U.S. Fish & Wildlife Service - Midwest Region
Fisheries Program

Fish Lines

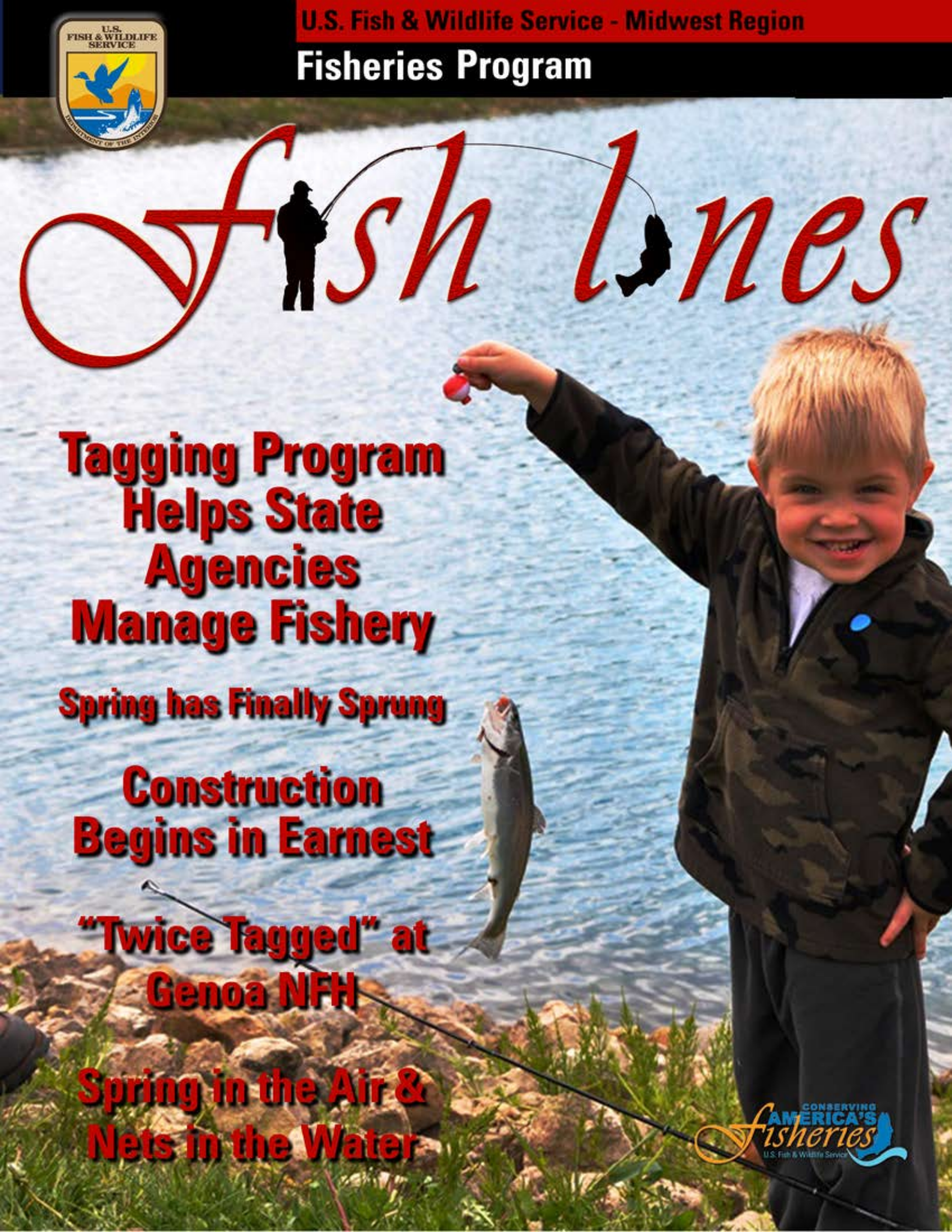
Tagging Program Helps State Agencies Manage Fishery

Spring has Finally Sprung

Construction Begins in Earnest

"Twice Tagged" at Genoa NFH

Spring in the Air & Nets in the Water



Tagging Program Helps State Agencies Manage Great Lakes Chinook Salmon Fishery

BY JAMES WEBSTER, GREEN BAY FWCO

Fish tagging trailer set up for Chinook salmon tagging at the Michigan Department of
Natural Resource's Platte River State Fish Hatchery. Credit: USFWS

A collaborative effort of the team at the U.S. Fish and Wildlife Service Great Lakes Fish Tag and Recovery Lab and their state agency partners, has resulted in an additional 2.5 million coded wire tagged Chinook salmon in Lakes Michigan and Huron. The team tagged and adipose fin clipped the fish during March and April using automated fish tagging trailers at seven state hatcheries in Michigan, Wisconsin, Illinois and Indiana. Also, 400,000 Chinook salmon were adipose fin clipped without coded wire tags for release into Lake Superior.

Tagging occurs at the state hatcheries when the fish are 3" to 4" long; about a month prior to the release of the fish in late April or May. The tagging equipment automatically implants the 1.1mm long coded wire tag into the nose of the salmon, while simultaneously removing the adipose fin. The tags bear a unique number assigned to specific groups of fish, and the adipose fin clip identifies the fish as hatchery-reared and possessing a tag. When a tagged fish is recovered from the sport fishery, the head is retained and sent to the Lab in New Franken, Wisconsin for tag extraction and identification.

Information collected from the recovered tagged fish and their wild counterparts helps fishery managers understand levels of natural reproduction, movement, and the contributions of hatchery-reared fish to the regional fisheries. In addition, the tag recoveries also aid in the evaluation of the size and health of the population by providing a detailed understanding of growth and survival rates and the comparative successes of rearing and stocking practices. Management of the multi-million dollar Chinook salmon fishery centers on balancing the stocking of the predatory fish with the available prey; data from the recovery of tagged fish help with this cooperative effort to manage the fishery.

This was the fourth year that all hatchery-reared Chinook salmon released into Lakes Michigan and Huron have been coded wire tagged and adipose fin clipped. To date, the Lab has tagged 16 million Chinook salmon and recovered more than 16,000 tags from Chinook salmon harvested from Lakes Michigan and Huron.

Biologist Kevin Pankow loads Chinook salmon into the tagging trailer at the Indiana Department of Natural Resource's Mixsawbah State Fish Hatchery. Credit: USFWS

"Spring has Finally Sprung" at Genoa NFH's Outdoor Classroom

BY JORGE BUENING, GENOA NFH

This year especially, it seems that winter was very reluctant to loosen its frozen grip on the Genoa National Fish Hatchery (NFH). Inevitably winter relented and we were rewarded with walleye and sturgeon to spawn, fish to distribute, and visits from our area outdoor classroom participants.

The season started off with a visit from the 5th graders of Summit Environmental School. During their visit these students received a tour of the hatchery that highlighted the spring activities that the hatchery was involved with, including spawning and pond setup. While here they also worked on cleaning out last year's growth from our butterfly garden and planting some early vegetables. Along with that activity they planted the initial plants in our new prairie garden alongside our archery range. All of these plantings were done with the assistance of the La Crosse Garden Club, who were equally ready to start some spring plantings.

Lincoln Elementary students remain still while observing a Largemouth bass spawning nest at Genoa NFH. Credit: USFWS

Next, the 7th and 8th graders from Lincoln Middle School made a visit. These students were divided into four groups that rotated through four stations.

Southern Bluffs Elementary students plant prairie plants this spring. Credit: USFWS

These stations consisted of an outdoor reading station, a frog call station, a bird call station, and a fish and freshwater mussel station. Students received lessons on the subject matter in class and then they tried out their newly found knowledge in our wetland and prairie habitat zones.

Even though spring had sprung, poor weather conditions postponed the hatchery visit with Southern Bluffs Elementary. So we just made a trip to Southern Bluffs Elementary School. During this classroom visit students learned about freshwater mussels. Please see the video of this classroom visit on our **Facebook page.**

The students learned how we remove glochidia (larval mussels) from freshwater mussels and saw what they look like before attaching to a host fish under a microscope. The students then witnessed the fish become infested with freshwater mussels.

Again this spring has given us an opportunity to share what we do with the younger generations. We hopefully have conveyed the importance of maintaining a healthy environment and learning about the world around us. Some of these young people held their first freshwater mussel, others heard their first red-winged blackbird, and still others planted their first plant. All of these experiences preserve conservation in the minds of our youth and galvanize the mind-set to carry them on for future generations.

Interpretive Center Construction Begins in Earnest

BY STEVEN GAMBICKI, ALPENA FWCO

April means not only the lifting of road weight restrictions in most of Wisconsin, but it also means the beginning of construction season for much of the northland. At the Genoa National Fish Hatchery it also means years of planning are coming to fruition with the construction of the Great River Road Interpretive Center at the hatchery site.

Dirt work and grading being accomplished for the Great River Road Interpretive Center. Credit: USFWS

The Great River Road Interpretive Center is one of a series of visitor contact centers for travelers that use the National Scenic Byway that bisects the hatchery, State Highway 35. The Wisconsin Great River Road is a 250 mile drive winding through 33 river towns and is Wisconsin's only designated National Scenic Byway. The road runs along the Mississippi River through some of Wisconsin's oldest and most historic communities. The scenery features stunning bluffs with scenic overlooks, a variety of wildlife, and beautiful countryside along the river.

The hatchery received a grant in 2010 through the National Scenic Byways Program to build a visitor contact center that would interpret the intrinsic value of the Upper Mississippi River. The center will focus on the history of conservation in the Region, and discuss the River's value from prehistoric time to the present. The center will also have an exhibit on the battle of Bad Axe, the last conflict east of the Mississippi River between Native Americans, and the United States Army.

Groundbreaking for the Center began this April with Pangea Group from St. Louis, Missouri acquiring the bid. A local company, St. Joseph Construction has begun moving dirt and installing retaining walls in preparation for the actual building construction. Projected building completion is estimated to be the fall of 2015, with hopes of a grand opening ceremony in the spring of 2016.

Lake Sturgeon "Twice Tagged" at Genoa NFH

BY AARON VON ESCHEN, GENOA NFH

This Lake sturgeon volunteered to be the next one tagged. Credit: USFWS

The time to shine has come for the last remaining lot of lake sturgeon at the Genoa National Fish Hatchery (NFH). It has been almost a year since this lot of Wolf River strain lake sturgeon arrived at Genoa and these fish were being held for a very special purpose. Their larger size made this lot ideal for studying retention of differing fishery tags.

In order to get the fish tagged with both PIT tags and Coded Wire tags, many partners joined forces, including Ashland Fish and Wildlife Conservation Office (FWCO), Green Bay FWCO, La Crosse FWCO, and staff from Genoa NFH. The objective of this study was to tag all the lake sturgeon with passive integrated transponder (PIT) tags and coded wire tags (CWT) for tag retention evaluation. Biological and tagging specific data for each fish was entered in a data file, so that later tag retention data can be associated with tag type, initial fish size, and tagging procedure/crew.

PIT tags are small glass capsules that encase a very small microchip that provides a unique serial number to each tagged fish. Once tagged the fish can be scanned with an electronic PIT tag reader, which display's the serial number thus providing the fish-specific identification number. CWTs are small magnetic steel tags that are inserted in the sturgeon's snout or underneath a scale (scute) and detected with handheld metal detectors known as wands. Generally PIT tags have come in one size (12mm) however a new smaller PIT tag (9mm) has been developed and may provide a new option for tagging of smaller fish. CWTs have been used to tag smaller size fish, however with the PIT tag an individual fish can be tracked and accounted for, as opposed to just identifying a single lot of fish as with CWTs.

All fish were scheduled to be rechecked one month after tagging to get a good grasp on the tag retention of each tag type and size.

The staff at the Genoa NFH would like to thank the members of the FWCO offices, La Crosse Fish Health office, and members from the Menominee Tribe for cooperating in the tagging study.

Tagging crew at Genoa NFH hard at work. Credit: USFWS

U.S. Fish & Wildlife Service

Fisheries, Midwest Region

Conserving America's Fisheries

Spring in the Air & Nets in the Water

BY ANGELA BARAN, GENOA NFH

Jeff Lockington, Genoa National Fish Hatchery resets a hoop net in the Mississippi River. Credit: USFWS

Spring was a little slow to show up this year, staff from Genoa National Fish Hatchery (NFH) usually start setting nets in the Mississippi River in the middle to late March, but water and air temperatures pushed things back until April 7th. The continual rise and fall of the temperature and rising and falling water levels stretched the spawning season out for the whole month of April.

Hatchery staff returned from setting up the sturgeon trailer in Michigan to hop in the boat and set out the walleye nets. During the spring netting, eggs are collected from walleye to support not only the fish culture programs but also for the mussel program. Walleye are the host fish for black sandshell mussels, an endangered or species of concern for several states. Walleye eggs are also sent to state partners for their restoration programs, this year Genoa was able to ship out 10 million eggs to New Mexico and two million eggs to DeSoto National Wildlife Refuge in Nebraska. Walleye fry are sent to the Menominee Indian Tribe to be stocked in their ponds to grow out and then stocked out in the fall.

During the spring netting, Genoa NFH also helps out the La Crosse Fish Health Office by collecting wild fish from the Mississippi River for the National Wild Fish Health Survey. The Fish and Wildlife Service continually samples waters throughout the country to monitor the health of fish populations, for more information you can visit the website: **http://www.fws.gov/wildfishsurvey/**.

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The Genoa National Fish Hatchery; Sportfish and Endangered Species Under one Roof

BY NATHAN ECKERT, GENOA NFH

A young angler shows off his first catch at Genoa National Fish Hatchery Fishing event. Credit: USFWS

The Genoa National Fish Hatchery (NFH) is located near Genoa, Wisconson. The station currently has 8 fulltime staff one pathways student and a network of volunteers to conduct hatchery operations and accomplish the stations' mission. We raise warm, cool and cold-water fish species ranging from fathead minnows to lake sturgeon along with freshwater mussels.

Genoa NFH raises rainbow trout, coaster brook trout and lake trout. The rainbow trout are produced to provide angling opportunities at multiple locations including several tribal waters and a military base. The coaster brook trout is raised for restoration efforts around Grand Portage. Lake trout are raised in our isolation facility and provided to other stations as brood stock for future restoration efforts. Unlike the other trout species, the lake trout stay on station for at least 18 months before they are transferred to allow for multiple fish health certificates. This is possible due to improvements made to our isolation facility which allows us to isolate fish from the rest of the hatchery during the health certification process.

Warm and cool water species raised at Genoa NFH include largemouth bass, smallmouth bass, bluegill, black crappie, yellow perch, and walleye and fathead minnows. These fish are reared in our ponds, which include over 55 surface acres, and are distributed to state, federal and tribal entities to provide angling opportunities, restoration efforts and research projects.

A fingerling Lake sturgeon prior to being stocked into its new home. Credit: USFWS

Many of the warm and cool water species raised at Genoa NFH are used as hosts for mussel propagation in the stations' native mussel recovery program. Currently, the mussel program propagates around 12 species annually, 4 of which are federally endangered. Mussels are host specific, each requiring a different fish to complete its' lifecycle. This unique portion of the mussel lifecycle has us constantly looking for sources of fish not reared at the hatchery to continue expanding the program by propagating new species. In the last year we worked with flathead catfish, freshwater drum, mudpuppies, logperch and golden shiners to propagate mussels that do not utilize fish currently produced at Genoa NFH.

Hatchery raised & wild collected mussels are prepared for shipment to USGS for

Genoa NFH may be best known for the production of lake sturgeon. Each year up to 70,000 lake sturgeon are reared here. Our sturgeon restoration program now includes four strains (Wolf River, Wisconsin River, Rainy River and St. Lawrence River). Fingerling lake sturgeon are stocked primarily for tribal trust obligations, but a portion of fish are stocked by state and federal personnel for restoration purposes across the country.

Genoa NFH also conducts several outreach events each year to further the Service mission of connecting people with nature. We hold an outdoor classroom with several schools to teach students about how the environment changes over the seasons. We have a sturgeon in the classroom program that allows students an up close view of their own lake sturgeon. We also host two fishing events for area youth, one in the spring and another, more popular, in the winter on a frozen pond.

U.S. Fish & 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.

A New Addition to the Great Lakes Fish Tag and Recovery Lab

BY KEVIN PANKOW, GREEN BAY FWCO

This year, the U.S. Fish and Wildlife Service Great Lakes Fish Tag and Recovery Lab welcomed their newest team member, fish biologist Kevin Mann. Kevin joined the Lab as the fourth member of the tagging team and will assist in providing coded-wire tagging services to state and Service hatcheries.

Kevin has served as a fish biologist for the Green Bay Fish and Wildlife Conservation Office (GBFWCO) for three years primarily working on lake sturgeon rehabilitation and conservation. Kevin path in fishery science began by attending Michigan State University, where he earned a B.S. degree in Fisheries and Wildlife in 2002 before working his way around the country through Michigan, Colorado, Illinois and Wisconsin. During that time, he was able to work on different systems ranging in size from farm field ditches to the Great Lakes. Kevin later attended Michigan Technological University where he received his M.S. in Biological Sciences in 2008 studying juvenile lake sturgeon in a streamside rearing environment. Kevin's career with the Service began in 2010 due to his knowledge of lake sturgeon biology and streamside rearing, and GBFWCOs' need for someone with that expertise.

With this new position, Kevin will be transitioning from one phase of his career to another, but has been fortunate enough to continue working with the Service and on the important projects underway. During his tenure at GBFWCO, Kevin has worked with the all of the biologists of the Great Lakes Fish Tag and Recovery Lab in different capacities and is excited to become the newest member of the crew

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Welcome Aboard!

BY ANGELA BARAN, GENOA NFH

It is now official; Orey Eckes is the newest full-time permanent member of the Genoa National Fish Hatchery staff. He was converted from a Pathways Student to a Fish Biologist this February. Orey started as a volunteer in the spring of 2010 and began as a STEP Student in the fall of 2010.

He graduated in 2011 with a Bachelors Degree of Biology with a major in Environmental Science and a minor in Recreational Management and then continued on to get his Master's Degree in Aquatic Science. For his thesis, Orey worked with the staff at Genoa NFH researching the development of lake sturgeon embryos at various temperatures. This work has led to a formal percent development chart that can be used to determine safe shipping times, predict hatch and feeding dates. He has been a large part of the outreach program at the hatchery, attending events off station and helping with the Outdoor Classrooms on station. After a nail-biting fall, with the addition of his son Easton to the family, graduating and finishing his master's thesis, he is breathing a sigh of relief to have a permanent position at the hatchery!

U.S. Fish & Wildlife Service

Fisheries, Midwest Region

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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.

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