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

fish lines

May is Mussel Time!

Trying to Save the Future

Lake Sturgeon for the Red River of the North

The Lake Sturgeon Expands its Kingdom

Columbia's 2nd Annual W.O.W.

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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.

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-USFWS/BrianElkington
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-USFWS/PattyHerman

Technician Chris McLeland and volunteer Marie Delatour deploy trotlines at sunset on the Missouri River.

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Lake Sturgeon for the Red River of the North

BY SCOTT YESS, LA CROSSE FWCO

Lake Sturgeon once inhabited the Red River of the North and its tributaries. In 1926, a lake sturgeon weighing 176 pounds was caught in White Earth Lake; however, since the turn of the century lake sturgeon populations have declined due to over-harvest, pollution and water development projects. The last record of a lake sturgeon in this area came from Lake Lida in 1957. In 1997, the White Earth Natural Resources Department (NRD) assisted by the Fish and Wildlife Service, Rainy River First Nations and Minnesota Department of Natural Resources (DNR) entered into an agreement to restore lake sturgeon in White Earth and Round lakes on the White Earth Reservation. For eight years, thousands of fingerling lake sturgeon have been stocked on the Reservation and fish up to three feet have been caught by anglers recently.

Lake sturgeon are primitive fish that historically inhabited many of Minnesota's large rivers and the lakes associated with those rivers. Native American cultures were partially dependent on the availability of lake sturgeon. Indian villages were often located near waters where sturgeon spawned. Early European settlement on Lake of the Woods was due to commercial fishing for lake sturgeon, when their caviar and fine flesh were known worldwide. It is a goal of the resource agencies to restore lake sturgeon to this part of its original range. The management plan calls for 8,000 fingerlings to be stocked in White Earth Lake and another 5,000 fingerlings to be stocked in Round Lake annually for ten years.

A significant team effort takes place prior to stocking fingerlings. The sturgeon are tested for viral infections prior to shipping the eggs. It took a true team effort to accomplish this goal. First, Scott Yess of the La Crosse Fish and Wildlife Conservation Office (FWCO) traveled to Baudette, Minn., to collect fin clips from 30 lake sturgeon held by the Minnesota DNR. The fin clips were delivered to the La Crosse Fish Health Center on April 18th. Results of the viral tests were completed in early May and were negative. This allows the importation of sturgeon eggs to the Genoa National Fish Hatchery (NFH).

-USFWS

Jerald Roberts of the White Earth Natural Resources Department stirs lake sturgeon eggs during the fertilization process. The process involves adding sperm (milt) from a male fish to the eggs, then adding water to activate the milt to fertilize the eggs.

On May 18th, Jerald Roberts of the White Earth NRD along with Scott Yess assisted Joe Hunter and staff of the Rainy River First Nations with spawning seven adult lake sturgeon. Yess delivered approximately 75,000 eggs on May 20th to Genoa NFH. In late summer, the lake sturgeon will be tagged and then transported and stocked into lakes on the White Earth Reservation. This was an incredible team effort. Thank you to all who participated.

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

May is Mussel Time

BY TONY BRADY, GENOA NFH

It as been said that "there is a time for everything, and a season for every activity under heaven." From late April through May at the Genoa National Fish Hatchery (NFH), staff, partners and volunteers have been busy with the hatchery's freshwater mussel recovery and restoration programs. Starting the last week of April, dozens of volunteers including the Prairie du Chien, Wis. High School agriculture class, descended upon the hatchery to assist staff by inoculating several thousand fish with endangered Higgins' eye pearlymussel larvae, otherwise called glochidia. Overall, the high school students volunteered more than 150 hours to the project.

Once all required host fish were inoculated with Higgins' eye pearlymussel glochidia, the focus switched to inoculating host fish for other mussel restoration and research programs. Once all the fish were inoculated, NFH staff along with their partners from the U.S. Army Corp of Engineers, Iowa Department of Natural Resources (DNR), Minnesota DNR, Wisconsin DNR, and Illinois DNR, National Park Service, Twin Cities Ecological Services Field Office, La Crosse Fish and Wildlife Conservation Office and the Prairie Island Indian Community teamed up to place propagation cages of inoculated fish in six locations of three different rivers.

-USFWS

Biologist Tony Brady harvests larval mussels (glochidia) from adult mussels while the rest of the "Clam Palace" is a buzz with volunteer activity. May is a busy month for mussel propagation activities at the Genoa National Fish Hatchery.

With help from Hartman Reserve and the Iowa DNR, a seventh location was used for cages at George Wyth Lake at George Wyth State Park located in Cedar Falls, Iowa. Mussels produced at George Wyth Lake will be used to bolster mussel populations in the Cedar River. Mussels produced at the other locations will either be stocked throughout the Upper Mississippi River basin as part of the Higgins' eye pearlymussel recovery program, or used in a number of mussel restoration or research programs with our state partners.

One new restoration program that has added a new twist to the work at Genoa NFH is the production of the salamander mussel. As hinted by its name, the salamander mussel does not require a fish host, but instead uses the mudpuppy as host for their glochidia. A total of 51 mudpuppies were inoculated and placed in cages in three different river locations to attempt a production run of this increasingly rare animal. Now is the time for Genoa NFH staff to take a quick breath before the next season of summer adult (brooding) mussels are ready for propagation.

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

Trying to Save the Future

BY RUSSELL HIVELY, THE POST

In early May, biologists at the Neosho National Fish Hatchery (NFH) had an opportunity that many fisheries people never get. They spawned an endangered species.

Fish hatchery manager Dave Hendrix and assistant manager Rod May spawned a pallid sturgeon, an ancient fish which lives primarily in the Missouri and lower Mississippi River basins. The pallid sturgeon is a relic of the dinosaur era that has lived in pre-historic rivers for about 70 million years. Pallid sturgeon can grow to be very large fish, up to eighty-five pounds at maturity, and they can live to be 100 years old. But their numbers began decreasing about 20 years ago.

The pallid sturgeon is considered to be a good tasting fish, and the female's eggs have been too often sold and eaten as caviar.

Changing habitat, over-fishing and harvesting females for caviar have lowered the populations, putting the pallid sturgeon on the endangered species list. The Neosho NFH and eleven other state and Federal hatcheries are working to save this ancient fish from extinction.

This year, a female pallid sturgeon from the Missouri River was spawned at the local hatchery. Spawning this ancient fish is not a simple matter.

First, wild fish must be caught in the Missouri River. Then each fish must be checked to see if it is genetically a pallid sturgeon, as they will cross breed with other sturgeon. Then the females must be checked to see if they will produce eggs this season. They usually only have mature eggs every other year. Then a mature male has to be located.

After all the tests and careful observation were made, the male and female at Neosho were determined to be ready for spawning. The male is caught and a sample of sperm removed. Scientific work with the female is much more complicated.

-USFWS

Project Leader David Hendrix of the Neosho National Fish Hatchery checks to see if eggs freely flow from a female pallid sturgeon, which indicates that the fish is ready to spawn (lay her eggs).

The general process is to take the eggs from the female and then blend in sperm from the male to fertilize the eggs. Taking eggs from the female is time consuming as handlers "milk" her every hour until all the eggs are taken. Blending the eggs and sperm is done in a container and, at the Neosho hatchery, the blending is done with a turkey feather. This is an old method that is still popular with fisheries experts. There are other more

modern ways to blend the eggs and sperm, but Hendrix and May are comfortable with the old turkey feather method. Eventually the eggs are placed in a hatching jar and then it is just a matter of waiting for the hatch.

The spawning was deemed a success. The last of the eggs were extracted about 4 p.m., and the following day, the nucleus had already divided, meaning the fertilization had been successful. Now, the two "expectant fathers," Dave Hendrix and Rod May, are just waiting for the babies.

Much time is required in the process of spawning pallid sturgeon. This work is being done at several hatcheries, all in an effort to save an endangered species—the ancient pallid sturgeon.

Preserving endangered species is a high priority in America because the old native species of plants, animals and fish are barometers of our natural resources. The introduction of non-native species into our fields and streams has often led to disaster. Millions of dollars and millions of hours are spent each year to get rid of invasive species that have come to America and caused damage and destruction. Native plants and animals are better for the nation, and efforts to preserve them are worth all the time and trouble it takes to prevent their extinction and have them still around in the future.

-USFWS

Sperm (milt) from a male pallid sturgeon has been added to the eggs of a female. Water was then added to the pan to "activate" the milt to fertilize the eggs. Stirring ensures that all of the eggs come into contact with the milt.

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

The Lake Sturgeon Expands its Kingdom

BY NICK STARZL, GENOA NFH

Poet Henry Wadsworth Longfellow once called lake sturgeon the "King of Fishes" because of its great size and longevity. Specimens have reached eight feet long, weighing more than 300 pounds and living to be over 100 years old. It is also said that "To every king an heir" which happens every spring for the lake sturgeon.

-USFWS

Fish and Wildlife Service staff from the Genoa National Fish Hatchery (NFH), Warm Springs NFH (GA) and Wisconsin Department of Natural Resources spawn wild lake sturgeon from the Wolf River near Shawano, WI.

Each year, the Genoa National Fish Hatchery (NFH) meets near Shawano, Wis., with the Wisconsin Department of Natural Resources (DNR) and the Warm Springs NFH of Georgia in order to capture and spawn the threatened lake sturgeon. Collecting the rare fish eggs during the Wisconsin DNR's annual sturgeon tagging program has always been an efficient way of killing two birds with one stone. Except in this case, one of the birds happens to be many Fish and Wildlife Service programs focused on returning the once abundant lake sturgeon to various locations throughout the United States.

Warm Springs NFH's primary focus is to fill management requests within the Tennessee Valley Authority reservoirs, while Genoa NFH's Wolf river strain lake sturgeon are destined for Legend Lake on the Menominee Indian Reservation in Wisconsin. Over-fishing, habitat loss and pollution diminished lake sturgeon populations throughout much of its historic range, and Legend Lake was no exception.

Lake sturgeon are an important food and cultural icon for Native Americans, which is why the Genoa NFH has been working to restore lake sturgeon on Reservation waters for the past 15 years with the help of the La Crosse Fish and Wildlife Conservation Office, and the Natural Resources Division of the Menominee Indian Tribe. Annual stocking efforts have brought about new populations in its historic range which have provided the Reservation with their culturally significant fish as well as allowing future generations to appreciate the "King of Fishes."

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

Columbia's 2nd Annual W.O.W.

BY CLIFF WILSON, COLUMBIA FWCO

Wonders of the Outdoor World (W.O.W.) is a national outdoor recreation and conservation school. The school's sole purpose is to connect people with nature. During the first weekend of May, the Columbia Fish and Wildlife Conservation Office (FWCO) hosted the 2nd annual Columbia W.O.W event.

The goal of this event is to raise awareness of the recreational opportunities along the Missouri River and its floodplain. The Missouri River is a vast and under-utilized natural resource that flows through Missouri. Hiking, bird watching, river fishing, recreational boating and mushroom hunting were just a few of the classes offered in the past. Unfortunately this year's event could not be held on the river like it was last year. Heavy rains in the Missouri River watershed caused the river to rise 13 feet in one night, just days before the event. Luckily, the coordinators of this event were on their toes and the venue was changed in just two days. Staff from the Missouri Department of Natural Resources (DNR) gladly helped ready Finger Lakes State Park. Some quick rearranging and modification of classes led to a successful event, even though we could not showcase the Missouri River.

-Rick Hansen

Students try their hand at fishing on Rocky Fork Lake during the Columbia Wonders of the Outdoor World school.

During the weekend, 150 W.O.W. participants were immersed in nature; at their campsites they were woken by the spring songs of Missouri's birds and the smell of camp fire smoke. Throughout the day, as they attended a range of nature related classes, they were surrounded by ponds, lakes and sunshine. In their classes, they learned outdoor skills such as how to fish, where to find mushrooms and how to cook with a Dutch oven. During meal-time, adults swapped stories of the day while children played in the lake and built sand castles. After dark, everyone gazed into the night sky as they were told stories about the constellations by an astronomer.

The wide range of classes provided were instructed by staff from Columbia FWCO, Columbia Ecological Services Field Office, Bass Pro Shops W.O.W. office, Big Muddy National Fish and Wildlife Refuge, Missouri DNR and Missouri Department of Conservation. Columbia FWCO is grateful for the assistance of these organizations, which made this event a success. We would also like to express our appreciation to the University of Missouri-Columbia School of Natural Resources, The Wildlife Society, American Fisheries Society, Missouri Waterfowl Association, Whitetails Unlimited, Wal-Mart, Hy-Vee, Schnucks, Gerbes and Pepsi-Cola for their assistance as well.

This event was a huge success in part due to the passion we all have for the outdoors and our drive to teach others about the wonders of our natural world.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

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.

Chinese Science Delegation Spends a Day on the Upper Miss

BY DOUG ALOISI, GENOA NFH

A scientific delegation from The People's Republic of China recently paid a visit to the La Crosse, Wis. area Fish and Wildlife Service fisheries offices and spent the afternoon on the mighty Mississippi River or "Big River" where they watched fisheries management techniques in action. Their visit is part of an exchange signed between the People's Republic of China's Department of Agriculture and the International Affairs Department of the Fish and Wildlife Service. Of particular interest to the Chinese delegation was fisheries management on big river systems, and management methods in river systems that have large water control structures and navigation systems in place.

-USFWS

A member of the Chinese Science Delegation poses with a lake sturgeon while visiting the Genoa National Fish Hatchery.

The delegation spent their first week in the United States on the Columbia River of the Pacific Northwest touring fisheries facilities. Then they traveled to Chicago, Ill., to tour the famous Shedd A. Aquarium, and then came upstate to the La Crosse area where they then observed habitat rehabilitation and enhancement projects in big river systems sponsored by the U. S. Army Corps of Engineers. After a quick lunch at the famous Big River Inn at Genoa, Wis., they loaded onto boats and went out on the Big River to lift nets with Genoa NFH staff and electrofish with the La Crosse Fish and Wildlife Conservation Office.

Of particular interest to the group was a live walleye spawning demonstration by Genoa's very own Dan Kumlin and Jeff Lockington. In addition, the delegation were impressed by the diversity of species caught both in the fyke and hoop nets and while electrofishing. The leader of the delegation, Mr. Li Yanliang, also caught the largest common carp of the day while electrofishing, which caused a bit of excitement from the group!

After a cool afternoon on the river, it was back to the Genoa NFH to concentrate on sturgeon restoration, endangered mussel recovery and enjoy a flathead catfish fry. Music with a Big River theme was provided by local musicians Roger and Mandy LaBarge. It is hoped that the delegation increases their understanding of ongoing fisheries management practices in the United States and that scientists may be able to put some of the practices to use in China, to benefit aquatic species in their country.

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

Let's Go Green Together

BY MARK STEINGRAEBER, LA CROSSE FWCO

GreenLaCrosse.com is a community initiative and internet website designed to help public, private and non-profit organizations unite to improve the quality of the environment in the Upper Mississippi River Valley, strengthen the local economy, and improve the health of the community in and around La Crosse, Wis. The La Crosse Earth Week Coalition is an outreach component of this effort that promotes sustainable practices in the community. In association with nation-wide observances of Earth Day late in April, the coalition sponsored a series of events during the week of April 19 to celebrate existing practices and promote additional actions that individuals can take to improve local environmental quality.

With this year's theme titled "Let's Go Green Together," the final event of the week was the annual Earth Day Fair held on April 25 at the Three Rivers Waldorf School in La Crosse. A diverse mix of repre-

-USFWS

The popular La Crosse Fish and Wildlife Conservation Office fish puzzle was a real "magnetic draw" at the La Crosse Earth Day Fair and provided opportunities for children of all ages to test their fish identification skills.

sentatives from grass roots organizations, business cooperatives, academia, community supported agricultural farms, nature centers, land trusts, automobile dealerships, and elected officials assembled here to inform several hundred attendees of "green" environmental practices, products and services that are locally available.

La Crosse Fish and Wildlife Conservation Office (FWCO) biologist Mark Steingraeber represented the Fish and Wildlife Service at the event with exhibits to inform the crowd about local, environmentally-friendly alternatives for the disposal of unwanted medications and unwanted pet fish. Recent partnerships forged by this office with local units of government and pet fish retailers, respectively, now accept these unwanted items to ensure they will not be released into aquatic environments where they can cause harm. Some individuals also expressed a desire to 'connect with nature' and were recruited as future volunteers. The opportunity to meet the diverse audience that attends the Earth Day celebration makes participation in this annual community event a valuable outreach tool.

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

Annual On-the-River Planning Event

BY NATE CASWELL, CARTERVILLE FWCO

Biologist Nate Caswell recently participated in the U.S. Army Corps of Engineers (CORPS) St. Louis District's annual River Resources Action Team (RRAT) trip down the Mississippi River. The RRAT trip is a floating meeting that alternates between the impounded and un-impounded portions of the St. Louis District. This year, the participants got a chance to see and discuss projects taking place on the un-impounded portion between the Missouri and Ohio rivers, otherwise known as the Middle Mississippi River (MMR).

This annual event gives river managers and stakeholders an opportunity to discuss the CORPS channel maintenance and ecosystem restoration issues while actually being on the river to see the projects first hand. Nate gave the group a brief update on the status of fish sampling for the Stone Dike Alterations Project, one of the habitat restoration projects planned for the MMR. Carterville Fish and Wildlife Conservation Office (FWCO) recently completed three years of pre-project baseline data collection, and is currently waiting for construction to take place. The CORPS will use a series of wing dike notches and chevron dikes to create island and side channel habitat in a reach of the MMR where there currently is none. Chevron dikes are upstream-facing horseshoe-shaped rock structures that create slack water, island and side channel habitat.

-CORPS-St.LouisDistrict

This chevron dike was placed to create island and side channel habitat in the Mississippi River.

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

National Weather Service Recognizes 100 Years of Weather Data Collection

BY MELISSA CHEUNG, NEOSHO NFH

Neosho National Fish Hatchery (NFH) was awarded by the National Weather Service for 100 years of weather data collection. A ceremony was held at the Hatchery followed by lunch. Hatchery staff collect weather observations every morning, record high and low temperatures, and measure the amount of precipitation, if any. This daily task has been relatively uninterrupted since October 1, 1909. Our long-term weather data is a valuable resource because our weather station is one of the oldest in the state and the weather station itself has been moved only once (about 200 feet) from its original location. You can read more about how our weather data is being used at: http://www.neoshodailynews.com/news/x726825001/Weather-service-honors-hatchery.

-USFWS

Meteorologist Bill Davis (Rt.) of the National Weather Service presents David Hendrix of the Neosho National Fish Hatchery with an award that recognizes 100 years of weather data collection at the hatchery.

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

Thunder Bay Power Annual Working Committee

BY ANDREA ANIA, ALPENA FWCO

This spring biologist Andrea Ania of the Alpena Fish and Wildlife Conservation Office (FWCO) participated in the annual Thunder Bay Power Working Committee meeting for the Thunder Bay Project License Implementation. The Working Committee was created to assist Thunder Bay Power (TBP) and its parent company, North American Hydro (NAH), in meeting the requirements of its Federal Energy Regulatory Commission (FERC) license. This year's meeting was held via web cast and conference call, which eliminated the need for participants to travel from Wisconsin and within Michigan to the TBP office in Alpena, Mich. The web cast was efficient, and the group decided future meetings will be conducted similarly to reduce travel time, travel costs and carbon emissions.

The primary focus of the meeting was to review results of NAH's 2008 stream bank erosion sites, invasive purple loosestrife and Eurasian water milfoil monitoring activities. A new invasive curly leaf pondweed was also reported to be found while monitoring the system. In addition, the Working Committee discussed recent charges to the project escrow account, NAH's website changes and an update on the public easement issue at the Hubbard Lake site.

The meeting was attended by member representatives from the Michigan Department of Natural Resources, NAH, TBP and Fish and Wildlife Service. In addition, representatives from the Hubbard Lake Sportsmen & Improvement Association and Michigan Hydro Relicensing Coalition participated.

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

The Leviathan of Mingo NWR

BY JOE MCMULLEN, ADAM MCDANIEL AND TRACY HILL, COLUMBIA FWCO

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.

Project Leader Tracy Hill shudders and hits the deck of our boat with haste as the last 10 feet of a gill net produces a large diamond back water snake. After a great deal of debate over the lethality of the species, the crew mustered the courage to remove and release the snake, without incident. This was the first of many angry and uncooperative residents of the Mingo swamp, which includes cottonmouths, snapping turtles and an army of mosquitoes.

-USFWS/JoeMcMullen

Tracy Hill holds a diamond back water snake that was accidentally captured in a gill net on the Mingo River at Mingo National Wildlife Refuge. Co-worker Adam McDaniel provides background support.

This year, staff from Columbia Fish and Wildlife Conservation Office (FWCO) participated in an annual fish community survey at Mingo National Wildlife Refuge (NWR). The study is linked to the reintroduction of alligator gar at the refuge. The crew consisted of Tracy Hill and technicians Joe McMullen and Adam McDaniel. With help from the Missouri Department of Conservation's Open River and Wetland Field Station, biologists successfully sampled fish communities in many of the area's streams, ditches and marsh lands. This was a unique opportunity for the staff, and a world away from the Missouri River issues that are dealt with on a daily basis. Many species of fish that our office rarely deals with were documented including bowfin, chain pickerel, starhead topminnows and taillight shiners.

In the spring of 2007, alligator gar officially became a native Missouri resident again, and resumed its rightful place as Missouri's largest fish. Alligator gar were once common in the rivers and swamp lands of southeast Missouri, but few reports of these giant fish have surfaced in the past 70 years. Occasionally, fish are caught in Missouri, most often on the lower portions of the Mississippi River and its tributaries, likely migrants from populations in Arkansas, Louisiana and Oklahoma. The fish stocked at Mingo NWR were raised at the Tishomingo National Fish Hatchery in Oklahoma where the species still thrives. Loss of habitat is the primary cause of the alligator gar's decline; however, suitable habitat still abounds in the swamps of Mingo.

Alligator gar can reach lengths of 12 feet and weigh as much as 300 pounds. Adults live on a diet consisting largely of fish, but are not known as picky eaters, and have been known to eat ducks, shore birds, other alligator gar, and are noted scavengers as well. It is believed that reintroducing this large predatory fish will help to balance biological processes and increase the overall health of the swamp ecosystem.

For the last four summers, fish have been sampled on the refuge in an array of habitats using multiple collection methods. These studies were conducted in order to gain perspective on the entire fish community present. This information can now be used as a basis of comparison, when future studies beg the question, "What affect are alligator gar having on the ecosystem?" To more fully understand the fish's habits, graduate students from Southeast Missouri State University have fitted these fish with telemetry devices in order to track their movements. This also allows biologists to easily recapture the gar so that information about their diets, growth and habitat preferences can be obtained.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

2008 Seneca Lake Wild Lake Trout Brood Lot

BY JAIME MASTERSON, PENDILLS CREEK NFH

During the 2008 lake trout spawning season at Sullivan Creek National Fish Hatchery (NFH), a new future brood lot of Seneca Lake Wild strain of lake trout was produced.

The 2008 Seneca Lake Wild (SLW) future brood lot of lake trout was created by crossing 2002 year class female lake trout with the 2003 year class of male lake trout. A total of 128 adult lake trout pairings were randomly collected during the entire spawning operation to make the 2008 group. After the fry hatched they were randomly culled down to 4,000 fish and placed into rearing tanks that are located in the incubation building. In August, when the fish are big enough, their numbers will culled down once again, this time to 2,000 fish and moved out to the brood building. In the next four to five years, the 2008 Seneca Lake Wild lake trout will be ready to spawn for the first time, contributing their progeny to the Great Lakes lake trout rehabilitation effort.

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

Isolation Brook Trout Clear First Hurdle

BY NICK STARZL, GENOA NFH

Captive coaster brook trout populations at the Genoa National Fish Hatchery's (NFH) Region 3 Fish Isolation Facility received their first clean bill of health from the La Crosse Fish Health Center (FHC). The fish originated from Tobin Harbor at Isle Royale National Park. If all goes well, this group of coaster brook trout will grow to approximately nine inches over a year and a half and undergo two more disease checks throughout their production cycle. If cleared, the wild lot of fish will be folded into the existing Tobin Harbor broodstock at Iron River NFH, and eventually produce families of their own.

This broodstock supplies both the Iron River and the Genoa NFH's with all of the brook trout eggs for the Midwest Region's annual production goals. In any restoration program which involves stocking hatchery fish, distributing "wild" fish, or fish that closely represent the founding population, is the best way to conserve the genetic variability and restore fish populations in the natural environment. To achieve this, service staff periodically captures the Tobin Harbor coasters during their spawning run to collect new gametes from the wild population. The last time this happened was in October 2008, when a small batch of eggs were disinfected and transferred to the Genoa NFH for incubation.

These fish are now little "brookies" averaging three inches in length, and on their way to being part of a program to conserve this genetically distinct strain of brook trout. The Iron River NFH, Genoa NFH, La Crosse FHC, and Ashland Fish and Wildlife Conservation Office actively work with the staff of the Isle Royale National Park to conserve this rare strain of fish.

-USFWS

Sarah Bauer of the La Crosse Fish Health Center conducts a routine hatchery inspection at the Genoa National Fish Hatchery.

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

Something Fishy at Ashland Middle School

BY CAREY EDWARDS, IRON RIVER NFH

For the past eight years, raising trout and salmon in the classroom has been common-place in the north woods of Wisconsin. It started at the Superior Middle School and spread to two other area schools. What better way would there be to teach students about the life history of trout and salmon then to have them raise fish in the classroom? All it takes is a 30 gallon aquarium, chiller unit and trout or salmon eggs. Kathy Sill, a middle school math teacher in Ashland, Wis., had heard about this project, and was intrigued by the math aspect of aquaculture. She had visited the Iron River National Fish Hatchery (NFH) before and contacted the staff to find out if she could initiate a project in her classroom. She hoped to present her students with a fun and educational way to apply math in everyday life.

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.

-USFWS

Carey Edwards helps middle school students count trout eggs that will be hatched and reared at the school.

The only hitch in the process was the $1,100 price tag on an aquarium and chiller unit. The financial backing for the other school aquarium projects had come from the Brule River Sportsman's Club and they were willing to contribute again. Also, stepping up to help out was the Wild Rivers Chapter of Trout Unlimited. The two groups split the cost and the Ashland Middle School was up and running.

In the fall of 2008, Iron River NFH agreed to provide lake trout eggs for the program with the stipulation that the fish would be humanly euthanized at the projects end. (This is due to stringent regulations and permitting in the transportation of fish due to disease concerns.)

Sixty five students from three classes welcomed the eggs into the aquarium in mid-October. They monitored water temperature daily and made sure the conditions were perfect for the developing fish. Excitement abounded when the eggs hatched, followed by surprise and disappointment that the newly hatched fry sought shelter in the gravel. After more than 30 days of waiting, the eager students began feeding the fish as they swam to the water surface looking for food. Math teacher Kathy Sill stated that they only lost seven eggs during the incubation period, but were losing around ten fry/fingerlings a day due to their fast circulating water filter. This was remedied by experimenting with filter speed to balance filtration with fry strength.

As part of the program, the hatchery agreed to come to the classroom and continue the learning process with a presentation and hands-on lab to all three classes. Biologist Carey Edwards brought the hatchery to life with a presentation, and students were able to simulate egg enumeration in the same manner that occurs at the hatchery. This involved displacing water with "eggs", recording data and calculating eggs/ml. Students were also presented with additional math problems that mimic day to day calculations occurring at the fish hatchery. This helped to strike home how important and frequently used math is in everyday life.

This program is very rewarding for everyone involved. The school, sportsman's club and hatchery are looking forward to this fall when the next group of students get to learn about the life history of lake trout.

For further info about the Iron River NFH: http://www.fws.gov/midwest/ironriver/

1st Annual Children's Fishing Day

BY JAIME MASTERSON, PENDILLS CREEK NFH

On behalf of the *Friends of Pendills Creek Hatchery* and the Pendills Creek National Fish Hatchery (NFH), we thank all of our sponsors and volunteers for a very successful 1st Annual Children's Fishing Day. With this combined generosity, we were able to make this special day happen.

The 1st Annual Children's Fishing Day was a hit! Despite the weather, more than 350 children and their parents/guardians arrived on June 20, excited to get the chance to go fishing. Staff stocked 408 lake trout adults from Sullivan Creek NFH for the little anglers. The first place fisherman, Parker Jacobson, hooked the biggest catch of the day – a fish weighing in at 2 pounds 14 ounces and 19 inches in length.

Thank you again for making this important day a memory that will never be forgotten. We are looking forward to hosting this event for years to come, and hope to keep future generations interested in the vast natural resources we have right here in our back yard.

-USFWS

The 1st Annual Children's Fishing Day at Pendills Creek National Fish Hatchery was outstanding with over 350 participants.

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

A Whole Lot of Fishing!

BY MELISSA CHEUNG, NEOSHO NFH

The last few weeks have been very busy as we kicked off our two annual fishing derbies and assisted Shepherd of the Hills State Fish Hatchery (SFH) with their fishing derby. Neosho National Fish Hatchery's (NFH) Kid's Fishing Clinic and Derby took place on June 5th. Before letting the more than 150 children between ages 8 to 12 fish, we shuffled them through five short but important outdoor classes: boat safety, fire safety, casting, knot tying and stream ecology. Lunch, plenty of water, fishing equipment and safety glasses were provided for the fishing event. The weather was fantastic and we owe much thanks to our many volunteers, *Friends of Neosho National Fish Hatchery*, Missouri Department of Conservation staff and summer interns who came out to help.

The very next day was the Kid's Fishing Derby at Shepherd of the Hills SFH. Some of the Neosho staff traveled to Branson to set up an educational booth and assist our Missouri Department of Conservation partner wherever we could. They also had a great turnout with more than 190 children coming to fish and investigate the fun and educational activities that were planned for the day.

-USFWS

About 100 people enjoyed a day of fishing at the Elderly and Handicapped Fishing Derby held at the Neosho National Fish Hatchery.

Back at the Neosho NFH, the Elderly and Handicapped Fishing Derby kicked off on June 12th. The rain did not deter about 100 elderly and handicapped visitors from fishing and enjoying the lunch and refreshments that were provided.

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

Great Lakes Ecosystem Display

BY ROB ELLIOT, GREEN BAY FWCO

After more than a year of planning and six months of very creative construction and artistry, the diversity of the Great Lakes ecosystem was brought to life on the indoor walls of Crossroads Environmental Learning Center in Door County, Wis. The new "Great Lakes Ecosystem Exhibit" was unveiled and officially opened during a dedication ceremony on Earth Day. This colorful and detailed exhibit provides a life-size 3-D educational diorama depicting the diversity of life in Lake Michigan, featuring mounts of key native, introduced and invasive fish and other aquatic species important and common to the Great Lakes ecosystem. Each fish is found in their appropriate habitat spanning deep offshore waters to shallow coastal streams, complete with common plants, rock reefs and shoreline, sand bars, ship-wreck timbers and even a fisherman wetting his line from a boat floating overhead.

The evening dedication event was attended by about 50 *Friends of Crossroads* and included presentations and words of appreciation to the many participants, volunteers and benefactors involved in the project. Biologist Rob Elliott of the Green Bay Fish and Wildlife Conservation Office (FWCO) addressed the audience, describing the educational purpose and main features of the exhibit and information on the key species depicted in the exhibit. The program also featured a video presentation by lead artist on the project Patty Clark, which highlighted the ecological importance of the Lake Michigan ecosystem and showed a time-series montage of the project's construction. The event concluded with a wine and cheese reception and time for informal questions and discussion with the participants.

The Fish and Wildlife Service played a significant role in the creation of this exhibit through Rob Elliott's participation in the five-person committee that designed and led the creation of the exhibit. Rob provided interpretive expertise and assistance throughout the project, selecting the specimens to feature from many fish mounts that were donated, helping to secure other needed specimens and coordinating their mounting, and providing regular guidance to help make the exhibit as realistic as possible.

Though eye-catching in its current state, the exhibit is still far from finished. Like the real ecosystem, the exhibit will continue to evolve and grow over the coming year as additional species are added, including a six foot lake sturgeon, a burbot, bloater chubs, a lamprey, and also northern pike and suckers, both of which migrate up and spawn in Big Creek which is the coastal stream that flows through the adjoining Crossroads property. An interpretive brochure is also being developed describing the key species depicted in the exhibit and their function in the ecosystem. For anyone visiting Door County, plan a visit to Crossroads at Big Creek and its new Great Lakes Ecosystem Exhibit, located just off the main highway in Sturgeon Bay, Wis.

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

Management Activities on Crab Orchard NWR

BY PHILIP ROGERS, CARTERVILLE FWCO

Crab Orchard National Wildlife Refuge (NWR), located near Marion, Ill., is a 43,890 acre refuge that includes three man-made lakes. Crab Orchard, Little Grassy and Devil's Kitchen lakes, totaling 8,700 surface acres, attract anglers from all across the region.

The Illinois Department of Natural Resources (DNR), Carterville Fish and Wildlife Conservation Office (FWCO), and Crab Orchard NWR cooperatively manage the recreational fisheries at Crab Orchard, Little Grassy and Devil's Kitchen lakes.

On February 21, 2009, Carterville FWCO staff members Brad Rogers and Nate Caswell assisted Illinois DNR staff and volunteers from the community with an annual habitat improvement project on Crab Orchard Lake. Brush piles were strategically placed around the east side of the lake to improve fish habitat and provide anglers with more opportunities to locate fish.

Other management activities on refuge lakes include annual fishery surveys. The spring surveys on Little Grassy and Devil's Kitchen lakes were completed on April 13 and 14 respectively. Carterville employees Brad Rogers, Sam Finney and John Zeigler assisted Illinois DNR staff with electrofishing surveys at pre-selected sites on each lake.

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

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.

Fishery Independent Lake Whitefish Surveys

BY DALE HANSON, GREEN BAY FWCO

Rob Elliott, Ted Eggebraaten and Dale Hanson of the Green Bay Fish and Wildlife Conservation Office (FWCO) spent the first week of June in Grand Traverse Bay and waters near Frankfort, Mich., while they finished the fishery independent lake whitefish surveys. These annual surveys are needed to track the relative abundances of lake whitefish and lake trout within these fishery management units of Lake Michigan. The crew set several gillnets in each location to determine catch-per-effort (cpe), or the number of fish captured per 1,800 feet of net. Each gillnet begins with a small 2-inch mesh with subsequent increments of 0.5 inches in mesh size until the last large 6 inch mesh is reached. This repeated graded-mesh pattern enables the survey to target a wide size-range of whitefish and lake trout from which information can be gathered on age, sex, size, maturity and presence of invasive sea lamprey wounding.

-USFWS/RobElliot

Ted Eggebraaten removes a fish while Dale Hanson guides a gill net on-board through a net lifter as part of a fishery assessment within 1836 Treaty waters of Lake Michigan.

Fishery independent surveys are a cooperative venture performed by the Fish and Wildlife Service, State of Michigan and tribes within the 1836 Treaty waters of the upper Great Lakes. Fishery independent survey data compliments other fishery data collected through commercial and recreational catch monitoring. All available fishery data is input within an integrated analysis which combines the multiple data sources into a single stock assessment model for each management unit. This approach was a critical component of the 2000 Consent Decree as it fosters the adoption of scientifically defensible management policies to regulate lake trout mortality rates, to levels consistent with Fish and Wildlife Service rehabilitation objectives, by effectively managing commercial and recreational fisheries in 1836 Treaty waters.

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

Bois Forte Indian Reservation's Nett Lake Surveyed

BY FRANK STONE, ASHLAND FWCO

At the request of the Bois Forte Indian Community, Frank Stone of the Ashland Fish and Wildlife Conservation Office (FWCO) assisted the Bois Forte Natural Resources Department with an inland lake survey of Nett Lake. Using a boat electrofishing system, several segments of the lake were surveyed to determine the species diversity and relative abundance of sport fish. The information gained from this survey will be used by the Bois Forte Natural Resources Department to determine future fishery management needs of Nett Lake.

For further info about the Ashland FWCO: http://www.fws.gov/midwest/ashland/

The Potential (unintended) Implications of Habitat Restoration on Native Species

BY CLAYTON RIDENOUR, COLUMBIA FWCO

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 25th volume of the scientific journal River Research and Applications (RRA) represents the culmination of three years of work at Columbia Fish and Wildlife Conservation Office (FWCO). From collecting and statistically analyzing field data, to writing and revising multiple drafts of the manuscript, our message about fisheries habitat restoration on the Missouri River is finally communicated to other fish scientists around the globe. RRA has an international distribution and is the leading source for river and river-fish science today. An important result of our paper suggests that current habitat improvement techniques intended to benefit sturgeon species may disrupt the life cycle of declining native chub species. Chubs are comparatively less studied than sturgeons, but other recently published research found that chubs made up 79 percent of a sturgeon's diet. Sturgeon habitat restoration techniques may need to be revised on Missouri River if they reduce populations of the sturgeon's main diet - chubs. To read more, pick up the latest volume of RRA and turn to pages 472-485.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

Meramec River Basin Watershed Project Selected as a 2009 "Ten Waters to Watch"

BY JOANNE GRADY, COLUMBIA FWCO

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.

The Meramec Watershed basin project is the largest partner-driven project to be recognized as a 2009 "Water to Watch" by the National Fish Habitat Action Plan. The Meramec basin is a species-rich aquatic system with 43 species of freshwater mussels and 90 species of fish. It is a priority aquatic watershed in Missouri's State Wildlife Action Plan. Efforts to improve aquatic habitat in the Meramec – Lower Bourbeuse watersheds are unique, as landowners drive the restoration programs. There is a lengthy history of established landowner cooperation/participation in the Meramec basin-Lower Bourbeuse watershed. An established six member landowner committee governs and guides restoration efforts in the Lower Bourbeuse Conservation Opportunity Area (COA) watersheds and leads by example, contributing their time and expertise. Installation of fencing, alternative water systems and secured cattle crossings will keep cattle out of most of the streams on these properties, addressing the root causes of habitat deterioration. This dedication has been matched by natural resource agencies and organizations over the last eight years. Grants and leveraged funds from: the Fish and Wildlife Service's Partners for Fish and Wildlife, Fisheries and Aquatic Resources and Ecological Services programs; National Fish and Wildlife Foundation; Missouri Conservation Heritage Foundation, Stream Stewardship Trust Fund; and Missouri Bird Conservation Initiative have helped improve stream stability and water quality on several farms.

-Missouri DOC/DavidStonner

Bob and Nicky Baker feed one of their cows under a Portable Cattle Shade Structure they are testing in the Lower Bourbeuse Conservation Opportunity Area as a demonstration model for the Missouri Department of Conservation.

In an effort to improve stream habitat, 50 to 100 foot buffer zones are being reforested along the streams. Ten to thirty year agreements are being signed with landowners to ensure protection of resources. Economic benefits such as lower fertilizer costs, higher forage utilization and improved cattle health will encourage farmers to utilize best management practices to ensure this habitat stays intact. Another key to this program's success is meeting the farmers' needs. One basic fact of cattle production is that they need shade. The introduction of portable cattle shade structures encouraged several landowners to fence their cattle out of the riparian corridor.

The 1998 Missouri Department of Conservation Meramec River Demonstration project identified the primary impact of the Meramec System to be grazing and watering of cattle in riparian corridors. There is much work remaining in the Lower Bourbeuse COA as approximately 52% of these watersheds are in pasture. The program has recently expanded to include the Lick Creek and Boone Creek sub-watersheds through funding provided by the National Fish Habitat Action Plan (NFHAP).

The mission of the NFHAP is to protect, restore and enhance the Nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people. This watershed received 2008 demonstration project funding through the candidate Fishers and Farmers Partnership of the Upper Mississippi River basin. This enabled partners to install practices to remove cattle from streams on 14 farms in the Lower Bourbeuse COA. Project funding in 2009 will be through the Southeast Aquatic Resource Partnership. More information about the NFHAP can be found on their webpage at: www.fishhabitat.org.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

Carterville FWCO Talks Strategic Habitat Conservation

BY NATE CASWELL, CARTERVILLE FWCO

By now, many people in the Fish and Wildlife Service have heard of Strategic Habitat Conservation (SHC) - a science-based framework for making management decisions that will be implemented in the coming years. As workloads increase and budgets are constrained more than ever, being strategic about how and where we expend our limited resources will become increasingly important.

In an effort to develop greater understanding of SHC and how it will be implemented, the Region 3 SHC Regional Support Team (RST) designed a series of "Listening Sessions" to take place at every field station in Region 3. The Listening Sessions were intended to provide an overview of the SHC framework, identify the challenges in implementing SHC and give field level staff an opportunity to express any questions and concerns regarding SHC. The Listening Sessions also provided a way to identify questions from the field that need to be answered at the regional level.

In April 2009, biologist Nate Caswell from Carterville Fish and Wildlife Conservation Office (FWCO) attended a workshop held by the SHC Regional Support Team to learn how to facilitate the Listening Sessions. Armed with this knowledge, Nate and John Mabery (manager at Two Rivers National Wildlife Refuge) recently teamed up to hold a Listening Session at the Crab Orchard National Wildlife Refuge (NWR) headquarters. Attendees at the session included staff from Crab Orchard NWR, Crab Orchard Superfund Office, Marion Ecological Services Sub-Office, Cypress Creek NWR and Carterville FWCO.

The Listening Session provided an introduction to the SHC framework for those that had not previously been exposed to it. Several people commented that they liked the mix of different Fish and Wildlife Service programs because it gave them a chance to hear and discuss other perspectives on SHC. The session participants also produced a number of thoughtful questions and concerns that will be combined with others from around the region. These questions will allow the RST and Regional Directorate to address the concerns that are common across programs and stations as the Fish and Wildlife Service implements Strategic Habitat Conservation.

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

Culvert Replacement Program and Fish Monitoring Assessments with the Bad River Watershed Association

BY FRANK STONE, ASHLAND FWCO

Frank Stone started a nine week project assisting the Bad River Watershed Association with a fishery assessment of several streams within the Bad River Watershed (BRW). Using a backpack electrofishing device, fish of all species will be collected and identified to help monitor the benefits of culvert replacements.

Many agencies in our area are involved in replacing perched culverts to improve the negative impacts of poorly constructed road crossings. These installations are intended to benefit fish species and their habitats; however, limited monitoring has been conducted to evaluate the effectiveness of these installations both at a specific project site and on an overall watershed basis.

In response, the Bad River Watershed Association and the Ashland Fish and Wildlife Conservation Office (FWCO) hosted a monitoring workshop in December 2008. The purpose of the workshop was to identify monitoring protocols that can be used to evaluate how well restoration work in the BRW is achieving program goals. At the workshop, participants developed specific recommendations for culvert program monitoring and developed a fisheries monitoring plan for 2009.

For further info about the Ashland FWCO: http://www.fws.gov/midwest/ashland/

Finding Your Path to a Biology Career

BY MARK STEINGRAEBER, LA CROSSE FWCO

High schools students who enroll in an Advanced Placement (AP) level biology course often express interest in a biological science-related career as they consider options for post-secondary education. Such was the case for 19 juniors and seniors in the AP biology class at Aquinas High School in La Crosse, Wis.. Wanting to compliment the many objective lessons these students learned throughout the academic year with a variety of personal perspectives on paths to satisfying careers, instructor Lisa Flottmeyer invited four local biologists to meet with these students, to share strategies and insights on how best to succeed in a biological science career.

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

High school volunteers participate in fisheries work at the La Crosse Fish and Wildlife Conservation Office.

Participating in this informal, hour-long discussion session were a food scientist, microbiologist, limnologist and biologist Mark Steingraeber of the La Crosse Fish and Wildlife Conservation Office (FWCO). Based on personal experiences dating back several decades, Steingraeber described the educational path and life journey that led him to a satisfying natural resource career in service to the nation. The importance of chemistry and math, as well as communication, information technology and interpersonal skills was stressed in whatever life science profession a student may eventually 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.

-UFFWS

Student volunteers at the La Crosse Fish and Wildlife Conservation Office may discover a variety of new and rewarding careers in conservation biology.

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

[111th CONGRESS Senate Bills]
[From the U.S. Government Printing Office via GPO Access]
[DOCID: s1214is.txt]
[Introduced in Senate]

111th CONGRESS
1st Session

S. 1214

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 SENATE OF THE UNITED STATES
June 9, 2009

Mr. Lieberman (for himself, Mr. Casey, Mr. Bond, Ms. Stabenow, Mr. Cardin, Mr. Sanders, Mr. Whitehouse, and Mr. Crapo) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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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,

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;

(6) loss and degradation of aquatic habitat, riparian habitat, water quality, and water volume caused by activities such as alteration of watercourses, stream blockages, water withdrawals and diversions, erosion, pollution, sedimentation, and destruction or modification of wetlands have—

(A) caused significant declines in fish populations throughout the United States, especially declines in native fish populations; and

(B) resulted in economic losses to the United States;

(7)(A) providing for the conservation and sustainability of fish and other aquatic organisms has not been fully realized, despite federally funded fish and wildlife restoration programs and other activities intended to conserve aquatic resources; and

(B) that conservation and sustainability may be significantly advanced through a renewed commitment and sustained, cooperative efforts that are complementary to existing fish and wildlife restoration programs and clean water programs;

(8) the National Fish Habitat Action Plan provides a framework for maintaining and restoring aquatic habitats to ensure perpetuation of populations of fish and other aquatic organisms;

(9) the United States can achieve significant progress toward providing aquatic habitats for the conservation and restoration of fish and other aquatic organisms through a voluntary, nonregulatory incentive program that is based on technical and financial assistance provided by the Federal Government;

(10) the creation of partnerships between local citizens, Indian tribes, Alaska Native organizations, corporations, nongovernmental organizations, and Federal, State, and tribal agencies is critical to the success of activities to restore aquatic habitats and ecosystems;

(11) the Federal Government has numerous regulatory and land and water management agencies that are critical to the implementation of the National Fish Habitat Action Plan, including—

(A) the United States Fish and Wildlife Service;

(B) the Bureau of Land Management;

(C) the National Park Service;

(D) the Bureau of Reclamation;

(E) the Bureau of Indian Affairs;

(F) the National Marine Fisheries Service;

(G) the Forest Service;

(H) the Natural Resources Conservation Service; and

(I) the Environmental Protection Agency;

(12) the United States Fish and Wildlife Service, the Forest Service, the Bureau of Land Management, and the National Marine Fisheries Service each play a vital role in—

(A) the protection, restoration, and enhancement of the fish communities and aquatic habitats in the United States; and

(B) the development, operation, and long-term success of fish habitat partnerships and project implementation;

(13) the United States Geological Survey, the United States Fish and Wildlife Service, and the National Marine Fisheries Service each play a vital role in scientific evaluation, data collection, and mapping for fishery resources in the United States; and

(14) many of the programs for conservation on private farmland, ranchland, and forestland that are carried out by the Secretary of Agriculture, including the Natural Resources Conservation Service and the State and Private Forestry programs of the Forest Service, are able to significantly contribute to the implementation of the National Fish Habitat Action Plan through the engagement of private landowners.

Source is http://www.gpoaccess.gov/bills/index.html
Searched database by keyword = "fish"

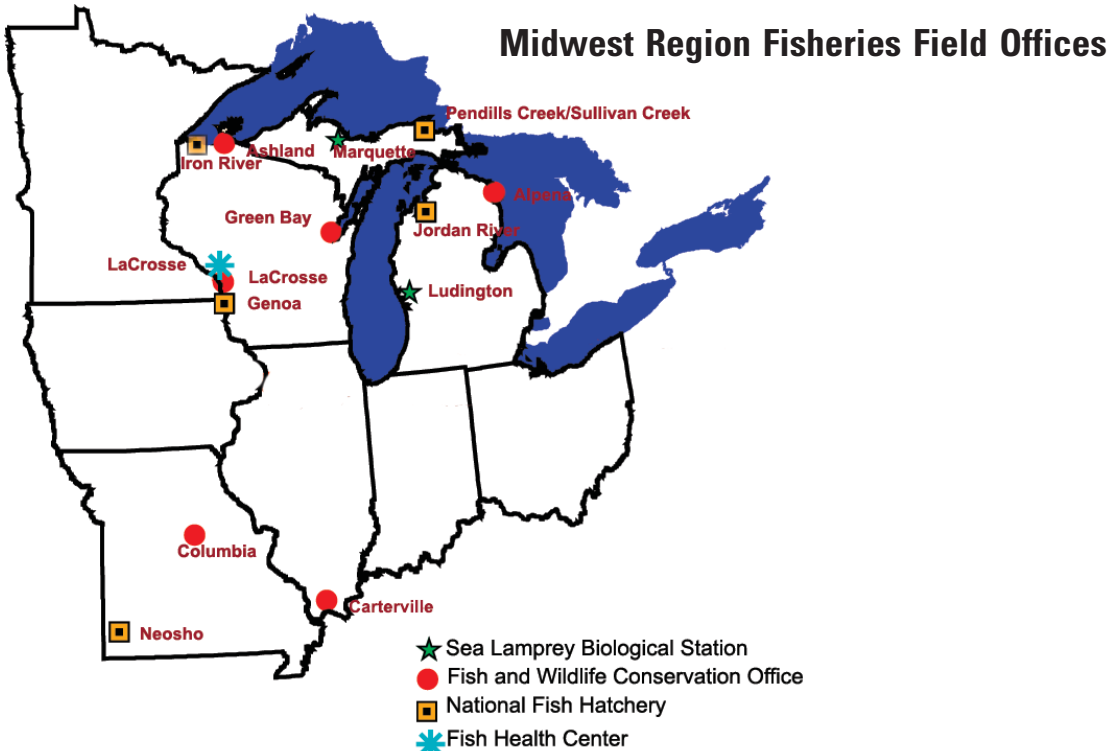
Midwest Region Fisheries Divisions

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.

Fish and Wildlife Conservation Offices
Fish and Wildlife Conservation Offices conduct assessments of fish populations to guide management decisions, perform key monitoring and control activities related to invasive, aquatic species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisheries databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and relicensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

Sea Lamprey Biological Stations
The Fish and Wildlife Service is the United States Agent for sea lamprey control, with two Biological Stations assessing and managing sea lamprey populations throughout the Great Lakes. The Great Lakes Fishery Commission administers the Sea Lamprey Management Program, with funding provided through the U.S. Department of State, U.S. Department of the Interior, and Fisheries and Oceans Canada.

Fish Health Center
The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state and tribal hatcheries in the region; conducts extensive monitoring and evaluation of wild fish health; examines and certifies the health of captive hatchery stocks; and, performs a wide range of special services helping to coordinate fishery program offices and partner organizations.



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906/226-1235

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

Missouri

Columbia Fish and Wildlife Conservation Office
101 Park Deville Drive; Suite A
Columbia, MO 65203
Tracy Hill (*tracy_hill@fws.gov*)
573/234-2132
Area of Responsibility (Iowa, Missouri)

Neosho National Fish Hatchery
East Park Street
Neosho, MO 64850
David Hendrix (*david_hendrix@fws.gov*)
417/451-0554

Illinois

Carterville Fish and Wildlife Conservation Office
9053 Route 148, Suite A
Marion, Illinois 62959
Rob Simmonds (*rob_simmonds@fws.gov*)
618/997-6869
Area of Responsibility (Illinois, Indiana, Ohio)

Wisconsin

Ashland Fish and Wildlife Conservation Office
2800 Lake Shore Drive East
Ashland, WI 54806
Mark Brouder (*mark_brouder@fws.gov*)
715/682-6185
Area of Responsibility (Michigan, Minnesota, Wisconsin)

Genoa National Fish Hatchery
S5689 State Road 35
Genoa, WI 54632-8836
Doug Aloisi (*doug_aloisi@fws.gov*)
608/689-2605

Green Bay Fish and Wildlife Conservation Office
2661 Scott Tower Drive
New Franken, WI 54229
Mark Holey (*mark_holey@fws.gov*)
920/866-1717
Area of Responsibility (Michigan, Wisconsin)

Iron River National Fish Hatchery
10325 Fairview Road
Iron River, WI 54847
Dale Bast (*dale_bast@fws.gov*)
715/372-8510

LaCrosse Fish Health Center
555 Lester Avenue
Onalaska, WI 54650
Becky Lasee (*becky_lasee@fws.gov*)
608/783-8441

LaCrosse Fish and Wildlife Conservation Office
555 Lester Avenue
Onalaska, WI 54650
Pamella Thiel (*pam_thiel@fws.gov*)
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Area of Responsibility (Illinois, Iowa, Minnesota, Wisconsin)

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

- Extra Fish Anyone?
  - Melissa Cheung, Neosho NFH
- Mourning Dove Call-Count Survey
  - Ted Koehler, Ashland FWCO
- Woodcock Singing-Ground Surveys
  - Ted Koehler, Ashland FWCO

Aquatic Species Conservation and Management

- Divers Search for Mussels
  - Scott Yess, La Crosse FWCO
- Finished Tagging the Pallid Juveniles!
  - Melissa Cheung, Neosho NFH
- Returning Pallid Sturgeon to Their Native Habitat
  - AMelissa Cheung, Neosho NFH
- Sturgeon Spawning Begins
  - Melissa Cheung, Neosho NFH

Aquatic Invasive Species

Public Use

- Annual Open House
  - Melissa Cheung, Neosho NFH
- Columbia NFWCO Heads to the Farm
  - Colby Wrasse and Patty Herman, Columbia FWCO
- Connecting Children With The Outdoors
  - Carey Edwards, Iron River NFH
- DeSoto Lake gets a Shock!
  - Aaron Walker and Brian Elkington, Columbia FWCO
- Hallsville Aquatic Day – Over Two Decades of Learning and Fun
  - Colby Wrasse and Patty Herman, Columbia FWCO
- Inspiring Youth… One at a Time
  - Wyatt Doyle, Columbia FWCO
- Paxton Keeley Students Visit Columbia NFWCO to Learn About Fish, Inside and Out
  - Aaron Walker and Joe McMullen, Columbia FWCO
- Students at Northwestern Middle School rear lake trout
  - Carey Edwards, Iron River NFH
- Superior Middle School rears lake trout
  - Carey Edwards, Iron River NFH
- Trempealeau Students Get "In-Touch" with Fish Adaptations
  - Heidi Keuler, La Crosse FWCO
- USFWS Personnel Participate on the Charlevoix County 4-H Scholarship Panel
  - Rick Westerhof, Green Bay FWCO

Cooperation with Native Americans

Leadership in Science and Technology

- Columbia NFWCO Fish Biologists Visit NCTC for Modeling Class
  - Clayton Ridenour, Columbia FWCO
- Maps on the Web
  - AMark Corio, Columbia FWCO

Aquatic Habitat Conservation and Management

Workforce Management

- Columbia NFWCO Welcomes New STEP Students!
  - Johnathon Spurgeon, Madeline Pletta, Nicholas Cole, Chris Scheppers and Tony Overmann, Columbia FWCO
- More Helping Hands
  - Melissa Cheung, Neosho NFH

Fishing for Fun Backpack

The *Friends of the Upper Mississippi Fisheries Services* and La Crosse Fish and Wildlife Conservation Office have assembleed an educational backback that they make available to local libraries and schools.