



U.S. Fish & Wildlife Service - Midwest Region

Fisheries & Aquatic Resources Program

fish lines

**Partners Register
Lake Winnebago
Sturgeon**

**Ounces of Prevention
Yields Tons of Cure for
Regional Waters**

**Fishery Management
at De Soto NWR**



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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/Mark Brouder

Future sturgeon biologists guess the sex and approximate weight of harvested lake sturgeons being examined by a registration crew. These budding biologists were right about 80% of the time!

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<http://www.fws.gov/midwest/Fisheries/library/fishlines.htm>

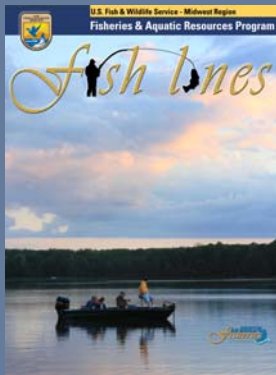
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Partners Register Lake Winnebago Sturgeon

BY GLENN MILLER, ASHLAND NFWCO

The morning of Friday, February 13th, Ashland National Fish and Wildlife Conservation Office (NFWCO) biologist Glenn Miller and Northland College student Scott Brandon headed to Oshkosh, Wis., to attend the annual registration station personnel meeting for the Lake Winnebago spear harvest season. The meeting was held at the Wisconsin Department of Natural Resources (DNR) net and boat storage building at Asylum Point, a traditional meeting site for biologist and spear harvest coordinator Dr. Ron Bruch. Bruch

explained the various functions that each 4–5 person crew needs to do while registering lake sturgeon. Any “angler” that spears a lake sturgeon from Lake Winnebago is required to register the fish at any one of the seven registration stations found along Lake Winnebago’s shoreline. The crews began work the following day which marked the beginning of the lake sturgeon spearing season.



-USFWS

(Lt. to Rt.) Scott Brandon (Northland College), Meagan Malovec (University of Wisconsin - Stevens Point) and Steve Fafjer (Wisconsin Department of Natural Resources - Wild Rose State Fish Hatchery) collect the ovaries of a female sturgeon that would have spawned in the spring. The ovaries will be analyzed at the Wisconsin DNR Oshkosh office.

The three upper lakes of the Winnebago chain (Lake Poygan, Winneconne and Butte des Morts) have a lottery system for fish harvest. Anyone interested in spearing in one of these three lakes has to apply for a harvest tag in August of the prior year (which 4,031 spearkers did) for a chance to pull one of the 500 harvest tags allowed for the upper lakes season. The lucky lottery winners were notified by October 1 and had to purchase a harvest tag by October 31.

Harvest of these magnificent fish in Lake Winnebago is regulated by

harvest caps that are set by annual population estimates. A total Lake Winnebago harvest cap of 350 juvenile females, 650 adult females and 1,000 males was set for 2009. Harvest is further regulated by setting pre-harvest caps that when upon reaching 90% of any of the three cap totals (juvenile and adult females or males), the season closes the following day, and if 100% of the harvest cap is reached, the season closes that same day. Harvest is only allowed between the hours of 6:30 a.m. and 12:30 p.m., and all fish speared that day need to be registered by 1:30 p.m.

Glenn and Scott, along with student Meagan Malovec (University of Wisconsin - Stevens Point), Steve Fafjer (manager of the Wild Rose State Fish Hatchery) and Mark Brouder (Ashland NFWCO project leader) were assigned to Critters Sport Shop in Winneconne, Wis., on Lake Poygan. The mandatory registration gathers important biological data from the harvested sturgeon. Each sturgeon is weighed, measured to the nearest ½ inch, has the first ray of the pectoral fin removed for ageing and sex determined by looking at the gonads of the fish. In addition, the first ten sturgeon registered have the stomach removed for diet analysis.

Any black egg female, a stage of egg development that indicates that the fish will spawn in the spring, had the individual ovaries removed if the spearer did not want them. The ovaries were taken to the Wisconsin DNR lab for a study to determine the number of eggs in that lake sturgeon by sampling the egg size and estimating the number of eggs based on the combined weight of the ovaries. This information is being compiled to estimate the possible number of juveniles produced by an individual sturgeon.

A large female lake sturgeon weighing 168.8 pounds (80.8 inches long)

had the eggs collected, and the combined weight of both ovaries was 64.2 pounds! This large female sturgeon is the fourth heaviest and sixth longest sturgeon recorded to date on the Lake Winnebago system. It was also a record as this sturgeon is the largest to be taken by a female spearer - Amy Van Beek of Menasha, Wis. Quite a Valentine's Day treat!

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



-USFWS/MarkBrouder

Lucky spearer Amy Van Beek of Menasha, WI, poses with her 168.8 pound (80.8 inch) lake sturgeon that she harvested from the Lake Winnebago system.

Ounces of Prevention Yields Tons of Cure for Regional Waters

BY MARK STEINGRAEBER, LA CROSSE NFWCO

Trace amounts of medications occur in surface waters that supply drinking water to millions of Americans. Although the human health effects of these exposures are uncertain, laboratory and field observations indicate that environmentally relevant concentrations of some commonly prescribed medications can cause physiological changes to fish and mussels that may adversely impact individuals and populations. To minimize our negative influence on the environment, communities can take actions to reduce the quantity of unwanted medications that are often flushed into wastewater systems for disposal.



-USFWS

La Crosse County, WI, officials use this mobile trailer to transport hazardous materials and unwanted medications from area homes and businesses. In 2008, over four tons of unwanted medications were safely destroyed.

services of an existing county-operated facility that accepts unwanted household hazardous materials (HHM) from residents and businesses, at little or no cost, throughout the year. This HHM service is also provided to others in southwest Wisconsin, southeast Minnesota and northeast Iowa. The County Board of Supervisors unanimously approved the plan and authorized HHM staff, in cooperation with the Sheriff's Department, to develop and implement a medication collection and disposal program that: meets local, state and federal regulations; uses an environmentally sound means to dispose of collected medications; and operates on a permanent basis. The sheriff subsequently deputized several HHM employees with the authority to accept and dispose of unwanted medications, including controlled substances. Deputized staff began to accept medications at the HHM facility on June 1, 2007 and collected more than 2.5 tons by the end of that year.

The program experienced even greater success during 2008 (its first full year of operation) by serving as the disposal vendor at one-day medicine collections for 185 businesses and 36 other counties in Wisconsin and Minnesota, destroying more than 4 tons of unwanted medications, and generating more than \$28,000 of new revenue for La Crosse County. This is the first permanent medication collection program in Wisconsin and one of only a few in the nation. The noteworthy accomplishments of the program present a model for the development of similar partnerships to raise awareness of the need to safely collect and dispose of unwanted medications to improve water quality in other portions of the country.

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

In western Wisconsin, representatives of the Fish and Wildlife Service, Mayo Health System and La Crosse County met early in 2007 to discuss the need to establish a safe and effective means for residents to dispose of unwanted medications. This diverse team developed a plan for a medicine turn-in program that utilizes the infrastructure and complements the



-USFWS

Unwanted medications should not be flushed into wastewater systems as a means of disposal.

Fishery Management at De Soto National Wildlife Refuge

BY BRIAN ELKINGTON, COLUMBIA NFWCO

The Columbia NFWCO, DeSoto National Wildlife Refuge (NWR), Iowa Department of Natural Resources and the Nebraska Game and Parks Commission met this month to discuss the results of sampling efforts and the future stocking/assessment plans at DeSoto Lake, located on the DeSoto NWR. It was a great opportunity for us as a group to provide fisheries management recommendations to DeSoto NWR based on multiple years of data collected from DeSoto Lake. The meeting focused on the results of an intensive three-year fishery management project that started in 2006 and ended in 2008.



-USFWS/BrianElkington

Jennifer Johnson, formerly of the Columbia National Fish and Wildlife Conservation Office, holds a walleye captured during DeSoto Lake sampling efforts. Walleye are a valued recreational species at DeSoto National Wildlife Refuge and have made up a large segment of the management efforts over the past three years.

Sampling information gathered from each of the agencies in 2008 was compiled by Columbia NFWCO biologist Brian Elkington and used to assess and discuss our data collection and fish stocking strategy for 2009. In the case of both sampling and stocking, minor changes will be made in 2009 to adjust our efforts based on the past three years of data. We also discussed habitat projects that have been completed such as large rock reefs constructed in the fall of 2007 and the prospect of future pine tree placements or rock reef construction in the lake. The group unanimously agreed that these projects are very important to promote fish habitat and strong populations at DeSoto Lake.

We are also developing a research study to promote the re-introduction of many native aquatic vegetation species into DeSoto Lake. We ran experiments in the lake in 2008 and have plans to expand that work in the coming months.

Recreational fishing is an important part of DeSoto NWR. All three agencies will continue to sample at DeSoto Lake in the hopes of continually honing and improving this very popular recreational fishery.

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

Biologist Presents Age and Growth Data for Lake Trout

BY DALE HANSON, GREEN BAY NFWCO

Biologist Dale Hanson of the Green Bay National Fish and Wildlife Conservation Office (NFWCO) collaborated with Craig Stafford (University of Montana) to investigate the relationships between lake trout length, otolith weight and age. As fish get older, their body growth slows. Fish otoliths, or ear bones, are different and continue to grow over the fish's entire lifespan. Hanson and Stafford have been manipulating these structural growth differences to develop a new method to interpret age and growth based on the ratio of fish otolith weight to fish length. It is hoped that this new approach will offer an objective method to evaluate growth rates and ages among different populations of fish. Hanson presented preliminary results of this work to Lake Michigan managers at the 2009 winter Lake Michigan Technical Committee meeting and also presented the work to the American Fisheries Society Wisconsin/Minnesota/Ontario joint annual chapter meeting in February.

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

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.

Agency Coordination Team meets in the Papio-Missouri River NRD

BY CLAYTON RIDENOUR, COLUMBIA NFWCO

Clayton Ridenour and Joe McMullen traveled to Wherspann Lake in the Papio-Missouri River Natural Resources District (NRD) near Omaha, Neb., during January for a meeting of the Agency Coordination Team (ACT) about Missouri River mitigation. Formation of the ACT was provided as an essential element of an Adaptive Management-driven reasonable and prudent alternative (RPA) listed in the Fish and Wildlife Service's Biological Opinion to the U.S. Army Corp of Engineers (Corps) on their operation and maintenance of the main-stem Missouri River to reduce jeopardy to endangered pallid sturgeon. The ACT includes biologists, engineers and real estate

experts from the Fish and Wildlife Service, Corps and state agencies, as well as representatives from Tribes and non-governmental organizations (NGOs).

The goal of the ACT is to identify and implement the goals of the Biological Opinion. They meet at least twice per year to develop targets and/or evaluate the Corps' progress towards avoiding jeopardy, increasing species status or habitat conditions, or implementation of effective conservation actions. Participants at the January meeting provided updates to mitigation efforts (e.g., habitat restoration, land acquisition) and species status, and the ACT developed an agenda for their next meeting.

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

Tall Ship Educational Program Planning Meeting

BY ANJANETTE BOWEN, ALPENA NFWCO

Alpena National Fish and Wildlife Conservation Office (NFWCO) biologists Scott Koproski, Andrea Ania and Anjanette Bowen participated in a tall ship education planning meeting hosted by Michigan Sea Grant and the National Oceanic and Atmospheric Administration (NOAA) Thunder Bay National Marine Sanctuary. Examples of shipboard education programs conducted around the Great Lakes were presented, and the group began exploring outreach ideas to be implemented in late May aboard

the *S/V Denis Sullivan*. The *S/V Denis Sullivan* tall ship is a 137 foot re-creation of a 19th century schooner that conducts educational and research programs. The ship will be at port in Alpena, MI, in late May. While at port, the Michigan Sea Grant, Michigan Department of Natural Resources, NOAA-Thunder Bay National Marine Sanctuary and Fish and Wildlife Service will be conducting aquatic educational programs for adults and youth.

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

Ashland NFWCO completes Lake Superior Lake Trout Ageing

BY GLENN MILLER, ASHLAND NFWCO

The Ashland National Fish and Wildlife Conservation Office (NFWCO) has completed ageing another set of lake trout scales collected from anglers at various creel check points on Lake Superior.



-USFWS

Glenn Miller of the Ashland National Fish and Wildlife Conservation Office ages lake trout scales collected in 1836 and 1842 treaty waters of Lake Superior by Michigan Department of Natural Resources creel clerks.

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

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.

The creel is run by the Michigan Department of Natural Resources (DNR) Marquette Fisheries Station. Scales were collected in both 1836 and 1842 treaty waters of Lake Superior. The ageing information is used in conjunction with the biological data in models regulating harvest of lake trout in Lake Superior. Approximately 600 lake trout scales from the 2008 creel in 1836 waters and 300 scales from the 2008 creel in 1842 waters were read. This was the 7th year the Ashland NFWCO has assisted with scale reading for the Michigan DNR. Data collected from the creels and surveys by natural resource agencies throughout the lake will help maintain sustainable populations of lake trout in Lake Superior.

Tag Identification Database Contains Over 18,000 Tag Numbers

BY ADAM KOWALSKI, ALPENA NFWCO

During the month of February, biologists Adam Kowalski and Anjie Bowen updated the Great Lakes Lake Sturgeon Tag Identification Database (TID) and website. Development of the database was funded by the Great Lakes Fishery Trust to house lake sturgeon tag information such as tag type, tag number, tag location and tagger contact information. The searchable database has been operational since 2006, and now contains information on over 18,000 passive integrated transponder (PIT) tags and over 150 external tag sequences. Kowalski will continue to maintain and update the database by requesting and entering tagging information annually. Feedback to Kowalski has been positive and the database is used frequently by biologists who look up information on tagged lake sturgeon they have captured. The database is housed at the Great Lakes Fishery Commission's web site and can be viewed at: <http://www.glfc.org/sturgeontag/index.htm>.

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

Great Lakes Lake Sturgeon Tag Identification Database	
<p>Introduction</p> <p>Data Submission</p> <p>PIT Tag Search</p> <p>External Tag Search</p> <p>Participants</p> <p>Contact Us</p> <p>This site is maintained by the U.S. Fish and Wildlife Service</p> <p>Privacy/Disclaimer E-mail</p> <p>updated: 2/27/2009</p>	<p>Introduction</p> <p>The Great Lakes Lake Sturgeon Tag Identification Database (TID) is intended to facilitate communication between people who tag and those who recapture lake sturgeon across the Great Lakes. The database provides managers, researchers, and other interested parties the ability to determine who should be contacted when they encounter a tagged lake sturgeon. Development of the TID was initiated by the U.S. Fish and Wildlife Service's (USFWS) Great Lakes Lake Sturgeon Committee in 2001. The structure of the database was developed through a peer review process that involved fishery professionals from several agencies that tag lake sturgeon in the Great Lakes. Completion of the database and development of this web accessible version was made possible through funding provided by the Great Lakes Fishery Trust in 2005. The database is managed by the Alpena National Fish and Wildlife Conservation Office (Alpena NFWCO). The USFWS Lake Sturgeon Committee provides oversight of the project.</p> <p>Data contained in the database are limited to contact information for those who tag and recapture lake sturgeon with specified tag number (PIT tags) or other identifying marks or tags. Data are submitted electronically to the Alpena NFWCO where they are formatted and added to the database. Annual updates will be completed to include new tags and recaptures. The Alpena NFWCO will make every attempt to keep the database as current as possible and will rely on the efforts of all agencies and institutions involved to provide data in a timely manner.</p> <p>Like all databases, errors or omissions will occur. It is the responsibility of each individual or agency providing data to transfer complete and accurate records. Any errors found by users should be referred to the Alpena NFWCO which will consult with the appropriate agency to rectify the error.</p>

A Step in the Right Direction

BY MELISSA CHEUNG, NEOSHO NFH

Bio-security is a major concern for fish hatcheries. This means that standard practice here at Neosho National Fish Hatchery (NFH) involves the disinfection of all trucks and equipment that enter our hatchery gates from another rearing station. There is always a possibility that unwanted or invasive pathogens may enter our station whenever outside hatchery vehicles visit (and likewise when we visit them).

Up until this month, the hatchery used bleach as our main disinfecting chemical. Although very effective at controlling unwanted pathogens, bleach is lethal to fish. It is also very corrosive to metal surfaces and requires neutralization with sodium thiosulfate. Virkon Aquatic Disinfectant, a newly approved chemical formulated for general cleaning in the aquaculture industry, advertises to be a highly effective disinfectant against many pathogens while at the same time being “fish-friendly.” According to the manufacturer, Virkon Aquatic does not harm fish and is bio-degradable. We also like the fact that it does not have a strong smell like bleach does, and it is supposed to be non-corrosive. Thus far, Virkon Aquatic has delivered as promised.



-USFWS

Biologist Jaime Pacheco uses Virkon Aquatic Disinfectant to treat a fish stocking trailer. This product is a newly approved chemical formulated for general cleaning in the aquaculture industry and advertises to be a highly effective disinfectant against many pathogens, while at the same time being “fish-friendly.”

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

You Don't See That Everyday!

BY CHRIS MCLELAND AND ANDREW PLAUCK, COLUMBIA NFWCO

During a warm, windy day in March, Columbia National Fish and Wildlife Conservation Office's (NFWCO) Andy Plauck, Cliff Wilson and Chris McLeland pulled gillnets in search of the federally endangered pallid sturgeon on the Missouri River near Herman, Mo. Two interesting fish caught the attention of the crew that day. An albinistic blue catfish came out of the first net. Albino fish lack skin pigments, which leads to a ghostly white animal with a pink tint. Most albinos become prey and don't survive to adulthood. It is likely that the muddy waters of the Missouri River gave this fish a better chance of survival. Our crews have sampled a few of these fish on the Missouri River but this one was the largest (around 6 pounds). According to our catch records this variation of blue catfish is rarer than the pallid sturgeon.



-USFWS

Two of the more interesting fish captured during March fish assessments in the Missouri River include an albino blue catfish (Lt.) and a northern hogsucker.

some of the clear-water tributaries that drain the Ozark plateau. This is the only time of the year we catch fish like shorthead redhorse and white sucker. Catching fish that you don't see everyday is always something memorable, in this case we were able to get two in one day. Monitoring native fish, whether rare or common, is an important part of conserving America's fisheries.

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

The second attention-grabbing fish is not a rare fish in nature; we just don't catch them on the Missouri River. The northern hogsucker, with its block shaped head and mottled coloration, usually inhabits small to medium streams with clear water. The northern hogsucker we captured must have strayed from a small nearby tributary. In the winter, the water in the Missouri River becomes much clearer, resembling

some of the clear-water tributaries that drain the Ozark plateau. This is the only time of the year we catch fish like shorthead redhorse and white sucker. Catching fish that you don't see everyday is always something memorable, in this case we were able to get two in one day. Monitoring native fish, whether rare or common, is an important part of conserving America's fisheries.

2007 Ruffe Surveillance Report Online

BY GARY CZYPINSKI, ASHLAND NFWCO

Activities that monitor the range of the invasive Eurasian ruffe detected minor range expansion in 2007, nearly equivalent to migratory rates estimated for ruffe by the U.S. Geological Survey (USGS). These monitoring activities were described in the report *Surveillance For Ruffe In The Great Lakes, 2007* which is the 16th annual ruffe sur-



-USFWS

Invasive Eurasian Ruffe

veillance report completed by the Ashland National Fish and Wildlife Conservation Office (NFWCO). The ruffe (pronounced rough) is an invasive fish that was likely introduced into western Lake Superior by ship ballast water during the mid 1980s. In 2007, the Wisconsin Department of Natural Resources reported that a commercial fisherman captured a ruffe in southern Green Bay of Lake Michigan, a range expansion of 88 kilometers (55 miles) south from the Bays de Noc of northern Green Bay, the previous range of ruffe in Lake Michigan. The ruffe range in Lake Michigan now extends throughout Green Bay. In eastern Lake Superior, ruffe likely migrated into Whitefish Bay in 2006, two decades after they were first detected in western Lake Superior. The ruffe range in Lake Superior spans the entire south shore, and the north shore from Duluth, Minnesota, to Thunder Bay, Ontario, Canada. No ruffe have been reported captured from Lake Huron since 2003. Ruffe remain undetected in the Lower Great Lakes, and in all inland lakes and streams within the Great Lakes basin.

The 2007 report can be found on the Ashland NFWCO website at: <http://www.fws.gov/midwest/ashland>.

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.

Refuge Hosts Ice Fishing Day

BY ANN RUNSTROM, LA CROSSE NFWCO

Making the Best of It- “Minnesotan Style” could be the theme for the annual ice fishing day hosted by the Winona District of the Upper Mississippi River National Wildlife and Fish Refuge (NW&FR) held February 21. Minnesotans don’t let the solid state of H₂O deter them from the quest of catching mighty bluegill, and that was definitely true on this day, as the hard water on Lake Winona was more than 20 inches thick! The kids were eager and enthusiastic, but despite the aid and guidance of a few accomplished biologists from the La Crosse National Fish and Wildlife Conservation Office (NFWCO), no bluegills were to be had.

That absence of our piscine friends did not dampen the mood of the children, as Refuge staff had planned an eventful day, whether or not the fish cooperated. Ice shacks were in place across Lake Winona, and there wasn’t an empty seat in a single shack. For those who got cold and couldn’t find a seat in an ice shack, activities in the warming house included fish painting, fish identification and introduction to global positioning systems (GPS). For the hungry folk, there were hot snacks, mostly hot dogs and hot chocolate. After the GPS introduction, a school of children plodded across the ice on a geo-caching treasure hunt. A good time was had by all, and the La Crosse National Fish and Wildlife Conservation Office (NFWCO) staff thanks the NW&FR staff for hosting this opportunity for the children and inviting us to participate in another fun day of fishing.

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

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.

Environmental Education at the Forefront

BY MELISSA CHEUNG, NEOSHO NFH

Roderick May and Melissa Cheung of the Neosho National Fish Hatchery (NFH) joined forces with approximately ten other environmental facilities within the southwest region of Missouri in the Partnership for Environmental Education Programs (PEEP). PEEP was created to give children a quality opportunity to spend time in the environment and be educated about science and nature by the members of PEEP. The group consists of facilities like Neosho

NFH, the Wildcat Glades Audubon Center, George Washington Carver National Monument and Roaring River State Park, to name a few. The partnership has created a PEEP Passport, which requires a stamp at each of the participating facilities to receive a final certificate. It is hoped that this will encourage families to spend more time outside and gain a better appreciation of their local environment.

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

Wilson School Teaching Event

BY ANJANETTE BOWEN, ALPENA NFWCO

Alpena National Fish and Wildlife Conservation Office (NFWCO) biologists Scott Koproski, Andrea Ania and Anjanette Bowen worked in partnership with Alpena Public School District's Wilson School to provide in-class science education for the 2nd grade class on February 19th. This educational event is part of ongoing Fish and Wildlife Service efforts to connect children and nature. Alpena NFWCO is partnering with teacher Lisa Syma during



the 2008-2009 school year to conduct science- and nature-based activities that meet school curriculum benchmarks.

During the February visit, students learned about molecules, how substances expand and contract, temperature and how water moves through substrates. Alpena NFWCO biologists taught the students about these topics and led them through experiments that reinforced their knowledge. Activities and experiments involved the use of a ground water model to show how pollutants can enter a watershed and impact ground water, how molecules move at different rates through water of different temperatures, and how temperature influences air molecule movement. Students were very interested in the topics and quickly grasped these potentially difficult concepts.

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

National Wildlife Refuges - A Natural Remedy for Cabin Fever

BY MARK STEINGRAEBER, LA CROSSE NFWCO

Long weeks of seasonal darkness, sub-freezing temperatures, and near record snowfall have given chills to many Coulee Region families who are coping with late winter symptoms of cabin fever. To help cure this annually recurring malady, the La Crosse National Fish and Wildlife Conservation Office (NFWCO) participated for the fourth consecutive year in the Winter Family Sports Show, a community event held February 20-21 at Coulee Region Christian Schools in nearby West Salem, Wisconsin. Posters encouraging families to "Discover the Nature of America" and "Prevent Nature Deficit Disorder" were prominently displayed at the NFWCO-sponsored information booth near the entrance to the show. Brochures describing recreational opportunities (e.g., fishing, hunting, camping, canoeing, hiking, photography, wildlife observation and foraging) available at nearby National Wildlife Refuges (Horicon, Necedah, Trempealeau, Upper Mississippi River), as well as practices that encourage ethical outdoor behavior and environmental stewardship, were also distributed to encourage more than 700 people who attended this event to visit and experience a National Wildlife Refuge, where nature comes first.

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

U.S. Fish & Wildlife Service

America's National Wildlife Refuge System ...

Offering Year-Round Opportunities ...

To Prevent Nature-Deficit Disorder

Red Lake Walleye Restoration Effort

BY FRANK STONE, ASHLAND NFWCO

The Ashland National Fish and Wildlife Conservation Office (NFWCO) continues work with the Red Lake Band of Chippewa, Minnesota Department of Natural Resources (DNR), Bureau of Indian Affairs and the University of Minnesota to restore a naturally spawning population of walleye in Red Lake. During a March 2 meeting, Frank Stone met with the Red Lake Task Force Committee to discuss the walleye restoration program and performance indicators of this long-term restoration effort. Several topics were discussed at this meeting: Joint 2008 Assessment and Forecast Report; 2007/2008 Harvest Year Estimates; 2009 Summer

The Ashland National Fish and Wildlife Conservation Office continues work with the Red Lake Band of Chippewa, Minnesota Department of Natural Resources (DNR), Bureau of Indian Affairs and the University of Minnesota to restore a naturally spawning population of walleye in Red Lake.

Harvest Plans; Law Enforcement Updates; and the Red

Lake Fisheries Technical Committee Memorandum of Understanding (MOU).

Yearly harvest levels of walleye remain under the safe harvest limits that have been established. Both Tribal and state resource agencies will institute revised walleye harvest plans for 2009. The Minnesota DNR will increase daily bag limits (4 fish/day in the Upper Red Lake). Increased Tribal harvest in the lower lake will be achieved by hiring additional gill netting crews.

The 10-year MOU that the Technical Committee has been working under will soon expire. The committee members were presented with a draft document and asked to make comments. The members expressed optimism that the revised MOU will be able to be signed during the December meeting.

Historically, Red Lake has provided food, recreation, cultural pursuits and income to many people. Government leadership, cooperation and coordination have been paramount throughout the restoration process. All parties have demonstrated a willingness to provide leadership by example to achieve the community support and involvement required to reach the goals of the Red Lake walleye restoration effort.

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

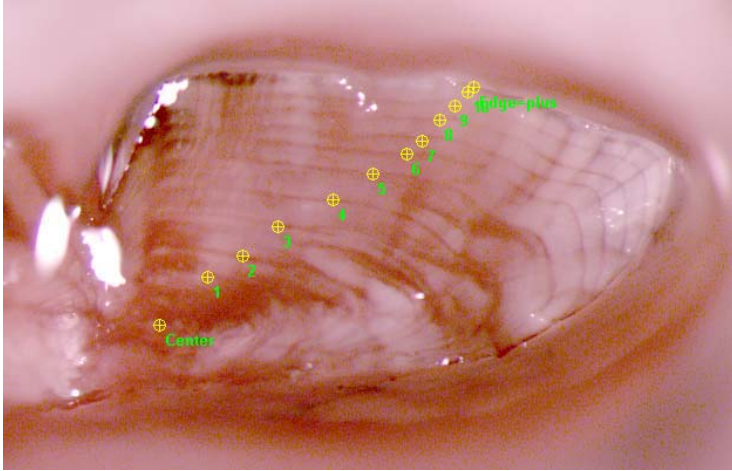
Conserving this Nation's fish and other aquatic resources cannot be successful without the partnership of Tribes; they manage or influence some of the most important aquatic habitats both on and off reservations. In addition, the Federal government and the Service have distinct and unique obligations 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.

2008 Lake Whitefish and Lake Trout Surveys

BY SCOTT KOPROSKI, ALPENA NFWCO

During the month of January, biologists Scott Koproski and Adam Kowalski finished aging samples collected during the 2008 fishery independent lake whitefish and fall lake trout spawning surveys. As a signatory of the 2000 Consent Decree, the Fish and Wildlife Service is responsible for working with state and Tribal agencies to establish safe harvest limits for lake whitefish and lake trout in 1836 Treaty waters. Alpena National Fish and Wildlife Conservation Office (NFWCO) fulfills the Fish and Wildlife Service's responsibilities in northern Lake Huron by assessing lake whitefish and lake trout populations in two management units: WFH-04 and WFH-05. The study sampling design was established by the Modeling Subcommittee (MSC) of the Technical Fisheries Committee (TFC). The MSC uses data collected from each management unit to establish safe harvest limits using catch-at-age models.

In 2008, Alpena NFWCO fished 40 gangs of gill nets in WFH-04 and WFH-05. Over 1,400 fish were collected during field operations, and aging structures



-USWS/Scott Koproski

Otoliths, in addition to other structures, are used to age lake whitefish captured during lake whitefish surveys in Lake Huron. Progressive age rings are identified in this image.

(i.e., scales, otoliths and fin rays) were removed from almost 400 of these fish. Scales and otoliths were collected from all lake trout and lake whitefish, scales were collected from all round whitefish, and scales and dorsal fin rays were collected from all percids encountered. Ages were assigned to each structure by Koproski and Kowalski.

Scales were examined using a stereo-microscope and a transmitted light. While examining a scale sample, the seasonal patterns of circuli formation can be identified and counted. An annulus within a scale sample is assigned when circuli spacing is compressed and circuli cutting-over is observed. This cutting-over is typically associated with the change in growth patterns present on the scale between slower winter and faster summer growth.

Fin rays were also examined using a stereo-microscope and a transmitted light. The fin rays are cross-sectioned and then a drop of vinegar is placed on each sample. While examining a cross-sectioned fin ray, broad summer and narrow winter growth bands can be identified. The winter growth bands are then counted and an age is assigned for that sample.

Similar to fin rays, patterns in summer and winter growth can be identified on an otolith sample; however, preparation is different and a crack and burn technique is used along with a reflected light. Individual otoliths are cracked transversely and placed in an alcohol flame for a brief period of time. Burning the otolith allows researchers to differentiate between the two distinct growth patterns within the structure - broad summer and compressed winter growth patterns. While viewing the sample, a drop of mineral oil is placed on the structure to provide a clearer image. By counting the bands of winter growth, age estimates can then be obtained from the otolith.

Age data, along with other biological parameters, are used by the MSC in the catch-at-age models to develop the safe harvest limits of 1836 Treaty Waters.

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

Study seeks Alternatives to the use of Black Carp on Aquaculture Facilities

BY ROB SIMMONDS, CARTERVILLE NFWCO

Black carp are native to Asia, first appeared in the United States in 1973, and are currently used to control pest snails at aquaculture facilities. Black carp work well for snail control, but if they escape from aquaculture facilities and become established in the wild, they pose a great threat to often imperiled native mussel species. Due to this escapement danger, it is beneficial to develop viable alternatives to the use of black carp at aquaculture facilities. Carterville National Fish and Wildlife Conservation Office (NFWCO) contracted with Southern Illinois University - Carbondale to complete a research project investigating potential alternatives of black carp to snail control in aquaculture ponds.



Black Carp

larger snails and are highly effective at controlling snail numbers. White suckers and river redhorse were ineffective at consuming snails at rates necessary.

However, there is hope for the future. Ongoing research is looking at the possibility of integrated pest management, using multiple approaches such as sunfish in conjunction with chemical treatments, to find a reliable, economically viable, and safe alternative for the use of black carp to control snails.

For further info about the Carterville NFWCO: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/carterville.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.

The study examined the use of redear sunfish, redear/green sunfish hybrids, river redhorse and white sucker as alternatives for black carp to consume and thereby control snails in aquaculture ponds. Results indicated that redear sunfish, and to a lesser extent, redear sunfish/green sunfish hybrids were relatively effective at consuming pest snails. Unfortunately, sunfish and their hybrids did not show the ability to control large snails. Additionally, the sunfish do not seem to be able to control snails to the degree necessary to be effective. Black carp can control the

Antrim Creek Dam Removal

BY RICK WESTERHOF, GREEN BAY NFWCO AND TIM SMIGIELSKI, JORDAN RIVER NFH

The Antrim Creek Dam was removed in September, 2008 through combined efforts of the Antrim County Conservation District



Through a cooperative effort with numerous partners, the Antrim Creek Dam (above) in Antrim County, MI, was removed, providing uninhibited fish passage to four miles of prime stream habitat (below).



-USFWS photos

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

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.

(ACCD), Antrim County, a private landowner and the Fish and Wildlife Service. The previous land owner built the dam to supply water for a man-made pond adjacent to the creek, but the current land owner wanted to remove the dam. Four miles of prime habitat for brook trout and other fishes was reconnected with Lake Michigan by removing this dam.

The project began when the private land owner was interested in returning the creek to its natural state and contacted the ACCD. ACCD discussed the project with Stewart Cogswell, Lake Michigan Fish Passage Coordinator for the Green Bay National Fish and Wildlife Conservation Office (NFWCO), and he was instrumental in securing \$10,000 dollars from the Coastal Program.

During the construction phase, sediments were used to control sediment during dam removal, and creek banks were stabilized with geotextile fabric and landscaping stone and step pools were constructed to allow passage of fish. A temporary road was built on a neighbor's property to get the equipment and materials to the site. After construction, the road was re-seeded and rock berms built to reduce runoff.

Tim Smigielski of the Jordan River National Fish Hatchery (NFH) and Rick Westerhof of the Green Bay NFWCO toured the site with representatives from the ACCD. Tim's experience with stream restoration projects was extremely valuable in inspecting the site and other potential sites in the area.

Bad River Watershed Restoration - 2008 Billy Creek Culvert Replacements

BY TED KOEHLER, ASHLAND NFWCO

Through the Partners for Fish and Wildlife Program, the Ashland National Fish and Wildlife Conservation Office (NFWCO) partnered with the Town of Ashland, WI, Ashland County Land and Water Conservation Department, Bad River Watershed Association and the Ashland County Highway Department to restore fish passage at two road crossings on Billy Creek in northern Wisconsin. The culverts are located on township roads and were fish passage barriers to brook trout and other aquatic life. One culvert was replaced, but the other was relatively new and could be reused. Both culverts were installed at the proper elevations and will now pass brook trout and other aquatic species. This action will enhance the Billy Creek watershed's fishery for miles both above and below the old barriers.



-USFWS

This new culvert will provide uninhibited fish passage to several miles of habitat on Billy Creek, which is within the Lake Superior watershed and a tributary to the Bad River.

Billy Creek is within the Lake Superior watershed and is a tributary to the Bad River. The creek is one of many within the Bad River watershed that is important to native brook trout and non-native naturalized species such as brown trout and rainbow trout. The Bad River watershed is a sparsely populated, largely forested area of northern Wisconsin and covers 700,000 acres. There are over 1,300 miles of perennial streams and shoreline, 390 miles of cold- or cool-water habitat and over 800 miles of intermittent streams. There are 1,122 identified road crossings in the watershed and the Ashland NFWCO works with the Bad River Watershed Association to evaluate every road crossing in the watershed to prioritize future restoration activities. At this time, 741 road crossing sites have been surveyed and 80% of these are barriers. Of these barriers, several high priority sites are planned for fish passage restoration during the 2009 field season.

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

Pallid Sturgeon Recovery

BY TRACY HILL, COLUMBIA NFWCO

Project Leader Tracy Hill of the Columbia National Fish and Wildlife Conservation Office (NFWCO) was invited by the University of Missouri Graduate School to discuss pallid sturgeon recovery efforts on the Missouri River. Dr. Hill participated in the Charles W. Schwartz Fisheries and Wildlife Seminar Series. The presentation centered on projects being conducted by the Columbia NFWCO in the lower 300 miles of the Missouri River. The presentation empha-

sized how adaptive management is being utilized in the recovery of this ancient riverine fish species. The projects involve monitoring the pallid sturgeon population and evaluating habitat construction and modification actions being done by the U.S. Army Corps of Engineers. The 65 students and faculty that attended the presentation were genuinely interested in the work and asked many thought provoking questions.

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

Columbia NFWCO's Citizen Soldier

BY CAPTAIN JEFF FINLEY, USAR

I am Captain Jeff Finley, Commander of the 480th Preventive Medicine Detachment. I am also a fish biologist and team leader for the Pallid Sturgeon Population Assessment Team. I am a Christian, a husband, a father, a patriot, a citizen and a warrior and it is my time to once again serve our Great Nation; this time in the Global War on Terrorism supporting Operation Iraqi Freedom.



-USFWS

Biologist Jeff Finley is the Team Leader for the Pallid Sturgeon Population Assessment Team of the Columbia National Fish and Wildlife Conservation Office.

the only of my three siblings to earn a degree and the sole son in five generations to serve in the military. I have been around the globe during peace time and war supporting soldiers in Bosnia, Somalia, Operation Just Cause and as a combat soldier in Desert Shield/Desert Storm - the first Gulf War.

My civilian job with the Columbia National Fish and Wildlife Conservation Office (NFWCO) is leading a team to combat the decline of the endangered pallid sturgeon. As a soldier, my duty is serving my fellow service men and women to prevent disease and non-battle injuries (DNBI). I am an environmental science officer. My unit (480th PM) provides preventive medicine services to soldiers in combat. Preventive medicine is a complex occupation in the military. It is best summed up as a triad of the Army's health department, OSHA and "Orkin Man" rolled into one. Although I am not a "combat" soldier anymore, my job is one that preserves the fighting strength of our forces. Not until the first Gulf War was the number DNBI's less than the number of combat-related injuries. Food and water borne sicknesses, environmental conditions and arthropod-vectored diseases once took more soldiers from the front lines than did shrapnel and bullets. The advent of preventive medicine

Wearing two hats is a challenging task. As a member of the U.S. Army Reserve, I balance the duties of a civilian occupation and one for the military. I spend weekends and summers away from friends and family, training and serving our active and activated forces. It is a second job that I have done for 21 years out of a deep appreciation for what this Nation has given me. Attracted by adventure and college money, I joined the U.S. Army in 1987 and served three years of active duty as a combat engineer before joining the Army Reserve. I owe much to the Army; a sense of pride, discipline and a never quit mentality. Without the GI Bill, I may never have attended college. I am

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.



-USFWS

Captain Jeff Finley in uniform shortly before he left the Columbia National Fish and Wildlife Conservation Office to serve our nation in Iraq.

and medical advancements are credited to reversing this trend. I will lead a team of 13 to include an entomologist, preventive medicine specialists and a mechanic to deploy to Balad Air Base (aka LSA Anaconda) in November 2009 for a one year rotation. In order to prepare my troops, I begin active duty service in April.

Leaving is bittersweet. I'll miss my coworkers, friends and family but I am proud to serve our Nation. You may say what you like about this war but the facts are true. The Global War on Terrorism has kept this country safe from attack since the events of 9/11. Moreover, peaceful Muslims (Imams) of Iraq and Afghanistan are resisting the world-wide efforts of Muslim Extremists to exploit Islamic doctrine. We are thwarting Militant Islam from world domination through the terror and violence of jihad. The efforts of our forces are providing these nations and their people freedom from tyranny. They have held historic elections working toward equal representation in their governments as opposed to domination by fascists. If you oppose this, well... that's your right and one I, along with many fallen comrades, are honored to have earned for you.

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

Fishery Biologist - A Career to Consider

BY MARK STEINGRAEBER, LA CROSSE NFWCO

Biologist Mark Steingraeber of the La Crosse National Fish and Wildlife Conservation Office (NFWCO) participated for the fifth consecutive year in the 8th Grade Career Day at Aquinas Middle School in La Crosse, Wisconsin. A total of 84 students attended the March 11 event.

Twenty different careers were represented at the fair this year. Students selected from among these and attended four brief presentations given by a local professional who works in that occupation. The morning event culminated a month-long guidance department program designed to encourage students to think about career options for their future. Information on the duties, responsibilities and requirements of a professional biologist for the Fish and Wildlife Service was described while a computer screensaver displayed examples of the diverse work performed by Fish and Wildlife Service biologists from across the country.

Based on personal experiences dating back more than 30 years, Mr. Steingraeber described the educational path and life-journey that led him to a satisfying natural resource career in service to the nation. The

As I prepare myself, my family and my troops, the lyrics of Toby Keith's song "American Soldier" fill my mind. Although you don't hear it on the radio anymore, I know the majority of this Nation still supports the "Warrior," even if they don't support the War. Our right to oppose was paid for by the blood of brave men willing to put their life on the line for freedom. Of the 306 million Americans, less than one percent (2.9 million) serves in National Guard, Reserve and Active Duty combined! This makes the old Marine slogan ever truer, the few, the proud! I am assured that I'll return to a job and a grateful Nation that appreciates the sacrifice, thanks to the lessons we have learned from the past. Theodore Roosevelt was credited with this statement "A man who is good enough to shed his blood for his country is good enough to be given a square deal afterwards." On behalf of all veterans, we appreciated his leadership.

Unlike the Gulf War, where letters take weeks to arrive, I will have access to e-mail. To reach me, feel free to write to jeff.m.finley@us.army.mil. Until then, may God Bless America and try not to recover the pallid sturgeon until I return. Mustang 6 - out.

importance of communication, information technology, math and interpersonal skills was stressed in whatever career a student may select. Students were also encouraged to closely examine potential career choices by actively participating in job-shadow and volunteer opportunities offered to them in high school and college.



-USFWS

Mark Steingraeber of the La Crosse National Fish and Wildlife Conservation Office discusses his career as a fish biologist with 8th grade students at Aquinas Middle School in La Crosse, Wisconsin.

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

Congressional Actions

[111th CONGRESS House Bills]
[From the U.S. Government Printing Office via GPO Access]
[DOCID: h51ih.txt]
[Introduced in House]

111th CONGRESS
1st Session

H. R. 51

To direct the Director of the United States Fish and Wildlife Service to conduct a study of the feasibility of a variety of approaches to eradicating Asian carp from the Great Lakes and their tributary and connecting waters.

IN THE HOUSE OF REPRESENTATIVES

January 6, 2009

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

A BILL

To direct the Director of the United States Fish and Wildlife Service to conduct a study of the feasibility of a variety of approaches to eradicating Asian carp from the Great Lakes and their tributary and connecting waters.

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

SECTION 1. SHORT TITLE.

This Act may be cited as the "Eradicating Asian Carp in the Great Lakes Study Act of 2009".

SEC. 2. ASIAN CARP ERADICATION STUDY AND REPORT.

(a) In General.—The Director of the United States Fish and Wildlife Service shall conduct a study to—

(1) identify methods to eradicate Asian carp from the Illinois Waterway System, including methods for harvesting Asian carp; and

(2) evaluate the feasibility and costs of each such method.

(b) Consultation.—The Director shall conduct the study under subsection (a) in consultation with—

(1) the Administrator of the National Oceanic and Atmospheric Administration; and

(2) at least two interstate bodies representing the Mississippi River and Great Lakes States.

(c) Contents.—The study shall include, at a minimum, an evaluation of the feasibility of temporarily harvesting Asian carp as a method for eradicating the carp from the Illinois River. Such evaluation shall include evaluations of—

(1) species biomass and distribution for all fish species in the Illinois River, including a comparison with historical biomass and distribution data if such data is available;

(2) possible harvesting methods for Asian carp;

(3) possible products that could be generated from Asian carp;

(4) available types of temporary processing locations for harvested Asian carp;

(5) the environmental effects of constructing and operating temporary processing facilities at such locations;

(6) methods to repopulate the Illinois River ecosystem with native species; and

(7) the effect of Asian carp on the Illinois River ecosystem if temporary harvesting of Asian Carp is not conducted.

(d) Report.—

(1) In general.—The Director, in consultation with the Administrator, shall submit to Congress a report containing the findings, conclusions, and recommendations resulting from the study under subsection (a).

(2) Contents.—The report shall include recommendations concerning—

(A) regulatory and other mechanisms to ensure—

(i) expeditious action to address the Asian carp problem;

(ii) effective eradication of such carp;

and

(iii) that an appropriate deadline is set for the completion of harvesting of such carp;

(B) preferred harvesting methods for Asian carp;

(C) the ideal quantity and distribution of—

(i) temporary processing locations for harvested Asian carp; and

(ii) temporary buying stations for harvested Asian carp; and

(D) methods to repopulate the Illinois River ecosystem with native species.

(e) Deadlines.—The Director shall—

(1) begin the study under subsection (a) not later than three months after the date of enactment of this Act;

(2) complete the study not later than 15 months after the date of enactment of this Act; and

(3) submit the report under subsection (d) not later than three months after the date of completion of the study.

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-

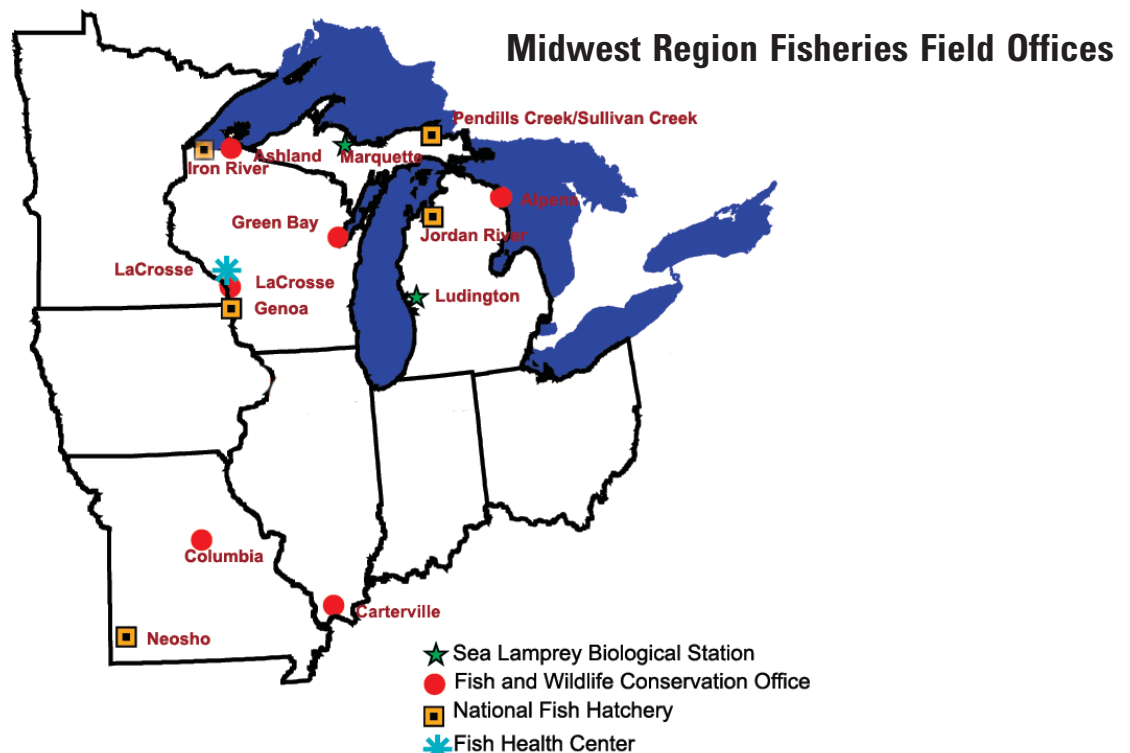
ies databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and re-licensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments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

- Fishheads Unite!
 - Melissa Cheung, Neosho NFH
- Green Bay NFWCO attends the Michigan Project Leaders Meeting
 - Rick Westerhof, Green Bay NFWCO
- More Signs, More Visitors?
 - Melissa Cheung, Neosho NFH
- Service Biologist Chairs Meeting of Lake Michigan Creel Workgroup
 - Dale Hanson, Green Bay NFWCO

Aquatic Species Conservation and Management

Aquatic Invasive Species

Public Use

Cooperation with Native Americans

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

- A Granted Discussion with the Tip of the Mitt Watershed
 - Rick Westerhof, Green Bay NFWCO
- Boardman River Dams Committee’s Recommendations for the Boardman River Dams
 - Rick Westerhof, Green Bay NFWCO
- Conservation Resource Alliance Annual River Care Meeting
 - Rick Westerhof, Green Bay NFWCO

Workforce Management

- A New Tool for the Old Tool Box
 - Colby Wrasse, Columbia NFWCO
- [First Time at the National Conservation Training Center!](#)
 - Melissa Cheung, Neosho NFH
- [What’s New Underwater](#)
 - Scott Yess, La Crosse NFWCO

Neosho NFH has a Blog Visit Us Online!

Biologist Melissa Cheung has started a blog for the Neosho National Fish Hatchery (NFH). Although not an official Fish and Wildlife website and still being developed, the Neosho NFH blog is a place for supporters and newcomers. The blog will allow children and adults to take a “Behind the Scenes” view at what we as fish culturists do at our fish hatchery. There will also be an opportunity to learn more about the fish we raise here and how individuals can participate in our hatchery events. Please visit our work in progress at :

www.NeoshoNFH.blogspot.com