

U.S. Fish & Wildlife Service - Midwest Region

Fisheries & Aquatic Resources Program

fish lines

**Volunteer Returns
for a Fifth Year!**

**Fish Collection is
Complete**

for Cisco Pathogen Survey

**Digging to Restore
Missouri River Fish Habitat**

**Partners Collect Data
for the Baby Brookies Program**



Vol. 7 No. 7
April 2009

Fish Lines

Fisheries & Aquatic Resources Program - Midwest Region

The Mission of the U.S. Fish & Wildlife Service: working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

The vision of the Service's Fisheries Program is working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support Federal mitigation programs for the benefit of the American public. Implementing this vision will help the Fisheries Program do more for aquatic resources and the people who value and depend on them through enhanced partnerships, scientific integrity, and a balanced approach to conservation.

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-USFWS/JanBeitlich

A Marquette Elementary School (Madison, WI) student displays a reusable shopping bag that she decorated as part of the "Going Green" initiative.

To view other issues of "Fish Lines," visit our website at:
<http://www.fws.gov/midwest/Fisheries/library/fishlines.htm>

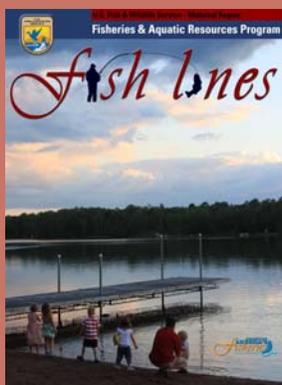
Fish Lines

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-USWFS/Karla Bartelt
(Lt. to Rt.) Jordan Redman, Yana Grueneis,
Jack Redman, Sasha Grueneis, Clark and
Wyatt Bartelt feed fish at Deep Lake in
northern Wisconsin.

Fish Lines is produced by the Fisheries and Aquatic Resources Program, Region 3, U.S. Fish & Wildlife Service, Ft. Snelling, Minnesota. Items included are selected from monthly reports submitted by Region 3 fisheries offices. Photos included are used by permission and may be copyrighted.

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Volunteer Returns for a Fifth Year!

BY CURT FRIEZ, PENDILLS CREEK NFH

Mr. Randy Obermiller has set a record at the Pendills Creek/Sullivan Creek National Fish Hatchery (NFH) Complex for his volunteer service. Randy has volunteered at the hatchery long enough that staff members treat and consider him to be the same status as an employee. During this period of time, Randy has become a very valuable asset for the hatchery complex. He does just about every fish culture activity, including monthly fish culture management reports.



Randy volunteers during the winter season when he is on hiatus from his regular job, where he works at a pie-making facility in down-state Michigan. When I asked Randy about why he liked it here so much, he commented that the work is interesting and the people here are high caliber professionals that truly believe in the mission and the importance of the resource.

Randy has volunteered an amazing 3,639 hours. During this time period, he has become a very proficient fish culturist and an excellent maintenance assistant at both facilities. Personally, it is nice to know that there are people out there like Randy who are willing to dedicate and commit their valuable time and efforts to assist in the Fish and Wildlife

-USFWS

Randy Obermiller records the weight of fish being transferred to a new fish culture raceway. Randy has volunteered at the Pendills Creek/Sullivan Creek National Fish Hatchery Complex for five consecutive years and has donated an amazing 3,639 hour of service to the facility.

Service mission to restore and conserve our natural resources so that future generations will also be able to enjoy them. We want to congratulate Randy on this achievement and thank him whole-heartedly for all his assistance during the past five years. We welcome him back any time.

For further info about the Pendills Creek NFH/Sullivan Creek NFH: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/pendills.pdf>

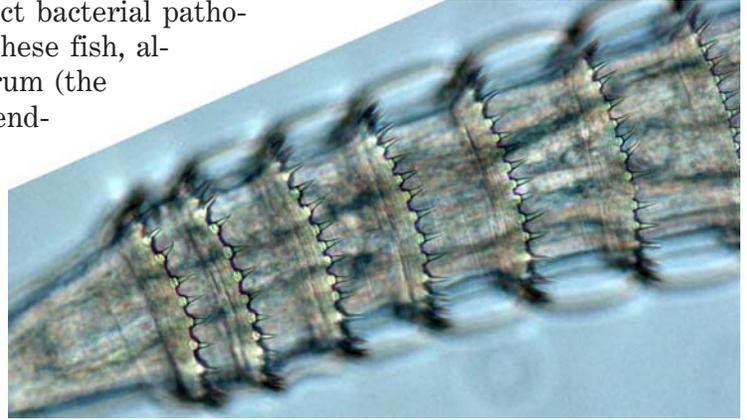
Fish Collection is Complete for Cisco Pathogen Survey

BY COREY PUZACH, LA CROSSE FHC

In November 2008, Eric Leis traveled to Thunder Bay, Ontario, to complete the 2008 cisco pathogen survey for the La Crosse Fish Health Center (FHC). Fish were collected from Thunder and Black bays in Lake Superior. Samples of kidney and spleen were taken for viral screening. Samples of kidney were also collected to screen for select bacterial pathogens. No viral or bacterial pathogens were detected in these fish, although the bacterial tests for *Renibacterium salmoninarum* (the causative agent of Bacterial Kidney Disease) are still pending.

After bacterial and viral samples were obtained, the fish were frozen using a flash freezing technique with super cooled ethanol. These preserved samples will be used for a quantitative parasite search.

The La Crosse FHC has been surveying cisco since the fall of 2005. Fish were obtained from Lake Superior (385 fish), Lake Huron (76 fish), Lake Michigan (27 fish) and the Saint Mary's River (60 fish). Many participating agencies have made this study possible including the United States Geological Survey (USGS) - Lake Superior Biological Station, Chippewa Ottawa Resource Agency (CORA), Michigan



-USFWS/Corey Puzach

This is a magnified image of the nematode *Spinitectus* spp. which is one of the many parasites found in cisco. The nematode gets its name from the rows of spines covering the anterior region. It uses these for attaching to the intestinal tract.

Department of Natural Resources (DNR), Minnesota DNR, USGS-Great Lakes Science Center and the Ontario Ministry of Natural Resources. The cisco survey was also conducted in conjunction with the National Wild Fish Health Survey. The data from this project is also part of a masters thesis.



-USFWS

These lake whitefish were shipped to the La Crosse Fish Health Center (FHC) to provide a source of bacterial and viral samples of a native population in the Great Lakes. The cisco pathogen survey has been ongoing since the fall of 2005 by the La Crosse FHC.

Cisco are members of the subfamily Coregoninae (whitefish and chub) in the trout family Salmonidae. These pelagic, deep water fish were once a large part of the food web in the Great Lakes. Cisco were also an important part of a once booming commercial fishery. It is thought that cisco harvest totals were more than all other species combined in the late 18th and early 19th centuries. Unfortunately, by the 1950s, the cisco population had crashed in all of the Great Lakes due to over-fishing, invasive species competition and pollution.

Over time, populations of cisco have returned to some parts of the Great Lakes. Lake Superior has the largest populations, with lower numbers occurring in the Saint Mary's River, Lake Huron and Lake Michigan. Population numbers are currently higher than the 1950s, but recruitment is still sporadic. Many partner agencies are working on propagating this species. The La Crosse FHC's cisco pathogen survey will identify pathogens that the hatcheries may encounter during the propagation of this important native species.

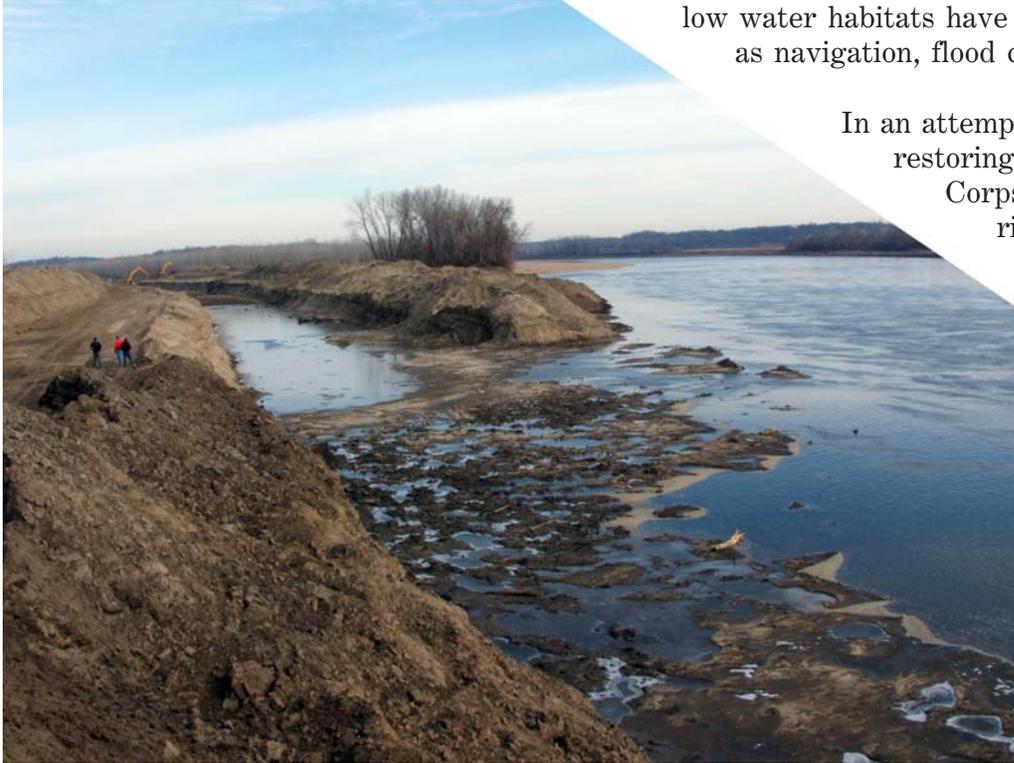
For further info about the La Crosse FHC: <http://www.fws.gov/midwest/LaCrosseFishHealthCenter/>

For further info about CORA: <http://www.1836cora.org/>

Digging to Restore Missouri River Fish Habitat

BY JOSHUA SCHLOESSER AND JOE MCMULLEN, COLUMBIA NFWCO

Many species of concern such as pallid sturgeon, blue sucker, plains minnow, western silvery minnow, sicklefin chub and sturgeon chub are hard to find in the Missouri River. These native fish have declined in abundance partially due to the loss of valuable floodplain and shallow water habitats which has affected spawning, growth, recruitment and survival. Shallow water habitats have been lost to special interests such as navigation, flood control, irrigation and hydropower.



-USFWS

This image shows the 2006 construction phase of Tadpole Island chute on the Missouri River near Columbia, MO, which will provide shallow water habitat for native Missouri River fishes.

In an attempt to amend the loss of, and start restoring native fishes, the U.S. Army Corps of Engineers (Corps) was authorized to acquire and develop habitat on public and non-public lands to mitigate for habitat loss. One method of habitat restoration used was digging side-channel chutes near historic island complexes. In the lower Missouri River, two chutes were dug, one at North Overton Bottoms and the other at Tadpole Island, both near Columbia, Missouri. To evaluate the success of this habitat restoration, the Columbia National Fish and Wildlife Conservation Office (NFWCO) monitored the fish community during 2006-2008. Additionally, two naturally formed chutes near Glasgow and Portland, Missouri, were monitored to serve as comparisons to man-made habitat.



-USFWS

Three months after construction, the flowing water in Tadpole Island chute has caused bank erosion, creating shallow water habitat for native fishes.

The monitoring efforts of the Columbia NFWCO were part of a large cooperative project consisting of the Corps, Iowa Department of Natural Resources, Nebraska Game and Parks Commission and Missouri Department of Conservation which monitored a total of twelve man-made and naturally formed chutes and five backwaters between Sioux City, Iowa, and St. Louis, Missouri.

Recently, the cooperating agencies completed a final report of the three year monitoring program to evaluate how the design and morphology of each chute affected the fish community. Biologists learned that chutes which were shallow and wide generally had more native river species present, as well as more juvenile fishes. Most man-made chutes, such as Overton and Tadpole, were constructed as pilot channels that were narrow and deep with swift water velocities, and expected to erode over time with high water events. Currently though, fewer species and lower numbers of juvenile fishes were found in the man-made chutes when compared to natural chutes. Through a variety of data analysis techniques, biologists are now more aware of the habitat conditions necessary to bolster efforts aimed at restoring fish populations. Recommendations provided to the Corps will give river engineers the tools they need to enhance fish habitats in existing chutes and improve the designs of future habitat restoration projects.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>



-USFWS

A biologist sorts through fish captured during an assessment of shallow water habitat. A wide variety of native small-bodied and juvenile fishes thrive in shallow water habitat on the Missouri River.

The success of the mitigation program has established side-channel habitats solely for the protection of fish and wildlife populations. As man-made habitats evolve, these restoration projects will continue to add to the diversity of habitats on the Missouri River and aid in the recovery of threatened and endangered species.

Partners Collect Data for the Baby Brookies Program

BY TIM SMIGIELSKI, JORDAN RIVER NFH

The cub scouts from Bellaire, Michigan, and representatives from the Bellaire Conservation Club toured Jordan River NFH on March 19th. This group is new to the Baby Brookies program and they are very enthusiastic. Baby Brookies is a program where catchable-sized brook trout are raised at the hatchery with assistance from school students and after school student groups. The students learn about trout biology, fish culture and resource conservation and management.



-USFWS/TimSmigielski

Looking very professional – One of the newest members of the “Baby Brookies” program learns the importance of accurately recording data on brook trout. Baby Brookies is a program where catchable-sized brook trout are raised at the Jordan River National Fish Hatchery with assistance from student groups.

During this visit, the cub scouts and their parents collected data on their fish. The parents helped sample the fish. Then the students performed length and weight measurements on the two year old brookies. Students learned to measure to the nearest tenth of an inch and weighed the fish in grams. Each scout recorded their own data in a special log book dedicated to the program participants.

During their next visit, students will perform another length/

weight measurement and a sample count to determine the mean length increase and number of fish per pound in that raceway.

For more about the Jordan River National Fish Hatchery public outreach programs or public use opportunities please contact Tim Smigielski at 231/584-2461 or via email at: tim_smigielski@fws.gov.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

Do you want to know where the fish are? - Check out the Great Lakes Fish Stocking Database!

BY DALE HANSON, GREEN BAY NFWCO

Did you know that since 1980, between 30 and 65 million fish have been stocked annually in the Great Lakes? The result of this is our world-class fishery which is worth an estimated value of \$4-6 billion. Managing these fisheries is very complex and requires, among other things, an in-depth knowledge of the fish stocked.



-USFWS/Rob Elliott

The *M/V Spencer F. Baird* leaves port from Sturgeon Bay, WI, to stock lake trout in Lake Michigan.

Partnerships are essential for effective fisheries conservation. Many agencies, organizations, and private individuals are involved in fisheries conservation and management, but no one can do it alone. Together, these stakeholders combine efforts and expertise to tackle challenges facing fisheries conservation. The success of these partnerships will depend on strong, two-way communications and accountability.

In 1991, the Great Lakes Fishery Commission undertook the mammoth task of tracking fish stocking events in the Great Lakes basin. This is no easy task. In addition to the Fish and Wildlife Service, there are eight states, one province, several tribes and private entities that all operate hatchery programs in the basin. In 1997, the Green Bay National Fish and Wildlife Conservation Office (NFWCO) assumed responsibility to further develop and maintain the fish stocking database. Biologist Dale Hanson annually updates the database with numbers stocked by species, location and life stage. Fish marks and tags, and fish health information are also tracked in the database. This stocking data is subsequently used in fishery management models by researchers who evaluate fish movement and survival, and by state management agencies that provide fishery information to anglers. You can learn more about the fish you want to catch by visiting the database on-line at www.glfco.org/fishstocking/.

For further info about the Green Bay NFWCO: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf>

St. Marys River Fishery Task Group Meeting

BY ANJANETTE BOWEN, ALPENA NFWCO

The St. Marys River Fishery Task Group (Task Group) met on April 6 to discuss upcoming activities and issues of concern regarding fisheries of the St. Marys River. Alpena National Fish and Wildlife Conservation Office (NFWCO) biologist Anjie Bowen co-chaired the meeting with new task group chair Neal Godby of the Michigan Department of Natural Resources (DNR). The meeting was hosted by Sue Greenwood of the Ontario Ministry of Natural Resources (OMNR) and held at the Ontario Forest Research Institute in Sault Ste. Marie, Ontario.

The following information was provided and/or discussed at the meeting: the announcement that Neal Godby was approved as the new task group chair; an overview of creel data available for the St. Marys River was provided by Tracy Kolb (Michigan DNR); information on Lake Superior State University

(LSSU) research on perch and walleye genetics in the St. Marys River was provided by Barb Evans (LSSU); planning for the fall walleye evaluation survey and the 2009 fish community survey; Neal Godby and Mike Ripley (Chippewa Ottawa Resource Authority) provided updates on St. Marys River project proposals; and Sue Greenwood (OMNR) provided an update on dewatering associated with the compensating gates repair scheduled for 2010. It was also noted that the Lake Huron Committee will conduct a final review of the *St. Marys River Walleye Stocking and Evaluation Plan*, and they will be reviewing an initial background document on Fish Community Objectives for the St. Marys River. The Task Group is comprised of a number of agencies with management authority or other interests in the St. Marys River. Membership includes the OMNR,

Michigan DNR, LSSU, Bay Mills Indian Community, Chippewa Ottawa Resource Authority, Department of Fisheries and Oceans Canada, Sault College of Applied Arts and Technology, Algoma University, U.S. Geological Survey and Fish and Wildlife Service. The task group was established under the authority of the Great Lakes Fishery Commission's Lake Huron Committee in 1997 to achieve a meaningful under-

standing of the fishery resources of the St. Marys River, and to develop a joint strategy for enhancing and maximizing that fishery. Publications produced by the Task Group may be found on the Great Lakes Fishery Commission's website at: <http://www.glf.com/lakecom/lhc/lhchome.php> under 'Publications and Products'.

For further info about the Alpena NFWCO: <http://www.fws.gov/midwest/alpena/index.htm>

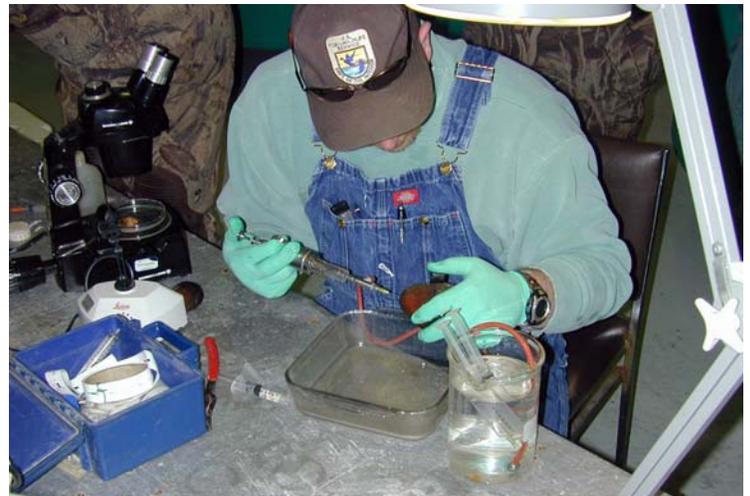
Genoa NFH Helps Plant Seeds for Underwater Butterfly Garden

BY TONY BRADY, GENOA NFH

Most people learn in school about the life cycle of butterflies, and it is this example that Genoa National Fish Hatchery (NFH) staff use when describing the life cycle of native freshwater mussels. Mussels have a larval stage that must metamorphose in order to become a free living organism. The larval mussel, called glochidia, undergoes its metamorphosis while attached to the gills and fins of fish. Like the Monarch butterfly, whose caterpillar lives only on milk-weed, certain mussels can only attach to certain fish. Genoa NFH has worked for years to pair up the correct host fish with mussels that are desired for a number of programs including the federally endangered Higgin's eye pearl mussel. Genoa's knowledge of mussel and fish interactions and mussel rearing success has led to an ongoing partnership with the Illinois Department of Natural Resources (DNR) and The Nature Conservancy (TNC). These agencies have enlisted help from Genoa NFH to work on a state wildlife grant to propagate, of all things, the Butterfly mussel which is listed as endangered in Illinois.

On 6 April, Genoa's mussel biologist met with Illinois Department of Natural Resources (DNR) and The Nature Conservancy (TNC) at Jake Wolf Memorial Fish Hatchery where glochidia were harvested from female butterfly mussels and then used to inoculate the freshwater drum. The freshwater drum is the only known host fish for the butterfly mussel. In addition to inoculating drum with butterfly mussels, the black sandshell mussel was used to inoculate

walleye that were cultured by Exelon Energy's fish culturist. By inoculating fish with two species, we will be able to test Spunky Bottoms, The Nature Conservancy site where we will attempt to produce sub-adult mussels. Genoa NFH has produced black sandshell mussels in cages in a couple of different locations along the Mississippi River and thought it would be a good control next to the butterfly mussels. The goal of this program is to produce butterfly mussels that will be stocked out for recovery efforts in Illinois, thus producing new gardens of butterfly mussels in state waters.



-USFWS

Mussel biologist Tony Brady of the Genoa National Fish Hatchery harvests mussel larva from a female butterfly mussel.

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>

Fish Health Center Testing Services

The La Crosse Fish Health Center provided laboratory testing services in March to: Jordan River National Fish Hatchery (NFH), Sullivan Creek NFH, Pendills Creek NFH, Genoa NFH, Neosho NFH, Mississippi River Lansing Dike (Fish and Wildlife Service), Upper Mississippi River Pool 8 (Wisconsin Department of Natural Resources - DNR), Maramec Spring State Fish Hatchery (SFH) - Missouri Department of Conservation, Ohio River (Ohio Division of Wildlife - ODW), Salt Fork Reservoir (ODW), Rocky Fork Lake (ODW), Leesville Lake (ODW), C.J. Brown Reservoir (ODW), Mosquito Lake (ODW), Berlin Lake (ODW), Maumee River (ODW), La Salle SFH (Illinois DNR), Jake Wolf SFH (Illinois DNR), Little Grassy SFH (Illinois DNR), French River SFH (Minnesota DNR), Peterson SFH (Minnesota DNR), Crystal Springs SFH (Minnesota DNR) and Michigan State University (Michigan DNR).

Spring Fish Health Inspection at Genoa NFH

BY COREY PUZACH, LA CROSSE FHC

Student employee Abby Purdy, volunteer Beka McCann and biologist Corey Puzach completed the annual spring inspection at Genoa



-USFWS
Student employee Abby Purdy and volunteer Beka McCann take fish health samples from a lake sturgeon at the Genoa National Fish Hatchery.

National Fish Hatchery. This biannual inspection is required to document that the hatchery is free of certifiable fish pathogens. It is essential that disease free fish are released in the wild, transferred to other hatcheries, or used as brood fish for future egg sources.

The La Crosse Fish Health Center (FHC) sampled 25 lots representing 14 species. Sixty individuals from each lot (a particular species, year class, and strain) are tested. Each lot is screened separately for target fish pathogens. Kidney and spleen samples were also collected to screen for the viral pathogens including Viral Hemorrhagic Septicemia virus (VHSV), Infectious Pancreatic Necrosis virus (IPNV), Oncorhynchus Masou virus (OMV), Infectious Hematopoietic Necrosis virus (IHNV), Largemouth Bass virus (LMBV), Spring Viremia of Carp virus (SVCV) and Channel Catfish virus (CCV).

Sixty heads were collected from the trout species. These heads were screened for the parasite *Myxobolus cerebralis*, more commonly referred to as whirling disease. Whirling disease is a devastating fish parasite that affects many fish in the Salmonid family and has never been found at Genoa NFH or any other NFH in the Midwest Region. The results of the other tests are still pending.

With the volume of fish housed at the Genoa NFH, this inspection is currently one of the largest done by the La Crosse FHC. Due to the work of students, staff and volunteers, this season's inspection was another success.

For further info about the La Crosse FHC: <http://www.fws.gov/midwest/LaCrosseFishHealthCenter/>

Jordan River Electrical Barrier Removal – One Down and One to Go

BY RICK WESTERHOF, GREEN BAY NFWCO AND KIM BALKE, CONSERVATION RESOURCE ALLIANCE

In February 2008, Mark Johnson from the Conservation Resource Alliance (CRA) began his quest to obtain funding for the removal of the Jordan River electrical barrier in western Michigan. As most people know, the electrical barrier, since 1988 was used to prevent sea lamprey and salmon from ascending the Jordan River to spawn; however, the barrier became ineffective and repair costs were estimated to be approximately \$250,000. In response, the Fish and Wildlife Service and Michigan Department of Natural Resources (DNR) decided to stop operation of the non-functional barrier in 2004. Though the electrical barrier was inoperable, it still inhibited migration of resident trout species and other native

fish. Removal of the barrier became a priority for resource managers as the Jordan River is a state designated Wild-Scenic River (1972) with only a few obstacles left that inhibit fish passage and recreational users in the watershed. In addition, a barrier for invasive sea lamprey is no longer needed since they are controlled by chemical treatments.

Mark began the fund raising campaign by contacting numerous partners and writing proposals for the removal of the barrier. A total of \$55,000 was obtained with donations coming from the Charlevoix County Community Foundation (\$10,000), Great Lakes Fishery Trust (\$25,000), Michigan DNR Inland Fisheries Grant Program (\$10,000), and the Sea

The Fisheries Program maintains and implements a comprehensive set of tools and activities to conserve and manage self-sustaining populations of native fish and other aquatic resources. These tools and activities are linked to management and recovery plans that help achieve restoration and recovery goals, provide recreational benefits, and address Federal trust responsibilities. Sound science, effective partnerships, and careful planning and evaluation are integral to conservation and management efforts.

Lamprey Control Program (\$10,000). Unfortunately, Mark left CRA to teach young kids about natural resources and environmental stewardship in the Cadillac area, but his legacy of spearheading the removal of the electrical barrier will live on.

Upon Mark's departure, Kim Balke took the reins for the project. Kim, just like Mark, brings a wealth of knowledge, experience and leadership skill to the project. So on a beautiful spring day on April 16, Kim convened interested parties (CRA; Michigan DNR Fisheries, Natural Rivers, and Parks and Recreation; *Friends of the Jordan River*; City of East Jordan; and Sea Lamprey Control Program (Greg Klingler and Jessica Barber) and Green Bay National Fish and Wildlife Conservation Office (NFWCO) together to tour the electrical weir and to develop a coordinated plan to remove the barrier. The wooden electrical structure in the water, fencing along the river, retention walls, small concrete building, backup generator and equipment will all be removed and the site will be restored to its natural condition. Removal of the barrier and nearby structures is slated for late summer/early fall of 2009. The two wooden platforms upstream and downstream from the electrical barrier will stay, as they provide a safe platform for visitor's to access and view the river. The site will continue to be maintained by the Michigan DNR Parks and Recreation staff.

For further info about the Green Bay NFWCO: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf>

Sturgeon Fins Sampled for Viral Testing

BY SCOTT YESS, LA CROSSE NFWCO

Lake sturgeon fin clips were obtained in cooperation with the Minnesota Department of Natural Resources (DNR) Baudette Office. On Saturday, April 18 Scott Yess of the La Crosse National Fish and Wildlife Conservation Office (NFWCO) traveled to Baudette, Minnesota, to collect 30 lake sturgeon fin clips. There he met Dennis Topp, Tom Heinrich and staff who had collected 30 lake sturgeons from anglers. The fish were being held in a holding tank prior to fin clipping. In addition to taking fin clips, the DNR staff recorded length data and tagged the fish with Carlin tags. The fin clips were transported to the La Crosse Fish Health Center, to be tested for Iridovirus. This test must be negative prior to transport-

For further info about the La Crosse NFWCO: <http://www.fws.gov/midwest/lacrossefisheries/>



-USFWS

This unused invasive sea lamprey barrier on the Jordan River will be removed in 2009 providing uninhibited fish passage to 21 river miles. The Jordan River is a state designated Wild-Scenic River that is a tributary stream of Lake Michigan.

Once completed, approximately 21 river miles will provide uninhibited passage to fish species and other aquatic resources in the Jordan River. The Jordan River was the first state designated Wild-Scenic River in Michigan and she is getting closer to that condition with the removal of the Jordan River electrical barrier.

ing lake sturgeon eggs to the Genoa National Fish Hatchery (NFH).

Viral testing is the first stage of the annual effort to restore lake sturgeon to the White Earth Reservation and the Red River watershed. If the viral tests are negative, staff from La Crosse NFWCO and White Earth DNR will assist Joe Hunter (Rainy River First Nations) with his lake sturgeon spawning operation. These eggs will then be transported to Genoa NFH and raised to fingerlings (approximately 6 inches in length) and stocked on the White Earth Reservation, Red Lake Reservation and DNR managed waters of the Red River watershed.

School District to Share Invasive Ruffe Data

BY GARY CZYPINSKI, ASHLAND NFWCO

As an educational tool in scientific methodology and cooperation, the Ashland, Wisconsin School District, in cooperation with the Wisconsin Department of Natural Resources (DNR), has been conducting an inventory of fish species and habitats in the Bay City Creek and corridor since spring of 2008. The lower reach of the creek and corridor flows within the city limits of Ashland and empties into Chequamegon Bay of Lake Superior. Under the direction of teachers Bruce Prentice and Ron



Eurasian Ruffe

Nemec, students are learning how to manage the use of a fyke net, identify and describe fish species and habitats, perform scientific planning, develop scientific data collection protocol and cooperate with management agencies. As a byproduct of this learning experience, the students have also been introduced to the invasive Eurasian ruffe, a perch-like, spiny-rayed, non-indigenous fish that became established in Chequamegon Bay during the mid-1990s.

The Ashland National Fish and Wildlife Conservation Office (NFWCO) has been monitoring the range expansion and relative abundance of ruffe and other aquatic invasive species (AIS) in Lake Superior since 1991. While conducting other fishery activities in Chequamegon Bay during 2008, the Ashland NFWCO captured nearly 10,000 ruffe in two 5-minute bottom trawls. The Ashland School District has captured nearly 800 ruffe from the mouth of Bay City Creek, and will share that data with Ashland NFWCO. In cooperation with the Wisconsin DNR, Ashland NFWCO will begin collecting baseline data and conducting early detection monitoring for invasive fish in Chequamegon Bay in 2009. The Ashland School District data will add an important site to this new embayment database.

Invasive fish impact has been primarily monitored in Lake Superior tributary estuaries. This new monitoring project will target the potential impact of ruffe and other invasive fish (threespine stickleback and common carp) on the native forage fish community in an important Lake Superior embayment. The apparent increase of ruffe presence in Chequamegon Bay and its potential impact on the native fish community emphasizes the importance of this long-term embayment invasive fish/native fish monitoring project.

For further info about the Ashland NFWCO: <http://www.fws.gov/midwest/ashland/>

Aquatic Invasive Species

Aquatic invasive species are one of the most significant threats to fish and wildlife and their habitats. Local and regional economies are severely affected with control costs exceeding \$123 billion annually. The Fisheries Program has focused its efforts on preventing introductions of new aquatic invasive species, detecting and monitoring new and established invasives, controlling established invasives, providing coordination and technical assistance to organizations that respond to invasive species problems, and developing comprehensive, integrated plans to fight aquatic invasive species.

Wilson Elementary School 2nd Graders Learn to ID Native Plants

BY HEATHER RAWLINGS, ALPENA NFWCO

Biologists Andrea Ania and Heather Rawlings from Alpena National Fish and Wildlife Conservation Office (NFWCO) traveled to Wilson Elementary School on April 9 to give a presentation on native plants to the second grade class. In October of 2008, students planted a native butterfly garden on their playground, utilizing Partners for Fish and Wildlife funding. The butterfly garden was planted to allow the entire school to play in it, watch it grow, and observe fauna that use the garden. All of the classes (K-6) will use this site as a part of their school curriculum, but the second grade has specific assignments involving the garden.

Alpena NFWCO has “adopted” this second grade class and is making an effort to be in the classroom once a month to assist the teacher, and incorporate more nature experiences while emphasizing the current State of Michigan mandated school curriculum. The presentation Ania



-USFWS/AndreaAnia

Biologist Heather Rawlings of the Alpena National Fish and Wildlife Conservation Office discusses native plants with the second grade class at Wilson Elementary School.

and Rawlings gave assisted the children in identification of the 14 species of native plants in the garden, and made them aware of what types of animals would be attracted to the garden. The class was broken into four groups and “tested” at the end of the presentation on identification of the plants, and did a fantastic job. Mrs. Lisa Syma, the second grade teacher, was given laminated pictures of all of the plants in the butterfly garden and information about each plant to display in the classroom.

This spring, Alpena NFWCO, utilizing Partners for Fish and Wildlife funds and volunteers from Wilson School’s Parent Advisory Council, will build a bird blind and several types of bird feeders that the children will have access to during recess hours. This

birding area will promote an environmental curriculum for the children, emphasizing bird migration, land-use and habitat requirements of the birding community. Each year, Alpena NFWCO plans to add another component to the playground, eventually creating a natural area on Wilson School’s property to allow nature to be more tangible to the kids, and to encourage imagination, unstructured play, and a relationship with nature that the children may not receive anywhere else.

For further info about the Alpena NFWCO: <http://www.fws.gov/midwest/alpena/index.htm>

Scouts’ Good Turn Recovers Eagle

BY MARK STEINGRABER, LA CROSSE NFWCO

On a mild Sunday afternoon in late March, as the ice cover receded from Mormon Slough on the La Crosse District of the Upper Mississippi River National Wildlife and Fish Refuge, Casie Cooper, a local high school freshman and member of Boy Scout Troop 11, hiked a steep winding trail that led down to the shore of the river. Standing on land owned by the Catholic Diocese of La Crosse that overlooks this scenic backwater, he was here with his father, Bob, to inspect this location as a possible site for a community

service project that could help him earn the rank of Eagle Scout, the pinnacle of achievement in scouting. As the two surveyed the shoreline, their curious attention was drawn to something partially submerged in shallow water nearby that was, in part, bright yellow in color. On closer inspection, they saw the yellow object was the bill of a mature bald eagle floating dead in the water. Aware of the protected status of this raptor, they used a cellular phone to immediately report their finding to the home of

As the population in the United States continues to grow, the potential for adverse impacts on aquatic resources, including habitat will increase. At the same time, demands for responsible, quality recreational fishing experiences will also increase. The Service has a long tradition of providing opportunities for public enjoyment of aquatic resources through recreational fishing, habitat restoration, and education programs and through mitigating impacts of Federal water projects. The Service also recognizes that some aquatic habitats have been irreversibly altered by human activity (i.e. - dam building). To compensate for these significant changes in habitat and lost fishing opportunities, managers often introduce non-native species when native species can no longer survive in the altered habitat.

La Crosse National Fish and Wildlife Conservation Office (NFWCO) biologist Mark Steingraeber, a friend of the family.

Unable to promptly contact refuge law enforcement or state conservation authorities on the weekend, Steingraeber went to the site with his son Sam, also a Troop 11 scout, to take temporary custody of the bird and preserve its remains. Working together, the group was able to recover the eagle from a small cove, among decayed vegetation and partially submerged tree branches, where river currents or wave action may have brought it to rest. The bird appeared to be largely intact (i.e., wings, primary feathers, talons, head, and beak present) although the breast

area was damaged, perhaps from scavenging animals. After inspecting its remains the following day, refuge authorities estimated the bird had died several days earlier and found no criminal intent related to its demise. Although this once majestic bird was dead when it was found, the Good Turn actions by these scouts ensured that its unfortunate demise would not be a complete loss. Bald eagles and golden eagles that are found dead are temporarily stored at the Fish and Wildlife Service's National Eagle Repository in Denver, Colorado. From here, the eagles and their parts are made available to members of federally recognized tribes for use in religious and cultural ceremonies.

For further info about the La Crosse NFWCO: <http://www.fws.gov/midwest/lacrossefisheries/>

Partners Undertake “Outdoor Classroom Days” Pilot Project

BY TIM SMIGIELSKI, JORDAN RIVER NFH

Tim Smigielski of the Jordan River National Fish Hatchery (NFH) has begun seeing the fruits of his labor when it comes to the Outdoor Classroom at Jordan River NFH. Tim has been presenting information, developing programs and gathering support for this effort for well over a year. The program offers up the hatchery grounds and surrounding areas as an Outdoor Classroom setting for students. Here, teachers can hold their planned indoor class lessons (out-of-doors) or they may select from a specialized lesson developed through a partnership with several teachers and Tim.

On March 24, outdoor education teacher Eric Shupbach of the Concord Montessori School held outdoor classrooms at the hatchery. The students' main curriculum concept was watersheds, the water cycle and ecosystems. PERFECT! The students learned about the watershed right in their own backyard. They learned how the porous glacial till in this

area allows for quick ground water recharge. The students tracked the groundwater flow from the hatchery intakes to the river below. They learned about the power of water, the temperature of groundwater in Michigan and the importance of protecting and managing this critical resource. They also learned that in Michigan we are blessed with great amounts of water, which is different from some other areas of our world.

This hands-on approach is an exciting way to learn these concepts. There are six total whole classroom days scheduled at the Jordan River NFH this spring. Tim will help the teachers evaluate the success of the outdoor classroom days. The objective is to integrate the outdoor classroom into the curriculums of the schools, using the hatchery and grounds as a permanent learning tool for our future resource stewards.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

Madison Kids Going Green

BY JAN BEITLICH, LA CROSSE FHC

On March 13, a presentation on “Going Green” was given to fourth grade students at Marquette Elementary School in Madison, Wisconsin. Administrative technician Jan Beitlich of the La Crosse Fish Health Center (FHC) led the discussion on recycling and reusing our resources to approximately 25 children at this east side elementary school. Following

the discussion, the kids made fish prints on re-useable cloth shopping bags. The activity was a success and some of the bags will be sold at their school bazaar at the end of the month. “Go Green” water bottles were also handed out; the kids used them at their annual camping trip the following week. A little green treat helped to put a smile on their faces as well!

For further info about the La Crosse FHC: <http://www.fws.gov/midwest/LaCrosseFishHealthCenter/>

Annual Kids Fishing Day a Big Hit

BY DOUG ALOISI, GENOA NFH

There are a few nights in a child's life where sleep is actually hard to come by before a highly anticipated event. The eve of the annual Kid's Fishing Day at the Genoa National Fish Hatchery (NFH) is quickly turning into one of those milestones in a young person's life. Families from as far away Des Moines, Iowa - over a four hour drive - showed up for the day. The local community now coordinates its yard sales to coincide with the fishing day, which this year drew a total of 223 people! The event, planned for kids ages 6-12, is sponsored by the *Friends of the Upper Mississippi River Fishery Services*, a local support group for the three La Crosse, Wisconsin- area Fish and Wildlife Service Fisheries Offices - the Genoa NFH, the La Crosse National Fish and Wildlife Conservation Office (NFWCO) and the La Crosse Fish Health Center (FHC).

The kids are first cycled through four different learning stations. Many thanks go to our presenters from the Falling Rock Walleye Club, the La Crosse NFWCO, the La Crosse FHC, and local Wisconsin Department of Natural Resources game warden Dale Hochhausen. Kids were taught the fine art of jig tying, fish behavior and identification, fish anatomy, and how fishing regulations help manage and conserve fish populations. Kids were then set loose on a stocked hatchery pond where 1,500 stocked rainbow



-USFWS/MerryClough

Kids from as far away as Des Moines, IA, participated in the annual Kid's Fishing Day at the Genoa National Fish Hatchery.

trout were waiting impatiently to be enticed with a baited hook.

Over 500 fish were caught and local businesses sponsored the event by donating merchandise and fishing equipment to be used as door prizes. All attendees got something to remember the day by, whether through the trout that they brought home or information gained that no doubt will be put to use in their future fishing pursuits. Many thanks to the Friends Group, sponsors, volunteers, partners and staff of the three La Crosse area Fisheries offices that make this event possible!

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>

The Traveling Sturgeon Show

BY COLBY WRASSE, PATTY HERMAN, ANDREW PLAUCK, CHRIS MCLELAND AND CLIFF WILSON, COLUMBIA NFWCO

On the surface, a biologist, fireman and heavy equipment operator don't seem to have much in common, but on a cool, rainy April night they joined forces for a common goal - to educate and inspire. The occasion was "Tons of Trucks", an annual event held in Columbia, Missouri. This family oriented event gathers large trucks for the community to learn about and view. Beyond teaching children and parents about trucks, it also gives them a glimpse into the careers of the men and women who drive those trucks.

Although the event is called Tons of Trucks, there was one large boat on display as well. The Columbia National Fish and Wildlife Conservation Office (NFWCO) brought their 26-foot trawl boat for the children to experience, along with some really cool Missouri River fish. For some children the massive boat was a little intimidating at first, but once they

climbed aboard those fears subsided as they took pleasure in honking the horn and pretending to drive the boat. As usual, the live fish stole the show. Hundreds of interested onlookers, young and old alike witnessed the unusual looking shovelnose sturgeon. Some brave children even had the opportunity to touch and hold these prehistoric fish.

Columbia NFWCO was well represented at this year's Tons of Trucks event. Andy Plauck, Patty Herman, Cliff Wilson, Chris McLeland and Colby Wrasse all participated. Despite the cold and rainy weather, the event still had hundreds of participants who learned a lot about Missouri River fish and the mission of the Fish and Wildlife Service. Tons of Trucks is the brainchild of Columbia Parks & Recreation and Parents as Teachers.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

Volunteers Tag Lake Sturgeon for Menominee Indian Reservation

BY ANN RUNSTROM, LA CROSSE NFWCO

La Crosse National Fish and Wildlife Conservation Office (NFWCO) volunteers PIT-tagged and measured 1,200 lake sturgeon destined to be stocked on the Menominee



-USFWS
Volunteers and staff from the La Crosse National Fish and Wildlife Conservation Office measure and tag lake sturgeon prior to stocking.

handle a large number of interesting fish. In addition, it was of great benefit to the Fish and Wildlife Service because of the quality of data we collected on these fish, and because of the amount of work accomplished through volunteers. This work would have taken days instead of hours, had we not had the help of such great volunteers.

For further info about the La Crosse NFWCO: <http://www.fws.gov/midwest/lacrossefisheries/>

Ashland NFWCO assists with Spring Walleye Surveys

BY FRANK STONE, ASHLAND NFWCO

The Ashland National Fish and Wildlife Conservation Office (NFWCO) assisted the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) with five adult walleye population surveys in northern Wisconsin and Michigan. Walleye population estimates are used to set safe harvest levels on which tribal harvest quotas are based. This year's assessment activity was assigned to Frank Stone. During the twelve night sampling effort, Frank and his crew (Dale Corbine and Greg Smart of the GLIFWC) collected more than 4,000 walleyes. The sampling effort is conducted at night because this is when spawning activity and opportunities to collect adult size fish are maximized.

For further info about the Ashland NFWCO: <http://www.fws.gov/midwest/ashland/>

Conserving this Nation's fish and other aquatic resources cannot be successful without the partnership of Tribes; they manage or influence some of the most important aquatic habitats both on and off reservations. In addition, the Federal government and the Service have distinct and unique obligations toward Tribes based on trust responsibility, treaty provisions, and statutory mandates. The Fisheries Program plays an important role in providing help and support to Tribes as they exercise their sovereignty in the management of their fish and wildlife resources on more than 55 million acres of Federal Indian trust land and in treaty reserved areas.

Indian Reservation. PIT tags are passive integrated transponders, a little bigger than a grain of rice. When activated by a reader, a PIT tag emits a digital code that is then displayed by the reader. Because the tags are only "on" when activated by the reader, they have an indefinite life span, making them an excellent tag for a long-lived species like lake sturgeon. Each tag has a unique code, enabling biologists to keep records for each individual fish from the time they leave the hatchery until they are collected in assessments or harvested in the fishery. This is invaluable information when trying to manage a long-lived species such as lake sturgeon.

A great group of volunteers enabled us to measure and record individual lengths for all of the 1,200 fish tagged. The efforts of these volunteers will better enable us to track growth and survival of stocked lake sturgeon. In the long term, we may be able to reduce hatchery production costs by having a better understanding of post-stocking survival.

This activity was enjoyed by the volunteers because they got to

Conserving this Nation's fish and other aquatic resources cannot be successful without the partnership of tribes. They manage or influence some of the most important aquatic habitats both on and off reservations. In addition, the federal government and the Fish and Wildlife Service have distinct and unique obligations toward tribes based on trust responsibility, treaty provisions and statutory mandates. The Fish and Wildlife Service's Fisheries Program plays an important role in providing help and support to tribes as they exercise their sovereignty in the management of their fish and wildlife resources on more than 55 million acres of federal Indian trust land and in treaty reserved areas.

Brook Trout Return to Trout Creek

BY DOUG ALOISI, GENOA NFH

It was a warm and windy day on May 12, the day native brook trout returned to Trout Creek on the Oneida Indian Reservation in Wisconsin. Tribal members and conservation partners alike were on hand to mark the occasion with a celebration, a true testimony to cooperative conservation. Trout Creek had been devoid of most aquatic life, impacted by inadequate manure storage facilities high up in the watershed. Through actions undertaken by the tribe and the Wisconsin Department of Natural Resources (DNR), a manure storage facility was constructed and implemented. After habitat rehabilitation efforts were taken, a decision was made to plant a wild strain of brook trout inherent to Wisconsin in the watershed.

A management plan was developed with restoration stocking recommended for three consecutive years and post stocking assessments to begin shortly afterwards. Tribal biologists, working in conjunction with the Green Bay National Fish and Wildlife Conservation Office (NFWCO), began to gather partner support to implement the plan. The Wisconsin DNR typically collects eggs from a native brook trout population originating in Ash Creek annually, a small stream near Richland Center, Wisconsin. Five thousand eggs were disinfected to prevent disease transmission and transferred to the Genoa National Fish Hatchery (NFH) for hatching and rearing to small fingerling size (2.5 inches). Hopefully the small fingerlings will be suitable and adapted to the wild conditions in Trout Creek.

The eggs and resulting fry were isolated from the rest of the hatchery fish populations in the fish isolation facility, designed to isolate and prevent disease transmission should the eggs be found to be carrying a

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>

2010 Tribal Wildlife Grant Program

BY FRANK STONE, ASHLAND NFWCO

The Ashland National Fish and Wildlife Conservation Office (NFWCO) recently mailed an announcement to all our tribal contacts alerting them about the opening of the 2010 Tribal Wildlife Grant program (TWG). Our intent was to insure that tribal resource managers and biologists were aware of this resource funding opportunity and to remind them to contact the Ashland NFWCO for any technical assistance they may require.

The TWG funds will be available for grants that benefit fish and wildlife and their habitats, including

For further info about the Ashland NFWCO: <http://www.fws.gov/midwest/ashland/>



-USFWS

Fish and Wildlife Service employees along with tribal biologists release brook trout into Trout Creek on the Oneida Indian Reservation.

disease. This is to safeguard the other fish populations on the hatchery, and the resulting watershed the hatchery discharges into. The La Crosse Fish Health Center then tested the brook trout to ensure that they were disease free. After 5 months at Genoa, a total of 4,870 fingerlings were released in five different locations in the watershed, in accordance with the management plan. Tribal elders and members gathered for a release ceremony to recognize and celebrate the significance of the event. Monitoring for spawning activity, juvenile recruitment and post stocking survival will be planned within the next three years. Hopefully, the Oneida tribe will be able to enjoy brook trout in Trout Creek again for this generation, and many generations to come.

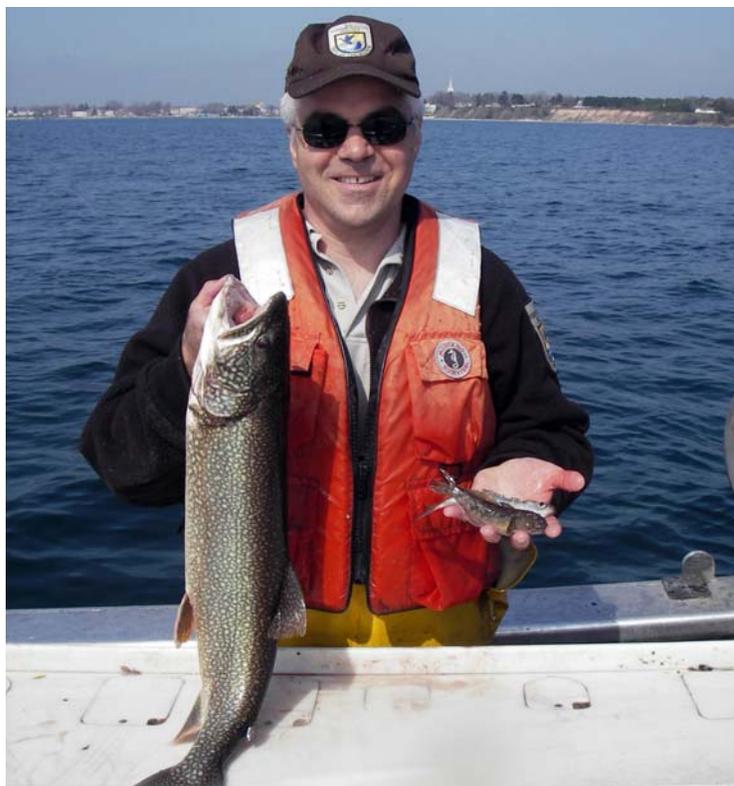
species that are not hunted or fished. Funding opportunities are also available to protect and restore habitats for fish and wildlife species of tribal significance. Although matching funds will be considered as an indicator of tribal commitment to a project, they are not required. The maximum award under this program is \$200,000.

These grant programs support efforts of tribal governments to develop or augment the capacity to manage, conserve or protect fish and wildlife species of concern through funding and technical support.

Lake Trout Natural Reproduction: A Question of Diet?

BY DALE HANSON, GREEN BAY NFWCO

Lake trout that consume a diet rich in non-native alewives is often bad news for their offspring. Since the 1960s, alewives have generally



-USFWS/BrandonSpude

Dale Hanson of the Green Bay National Fish and Wildlife Conservation Office holds a lake trout captured during an assessment. In his other hand are two prey fish species of lake trout (top - alewife; bottom - round goby).

capture lake trout, alewives, gobies and other lower-level prey items. These biological samples were shipped to SUNY-Brockport where Jacques will analyze the fatty acid compositions to reconstruct the lake trout diet. In upcoming fall samples, lake trout eggs will be sent to the Illinois NHS where Sergiusz evaluates the survival rates of eggs and lake trout larvae. By combining diet and egg survival work, we will investigate the role of food web effects on lake trout reproductive success and contribute much needed data to determine if rehabilitation of the prey-base is needed before the Fish and Wildlife Service can rehabilitate lake trout populations in Lake Michigan.

For further info about the Green Bay NFWCO: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf>

Science and technology form the foundation of successful fish and aquatic resource conservation and are used to structure and implement monitoring and evaluation programs that are critical to determine the success of management actions. The Service is committed to following established principles of sound science.

been abundant in Lake Michigan.

A prey-base dominated by alewives is a major concern because they often contain high levels of thiaminase, an enzyme that depletes vitamin B reserves. Thiaminase accumulates in mature fish and results in high rates of egg mortality in lake trout. Egg thiamine deficiency is a leading theory as to why we do not see evidence of lake trout natural reproduction in Lake Michigan.

Over the last five years, alewife numbers have greatly declined and lake trout are now feeding on round gobies, an invasive species from Eurasia. Goby populations are exploding in Lake Michigan and now comprise over 15 percent of the prey-fish biomass. Will this added diversity in the forage base lead to naturally reproducing lake trout in Lake Michigan? To find out, Dale Hanson of the Green Bay National Fish and Wildlife Conservation Office (NFWCO) has been working with researchers Jacques Rinchar (SUNY-Brockport) and Sergiusz Czesny of the Illinois Natural History Survey (NHS) on research funded by the Great Lakes Fishery Trust. Their work is funded through 2010 and will examine whether egg survival is correlated with lake trout diet in Lake Michigan.

In May 2009, Dale led a field team which employed gill nets, beach seines, plankton nets and trawling to

Genoa NFH more than Doubles Northern Pike Egg Fertility Rates

BY JAMES LUOMA, GENOA NFH

The National Fish Hatchery System (NFHS) produces a wide range of fish, amphibian and freshwater mussel species in support of a host of fishery management and conservation goals. Production of these animals include efforts in endangered species recovery, restoration of threatened and imperiled populations and supporting cooperative management initiatives with tribal, federal and state partners.

Producing adequate numbers of fish to support the needs of partners is one of the many challenges that constantly confront the NFHS. Even more challenges are encountered when hatcheries are required to use wild, free ranging populations of fish for the source of eggs to meet the production goals. Additional challenges include capturing adequate numbers of brood fish during the spring spawning run and incubation space for the resulting eggs which are often isolated from other hatchery systems/populations.

The Genoa National Fish Hatchery (NFH) has been active in northern pike production for decades. Egg quality of northern pike reared at the hatchery has been sporadic for a number of years with individual incubation jars attaining good fertilization and survival rates, but the yearly average fertility rate has been consistently low with averages around 30 percent. The low fertility rates have not been correlated to any specific procedure or event but have been thought to have been a problem with sperm quality in the male fish.

Without consistent and reliable results in egg quality, it is difficult to determine if sufficient numbers of eggs have been collected to reach management production goals. Additionally, the Genoa NFH has limited incubation space available to dedicate to northern pike production; therefore, the higher the quality of the eggs, the greater the number of fish that can be ultimately be produced.

In order to achieve better success rates, improve quality and better manage time and resources, the Genoa NFH crew decided this year to attempt to increase fertility rates and consistency of northern pike eggs by focusing efforts on sperm quality. Northern pike are notorious for producing a very small quantity of sperm. Additionally, fish sperm is activated immediately when it comes in contact with water and it is motile/viable for a very short period of time. Various techniques have been investigated to



-USFWS

Northern pike eggs are incubated in jars that are supplied with a constant flow of fresh water.

increase sperm volume and motility with varying success rates. Previous research conducted at the Valley City NFH showed an increase in some northern pike fertility rates by the addition of various saline diluents. Armed with this knowledge, the Genoa NFH staff elected to use a saline fertilization solution at a rate of six grams of salt (NaCl) per liter of spawning water to extend the sperm motility time, thereby in theory increasing fertilization rates. During the 2009 spawning season, the Genoa NFH collected approximately 1.8 million eggs during four separate spawning events. All eggs were fertilized in acclimated hatchery well water that contained 6g/L of NaCl. The average fertilization rate achieved was 82.4%, with the lowest measured fertility rate at 76%, and the highest levels achieved at 85%. This data suggests that the addition of NaCl at a rate of 6g/L of spawning water greatly increases fertility rates. Additionally, the resulting viable eggs (1.5 million) would have required an egg take of approximately 4.8 million total eggs in previous years, which is a significant additional increase in effort for netting, spawning and egg incubation.

The Genoa NFH hopes to repeat this success in 2010; which, if achieved, will assist the hatchery crew to better meet the needs of our conservation partners by supplying high quality eggs with reduced labor and resources expended.

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>

Gyrodactylus Study

BY ERIC LEIS, LA CROSSE FHC

Staff from the La Crosse Fish Health Center (FHC), Iron River National Fish Hatchery and the U.S. Geological Survey Upper Midwest Environmental Sciences Center completed a study determining the effectiveness of hydrogen peroxide for controlling *Gyrodactylus* outbreaks in brook trout. Gyrodactylids are small ectoparasites which can cause serious health problems if they exist in high numbers on the skin and gills of fish. These parasites are unique because they are viviparous, meaning that a developing embryo can be observed inside the adult.

Over the course of the study, brook trout were separated into treatment groups, and mucus scrapes were observed for the presence of parasites. The parasites were quantified and identified. Species identification involved measuring and observing the shape of different sclerotized parts of the parasite. The results of this study will be published in a fisheries journal.



-USFWS/EricLeis

This magnified image is an adult fish ectoparasite called *Gyrodactylus* which is ready to birth two "baby" embryos (see arrows).

For further info about the La Crosse FHC: <http://www.fws.gov/midwest/LaCrosseFishHealthCenter/>

Dynamics of Solar Power Reviewed for PIT Tags

BY GLENN MILLER, ASHLAND NFWCO

Ashland National Fish and Wildlife Conservation Office (NFWCO) biologist Glenn Miller recently attended a second training session on *Introductions to Solar Systems*, sponsored by Midwest Renewable Energy Association. The training was held at the Northland College campus in Ashland, Wisconsin, and introduced the concepts of solar generation and possible uses of solar power.

The full day training covered solar power from its origin to present day, and then went into how solar power is harnessed. Attendees were taught how to assess sites for solar power generation and design configurations. The Ashland NFWCO is currently using solar power to run several passive integrated transponder (PIT) tag detection stations located on Lake Superior shorelines. All of the PIT tag detection sites are remote locations with no power available except for solar and wind. By using these alternative energy sources, it is hoped that the PIT tag stations will be able to run year-round gathering data on tagged brook trout and other salmonid species.



-USFWS

Glenn Miller of the Ashland National Fish and Wildlife Conservation Office makes final preparations to a solar power generator that will provide power to run a tag detection station, located along the Lake Superior shoreline.

For further info about the Ashland NFWCO: <http://www.fws.gov/midwest/ashland/>

Maury Creek Site Tour with Antrim Conservation District

BY RICK WESTERHOF, GREEN BAY NFWCO AND HEIDI LAND, ANTRIM CONSERVATION DISTRICT

On a beautiful spring day, Heidi Lang (Soil Erosion Officer, Antrim Conservation District), Dean Branson (President of Three Lakes Association)



-USFWS

This perched culvert is on Maury Creek near Bellaire, MI. Partners are exploring options to restore fish passage at this location.

As you move down the creek, there are areas where clay fines and silt are suspended in the water from the concentrated flows. Further down, the creek was moved out of its original bed and is diverted into a holding pond. The water then flows out an undersized culvert that is extremely perched and blocks all fish passage.

For the past year, Heidi and Dean have been working to gather information to develop alternatives and submit proposals. Grant applicants are being developed for submittal to various agencies for funding, such as the National Fish Passage Program.

For further info about the Green Bay NFWCO: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf>

Partners for Fish and Wildlife Michigan Meeting

BY HEATHER RAWLINGS, ALPENA NFWCO

Michigan Partners for Fish and Wildlife Program (PFWP) coordinators and the Regional Coordinator Greg Brown met in Alpena, Michigan, at the National Oceanic and Atmospheric Administration (NOAA) Great Lakes Maritime Heritage Center. Biologist Heather Rawlings from the Alpena National Fish and Wildlife Conservation Office (NFWCO) hosted the meeting and organized a series of speakers, tours and extracurricular activities. The meeting focused on changes to PFWP protocol, budgets, the 2008 Farm Bill, and proper permit submission to the

Michigan Department of Environmental Quality. Matt Kleitch from The Nature Conservancy (TNC) led a tour of TNC property south of Alpena at Squaw Bay. Matt discussed invasive plant species and a cooperative initiative to control three species in northeast Michigan: phragmites, common and glossy buckthorn and purple loosestrife. In addition, Brad Jensen from Huron Pines led a lively discussion on the prioritization of stream restoration sites in northeast Michigan, and Pat Labadie from NOAA led the group on an excellent tour of the maritime museum.

For further info about the Alpena NFWCO: <http://www.fws.gov/midwest/alpena/index.htm>

Loss and alteration of aquatic habitats are principal factors in the decline of native fish and other aquatic resources and the loss of biodiversity. Seventy percent of the Nation's rivers have altered flows, and 50 percent of waterways fail to meet minimum biological criteria.

Three Price County, WI, Habitat Projects Completed in 2008

BY TED KOEHLER, ASHLAND NFWCO

Three Partners for Fish and Wildlife Program (PFWP) projects were completed in partnership with the Price County Land Conservation Department in 2008. Working in conjunction with private land owners and the Price County Land Conservation Department, projects were completed on the Seidl, Heffner and Stein properties. These projects are within the Upper Mississippi River watershed in Price County, Wisconsin, and part of the northern Wisconsin Focus Area of the Fish and Wildlife Service Midwest Region's PFWP Strategic Plan.

Wetland habitat restored on the projects totaled 19 acres. Upland migratory bird nesting cover around the projects totaling 6 acres was also enhanced and protected through management plans. A PFWP Habitat Development Agreement was signed to protect the restored area of each project for a period of 10 years. These wildlife habitat projects will benefit a host of species including mallards, wood ducks, blue-winged teal, northern harriers and Le Conte's sparrows. Partners on the projects included the landowners and the Price County Land Conservation Department.

For further info about the Ashland NFWCO: <http://www.fws.gov/midwest/ashland/>

Pere Marquette River Restoration Committee Meeting

BY RICK WESTERHOF, GREEN BAY NFWCO

The Pere Marquette River Restoration Committee met in February to discuss the latest activities, grant proposals and projects for 2009. Rick Westerhof of the Green Bay National Fish and Wildlife Conservation Office (NFWCO) attended the meeting and gave updates on the Fish and Wildlife Service grant proposal process and the proposed operation of the sea lamprey electrical barrier on the Pere Marquette River.

The Tank Creek Dam Removal Proposal was submitted by the Conservation Resource Alliance (CRA) for funding under the National Fish Passage Program. The proposal would remove the dam on Tank Creek, eliminate significant erosion and open up 1.5 miles of river to native brook trout. CRA also submitted a proposal to the Great Lakes Fish and

For further info about the Green Bay NFWCO: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf>



-USFWS

This is one of three Partners for Fish and Wildlife habitat restoration projects completed in 2008 in Price County, WI. The three projects restored 19 acres of wetland habitat and enhanced 6 acres of upland migratory bird nesting cover.

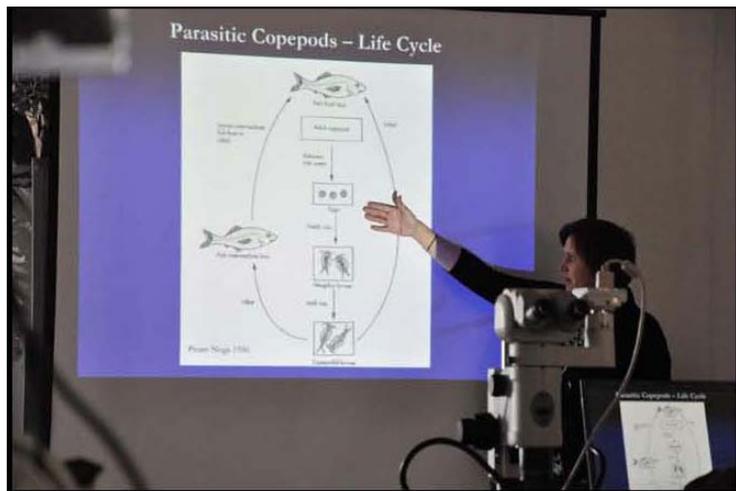
Wildlife Restoration Act to conduct in-stream habitat restoration on the Pere Marquette River. Approximately 50 structures (log jams, log revetment, whole tree revetment and island structures) would be strategically placed in the river to increase habitat for fish and other aquatic organisms.

In addition, many local citizens wondered if the Pere Marquette electrical barrier was going to be operated to block the upstream migration of invasive sea lampreys. The barrier is currently scheduled to be operated from March 1 – July 1. A task force will be created to review the operation and determine the scope of repairs, and if they are feasible. The barrier has been ineffective at stopping sea lamprey because of flooding, mechanical problems and lampreys successfully negotiating the fishway.

La Crosse FHC Lends a Helping Hand

BY SARAH BAUER, LA CROSSE FHC

The Fish and Wildlife Service's Southwest Region held their first annual biologist workshop at the Dexter National Fish Hatchery and Technology Center. The coordinators invited Becky Lasee of the La Crosse Fish Health Center (FHC) to give a presentation on fish parasites.



-USFWS

Project leader Becky Lasee of the La Crosse Fish Health Center describes the life cycle of parasitic copepods at the Region 2 Fisheries Biologist Meeting.

For further info about the La Crosse FHC: <http://www.fws.gov/midwest/LaCrosseFishHealthCenter/>

Columbia NFWCO attends Vet School

BY PATTY HERMAN, COLUMBIA NFWCO

It was a beautiful spring day in early April for the University of Missouri – Columbia Veterinary School Open House. Not only were potential veterinary school students invited to attend, but so was the general public. A variety of demonstrations, including dog agility training, wildlife rehabilitation and underwater equine therapy were held throughout the day. Jennifer Ballard, a student employee with Ecological Services asked our office to participate by presenting our sturgeon research posters. Tracy Hill and Chris McLeland represented Columbia National Fish and

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

The Fisheries Program relies on a broad range of professionals to accomplish its mission: biologists, managers, administrators, clerks, animal caretakers, and maintenance workers. Without their skills and dedication, the Fisheries Program cannot succeed. Employees must be trained, equipped and supported in order to perform their jobs safely, often under demanding environmental conditions, and to keep current with the constantly expanding science of fish and aquatic resource management and conservation.

sites. Teresa Lewis (acting Fish Health Unit Leader at Dex-

ter) also gave an update on parasites of concern in the Southwest Region.

After the presentations, a “hands-on” parasite workshop was held where biologists were given an opportunity to search for internal and external parasites in fish from a local reservoir. Sarah Bauer of the La Crosse FHC assisted with the laboratory.

The participants were excited about trying something new and seemed to enjoy themselves. One enthusiastic participant was determined to find the parasitic eye fluke by examining the eyes from many of the fish. Both the participants and the speakers learned from this workshop.

Wildlife Conservation Office (NFWCO) during the morning shift and Colby Wrasse and Patty Herman worked the afternoon. Diana Papoulias from the U.S. Geological Survey Columbia Environmental Research Center also joined us and brought along some of her research. A slide show of Missouri River fish played in the background and spurred many questions from the attendees. As usual, the most popular part of our display for kids and adults alike was the souvenir “squishy” sturgeon.

Congressional Actions

[111th CONGRESS House Bills]
[From the U.S. Government Printing Office via GPO Access]
[DOCID: h2565ih.txt]
[Introduced in House]

111th CONGRESS
1st Session

H. R. 2565

To conserve fish and aquatic communities in the United States through partnerships that foster fish habitat conservation, to improve the quality of life for the people of the United States, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

May 21, 2009

Mr. Kind introduced the following bill; which was referred to the Committee on Natural Resources

A BILL

To conserve fish and aquatic communities in the United States through partnerships that foster fish habitat conservation, to improve the quality of life for the people of the United States, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) Short Title.—This Act may be cited as the “National Fish Habitat Conservation Act”.

(b) Table of Contents.—The table of contents of this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings; purpose.
- Sec. 3. Definitions.
- Sec. 4. National Fish Habitat Board.
- Sec. 5. Fish habitat partnerships.
- Sec. 6. Fish habitat conservation projects.

- Sec. 7. National Fish Habitat Conservation Partnership Office.
- Sec. 8. Technical and scientific assistance.
- Sec. 9. Conservation of aquatic habitat for fish and other aquatic organisms on Federal land.
- Sec. 10. Coordination with States and Indian tribes.
- Sec. 11. Accountability and reporting.
- Sec. 12. Regulations.
- Sec. 13. Effect of Act.
- Sec. 14. Nonapplicability of Federal Advisory Committee Act.
- Sec. 15. Funding.

SEC. 2. FINDINGS; PURPOSE.

(a) Findings.—Congress finds that—

(1) healthy populations of fish and other aquatic organisms depend on the conservation, protection, restoration, and enhancement of aquatic habitats in the United States;

(2) aquatic habitats (including wetlands, streams, rivers, lakes, estuaries, coastal and marine ecosystems, and associated riparian upland habitats that buffer those areas from external factors) perform numerous valuable environmental functions that sustain environmental, social, and cultural values, including recycling nutrients, purifying water, attenuating floods, augmenting and maintaining stream flows, recharging ground water, acting as primary producers in the food chain, and providing essential and significant habitat for plants, fish, wildlife, and other dependent species;

(3) the extensive and diverse aquatic habitat resources of the United States are of enormous significance to the economy of the United States, providing—

(A) recreation for 44,000,000 anglers;

(B) more than 1,000,000 jobs and approximately \$125,000,000,000 in economic impact each year relating to recreational fishing; and

(C) approximately 500,000 jobs and an additional \$35,000,000,000 in economic impact each year relating to commercial fishing;

(4) at least 40 percent of all threatened species and endangered species in the United States are directly dependent on aquatic habitats;

(5) certain fish species are considered to be ecological indicators of aquatic habitat quality, such that the presence of those species in an aquatic ecosystem reflects high-quality habitat for other fish;

Source is <http://www.gpoaccess.gov/bills/index.html>
Searched database by keyword = “fish”

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.

National Fish and Wildlife Conservation Offices

National 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 fisher-

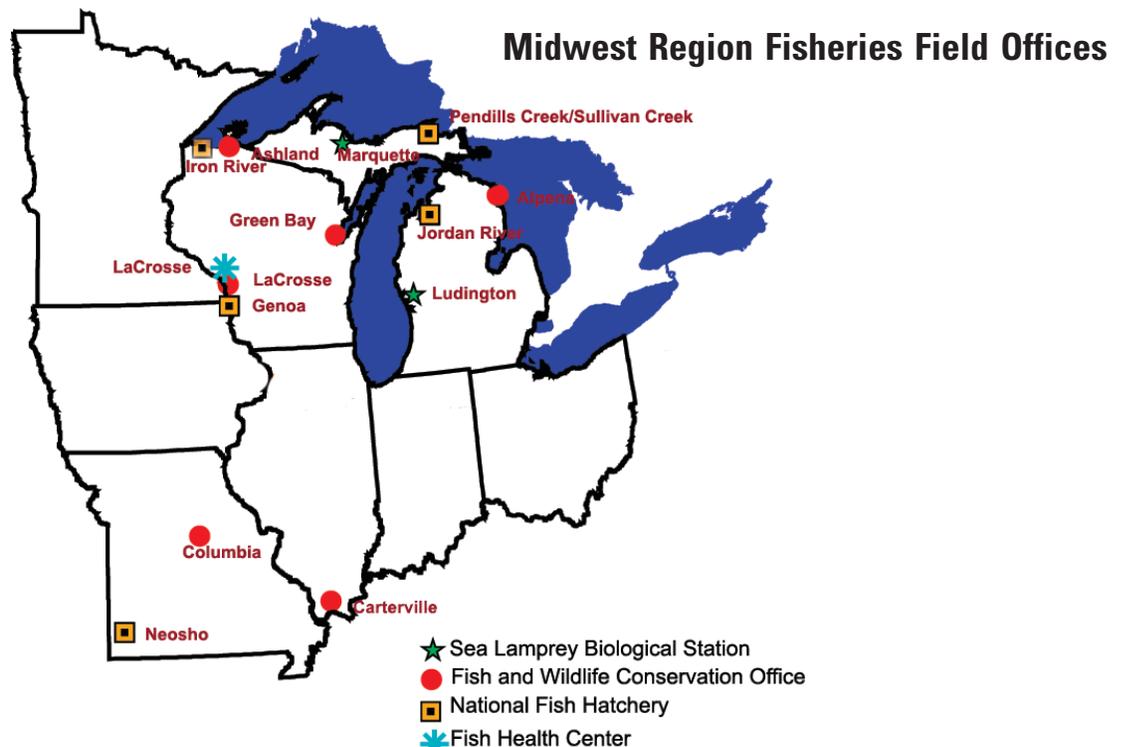
ies databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and re-licensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments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



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Fish Tails

“Fish Tails” includes articles that are included in field station reports that are not published in the “Conservation Briefs.” These articles are categorized by focus area and includes the article title, author and field station. The website link, where the full article can be viewed, is highlighted in blue type.

Partnerships and Accountability

- Michigan Chapter of the Wildlife Society Spring Meeting
 - Rick Westerhof, Green Bay NFWCO
- Missouri River Cooperating for Recovery Team Meeting
 - Tracy Hill, Columbia NFWCO

Aquatic Species Conservation and Management

- 2008 Pallid Sturgeon Population Assessment and Monitoring Reports
 - Patty Herman and Andy Plauck, Columbia NFWCO
- Coded wire tags read at Green Bay NFWCO
 - Dale Hanson, Green Bay NFWCO
- Lake Trout Distribution Begins
 - Tim Smigielski, Jordan River NFH
- Love for Sturgeon on Valentines Day
 - Sarah Bauer, La Crosse FHC
- Regional Director Released Pallid Sturgeon
 - Wyatt Doyle, Columbia NFWCO

Aquatic Invasive Species

Public Use

- Almost 700 Science & Math Expo Junior High Students “Measure Up” with Success
 - Heidi Keuler, La Crosse NFWCO
- Earth Day Celebration at Constitution Hall
 - Anjanette Bowen, Alpena NFWCO
- Enthusiasm of Young Fishermen
 - Joshua Schloesser, Columbia NFWCO
- TFWS helps Ridgeway Elementary 2nd graders assess stream health at Rockbridge State Park
 - Aaron Walker and Joanne Grady, Columbia NFWCO
- Genoa NFH Presents at West Salem Elementary Environment Days
 - Jenny Walker Bailey, Genoa NFH
- Kids Backpack into Aquatic Environments
 - Sarah Bauer, La Crosse FHC
- Successful Day on the Ice!
 - Sarah Bauer, La Crosse FHC

Cooperation with Native Americans

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

Workforce Management

- Prepared for the Workplace, Prepared for Life
 - Mark Corio, Columbia NFWCO

Genoa National Fish Hatchery

Genoa National Fish Hatchery (NFH) was established over 75 years ago and is one of 69 Federal fish hatcheries located across the Nation. Genoa NFH cultures a variety of cold-, cool- and warmwater fish as well as freshwater mussels and one salamander species. The hatchery is open for tours during business hours. For large groups, please call for an appointment. You can reach the hatchery at 608/689-2605 from 7:30 am to 3:30 pm.