U.S. Fish & Wildlife Service - Midwest Region

Fisheries & Aquatic Resources Program

Fishlines

Life in the Boots with Lapmricide Control

Pallid Sturgeon Recovery in a Changing Climate

Protecting Lake Sturgeon Habitat during Climate Extremes

Fueling the Battle with Sea Lampreys

Service Staff Make a Splash

Vol. 8 No. 10
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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.

Features

-USFWS

Program manager Robert Blankenship of the Eastern Band of Cherokee Indians in Cherokee, North Carolina, transfers a net full of rainbow trout to his fish distribution truck. The Tribe used some of Neosho National Fish Hatchery's excess fish to support their Fisheries and and Wildlife Management Program.

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

Fish Lines
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-USFWS/KarlaBartelt
Bald eagles of Northern Wisconsin.

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Conservation Briefs 13-28

Life in the Boots with Lampricide Control

BY MICHAEL ROBINSON, MARQUETTE BIOLOGICAL STATION

It looks like an eel, acts like a leech, but is in fact a sea lamprey, and at par with the Asian carp. It is among the chief invasive threats to the Great Lakes fisheries, a $7.0 billion industry. Accordingly, the Fish and Wildlife Service in partnership with the Great Lakes Fishery Commission and Department of Fisheries and Oceans Canada are tirelessly combating the invasion. While consisting of various orchestrated parts, the Marquette Biological Station's Larval Unit is divided into two main work crews, larval assessment and lampricide control.

-USFWS/KarlaBartelt

A stream is gauged using a flow meter and stop watch, a step that is critical to prepare for a lampricide treatment.

Each team, working both independently and collaboratively, travel extensively throughout Michigan and the entire Great Lakes region, first determining which rivers harbor sea lampreys, is a stream infested and to what extent, and then treating them based on a cost effective ranking system.

The main objective of the Sea Lamprey Management Program is to manage sea lamprey populations in a safe, effective and economical way. A multitude of components go into accomplishing this, so to put you into the boots of a sea lamprey control person the following will detail my experience as a "Biological Science Tech" and some of the challenges encountered.

To begin, each trip lasts about 10 days and there are about 30 of us traveling together at any one time. On our first field working day, we begin with stream gauging and site access, to determine stream discharges and potential lampricide feed sites, as previously surveyed by larval assessment crews. Some sites are easier accessed than others, while the more difficult ones require the combined efforts of a handheld GPS, a four wheel drive vehicle, accurate maps (sometimes hand drawn), ATVs, and most importantly, determination.

When it comes to gauging, we work in two person teams using a tape measure, gauging rod and velocity meter, to determine cubic feet per second (cfs) stream discharge. A depth staff is also set and monitored throughout the trip to identify changes in water depth (thus stream flow). At the end of the day, our results are entered into a field computer at the mobile office and used to determine when and where to treat and how much lampricide to use. In the event it rains significantly overnight or during a work shift, a change in water volume and velocity must be accounted for, sometimes requiring repeated gauging. Once this process is finalized, lasting anywhere from a day to a week, the treatment begins.

The chemical lampricide we primarily use is called TFM (3-trifluoromethyl-4-nitrophenol), which in dilution at the proper dose used to eliminate sea lampreys, is largely non-toxic to mammals, aquatic plants and other fishes. Because it is a restricted use pesticide, it requires us to take a certain level of precaution and a commercial pesticide applicator license.

To effectively disperse the TFM into an aquatic system we use a pump feed instrument, and each "feed" is typically set up and operated by one or more

personnel. To avoid non-target kills of other aquatic inhabitants and ensure efficacy of treatment, water chemistry analysis is conducted downstream and feed rates (ml/minute) can be adjusted accordingly.

-USFWS/KarlaBartelt

The feed rate for a lampricide treatment is monitored to insure that the correct amount of chemical is added to achieve the desired concentration.

Each feed, typically lasting 12 hours in length, often requires working late nights and early mornings. It is vital that you arrive not only on time, but early enough to either set up or communicate with the first shift regarding access, feed rates, analysis and any additional items, such as lampricide needed. It's very much a hurry up and wait type of process, as once set up, feed rates are checked and adjusted every half hour.

Additionally, to ensure a treatment was successful we often will do specimen collections, where fish identification becomes very important. People commonly associate sea lampreys as foot long, blood sucking river monsters, as many of the pictures display them to be; however, the majority of their lives (3-5 years) are spent at the larval stage in streams. Upon transformation, in which they develop eyes, teeth and their characteristic sucker-like mouth, they spend 12-20 months as parasitic adults in the lake, ultimately returning to the rivers to spawn and complete their life cycle. The majority of specimens we collect are larval sea lampreys, though there are also native lampreys in streams. The American brook lamprey, to the untrained eye, looks identical to the sea lamprey. While infrequent and an unfortunate circumstance, non-target fish kills must also be identified and documented should they occur.

Lastly, public relations are a very important part of what we do. Traveling so much and with so many people means constant interaction with the public. Additionally, the use of pesticide can be controversial. It usually brings about a certain level of concern, in that we apply lampricide directly in contact with such a precious and delicate resource, water. Consequently, having a professional attitude about what we do and a level of competency about the relative dangers of using pesticides is very important. I for one, upon beginning this position felt slightly uncomfortable with the prospect of working with chemicals, although as my understanding of its utility and relative safety to people and the environment has grown, I feel more comfortable talking with the public about its use and our work. Plain and simple, without public support, this program would not be the success that it is today.

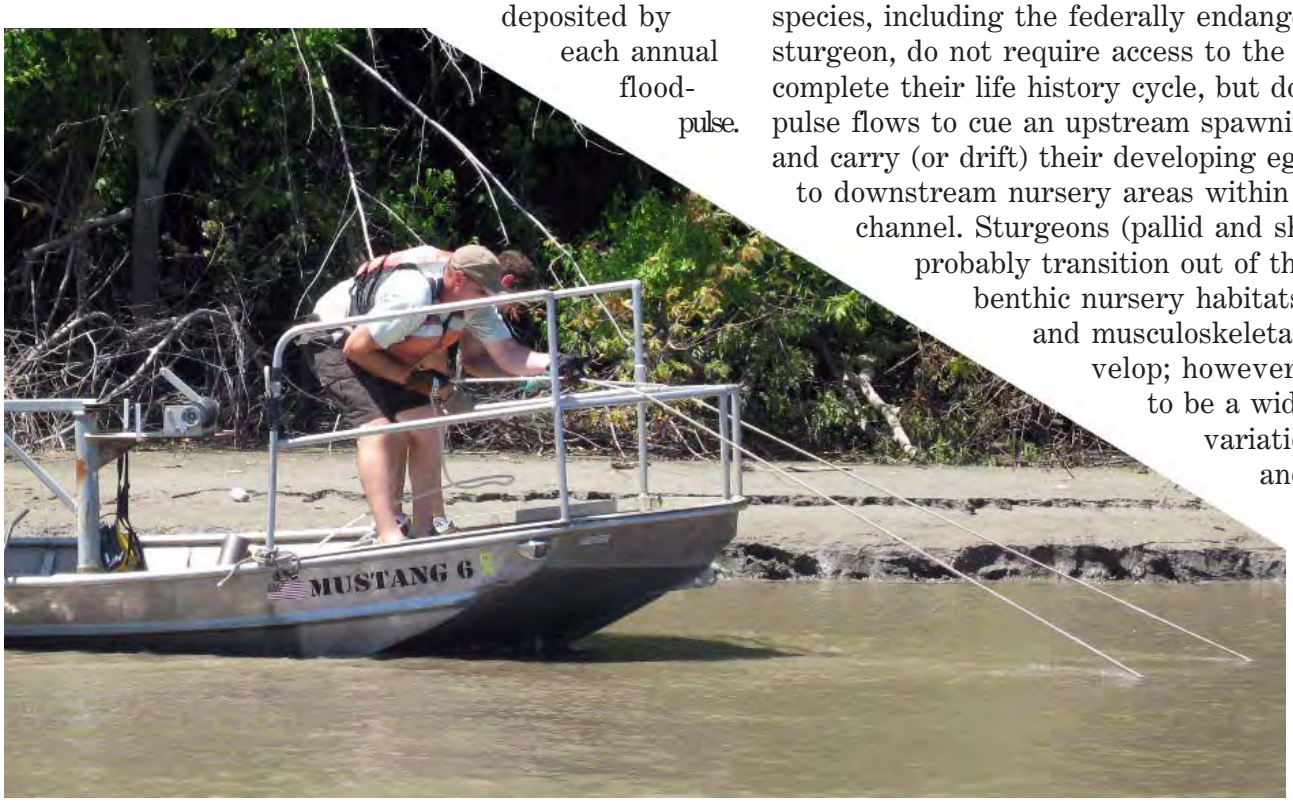
While we are winning the battle of sea lamprey management, it hasn't been easy. With the first lampricide treatment occurring in 1958 and a subsequent 90% reduction in sea lamprey populations, lampricide remains a costly and less than desirable long-term management strategy. Consequently, the Great Lakes Fishery Commission has also incorporated the use of barriers, trapping and sterile male release techniques. "Integrated Pest Management" remains at the heart of the sea lamprey management strategy. Nonetheless, the battle is a long term commitment and thus requires adequate appropriations. In closing, to quote an educational pamphlet we distribute, "Sea Lamprey Control is an investment in our fishery and environment. Success means more quality fish and fishing opportunities for ourselves and future generations".

For further info about the Marquette Biological Station: http://www.fws.gov/midwest/marquette/

Pallid Sturgeon Recovery in a Changing Climate

BY CLAYTON RIDENOUR, COLUMBIA FWCO

Some of the best and brightest minds in the field of ecology have spent a great deal of time developing theories about the role of climate and hydrology in our natural world. Climate is a primary driver of the hydrologic regime for rivers, but paradigms that drive how humans interact with rivers have seemingly ranged a full spectrum. Ancient Egyptians embraced annual floods from the Nile River as they learned to plan for the nutrient rich soil deposited by each annual flood-pulse.



-USFWS/AdamMcDaniel

Clayton Ridenour and Brandon Spratt pull a bow trawl in the main channel of the Missouri River during a flood-pulse flow event.

During the modern Industrial Revolution, many large floodplain rivers around the world were dammed and channelized as the prevailing theme was to tame and conquer the flood-pulse. However, during the mid 20th century, the paradigm again began to shift towards achieving an ecological balance between modern human industry and preservation of the natural environment as we realized the power of our effects on climate and the environment. Ecological pioneers like H.B.N. Hynes, Wolfgang Junk, and N. LeRoy Poff have helped shape our contemporary ideas for how rivers and their inhabitants functionally interact.

Their works have led us to understand the beneficial role that floods play in the natural environment. Flood-pulse flows provide access to the floodplain where many species of fish spawn and rear their young. They are a key mechanism for the exchange of nutrients and energy throughout the river system, and they drive many life history characteristics of fishes that do not directly use the floodplain for spawning or rearing. For example, some sturgeon species, including the federally endangered pallid sturgeon, do not require access to the floodplain to complete their life history cycle, but do require flood-pulse flows to cue an upstream spawning migration and carry (or drift) their developing eggs and larvae to downstream nursery areas within the main-channel. Sturgeons (pallid and shovelnose) probably transition out of the drift to benthic nursery habitats as their fins and musculoskeletal system develop; however, there seems to be a wide range of variation in growth and development rates among individuals. Inasmuch, very little work has been done to understand how the post-drift stage of these young-of-year sturgeons cope with flood flows once they transition to their post-drift nursery areas. A range of possibilities exist: since their body shape is designed for efficiency and minimal drag in flowing water, perhaps flood flows have no effect on behavior; or, maybe flood pulses overpower their ability to hold stationary and young-of-year sturgeons experience washout where they effectively re-enter the drift; or, perhaps they actively swim to seek refuge from fast flows during a flood-pulse event.

To begin addressing this question, the Columbia Fish and Wildlife Conservation Office (FWCO) biologists

have been opportunistically sampling for young-of-year sturgeons during the frequent flood-pulse flows in 2010 on the lower Missouri River. We try to sample all habitat types for sturgeons, including the floodplain, and will compare where we find them during a flood-pulse with existing data that was collected during non-flood flows. Preliminary 2010 data indicates that young sturgeon may seek refuge from extremely high velocity flows during a flood-pulse, but not onto the floodplain. This project is challenging because we cannot predict, for more than a day or two in advance, when or for how long a flood pulse will occur.

-USFWS

This is a typical trawling site for a fishery assessment during a flood-pulse flow event.

We are carefully considering the effects that a changing climate and hydrological regime may have on young-of-year sturgeon habitats and survival. Some climate predictions call for more precipitation and a more dynamic hydrologic regime throughout the range of pallid sturgeon. It's likely that the extreme hydrology we're experiencing in 2010 on the Missouri River is a sample of what should be expected into the future; stage height exceeded records set during the Great Flood of 1993 at some locations along the Missouri River. If we can predict how young-of-year sturgeons respond to flood-pulse events, then we can design proximate river habitats that will give them the best opportunity to survive a changing climate and hydrologic regime. The data we are collecting, and our subsequent contributions to the scientific literature, will serve as important pieces to the puzzle of pallid sturgeon recovery in the face of a changing climate.

-USFWS

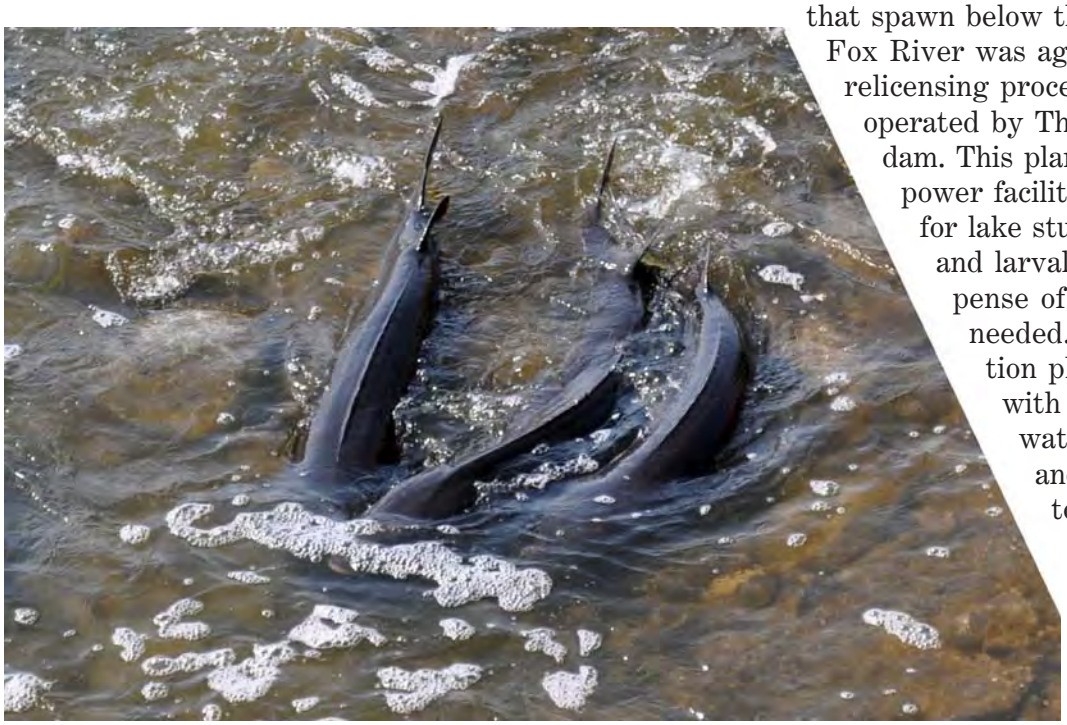
These young sturgeon were collected from the Missouri River during a flood-pulse flow event in July, 2010. Note that the lower fish has not yet developed its full complement of fins.

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

Protecting Lake Sturgeon Habitat during Climate Extremes

BY ROB ELLIOTT, GREEN BAY FWCO

Despite the very dry spring of 2010, the Green Bay Fish and Wildlife Conservation Office (FWCO) was successful in coordinating with the major water users on the lower Fox River, Wisconsin, to ensure that flows needed for lake sturgeon reproduction were maintained throughout this year's spawning and incubation season, but just barely.



-USFWS/RobElliott

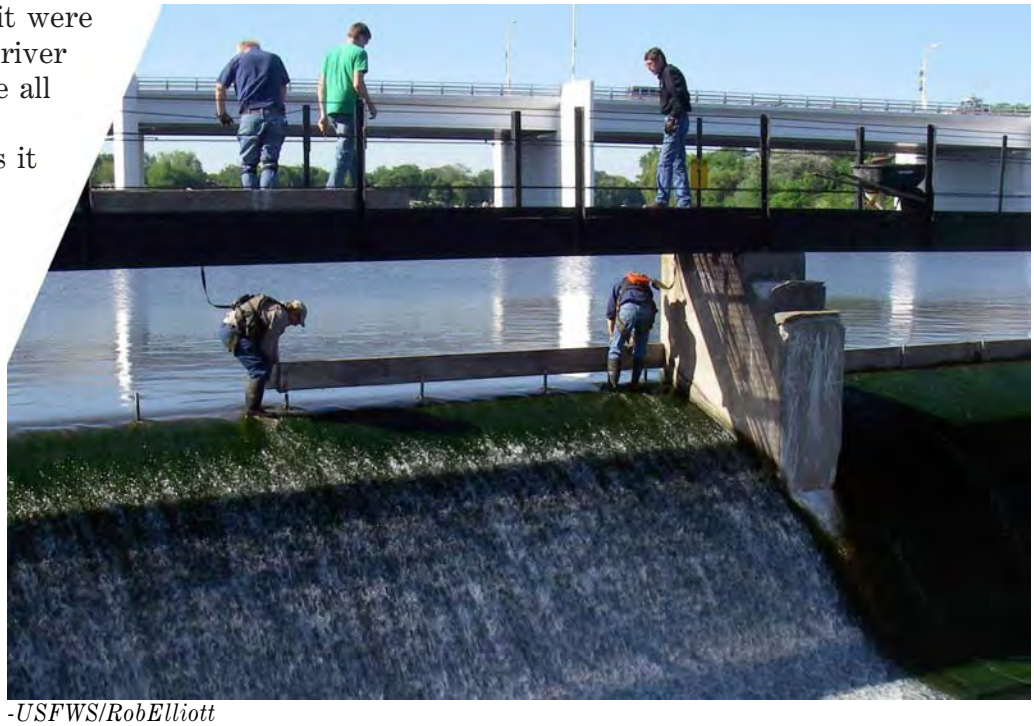
Lake sturgeon spawn below the De Pere Dam on the lower Fox River during an early spring spawning event in 2010. Maintaining water flow over this habit during the spawning season requires coordination among a number of partners including the U.S. Army Corps of Engineers, Thilmany Papers (who operate the local hydropower facility), Wisconsin Department of Natural Resources, and Green Bay Fisheries and Ecological Services Offices.

The Fox River is a major and historically important lake sturgeon tributary to Lake Michigan that receives outflow water from Lake Winnebago, a highly managed system that has many competing users and interests. Each year, it is a balancing act to try and maintain enough water in the lower Fox River throughout the sturgeon spawning and incubation season while also meeting the other diverse needs of the upriver system which include flood control, recreational boating, hydropower production and growth of aquatic vegetation that provides fish and wildlife habitat. As part of the balancing act, Rob Elliott with the Green Bay FWCO monitors the timing of the sturgeon spawn and calculates the duration of egg and larval incubation in order to determine an end date for the needed minimum flows for sturgeon reproduction. During this period, there are often daily emails and phone calls with the principal water users and managers on the river, namely the U.S. Army Corps of Engineers (CORPS) and Thilmany Papers.

Three years ago, a protection plan for lake sturgeon that spawn below the De Pere dam on the lower Fox River was agreed to as part of the relicensing process for the hydroelectric facility operated by Thilmany Papers at the De Pere dam. This plan establishes how the hydropower facility will provide minimum flows for lake sturgeon during the spawning, egg and larval incubation season at the expense of hydroelectric generation as needed. Implementation of this protection plan also requires coordination with the CORPS who manages the water levels in Lake Winnebago and the lower Fox River in order to maintain flood control, while providing for the other interest groups and resource needs on the lake and river. For the last three years, this coordination has insured that habitat conditions suitable for successful lake sturgeon reproduction have been maintained, but this year put everyone's cooperation and communication skills to the test.

Spring runoff within the Winnebago watershed this year was minimal, leaving limited flow in the lower Fox River for spawning fish and hydropower production and also limited flow into Lake Winnebago for filling the lake to the desired summer level by June 1. This really put the protection plan with the hydro operator to the test. For several weeks this spring, there was barely enough water flowing in the lower Fox River to provide for the spawning needs of sturgeon, let alone any extra for power generation. Fortunately for the sturgeon, it also was an unusually warm early spring which brought them to the spawning grounds below the spillway on the De Pere dam

two weeks earlier than normal. If it were not for their earlier spawning, the river would literally have dried up before all the eggs hatched or the larvae emerged and moved down river. As it was, Thilmany Papers shut down operation of all of its hydro units several times for an extended period in order to direct all of the river flow over the spillway and over the spawning grounds below the dam. And as soon as the Fish and Wildlife Service was able to determine that the larval sturgeon had completed their development and emigrated from the spawning grounds, the CORPS immediately closed all of its upriver gates in order to meet the obligation to fill Lake Winnebago for the summer boating season, bringing the lower Fox River to a mere trickle. The irony of this year's limited spring flows was that once June arrived, the Lake Winnebago basin began to receive what became record precipitation throughout June and July, a remarkable contrast to the record low spring flows that everyone had struggled through during April and May.



-USFWS/RobElliott

Employees from Thilmany Papers install boards on the top of the De Pere Dam on the lower Fox River in preparation for the 2010 lake sturgeon spawning season. Boards are used to help regulate limited flows during the spawning season as part of a negotiated Sturgeon Protection Plan.

Prior to implementation of this lake sturgeon protection plan, water management practices related to flood control, recreational boating and hydroelectric production in the Winnebago system often resulted in the dewatering of the habitat used by sturgeon in the lower Fox River during the egg and larval incubation period, reducing survival of eggs and larvae. Though the 25-75 adult sturgeon that currently return to spawn in this river are few compared to the thousands that historically spawned at this site, their numbers might be capable of supporting a natural population recovery if suitable environmental conditions can be maintained. Implementation of this protection plan now creates opportunities to implement other rehabilitation efforts for sturgeon in this important Lake Michigan tributary.

-USFWS/RobElliott

River flow conditions below the De Pere Dam on the lower Fox River during the 2010 spawning and incubation season show (Lt.) flow conditions resulting from the implementation of protection measures prescribed in the negotiated Sturgeon Protection Plan compared to (Rt.) flow conditions the day after sturgeon protection flows were no longer needed, allowing the U.S. Army Corps of Engineers and Thilmany Papers to resume normal operations.

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

Fueling the Battle with Sea Lampreys

BY JEFF SLADE, LUDINGTON BIOLOGICAL STATION

The sea lamprey management program in the Great Lakes is a world class model of integrated pest management in an aquatic environment. The lampricides TFM (3-trifluoromethyl-4-nitrophenol) and Bayluscide (2', 5-dichloro-4'-nitrosalicylanilide) continue to be the foundation of this highly successful program. Without the ability to obtain lampricides, in a mere two or three years, invasive sea lamprey populations would likely flourish and devastate Great Lakes fishes and the $7 billion economy they support.

-USFWS/Jeff Slade

These larval and newly metamorphosed invasive sea lampreys were collected from a lampricide treatment.

The first experimental treatments with the lampricide TFM occurred over 50 years ago in three tributaries to Lake Superior. Success was immediate and since those initial treatments, lampricides have been applied to more than 300 Great Lakes tributaries, many of which are treated every three to five years. Lampricide treatments target the larval life phase of the sea lamprey and reduce the number of newly metamorphosed sea lampreys that migrate to the lakes and prey on host fishes. Lampricides are the primary component of sea lamprey management and have proven to be an effective method of control; therefore, management of sea lampreys is heavily reliant on the ability to obtain, store and use lampricides in the aquatic environment.

The lampricide TFM is produced in two formulations. The liquid formulation is typically packaged in plastic containers weighing about 50 lbs each and is the primary lampricide used during stream treatments. The solid formulation is packaged in two pound bars and is used to treat small tributaries and rivulets.

Baylusicide is produced in three formulations. The liquid formulation is typically packaged in one to five liter plastic containers and the wettable powder formulation is packaged in 0.5 to 3 lb plastic containers. Both of these formulations are used as additives to TFM that increase the effectiveness of TFM as a lampricide and reduce the amount of TFM needed to effectively kill larval sea lampreys. The granular formulation of Bayluscide is used to kill larval lampreys in lentic areas and as a tool to assess the presence and relative abundance of larval lampreys in deep waters.

The U.S. Environmental Protection Agency and Health Canada Pest Management Regulatory Agency have concluded that lampricides pose no unreasonable risk to the general population and the environment when applied at concentrations necessary to control sea lampreys. However, as with any pesticide, the public is advised to use discretion and minimize unnecessary exposure. TFM is non-toxic to mammals and concentrations used during lampricide treatments do not pose a risk to wildlife. Neither lampricide is

-USFWS/Jeff Slade

The lampricide TFM is produced in two formulations: liquid and solid bar (left photo), while Bayluscide is available as granular, liguid and powder (right photo).

persistent in the environment as they break down through photo and microbial degradation.

Lampricides are purchased by the Great Lakes Fishery Commission (GLFC) from three vendors in the United States and Germany and shipped to storage facilities located at the Marquette and Ludington Biological Stations (Michigan) and the Sea Lamprey Control Centre (Sault Ste. Marie, Ontario). The Ludington Biological Station and Sea Lamprey Control Centre are the two primary locations where lampricides are stored. These two facilities are capable of storing more than 16,000 containers of TFM, or enough lampricide for about two years of stream treatments. Storage facilities have specific spill containment designs and lampricides must be stored in accordance with state, federal and provincial regulations. In addition, to allow the option of relabeling products as required by the U.S. Environmental Protection Agency (EPA), the Ludington Biological Station maintains an EPA establishment number, which requires the completion of an annual Pesticide Report for Pesticide-Producing and Device-Producing Establishments. This report is completed in cooperation with staff at the U.S. Geological Survey Upper Midwest Environmental Science Center (UMESC). Because it maintains an EPA establishment number, the Ludington facility and all shipping and receiving records are subject to random inspection by the EPA. Staff at the UMESC also provides the expertise and support required to maintain lampricide registrations in both the United States and Canada.

The sea lamprey management program continues to work closely with partners to control populations of sea lampreys in tributaries of the Great Lakes to protect the fishery and related economic activities in the basin (an estimated annual benefit of more than $7 billion/year to the region). The Fish and Wildlife Service delivers a program of integrated sea lamprey control in United States waters of the Great Lakes in partnership with the Great Lakes Fishery Commission.

-USFWS/Ellie Koon

Dale Burkett assists with relabeling containers of TFM in the Ludington Biological Station Chemical Storage Facility.

For further info about the Ludington Station: http://www.fws.gov/midwest/Fisheries/bio-stations.html

Service Staff Make a Splash

BY HEIDI KEULER, LA CROSSE FWCO

It's not every day that a Fish and Wildlife Service office gets to team up with a library, so Heidi Keuler from the La Crosse Fish and Wildlife Conservation Office (FWCO) jumped at the opportunity to work with Kristen Anderson and librarians from the Winding River Library System during June and July. The Winding River Library System (WRLS) covers 39 libraries in Buffalo, Jackson, Juneau, La Crosse, Monroe, Trempealeau and Vernon Counties in Wisconsin.

-USFWS

Young library patrons in Ontario, Wisconsin, participate in an angling education clinic conducted by Heidi Keuler of the La Crosse Fish and Wildlife Conservation Office.

Public libraries from these seven counties get together every year to decide on a theme for their summer reading program. The WRLS summer reading program theme for 2010 is "Make a Splash, Read." Since the theme was aquatic, Heidi Keuler offered to put on angler education programs for libraries in the area. Five different libraries contacted Heidi including libraries from Cashton, Trempealeau, Ontario, Wonewoc and Mauston. An average of 10-15 students attended from each library and activities included live fish identification, fishing equipment (including how to tie on and bait a hook), aquatic invertebrates, and learning how to cast with a Backyard Bass game. The Shirley M. Wright Memorial Library in Trempealeau even had actual fishing at the end of the program and every child caught a fish.

Heidi couldn't have put on all of these clinics by herself, however. Many people dove in to help her including: Ed Lagace and Cortney White from the Upper Mississippi River National Wildlife and Fish Refuge (NW&FR)– Winona District; Paula Ogden-Muse from the Upper Mississippi River NW&FR – La Crosse District; and Jenna Merry, Jordan Brillowski, and Mark Steingraeber from the La Crosse FWCO.

Heidi sends out a sincere thanks to all the librarians: Kristen Anderson (WRLS), Jill Bjornstand (Cashton), Debby Brooks (Mauston), Laurie Erickson (Ontario), Judy Grant (Trempealeau), and Chris Smolek (Wonewoc), and all of the Fish and Wildlife Service staff that truly "made a splash" in the La Crosse FWCO's summer outreach programs.

-USFWS

Jenna Merry of the La Crosse Fish and Wildlife Conservation Office untangles a line during a Backyard Bass casting exercise.

For further info about the Marquette Biological Station: http://www.fws.gov/midwest/marquette/

La Crosse FHC and Law Enforcement Conduct Baitfish Study

BY COREY PUZACH AND BEKA MCCANN, LA CROSSE FHC

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

In the fall of 2009, four baitfish companies were charged with violating the Lacey Act by importing bait fish from outside the state without valid import permits and health certificates. The Lacey Act makes it unlawful "to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce any fish or wildlife taken, possessed, transported, or sold in violation of any law or regulation of any state or in violation of any foreign law." The investigation was a joint effort between the Fish and Wildlife Service and the Wisconsin Department of Natural Resources law enforcement agencies. The companies pled guilty to violations of the Lacey Act and were sentenced to fines, probation and to comply with disease testing. This consists of up to two random site visits per year, and testing of monthly imports for two years. The companies must submit a list of their anticipated imports for each month, and lots are selected at random to be tested. All testing occurs at the expense of the baitfish companies.

-USFWS/B.McCann

Corey Puzach (Rt.) shows special agent Gary Jagodzinski how to process virology samples.

In February 2010, the La Crosse Fish Health Center (FHC) began receiving its first sample groups of baitfish from the four Wisconsin dealers. Among the baitfish being tested are fathead minnows, golden shiners and white suckers. Each lot of fish undergoes testing for bacterial and viral pathogens as well as internal and external parasites.

In June, staff of the La Crosse FHC performed a site visit at a baitfish distributor in Wisconsin. The purpose of the visit was to check the baitfish for any harmful fish pathogens. Center staff used a sterile loop to sample the kidney. This sample is placed onto growth medium and analyzed for certifiable "serious" bacteria. A sample of the kidney is then taken for screening of a Renibacterium salmoniarium (Bacterial Kidney Disease). Next, a sample of the fish's kidney and spleen are collected for screening of viruses. Some of the necropsied fish were then taken back to the La Crosse FHC where quantitative parasite searches will be preformed. Fish health staff was also accompanied by Special Agent Gary Jagodzinski, who is the case law enforcement agent.

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

National Pharmaceutical Take Back Initiative

BY MARK STEINGRAEBER, LA CROSSE FWCO

On September 25, the U.S. Drug Enforcement Administration will coordinate a collaborative effort with participating state and local law enforcement agencies focused on safely removing potentially dangerous pharmaceutical controlled substances and other medications from our nation's medicine cabinets. This initiative supports Fish and Wildlife Service efforts to prevent the disposal of unwanted medications in public waters where they may harm sensitive fish and wildlife. Contact your local law enforcement agency to see if it plans to take part in this important, day-long event. Remember to dispose of your unwanted medications in ways that protect both human and environmental safety.

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

Getting Meaning out of Adaptive Management

BY WYATT DOYLE, COLUMBIA FWCO

Wyatt Doyle of the Columbia Fish and Wildlife Conservation Office (FWCO) attended the quarterly resource briefing meeting with the U.S. Army Corps of Engineers (CORPS) and Missouri River basin state and federal representatives. These meetings generally frame up the work of the CORPS within their ongoing efforts for Missouri River rehabilitation and pallid sturgeon recovery. Of particular interest during this meeting was the restructured effort of program managers, representing a new cadre of faces to breathe life into our adaptive management program. The basin has long been clamoring for a process to inform and contribute with good science, that will enable us to do better things for the resource. We were given hope and a vision that the adaptive management plan will soon be realized and will have representatives by not only managers, but independent scientists and experts in varying fields. The nature of changing old ways of doing things and developing a living process by which science can be a tool for change has long been pursued by our partners and we are hopeful that we can not only incorporate the idea of adaptive management, but be a leader for big river restoration projects throughout the United States.

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

Weedy Pool 10

BY SCOTT YESS, LA CROSSE FWCO

On August 10th, over 50 biologists and river resource personnel from several state and federal agencies raked Pool 10 of the Mississippi River for vegetation. The purpose of this effort is to identify the vegetation present and estimate its abundance. Mike Griffin (Iowa Department of Natural Resources) led the effort and did a fantastic job organizing this huge monitoring operation. Grif, as he is called by all his fellow river rats, takes great pride in making a hard job enjoyable.

Over 400 sites were checked utilizing guidelines established by the highly respected Long Term Resource Monitoring Program (LTRMP) for the Upper Mississippi River. Results from this effort will be compiled by river resource managers working with the LTRMP and ready for distribution this winter.

-USFWS

Mike Griffin of the Iowa Department of Natural Resources (center) directs the vegetation monitoring operation on Pool 10 of the Mississippi River.

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

Winged Mapleleaf Aggregation

BY JORGE BUENING, GENOA NFH

During the month of July, Genoa National Fish Hatchery (NFH) took part in the collection of adult winged mapleleaf, a freshwater mussel species. Winged mapleleaf is a federally endangered species that is part of the hatchery's mussel culture program, and are considered to be one of the rarest mussel species in the Upper Mississippi River system. The adults were collected in July and placed into GPS marked sites, so that in August and September they can be monitored and larval mussels, or glochidia, can be collected.

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.

-USFWS

A larval bearing (gravid) winged mapleleaf mussel shows her display, hoping to attract a catfish host.

Like most mussel species, the female winged mapleleaf houses viable offspring in a brooding chamber where they wait to be inoculated on a host fish. During this period, the mussel is said to be gravid. Another interesting facet is that host fish are specific to the mussel species; in the case of the winged mapleleaf the channel catfish or the blue catfish serve as the host fish. The glochidia then live on the host until they develop enough to feed on their own and drop off.

Genoa NFH has many partners in winged mapleleaf propagation, including the National Park Service, Twin Cities Ecological Services and Macalester College. All of these offices worked together to collect a total of 82 adults during the two day collection period. Now we will wait to see if the hard work of aggregating mussels pays off and if some of the mussels we collected will become gravid.

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

Fish Going and Coming

BY MELISSA CHEUNG, NEOSHO NFH

Biologists Jaime Pacheco and Melissa Cheung of the Neosho National Fish Hatchery (NFH) traveled to State of Nebraska sites at Ponca State Park and Nebraska City to stock juvenile pallid sturgeon during the second week of June. After spending the night in Yankton, South Dakota, we stopped by Gavins Point NFH to pick up adult (broodstock) pallid sturgeon. Gavins Point had kindly agreed to hold these two broodstock fish for us until we could retrieve them. After a brief tour of their sturgeon facilities and a welcomed coffee refill, we began our eight hour drive back to the Neosho NFH. The adult sturgeon arrived safely and are healthy.

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

Retiring: An Old Workhorse Takes a Backseat

BY SHAWN SANDERS, IRON RIVER NFH

The year was 1995 and Iron River National Fish Hatchery (NFH) was replacing a worn out fleet of fish hauling trucks. These trucks were gasoline fueled and achieved only 2-3 miles per gallon. In addition, most engines needed replacement with less than 100,000 miles of use. Efficient use of Regional Fisheries resources dictated the purchase of larger fish distribution trucks, reducing travel and road costs related to the fish distribution season. Iron River NFH chose to purchase a larger vehicle at this time.

The purchase was a 1995 Ford L9000 with an Eaton 13-speed Road Ranger Transmission. This

vehicle was fitted with a specially built stainless steel tank which consisted of three 1,100 gallon holds. Each of the holds transported the same amount of fish as was held in each of the smaller transport vehicles, thereby reducing the Regional truck fleet by two vehicles and two drivers. Efficiency was also increased by a diesel vehicle that averaged 9-10 miles per gallon (mpg) for a full trip.

-USFWS

This 1995 Ford L9000 fish truck at the Iron River National Fish Hatchery set a precedent in the Upper Great Lakes lake trout program by providing a vehicle that could haul the same amount of fish as three separate fish transport units.

There have been aspects of this vehicle that were not always the most comfortable or accommodating, such as learning to drive a "real" stick shift truck; however, this learning curve was a small price to pay for an overall hauling machine! On one of my first trips, I was hauling fish to Milwaukee, Wisconsin, over Labor Day Weekend. To see the children's faces light up, and to see grown men giving me the thumbs up as they passed was well worth the sacrifice of working a "normal" holiday weekend. This occurrence was commonplace while hauling fish across Wisconsin and Michigan; you could tell that people were 'on board' with our stocking efforts and excited to see such a truck.

I should say that this vehicle is not totally retired, yet. The Iron River NFH will keep it in our stable as a back-up workhorse in case of a breakdown or emergency; however, once BIG D(iesel) is finally retired, we will all say a heartfelt "farewell" or at least something like that…

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

Tagging Pallid Sturgeon

BY COLBY WRASSE AND ADAM MCDANIEL,COLUMBIA FWCO

During the first week of August, Columbia Fish and Wildlife Conservation Office (FWCO) assisted Neosho National Fish Hatchery (NFH) with tagging of pallid sturgeon. Columbia FWCO was represented by technicians Colby Wrasse and Adam McDaniel, and student employees Brandon Baumhoer, John Carroll, Scott Childers, Clint Feger, Randi Preece and Brandon Spratt. Also on hand to help were staff from the Missouri Department of Conservation, Nebraska Game and Parks Commission and U.S Geological Survey Columbia Environmental Research Center. With the large cooperative effort, we were able to tag approximately 5,500 pallid sturgeon over a two day period. The tagging procedure consisted of scute removal, passive integrated transponder (PIT) tag injection, and recording the length and weight of each fish.

-USFWS/ColbyWrasse

Student employee Randi Preece carefully weighs a pallid sturgeon as part of the annual tagging operation at the Neosho National Fish Hatchery.

Stocking remains an integral tool in restoring pallid sturgeon populations. Tagging hatchery reared fish will help provide important future information such as: dispersal patterns of stocked fish, growth rates and survival estimates. Data collected at the hatchery and later in the field will assist scientists and managers when making future decisions regarding stocking of this federally endangered species.

We were glad we could assist Neosho NFH with their tagging efforts, and it was also a great learning experience for us. For some of our student employees, this was their first time handling the endangered pallid sturgeon, implanting PIT tags, scute marking and also their first time working in a fish hatchery. Hatchery Manager Dave Hendrix and his staff did a great job of welcoming us to Neosho. We were treated to lunch and a tour of the hatchery facilities, including the new visitor center which will open soon.

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

Achtung … Springenden Fische!

BY MARK STEINGRAEBER, LA CROSSE FWCO

Although my bilingual skills have grown rusty since my last German language class as a high school senior, I thought I heard this literal warning of 'projectile fish' cried repeatedly while operating an electrofishing boat recently on the Vermillion River near Peru, Illinois. No, it wasn't coming from the crew of a lost U-boat. And not from just one, but from two German television crews who independently joined members of the La Crosse Fish and Wildlife Conservation Office (FWCO) in July to prepare news reports for European audiences on the abundance and impacts of Asian carps in the Illinois Waterway.

Earlier in the week, the Germans visited downstream sites along the Illinois River to document the enormous quantities of these fish harvested daily by commercial fishermen, as well as upstream sites in the Chicago Area Waterways where millions of dollars in government efforts have been spent to prevent them from entering Lake Michigan. Wanting to fully portray the scope and magnitude of problems created by these invasive species in the United States, the crews accompanied us with the goals of documenting navigational safety hazards while transiting infested waters and learning more about the ecological impacts of these invasive fish. With the water electrified and silver carp leaping all about us (as well as directly at us) like missiles launched from a submarine, our foreign guests departed later that day with compelling reports to broadcast. As my high school German teacher, Herr Geppert, would have said at the conclusion of a successful day like this, "Ausgezeichnet! (i.e., Excellent!)."

-USFWS

A German television crew films an Asain carp assessment on the Illinois Waterway.

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.

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

Asian Carp Implementation Meeting

BY SAM FINNEY, CARTERVILLE FWCO

An initial scoping and strategy meeting for implementation of the "Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States" was recently convened in conjunction with the Midwest Association of Fish and Wildlife Agencies meeting in Indianapolis, Indiana. The plan and other information about Asian carp management can be found at www.asiancarp.org. Close to 50 participants of state, federal and private partners participated in the meeting with the purpose of expediting formation of committees in support of the Plan's implementation. Great comments and suggestions were received on the draft committee structure and function.

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

The Hunt for Asian Carp

BY ANDY PLAUCK AND ADAM MCDANIEL, COLUMBIA FWCO

The Columbia Fish and Wildlife Conservation Office (FWCO) sent another crew to "The Windy City" at the end of July in search of Asian carp at five sites on the Chicago Area Waterway System (CAWS). As anyone who has followed the Asian carps' journey toward the Great Lakes can attest, the threat of Asian carp entering the Great Lakes is real. The capture of a bighead carp in Lake Calumet earlier this summer made this trip even more important.

One of the five sites sampled was in Lake Calumet. While our electrofishing crew knew the importance of all five sites, Lake Calumet definitely stood out as the most likely place to capture an Asian carp. The large shallow flats of Lake Calumet looked like some of the floodplain lakes in which we had witnessed thousands of Asian carp in the past. During each electrofishing run, the crews made sure to positively identify every fish that came up. While Asian carp were the primary target, abundant round goby, white perch and common carp proved that aquatic invasive species have already made their mark on this system. While many fish were encountered, no Asian carp were found during our sampling runs at Lake Calumet or the other four sites sampled.

The Columbia FWCO is one of many offices representing various state and federal agencies working on the CAWS. Hopefully, the monitoring effort of these agencies can help to keep Asian carp out of the Great Lakes.

-USFWS

A crew from the Columbia Fish and Wildlife Conservation Office search for Asian carp near the Willis (formerly Sears) Tower in Chicago.

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

Turing Sea Lampreys into Stars

BY MICHAEL FODALE, MARQUETTE BIOLOGICAL STATION

Sea lampreys are coming to a television station near you! Pete Mathiesen and Jeff Breitenstein from North American Media Group, an independent filming company attached to Versus Television, are filming various activities of the Sea Lamprey Management Program for an upcoming TV special, likely in December, 2010. The film crew is creating four 22-minute shows about invasive species in the Great Lakes and their species of choice are sea lampreys, round gobys, Asian carp, and zebra/quagga mussels; they chose to do the show on sea lampreys first. Staff was both interviewed and filmed conducting adult trapping activities, electrofishing for larval sea lampreys using backpack gear, sterilizing adult male lampreys at the Sterilization Facility near Rogers City, Michigan, conducting a TFM lampricide treatment on Albany Creek (Lake Huron), and most recently, treating specific areas with granular Bayluscide on the St. Marys River with a newly designed aquatic pesticide application boat. The TV special will highlight the success of the management program and emphasize the dedication of the people and the use of state-of-the-art technologies to control sea lampreys in the Great Lakes.

-USFWS/MichaelFodale

Jeff Breitenstein of the North American Media Group interviews and films technician Victoria McClellan about sea lamprey management techniques during a lampricide treatment of Albany Creek, Lake Huron.

For further info about the Marquette Biological Station: http://www.fws.gov/midwest/marquette/

The "Toddler Tank" is a big hit during Crab Orchard NWR Kids Fishing Day

BY SAM FINNEY, CARTERVILLE FWCO

As they say at the circus, "Come one, Come all". And the children did, of all sizes. The annual Kid's Fishing Derby at Crab Orchard National Wildlife Refuge (NWR), and the Carterville Fish and Wildlife Conservation Office's (FWCO) "Toddler Tank" were a big hit with the children and families of Southern Illinois. An estimated 200 people showed up for the morning event to participate in the free fishing event that included prizes for most, smallest and biggest fish caught. There was also a demonstration of electrofishing techniques and a family picnic.

-USFWS

The toddler tank was a big hit at the annual Kid's Fishing Derby at Crab Orchard National Wildlife Refuge, even with fake magnetic fish to catch.

The toddler tank is always a big hit with the little ones that are not quite ready for sharp hooks, slimy fish and deep water. To simulate real fishing, kids were given small wooden fishing poles with large metal washers as "hooks". The display tank has fake magnetic fish for the toddlers to catch with their poles. To up the excitement and enjoyment a bit, real fish are also placed in the tank.

Biologists spend the day prior to the event electrofishing Crab Orchard Lake to gather large fish for the kids and families to "ooh" and "ahh" over. This year, an especially large channel catfish and several big largemouth bass were big hits, not only with the little ones but with big brothers and sisters and parents too. Many other fish captured were swimming around in the large tank too, and the eyes of the kids really light up when they see them. We look forward to next year and making more future fishermen and women!

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.

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

Learning to Fish

BY KAY HIVELY, NEOSHO NFH

With a boatload of help from the MAKO Fly Fishers club, the Neosho-Newton County Library sponsored an "Introduction to Fly Fishing" event at the Neosho National Fish Hatchery (NFH).

On Saturday morning, June 26, several area youngsters turned out to learn about fishing. These lucky kids received instructions on tying flies and casting a fly rod from some of the best fly fishermen in the area. MAKO club members from Neosho, Joplin, Cassville, Carthage, Miami, OK, and several other communities passed along many years of experience.

Before the morning was finished, the kids had tied two flies (A wooly booger and a foam bug) and they were given casting lessons by club members, including certified casting instructor Randy Billings of Miami, OK.

Anyone wanting lessons such as this would have to pay a nice fee for such schooling, but these youngsters received these lessons free of charge as part of MAKO's education and outreach program.

According to Waymeth Werries, club member from Neosho, the group attends many events and

sponsors many clinics in the area to introduce fly fishing to both children and adults.

"We go down to the fishing derby at Roaring River State Park, we come to the Kids Fishing Derby here in Neosho and to the fishing derby at Kellogg Lake in Carthage, and we also give instructions for kids and adults at Water Woods Conservation Area," Mrs. Werries explained.

-KayHively

Greg Edster (Lt.) shares a laugh with a boy he is teaching to tie flies while Steve Werries bends over to help another lad. These men and other members of the MAKO Fly Fishers give time, money and effort to projects such as this one held in Neosho, Missouri.

This special event was done at the request of the Neosho-Newton County Library and included not only fly tying and casting, but a hot dog cookout for the kids and volunteers.

Mrs. Werries is very excited about the new visitor center which will open late this year at the Neosho hatchery. She noted that the fly fishermen are already making plans to hold more events in Neosho, using the facilities at the visitor center.

Nine years ago, Mrs. Werries first learned to fly fish when she took an introductory course from the Missouri Department of Conservation on Capps Creek at Jolly Mill. She was immediately 'hooked' on fly fishing and fly tying.

"If you do it once, you've got the fishing bug," she laughed.

Mrs. Werries pointed out that fly fishing is not just for certain people nor is it appropriate in just certain places. "You can fly fishing anywhere," she said, "and for just about any species. One of my favorite places to fly fish is in Big Sugar Creek at Powell. I go there to get pan fish with my fly rod."

For Mrs. Werries and the other devoted fly fishermen, the sport is a great way to relax, to entertain yourself and to get lost in your own world.

Anyone interested in learning to fly fish or to tie flies may contact the club and join the group. The president of the club is George Hammond and he may be reached on his home phone at 417-358-9486 in Carthage. "I would be happy to talk to anyone," he said, "or they can leave a message and I'll get back with them."

Now, thanks to efforts such as the one the club put out for a lucky group of kids in late June, there may soon be a new crop of fly fishermen and women in southwest Missouri.

That means the staff at the Neosho NFH will have to keep those rainbows coming.

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

Kids Create Fishy Masterpieces

BY RYAN KATONA, LA CROSSE FHC

Sarah Bauer and Ryan Katona from the La Crosse Fish Health Center (FHC) participated in "Winnebago Wednesday" in Tomah, Wisc. on June 16th. Winnebago Wednesday is a program directed by Julee Katona from the Monroe County Family Resources Center every Wednesday throughout the summer in Winnebago Park. This program is a way to get families to come and enjoy different activities for an hour every Wednesday. Each week there is a new theme.

On June 16th, the theme was nature day. The day was filled with all kinds of activities including a nature scavenger hunt, making fish out of tissue paper and paper plates, fur identification, fish anatomy, and making fish prints on reusable cloth bags. La Crosse FHC staff explained fish anatomy using rainbow trout supplied by the Unites States Geological Survey. Staff helped very enthusiastic kids paint reusable cloth bags with their favorite fish species using rubber fish as stamps. This program was a great success and our office staff looks forward to helping out with this program in future years.

-USFWS/J.Katona

A child patiently waits for a bag to paint with fish prints.

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

Children, Families "Pour" into Youth Outdoor Fest

BY HEIDI KEULER, LA CROSSE FWCO

Although rain fell in the morning and trees were down after a devastating storm passed through the Coulee Region, the "pour" weather could not keep approximately 2,000 people from attending the 2nd Annual Youth Outdoor Fest July 24 at Pettibone Park in La Crosse, Wisc.

Almost 40 activity stations were set up so kids had the opportunity to shoot a bow, drive a boat, paddle a kayak, ride a pontoon, cast a fly rod, catch a trout, learn how to clean fish, scoop up aquatic insects, watch biologists electrofish, touch live turtles, and learn duck, fish, and fur identification all in one day. The hands-on event was free (everyone received a free hot dog and handouts) and 200 lucky kids won a rod/reel combo.

Youth Outdoor Fest is the brain-child of the La Crosse Park and Recreation Department and La Crosse Fish and Wildlife Conservation Office (FWCO). Both of these offices teamed up with the *Friends of the Upper Mississippi Fishery Services*, Trout Unlimited, Midwest Family Broad-casting, Festival Foods and Kwik Trip to sponsor the outdoor event. Federal, state and local agencies as well as conservation organizations and businesses provided much needed support including the U.S. Geological Survey, U.S. Army Corps of Engineers, Fish and Wildlife Service (National Wildlife Refuge and Fishery offices), Wisconsin Department of Natural Resources (DNR), Minnesota DNR, North American Squirrel Association, Coulee Region Sierra Club, Chaseburg Rod and Gun Club, Eagle Bluff Environmental Learning Center, La Crosse Public Library, Children's Museum of La Crosse, Bikes Limited, Signatures Chiropractic, and La Crosse Camera Club.

Heidi Keuler of the La Crosse FWCO, an organizer of the event, heard over and over from attendees that this was the first time their son or daughter ever paddled a kayak, caught a trout, and not only rode in a boat, but drove one too! Keuler stated, "Many people don't realize the wealth of opportunities they have in our area, or are too timid to try something on their own, so Youth Outdoor Fest is a great way to introduce outdoor activities to kids in a very safe environment."

-OwenJohnson

***Friends of the Upper Mississippi Fishery Services* member and storyteller Terri Visger gets the audience involved in one of her tall tails at Youth Outdoor Fest.**

The event also provides an opportunity for the public to ask the experts questions, pick up informational brochures, and learn about natural resources.

Keuler added "I've learned that a lot of people won't always ask you a question at a boat show or fair, but if you take the time to show their child how to shoot a bow, drive a boat, or some other activity, they are more likely to spend an extra ten minutes talking with you, even if it's pouring rain".

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

Vernon County Department of Aging and Genoa NFH Team Up to Provide Recreational Fishing Opportunities

BY JENNY BAILEY, GENOA NFH

On July 30, people arrived at Genoa National Fish Hatchery (NFH) for a tour of the facilities and a recreational fishing opportunity. Chris Olds introduced each of Genoa's fish and mussel conservation programs to the group and conveyed the importance of conserving these species for the Great Lakes and Mississippi River watersheds, and later directed the group in fishing at the handicapped accessible fishing pond. There, Chris, Darla Wenger, Dan Kumlin, and Jenny Bailey provided equipment, bait, and fishing expertise to the group, and a volunteer from Trout Unlimited cleaned and filleted the catch.

The group tour was organized by the Department of Aging to get aging community members out for an educational and recreational activity. The hatchery staff was glad to provide the opportunity. Fishing is a healthy activity that people of any age can participate in. Unfortunately, many people who have mobility restrictions may not be able to access traditional fishing areas. In 2008, Dairyland Power provided a fishing dock to one of Genoa NFH's ponds to increase recreational fishing opportunities for people who may not otherwise have access. The NFH maintains the facility, stocks 500 catchable rainbow trout per year to the pond, and organizes events such as this with community groups.

-USFWS

Dan Kumlin of the Genoa National Fish Hatchery assists fishermen at the hatchery's fishing dock.

Many successful catches were made at the event, and many smiling faces proudly displayed a rainbow trout or two at the cleaning station. The group had a cooler in their tour bus optimistically filled with ice for the event. It was filled to the top with clean and healthy fillets for a fish fry. Members of the group commented that they were happy to bring home supper, that these were the first fish that many of them had caught in years, and that they had such fun at this event and hoped to participate again.

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

Keep an Eye out for Sea Lampreys on the Road

BY MICHAEL FODALE, MARQUETTE BIOLOGICAL STATION

The Sea Lamprey Management Program routinely staffs numerous boat and sportsmen shows and fairs each year, giving high profile to the business of controlling the pest in the Great Lakes. To draw even more attention to the program and the valuable work that is being done to minimize such parasitic populations around the Great Lakes, staff at the Marquette Biological Station, in cooperation with the Great Lakes Fishery Commission, recently contracted with a local manufacturer to dress up a utility trailer used to house and transport a professional quality display used at these shows. Silkscreen panels, called vehicle wraps, showing sea lampreys and their hosts were developed using computer aided design software and then permanently draped over the trailer giving the illusion of sea lampreys in an aquarium. The panels also acknowledge our partners and indicate the success of the management program. Initial feedback from the public and other show presenters has been very positive and seems to be getting the word out about the success of the management program, even more so than our normal effort. Plans are currently underway to drape additional trailers used in the program, including those that transport equipment for lampricide treatments to provide even more exposure for the program. So, if you are driving down the highway one day and think you saw a sea lamprey swimming by, you just might be right!

-USFWS/MichaelFodale

The equipment trailer for the Marquette Biological Station received a new graphic wrap to highlight the Sea Lamprey Managment Program's traveling display.

For further info about the Marquette Biological Station: http://www.fws.gov/midwest/marquette/

Coasters Making a Comeback in Grand Portage Bay

BY DOUG ALOISI, GENOA NFH

Recent fall fisheries assessments completed by the Grand Portage Tribal Department of Natural Resources record a 6 fold increase in coaster brook trout abundance in Grand Portage Bay of Lake Superior between 2006 and 2010. The Ashland Fish and Wildlife Conservation Office, Genoa National Fish Hatchery (NFH) and Iron River NFH have been participating in a coaster brook trout restoration program with the tribe since the late 90's.

-Grand Portage DNR

Grand Portage Bay spring assessment of coaster brook trout produced four year classes, indicating a successful restoration of this beautiful fish to Tribal waters.

Stocking rates and restoration strategies for the restoration effort are described in the tribe's fisheries management plan "A Coaster Brook Trout Rehabilitation Plan for the Grand Portage Reservation 2005-2015". In the plan, trials are ongoing to test different coaster strains and sizes at stocking to gather information on the most successful restoration strategy.

Two separate strains of coaster brook trout are maintained at the two Fish and Wildlife Service hatcheries in Wisconsin. The strains were developed from wild coaster brook trout populations on Isle Royale National Park. These strains were collected due to the larger percentage of individuals in these populations that "coast" or migrate out to the Big Lake (Superior). There they grow to larger sizes than the typical "resident" or stream dwelling brook trout, with fish as large as 10 pounds being recorded in historical catches. After growing and maturing for a few years in the Big Lake, they head back to their birth streams to spawn. There, the eggs and resulting fry will live for 1-3 years and grow relatively protected from the predators residing in the Big Lake until they are somewhat larger and less vulnerable to predators. Then a portion of the progeny returns to the lake to start the process of all over again.

It is hoped that these stocked fish which are only one generation removed from the wild, will perform very similarly and as successfully as the wild populations on Isle Royale …that they originated from. Coasters once played a large role as a large predator fish in the Great Lakes, especially Lake Superior before overfishing, habitat destruction and the sea lamprey invaded the Great Lakes. It is the hope of many who live by and enjoy Lake Superior and its aquatic resources to see the coaster rise again.

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.

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

Seventeen Hours for Surplus Fish

BY MELISSA CHEUNG, NEOSHO NFH

In the event that our hatchery has surplus rainbow trout, Neosho National Fish Hatchery (NFH) makes an effort to donate fish to federal and state hatchery facilities as well as Native American tribes. After making the necessary calls and finding that no one nearby needed our surplus fish, we called the Eastern Band of Cherokee Indians in Cherokee, North Carolina. Robert Blankenship, program manager to their Fisheries and Wildlife Management Program, made two 17 hour trips to our facility to transfer rainbow trout to the Tribe. These fish will be raised and stocked on tribal land.

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

Gut Check Time

BY COLBY WRASSE, COLUMBIA FWCO

Have you ever caught a fish and wondered what it had eaten recently? One sure fire way to find out is to dissect the fish and examine its stomach content, but this technique is undesirable when studying a species you are attempting to conserve. A slick technique called gastric lavage allows scientists to examine a fish's diet without killing or injuring the fish. Gastric lavage works by forcing water into a fish's digestive tract, causing the fish to regurgitate any recent meals. While the principle is simple, there are a few "tricks of the trade".

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.

During July, Columbia Fish and Wildlife Conservation Office (FWCO) staff members Colby Wrasse, Scott Childers, Randi Preece and Clint Feger travelled to Chillicothe, Missouri, to meet with Missouri Department of Conservation scientists experienced with gastric lavage. Darby Niswonger and Jason Dattilo demonstrated their techniques for safely examining the stomach contents of shovelnose sturgeon.

Understanding diet compositions provides vital information when managing fish populations. Although much research has been performed on the fishes of the lower Missouri River, there are still many knowledge gaps, including diet compositions of many fish species. Scott Childers plans to use his newly acquired gastric lavage skills for an undergraduate research project involving blue suckers. In the future, we hope to employ gastric lavage on pallid sturgeon to better understand their food usage on the lower Missouri River. We thank the Missouri Department of Conservation for their time and willingness to work and train with us.

-USFWS/PattyHerman

You never know what you may find in a fish's stomach. This bat was found inside this largemouth bass.

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

Service Divers aid USGS Research

BY SCOTT YESS, LA CROSSE FWCO

The U.S. Geological Survey's Upper Midwest Environmental Sciences Center is conducting a climate change project looking at native mussels as indicator species. Divers from the La Crosse Fish and Wildlife Conservation Office (FWCO) and Genoa National Fish Hatchery assisted with this project by placing temperature monitors into the substrate of native mussel beds in the Mississippi River just south of La Crosse, Wisc. Researchers will monitor three sites on the St. Croix River and compare these to three sites on the Mississippi River. The principal investigator for this project is Dr. Theresa Newton.

-USFWS

The U.S. Geological Survey's Upper Midwest Environmental Science Center is conducting a climate change project looking at native mussels as indicator species.

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

Fish Passage Restored to Silver Creek in Lake County, Michigan

BY RICK WESTERHOF, GREEN BAY FWCO & CHRIS PIERCE, CRA

The Silver Creek culvert replacement project in Lake County is complete and four miles of quality habitat is open to fish and other aquatic organisms. Chris Pierce from the Conservation Resource Alliance (CRA) was the project manager and brought together the following partners to remove the perched culvert: Michigan Department of Natural Resources and Environment, National Forest Foundation, Pine River Watershed Restoration Committee, Natural Resource Conservation Service, Lake County Road Commission, Wade Trim, Elmer's Crane and Dozer, Inc., U.S. Forest Service (USFS) and the Fish and Wildlife Service. Funding from the USFS and Fish and Wildlife Service ($37,500) came from the American Reinvestment and Recovery Act (ARRA). The project probably wouldn't have been completed without the additional ARRA funds, for a total cost of $457,605.

-USFWS

The replacement of a perched culvert (Lt.) on Silver Creek in Lake County, Michigan, restored fish passage to four miles of quality aquatic habitat.

Chris Pierce of the CRA and Rick Westerhof of the Green Bay Fish and Wildlife Conservation Office (FWCO) toured the site on May 17, just after the road was paved and revegetated. The new concrete culvert is large enough for several people to walk through and was lined with rock to make it more natural and provide habitat for fish and other aquatic critters.

Participants from the Roadstream Crossing Workshop held in Cadillac, Mich. got a rare glimpse of a large culvert replacement project. They stopped by during construction in the Fall of 2009 when holes were being drilled to drain water from the area. Mud and water was flying everywhere each time they drilled deeper to install a drain pipe. The new culvert is 10 ft. high, 12 ft. wide and 100 ft. long and had to be built strong enough to allow semi truck trailers to drive over the road. The workshop was organized by the CRA and USFS with partial funding provided through the National Fish Passage Program.

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.

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

Driftless Area Restoration Effort in Action: Vermont Creek Restoration

BY LOUISE MAULDIN, LA CROSSE FWCO

A small coldwater stream in Dane County, Wisconsin, received some tender loving care this past fall. Vermont Creek is an eight mile long, Class II-Class III trout stream that flows into Black Earth Creek, just west of the Village of Black Earth. Two problem culverts on this stream were replaced, reconnecting three miles of stream. The culverts impeded fish movement during low stream flows and were not large enough to handle high stream flow events. The improperly sized culverts negatively impacted the natural flow of the stream and its geomorphology, disconnecting the stream from its floodplain in that area. In addition, the unstable channel accelerated erosion and sediment inputs to the stream.

Much of the riparian area was overgrazed by cattle, further exacerbating erosion, runoff and down cutting, contributing to poor instream habitat for trout and other fishes. Vermont Creek has not met state water quality standards and has been placed on the impaired 303(d) list. The restoration project area belongs to a third generation farm. The farm consists of approximately 40-50 head of cattle for a milking operation and over 400 acres of cropland. Partial funding through the National Fish Habitat Action Plan was used by the Dane County Land and Water Resources Department (LWRD) to work with the farmers to replace the two culverts, install a new cattle crossing, remove the woody vegetation along two miles of the stream and reshape and stabilize the actively eroding banks. Several structures, such as rock weirs were installed instream to improve velocities and transportation of sediment downstream. The Dane County LWRD will be working with adjacent landowners in late 2010 to return a section of the stream to its historic channel.

This restoration project would not have been a success had it not been for the willingness of the landowners. Such conservation efforts by landowners within this watershed will contribute to the improvement of overall health of the watershed and removal of the stream from the 303d list. The farmers of this property received a 2009 award from the Southern Wisconsin Chapter of Trout Unlimited, "for supporting and improving the cold water resource of Vermont Creek for future generations."

-USFWS

Culverts were replaced on Vermont Creek in Dane County, Wisconsin, which provides uninhibited fish passage to three miles of stream.

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

White River Watershed Fish Passage Tour with the Forest Service

BY RICK WESTERHOF, GREEN BAY FWCO

Chris Riley and Rich Corner from the United States Forest Service (USFS) and Rick Westerhof from the Green Bay Fish and Wildlife Conservation Office (FWCO) toured potential fish passage sites in the White River watershed on July 20. Ten sites were visited with each one having its own unique issues related to fish passage. Some were perched. Others were aligned improperly, while others were in need of replacement. Each site was discussed in detail with notes and photos taken for a report that the USFS will develop to strategically remove barriers in the White River watershed. When the report is done, sites will be prioritized and several proposals will be submitted through the National Fish Passage Program to obtain additional funding.

The USFS program complements the current efforts of the Fish and Wildlife Service to remove barriers in the White River Watershed. Last year, the Oceana County Road Commission was funded to replace culverts on Cobmossa Creek and Johnson Road, and Cobmossa Creek and 148th. We look forward to continued work with the USFS to open up habitat for fish and other aquatic organisms in the White River watershed.

-USFWS

This is one of ten sites visited on U.S. Forest Service managed land of the White River watershed, where fish passage improvements were identified.

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

The Future of Fisheries

BY MELISSA CHEUNG, NEOSHO NFH

Being situated right in town really gives us an advantage at the Neosho National Fish Hatchery (NFH). Neighbored by mainly residential properties, we are surrounded by families with kids. From an early age, those children either have been to our facility on field trips, participated in one of our public events, driven by us as they pass through town, or heard about us in the local news. Occasionally, when those children become teenagers, they call on us for summer internships. And that is where we can help each other. Starting as early as April, we had volunteers offering to help whenever they could. We also celebrated our first year with three Youth Conservation Corps (YCC) employees. This is an eight week program that allows youth between ages 15-18 to work and learn about public lands projects.

-USFWS

Youth Conservation Corps employees (Lt. to Rt) Jordan Shope, Elizabeth Wood and Dustin Smith celebrate the completion of their eight week tour of duty at the Neosho National Fish Hatchery.

Greg Davidson of Joplin, Missouri, is 23 and has a Bachelor's of Science degree from the University of Arkansas-Fayetteville. He volunteers Mondays when he isn't preoccupied with his full-time job. He is a great addition to our team and we enjoy hearing his stories of travelling abroad.

Jordan Shope of Wyandotte, Oklahoma, started volunteering in early May and became one of our YCC students. Jordan is 15 and has a driver's permit. Every morning and afternoon that he works, his mom or brother(s) ride along on the 45 minute drive so that Jordan can continue volunteering. Now that the YCC program is over, he still volunteers with us once a week. Jordan has a fantastic work ethic and can withstand this summer's high heat indices better than any of us!

Next is 20 year old Jesse Rogers, an undergraduate student from Northeastern Oklahoma A&M College in Miami, Oklahoma. He volunteered at the hatchery for a little over a month while earning college credit. Jesse did a great job and his humorous stories will be missed.

Dustin Smith and Elizabeth Wood joined the YCC program in June. Both Dustin and Elizabeth are 16 and live in Neosho. While working with us, Dustin gained a new respect for sturgeon tagging and scute removal. He is a hard worker and did an excellent job. We wish him luck at his next tractor pull and FFA milk tasting contest. Elizabeth learned how to drive a stick shift this summer on our Cushman carts while working at the hatchery. She is great at taking the initiative and also has a great work ethic. We wish Elizabeth all the best in her academic endeavors and collection of all things miniature.

Tom Jay, a summer intern from last year's A+ Program has returned. Now working with Alternative Opportunities, Inc. based out of the Joplin Career Center, Tom will continue working at the hatchery until the end of August.

We are grateful for all of our volunteers who donate their precious free time to learn about what we do at the hatchery. This is our first year hosting the YCC program and it surely will not be the last. It was a true joy to work with such bright young people. In exchange, they gained hands-on experience in the daily tasks of fish biologists.

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.

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

Volunteers and YCC Help to Make the Hatchery Shine

BY SHAWN SANDERS, IRON RIVER NFH

Halfway through our Youth Conservation Corps (YCC) tour-of-duty at Iron River NFH, a number of projects have made great headway. In fact, help has come in from other sources including volunteers and a working visit by almost 20 YCC students from the Northern Great Lakes Visitors Center.

The Northern Great Lakes Visitors Center YCC helped to complete summer broodstock length and weight measurements. Each participant had the chance to measure and weigh fish or record data. This greatly helped our staff as almost 200 fish were handled. The students and coordinators also toured the facility with guide and biologist Nick Grueneis.

Finally, Iron River's own YCC crew John Bainbridge and April Johnson have been working hard, focusing roughly half their time on fish related work and the other half on outdoor projects. They started their tour working to clear the hiking and cross country ski trail to prepare it for mowing. They also have been working with biologist Shawn Sanders to create wildlife openings on overgrown fields. They have also worked on the butterfly gardens by weeding from moving fish to mulching a garden to cleaning a water intake structure. Matt has narrowed his search to a number of Lake Superior basin colleges, focusing on fish biology.

-USFWS

Youth Conservation Corps employees April Johnson and John Bainbridge work in the butterfly garden at the Iron River National Fish Hatchery.

Todd and Matt Friberg volunteered at the hatchery for almost three days. The Freiberg's live in Rockford, Illinois, and met manager Dale Bast while visiting the hatchery last summer. Bast recommended that they visit this summer, as son Matt has an interest in pursuing a degree in fish biology. It gave Matt a first-hand experience of working on a fish hatchery, the area and spreading thousands of pounds of wood chips. Assistant project leader Nick Starzl has been directing the crew on rebuilding the tagging break area, which includes new insulation, walls and lighting. We are looking forward to four more weeks of project accomplishments with our amazing crew! Thanks John and April!

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

Congressional Actions

H.R. 51 (ih) 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. [Introduced in House]

H.R. 4604 (ih) To direct the Secretary of the Army to prevent the spread of Asian carp in the Great Lakes and the tributaries of the Great Lakes, and for other purposes. [Introduced in House]

H.R. 48 (ih) To amend section 42 of title 18, United States Code, popularly known as the Lacey Act, to add certain species of carp to the list of injurious species that are prohibited from being imported or shipped. [Introduced in House]

S. 1421 (rs) To amend section 42 of title 18, United States Code, to prohibit the importation and shipment of certain species of carp. [Reported in Senate]

S. 1421 (is) To amend section 42 of title 18, United States Code, to prohibit the importation and shipment of certain species of carp. [Introduced in Senate]

H.R. 3173 (ih) To amend section 42 of title 18, United States Code, to prohibit the importation and shipment of certain species of carp. [Introduced in House]

H.Res. 439 (ih) Supporting the goals and ideals of National Asian American and Pacific Islander HIV/AIDS Awareness Day. [Introduced in House]

S. 3553 (is) To require the Secretary of the Army to study the feasibility of the hydrological separation of the Great Lakes and Mississippi River Basins. [Introduced in Senate]

S. 237 (is) To establish a collaborative program to protect the Great Lakes, and for other purposes. [Introduced in Senate]

S.Res. 570 (ats) Calling for continued support for and an increased effort by the [Agreed to Senate]

H.R. 4472 (ih) To direct the Secretary of the Army to take action with respect to the Chicago waterway system to prevent the migration of bighead and silver carps into Lake Michigan, and for other purposes. [Introduced in House]

S. 2946 (is) To direct the Secretary of the Army to take action with respect to the Chicago waterway system to prevent the migration of bighead and silver carps into Lake Michigan, and for other purposes. [Introduced in Senate]

H.R. 5625 (ih) To require the Secretary of the Army to study the feasibility of the hydrological separation of the Great Lakes and Mississippi River Basins. [Introduced in House

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

Midwest Region Fisheries Divisions

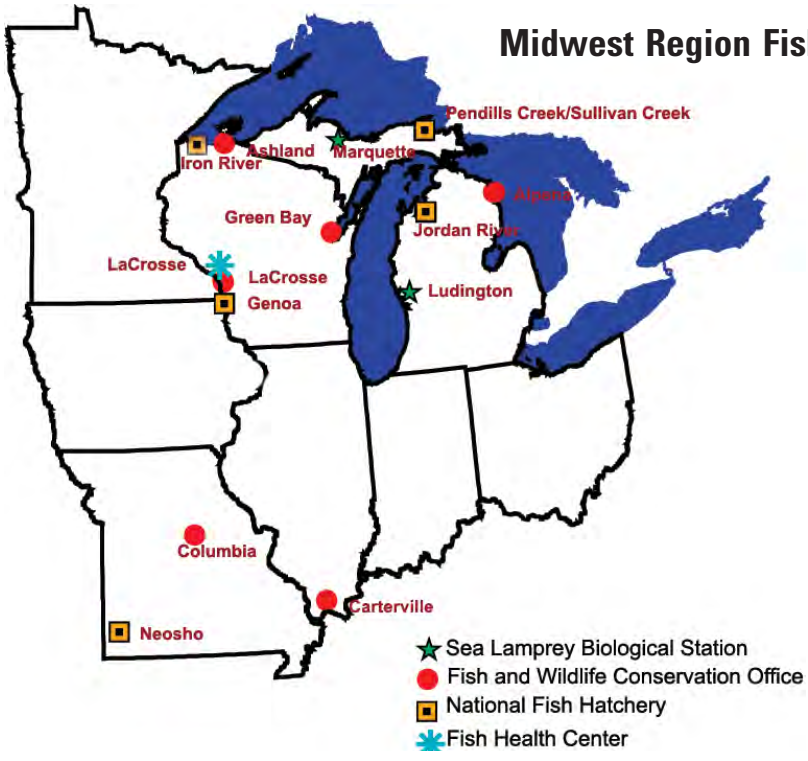
National Fish Hatcheries
The Region's National Fish Hatcheries primarily focus on native fish restoration/rehabilitation by stocking fish and eggs, such as pallid and lake sturgeon and by developing and maintaining brood stocks of selected fish strains, such as lake trout and brook trout. Hatcheries 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.

Midwest Region Fisheries Field Offices



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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

- VHS Technical Working Group Convenes at the National Veterinary Services Laboratories, Ames, Iowa
  - Becky Lasee, La Crosse FHC

Aquatic Species Conservation and Management

Aquatic Invasive Species

- Aquatic Nuisance Species Barrier Panel Meeting
  - Sam Finney, Carterville FWCO

Public Use

- Columbia FWCO Makes a Splash at the Public Library
  - Colby Wrasse, Patty Herman, Randi Preece & Clint Feger, Columbia FWCO
- Charlevoix County 4-H Scholarship Panel
  - Rick Westerhof, Green Bay FWCO
- Coon Valley Elementary Students Learn About Fish and Fishing
  - Kenneth Phillips, La Crosse FHC
- Fishing Derby Time
  - Melissa Cheung, Neosho NFH
- Genoa NFH helps with the Blackhawk Park Annual Fishing Derby
  - Chris Olds, Genoa NFH
- High School "Conservation Honors Program" Visits Columbia FWCO
  - Andy Plauck & Andy Starostka, Columbia FWCO
- Mako Fly-fishing Clinic
  - Melissa Cheung, Neosho NFH
- West Salem School Group Tours Onalaska's U.S. Fish and Wildlife Resource Center
  - Corey Puzach, La Crosse FHC

Cooperation with Native Americans

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

- Boardman River Implementation Team July Meeting
  - Rick Westerhof, Green Bay FWCO
- Crossings, Culverts and Contacts..... Having Fun with Fish Passage
  - Wyatt Doyle, Columbia FWCO
- Flowing Well Property - The Long and Winding Road to Restoration
  - Rick Westerhof, Green Bay FWCO & Chris Pierce, CRA
- St. Joseph River Watershed Barrier Inventory Kick Off Meeting
  - Rick Westerhof, Green Bay FWCO

Workforce Management

- Columbia Fish and Wildlife Service Fish Fry
  - Tracy Hill, Columbia FWCO

Newton County Fair

This year's county fair fell on the second week of July for the Neosho National Fish Hatchery. We were excited to show off the new impressive Fisheries backdrop at our booth. The four day event allowed us to answer many questions about the new visitor center, pass out candy and pencils to kids, and engage the public.