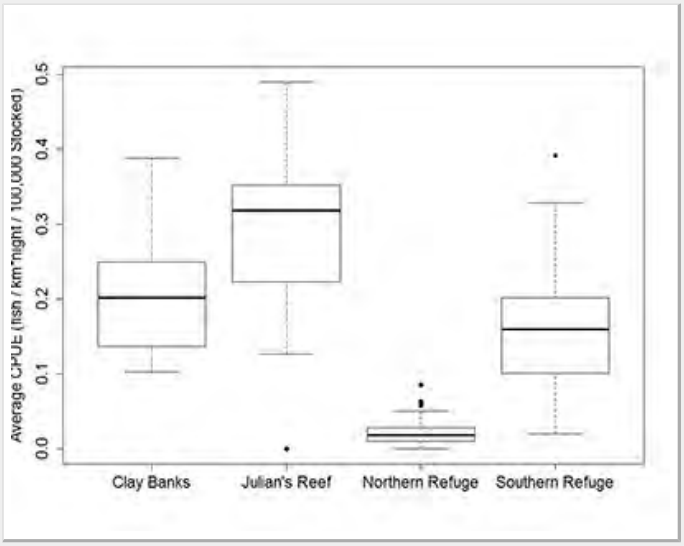
Lake trout Flat Fish migration art work. Credit: Laury Zicari

Study Reveals Patterns in the Survival and Movement of Lake Trout Stocked in Lake Michigan

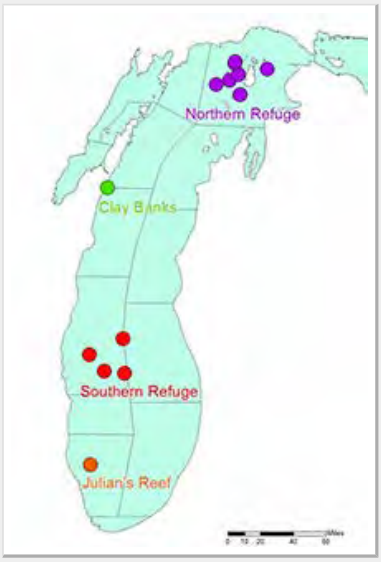
BY MATTHEW KORNIS, GREEN BAY FWCO-GREAT LAKES FISH TAGGING AND RECOVERY LAB

Lake trout were the top predator in the Great Lakes until overfishing and invasive sea lamprey caused their populations to crash by the 1960s. Since that time, rehabilitating this native species has been a major priority of federal, tribal, and state agencies. Up to 3 million lake trout have been stocked annually into Lake Michigan, where the species was completely eliminated, to restore populations of this native species and provide fishing opportunities for anglers.

Although lake trout are stocked throughout the lake, efforts have focused on four historically important spawning grounds in Lake Michigan to encourage wild reproduction. Coded-wire tags (small pieces of wire inserted into the snout) have been used since the mid-1980s to identify genetic strain, length at stocking, and hatchery of origin of lake trout stocked in each of these four areas. Recovery of coded-wire tagged lake trout in annual spring gillnet assessment surveys coordinated among state, tribal and federal agencies since 1998 has allowed us to assess patterns in lake trout survival and movement after stocking.

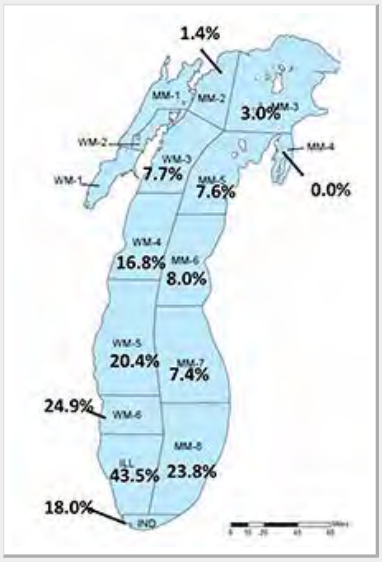


Average lake-wide catch per unit effort ('CPUE', a proxy for post-stocking survival) of lake trout stocked in the four major stocking areas. CPUE accounts for sampling effort and number of fish stocked in each stocking area. Credit: Matt Kornis, USFWS



The four major stocking areas evaluated by this study. Lake trout stocked in these areas received coded-wire tags from 1985 – 2004. Credit: Matt Kornis, USFWS

Our results indicated that lake trout stocked in the Northern Refuge had substantially lower survival compared to other sites, likely due to sea lamprey predation and commercial fishing in that area of the lake. Higher survival of fish stocked at other sites, especially Julian's Reef in Illinois, corresponded with areas where wild (non-stocked) juvenile and adult lake trout have been observed with increased frequency in recent years. Stocked lake trout from genetic strains that originated from wild Lake Michigan fish prior to their demise also had greater survival in central and southern Lake Michigan, where sea lamprey predation and fishing on lake trout is relatively low. A lake trout genetic strain from Seneca Lake, New York, has also been stocked in Lake Michigan due to their resistance to sea lamprey, but has somewhat lower survival in central and southern Lake Michigan compared to the remnant Lake Michigan strains. Finally, more than half of the lake trout stocked offshore in southern Lake Michigan (i.e., Southern Refuge and Julian's Reef sites) were recovered in nearshore waters where



Percent of adult lake trout recovered from each Lake Michigan management unit (e.g., MM-2, WM-6) that were wild fish. Data are from 5,794 lake trout captured by anglers and sampled by the Great Lakes Mass Marking Program in 2015. Credit: Matt Kornis, USFWS

they would be accessible to recreational anglers.

Our results suggest that lake trout stocking has contributed to rehabilitating wild lake trout in southern Lake Michigan, and has also provided angling opportunities to the recreational fishery in southern and central Lake Michigan through their nearshore movements. Poor survival from fish stocked in northern Lake Michigan highlight the continued challenge of rehabilitating lake trout in that area of the lake. Information on the performance of lake trout stocked at other Lake Michigan stocking locations, including numerous nearshore stocking sites, will be available soon from the Great Lakes Mass Marking Program, which has coded-wire tagged all lake trout stocked in Lakes Michigan and Huron from 2010 to present.

Locations where lake trout stocked in the Southern Refuge (dashed black oval) were recovered by gillnet assessments. Dot size is proportional to the number of recoveries. Black x's denote sampling locations. Credit: Matt Kornis, USFWS

Last updated: May 19, 2016

Kalamazoo River Streamside Rearing Unit Deployed

Spring Loaded!

BY DOUG ALOISI, GENOA NFH

Every spring, spawning adult lake sturgeon make their way back to the streams where they were hatched to create the next year class of lake sturgeon, ultimately continuing their species. In what is also now an annual rite of spring, three members of the Genoa National Fish Hatchery (NFH) staff traveled to Allegan, Michigan to set up the electrical, plumbing and backup life support systems for the "mobile rearing station" situated on the Kalamazoo River.

Kalamazoo River sturgeon rearing trailer deployed streamside. Credit: USFWS

The station pumps filtered and sterilized river water into the culture tanks, creating culture conditions that are closer to the lake sturgeon's optimal environmental temperature and water chemistry. This ensures the best survival for the incoming eggs and fry that are trapped directly out of the Kalamazoo River.

The U.S. Fish and Wildlife Service's Genoa NFH and Green Bay Fish and Wildlife Conservation Office partner with the Michigan Department of Natural Resources, Matchebenashshewish Band of Pottawatomi Indians of Michigan and Kalamazoo River branch of Sturgeon for Tomorrow to set and collect egg traps and larval drift nets to fill up the trailer with river specific origin lake sturgeon from the Kalamazoo River. These fry are reared on river water to allow them to imprint to the river's unique water chemistry in order to be able to find its way home up to 22 years later when the sturgeon is reproductively mature. Then it will do its best to replace itself at least once by successfully completing the spawning cycle.

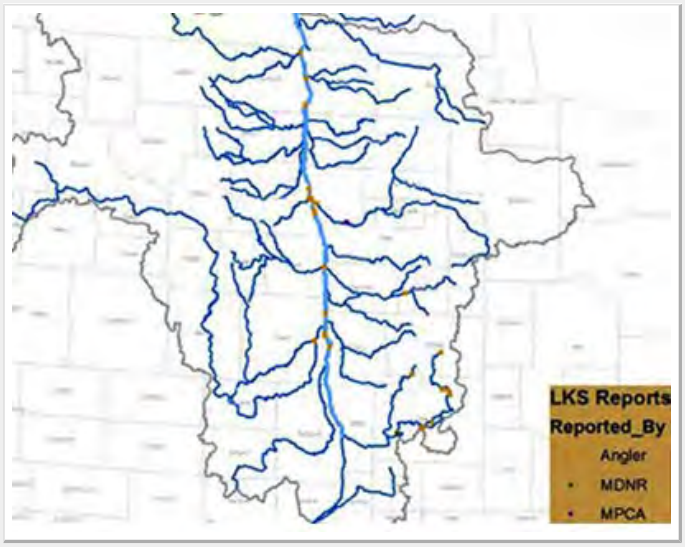
Juvenile Lake sturgeon. Credit: Katie Steiger Meister, USFWS

The juvenile lake sturgeon will be reared until 8-10 inches in length, and released in early September, when the water temperatures have begun cooling and the fish is large enough to escape most predators. Genoa NFH will have one staff person stationed at the trailer until then, caring for the larval lake sturgeon and ensuring that trailer systems remain operational. So far, a total of over 200 viable eggs have been brought into the facility, and we are hopeful that a large portion of those eggs will survive to complete their circle of life starting in the Kalamazoo River.

Reports of Lake Sturgeon Stocked by Genoa NFH and Partners...
They're Doing Well!

BY OREY ECKES, GENOA NFH

As spring progresses, lake sturgeon begin their migration from larger bodies of water to natal spawning grounds. In the months of April-June hatchery staff will begin collecting sturgeon eggs from natural spawning adults. Eggs will be collected from four river systems (Wolf River, Rainy River, Wisconsin River, and St. Lawrence River) for culture at Genoa National Fish Hatchery (NFH). Sturgeon will be reared at Genoa NFH for approximately four months before they are released in support of lake sturgeon restoration for federal, state, and tribal partners.



Red River Lake sturgeon catches reported by (Minnesota DNR)

Prior to release, lake sturgeon are coded wire tagged for future assessment of survival, growth, and migration patterns. As part of the restoration goal it is essential to monitor the success of stocking efforts. For example, sturgeon stocked over the past 15 years from Genoa NFH and released within the Red River Basin have been monitored by US Fish and Wildlife Service, Minnesota Department of Natural Resources (DNR), and tribal partners. Fisheries reports by Minnesota DNR and anglers have revealed capture locations of lake sturgeon in lakes and streams within the Red River Basin. Fish stocked in 2007 are reported to be between 45-50 inches. Since female lake sturgeon sexual mature between 20-25 years of age and males between 12-15 years they should start reproducing in the near future. Reports of these large fish are encouraging to hear. It's exciting to know that fish stocked from the Genoa NFH are surviving and doing well in the wild.

Repost from May 14, 2015 Fish Lines

Removing Barriers in the Marengo River
A Watershed Effort to Restore Cold Water Fisheries

BY TED KOEHLER, ASHLAND FWCO

Barrier Restoration on Marengo River Tributary. Credit: Bad River Watershed Association

The Marengo River Watershed Action Plan characterizes water resources to identify projects that should occur to improve watershed health. The plan seeks to restore connectivity among stream habitats in approximately 50 river miles throughout the basin. Restoration work at two locations was recently completed using funding and professional assistance provided by the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program, National Fish Passage Program and the Great Lakes Basin Fish Habitat Partnership.

One site on Kepsel's Creek Completed. Credit: Ted Koehler, USFWS

The two recently completed projects support the Marengo Watershed Action Plan's goal of barrier removal through restoration of the two high priority sites on tributaries to the Marengo River. The former barriers prevented movement of brook trout and other aquatic organisms, fragmenting habitat and limiting access to upstream spawning, rearing and feeding habitats.

The restoration work performed here continues the partnership tradition in the Bad River watershed to remove barriers and improve habitat for native brook trout, inventory culverts, monitor habitat changes, and engage citizens. Many of these efforts have been funded in part by the U.S. Fish and Wildlife Service in cooperation with the Ashland County Land and Water Conservation Department (LWCD), Bayfield County LWCD, Iron County LWCD, BRWA, U.S. Forest Service, U.S. Geological Survey, the Bad River Band of Lake Superior Chippewa Indians, and the Great Lakes Indian Fish and Wildlife Commission.

Neosho National Fish Hatchery
Spring 2016 Station Overview

BY BRUCE HALLMAN, NEOSHO NFH

Things at the Neosho National Fish Hatchery (NFH) have been heating up lately, in more ways than one. We've been busy with our sturgeon, mussels, trout and moving forward with the shiners.
We had two spawning windows for our endangered pallid sturgeon, which doubled our normal approach to breeding them. Three of our female sturgeon showed signs of early spawning, and we provided all the manpower to harvest eggs back in February from them. Unfortunately, for whatever reason, none released their eggs, and the females were returned to the wild after being implanted with telemetry devices. May spawning efforts produced two batches of male sperm.

Hatchery manager David Hendrix scooping up a pallid sturgeon in preparation for spawning. Credit: Bruce Hallman, USFWS

We have had two big outreach events this spring, with two more to come in the next few weeks. Our Veterans Fishing Derby in March was attended by about 170 tough souls that braved a cool, but pleasant morning of fishing. Most caught their limit of four rainbows, and everyone had a jolly good time. This was the fifth year we have held this event, and it kicks off our big outreach calendar. Our other annual event, put on in conjunction with the local Dogwood Tour is our Open House, which drew around 500 throughout the day. This occasion is popular because we partner with the Missouri Department of Conservation and they provide a booth with free tree giveaways. They always bring two to three thousand young trees, including flowering dogwoods, and most are gone by the time the day is done.

Our freshwater mussel breeding work continues to move forward, with glochidia being implanted on young largemouth bass this year. The young were removed from the tank after they dropped off and are now tiny but growing in trays alongside the adults. We hope to move on with endangered Neosho mucket mussels soon, but for now we are getting all the kinks out with the more common fatmuckets.

The grounds of Neosho NFH during the Annual Veterans Fishing Derby. Credit: Bruce Hallman, USFWS

We are gearing up for the second year's work with the endangered Topeka shiner minnows as well. We had much success last year, our first year with them, and we hope for things to be even better this time around. The adults are all in place and holdovers from last year's production are in a second raceway with the hopes of doubling production of this rare little fish. Hopefully by the end of June we will see many hundreds of tiny fry from these special fish.

And as always, we work to provide Missouri with about 100,000 pounds of rainbow trout per year. From an economic perspective, this program creates a return on investment of up to 20:1 – just another reason that we are proud to be giving back to our community, state and country in so many various ways.

Happy veterans after catching their limit of trout. Credit: Bruce Hallman, USFWS

A sturgeon is measured prior to implanting a telemetry device. Credit: Bruce Hallman, USFWS

Last updated: May 19, 2016

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.

Spring Distribution Commences

BY CAREY EDWARDS, IRON RIVER NFH

Iron River National Fish Hatchery raises approximately 1.2 million lake trout for restoration purposes in the upper Great Lakes. 90,000 are shore stocked as spring yearlings and entails discharging fish from the distribution truck into marinas or river mouths and occurs as soon as the weather and ice conditions permit. This year's spring shore stocking sites were Kewaunee, Sturgeon Bay and Bender Park. April 12th Iron River's marked the beginning of distribution for fish being stocked off the *M/V Spencer F. Baird*. These fish are offloaded onto the vessel and stocked onto reefs in Lake Michigan and Lake Huron. This is a massive cooperative effort which lasts over two months, between three National Fish Hatcheries, two Fish and Wildlife Conservation Offices, and Fish Health to stock approximately 4.4 million lake trout. Stay tuned for the final results on spring distribution.

U.S. Fish & Wildlife Service

Fisheries, Midwest Region

Conserving America's Fisheries

Search

Midwest Region Fisheries Divisions

National Fish Hatcheries

The Region's National Fish Hatcheries (NFH) focus on native species recovery and restoration. Primary species include: lake trout, endangered pallid sturgeon, and endangered, threatened, and native mussels. Other major programs include coaster brook trout and lake sturgeon restoration, fulfilling tribal trust responsibilities for native aquatic species, and cost reimbursed rainbow trout production for recreational fishing. Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, and develop and maintain brood stocks of various species and strains.

Fish and Wildlife Conservation Offices

Fish and Wildlife Conservation Offices (FWCO) conduct assessments of fish populations to guide management decisions, play a key role in targeting and implementing native fish and habitat restoration programs; perform key monitoring and control activities related to aquatic invasive species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's National Fish Passage Program, National Fish Habitat Partnerships, 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. The Whitney Genetics Lab serves as a leading edge genetics laboratory and conducts environmental DNA (eDNA) sample processing for early detection of invasive species.

Whitney Genetics Lab

The Whitney Genetics lab provides environmental DNA (eDNA) surveillance for the early detection of invasive Silver and Bighead carp as part of the Asian Carp Regional Coordinating Committee's plans to detect, monitor, and respond to the threat of invasive carp in the Great Lakes. The lab also provides analysis for determining the ploidy of wild-caught Black and Grass carp, two more invasive carp species.

U.S. Fish & Wildlife Service

Fisheries, Midwest Region

Conserving America's Fisheries

Search

Midwest Region Fisheries Contacts

Regional Office
5600 American Blvd West
Bloomington, MN 55437
Todd Turner *todd_turner@fws.gov*
612-713-5111

Iron River National Fish Hatchery
10325 Fairview Road
Iron River, WI 54847
Nick Starzl *nick_starzl@fws.gov*
715-372-8510

Genoa National Fish Hatchery
S 5689 State Road 35
Genoa, WI 54632
Doug Aloisi *doug_aloisi@fws.gov*
608-689-2605

Jordan River National Fish Hatchery
6623 Turner Road
Elmira, MI 49730
Roger Gordon *roger_gordon@fws.gov*
231-584-2461

Neosho National Fish Hatchery
520 E Park Street
Neosho, MO 64850
David Hendrix *david_hendrix@fws.gov*
417-451-0554

Pendills/Sullivan Creek National Fish Hatchery
21990 W. Trout Lane
Brimley, MI 49715
Curt Friez *curt_friez@fws.gov*
906-437-5231

Midwest Fisheries Center
555 Lester Avenue
Onalaska, WI 54650
Teresa Lewis *teresa_lewis@fws.gov*
608-783-8420

- **LaCrosse FWCO**
  Sam Finney *sam_finney@fws.gov*
  608-783-8434
- **LaCrosse Fish Health Center**
  Ken Phillips *kenneth_phillips@fws.gov*
  608-783-8447
- **Whitney Genetics Lab**
  Acting Emy Monroe *emy_monroe@fws.gov*
  608-783-8402

Alpena Fish & Wildlife Conservation Office
480 W. Fletcher Street
Alpena, MI 49707
Scott Koproski *scott_koproski@fws.gov*
989-356-5102
Area of Responsibility (MI, OH)

Ashland Fish & Wildlife Conservation Office
2800 Lake Shore Drive East
Ashland, WI 54806
Mark Brouder *mark_brouder@fws.gov*
715-682-6185
Area of Responsibility (MI, MN, WI)

Carterville Fish & Wildlife Conservation Office
9053 Route 148, Suite A
Marion, Illinois 62959
Rob Simmonds *rob_simmonds@fws.gov*
618-997-6869
Area of Responsibility (IL, IN, OH)

Columbia Fish & Wildlife Conservation Office
101 Park Deville Drive, Suite A
Columbia, MO 65203
Jason Goeckler *jason_goeckler@fws.gov*
573-234-2132
Area of Responsibility (IA, MO)

Green Bay Fish & Wildlife Conservation Office
2661 Scott Tower Road
New Franken, WI 54229
Mark Holey *mark_holey@fws.gov*
920-866-1717
Area of Responsibility (IL, IN, MI, WI)

Ludington Biological Station
229 S.Jebavy Drive
Ludington, MI 49431
Scott Grunder *scott_grunder@fws.gov*
231-845-6205

Marquette Biological Station
3090 Wright Street
Marquette, MI 49855
Kasia Mullett *katherine_mullett@fws.gov*
906-226-6571