



Fish Lines

Getting Into Nature -

A Day on the
Shore of Lake Huron

What's in the Bucket?

At La Crosse FWCO -
Outreach Events in
Full Swing

Genoa NFH Receives Grant
to construct Interpretive Center

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Fisheries & Aquatic Resources Program - Midwest Region

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Features

4 Getting Into Nature - A Day on the Shore of Lake Huron

Alpena FWCO staff talks to students at the Besser Bell Natural Area.
BY HEATHER RAWLINGS, ALPENA FWCO

5 Genoa NFH Receives Grant to Construct Interpretive Center

The Genoa NFH received a grant from the National Scenic Byway Grant Program to construct an interpretive center.
BY DOUG ALOISI, GENOA NFH

6 What's in the Bucket?

Columbia FWCO staff taught stream ecology to Derby Ridge Elementary School students.
BY ADAM MCDANIEL AND BRETT WITTE, COLUMBIA FWCO

7 At La Crosse FWCO - Outreach Events in Full Swing

As spring arrived in the La Crosse, Wisconsin area, students and teachers alike were ready to get out of the classroom and enjoy nature.
BY NICHOLAS BLOOMFIELD, LA CROSSE FWCO



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Michigan Department of Natural Resources employees Roy Beasley and Jeremy Maranowski tend a trap net on Lake St. Clair.

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Brad Rogers of the Carterville Fish and Wildlife Conservation Office pulls up a trammel net set in Little Grassy spillway, to sample for the presence Asian carp.

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Conservation Briefs 8-22

- 8 Ashland FWCO Biologist Receives "Resource Professional Award"
BY MARK BROUDER, ASHLAND FWCO
- 8 2011 Great Lakes Lake Sturgeon Website Update
BY ANJANETTE BOWEN, ALPENA FWCO
- 9 Green Bay FWCO Assists USGS with Northern Lake Michigan Assessment Surveys
BY DALE HANSON, GREEN BAY FWCO
- 9 LEED Gold Certified
BY MELISSA CHEUNG, NEOSHO NFH
- 10 Pendills Lake Wild Fish Survey
BY SARAH BAUER, LACROSSE FHC
- 10 Trap Netting on Lake St. Clair, Michigan
BY JUSTIN CHIOTTI, ALPENA FWCO
- 11 Smallmouth Bass Spawn in Raceways at Genoa NFH
BY JENNIFER BAILEY, GENOA NFH
- 12 Mass Marking Team Completes 2011 Chinook Salmon Tagging Season
BY JAMES WEBSTER, GREEN BAY FWCO
- 13 Catching Up with Spring at Neosho NFH
BY MELISSA CHEUNG, NEOSHO NFH
- 14 Crab Orchard NWR: Asian Carp Alert!
BY TERESA CAMPBELL, CARTERVILLE FWCO
- 14 Early Detection and Monitoring for Aquatic Invasive Fish Species on Lake Huron and the St. Marys River
BY ANJANETTE BOWEN, ALPENA FWCO
- 15 Monitoring to Detect New Invasive Fishes in Lake Superior
BY MARK BROUDER, ASHLAND FWCO
- 16 Camp Chickagami: Merging the Outdoors and Education
BY JOSEPH GERBYSHAK, ALPENA FWCO
- 16 Mussel Information Presented to Local Students at Three Outreach Events
BY NATHAN ECKERT, GENOA NFH
- 17 Lake Sturgeon of the Bad River, Wisconsin
BY JOSHUA SCHLOESSER, ASHLAND FWCO
- 18 Brook Trout Reintroduced to Trout Creek at the Oneida Reservation
BY DOUG ALOISI, GENOA NFH
- 19 Fish and Wildlife Service Assists in the Transition of eDNA Surveillance
BY SARAH BAUER, LA CROSSE FHC
- 20 Bridge Construction begins on the Maple River
BY HEATHER RAWLINGS, ALPENA FWCO
- 21 Region 3 Assists the National Park Service with MOCC Course
BY ADAM KOWALSKI ALPENA FWCO
- 22 Headin' West
BY BRETT WITTE, COLUMBIA FWCO

Congressional Actions	23
Midwest Region Fisheries Divisions	24
Fisheries Contacts	25
Fish Tails	26

Getting Into Nature - A Day on the Shore of Lake Huron

BY HEATHER RAWLINGS, ALPENA FWCO

Alpena Fish and Wildlife Conservation Office (FWCO) staff members Anjanette Bowen, Andrea Ania, Joseph Gerbyshak and Heather Rawlings coordinated a field trip for 45 Wilson Elementary School 4th Graders at the Besser Bell Natural Area, Presque Isle County, Michigan, on May 13th, 2011.

hiking trail that led through an old-growth white pine forest. The students were “banded” during the migratory bird game, filled up on wintergreen berries during the scavenger hunt, found frogs and a turtle in the coastal lagoon, and found handfuls of fossils along the beach. They were given special notebooks and pens that they could use for journaling or taking notes during their adventures.



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Joseph Gerbyshak helps students search for frogs and toads netted in a coastal lagoon.

The children were divided into four groups and rotated through stations, including a nature scavenger hunt, a migratory bird game, a fossil hunt and journaling, and exploring a coastal lagoon. The children had binoculars, dip nets and magnifying glasses at their disposal for various components of the trip. The groups were led through a variety of environments including upland and mesic conifer forests, coastal wetlands and shoreline habitat, and a one-mile

The Alpena FWCO staff kept the 4th Graders occupied for a full day, and during the final hour let the kids run loose to play along the shoreline. The students were sent back to the school wet, happy and hopefully tired! It was a great way to wrap up the year with children that we have been in contact with on a monthly basis since they started 2nd Grade. We will be with them for one more year before they head off to Junior High. This trip was part of the Alpena FWCO's Children

& Nature Program, and our intent is to repeatedly expose a group of children to the natural world and assist with teaching their science curriculum to make it “fun” as well as educational. At the end of the 2012 school year (as the children move on to Junior High), we will compare testing and behavioral scores with children that were not exposed to our tutelage, to determine if there are any differences.

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

Genoa NFH Receives Grant to Construct Interpretive Center

BY DOUG ALOISI, GENOA NFH

The Genoa National Fish Hatchery (NFH) (Genoa, Wisconsin) received a 1.7 million dollar grant from the Federal Department of Transportation's National Scenic Byway Grant Program this past May. The grant award will allow the hatchery to construct an interpretive center on the hatchery grounds. The focus of the center will be on

for navigation from pre-colonial settlement until now), and the aquatic resources of the Region displayed through an active aquarium. It will also aid the hatchery in its current conservation education programs by providing living examples of the Region's vast aquatic resources, and as a teaching aid to further students' knowledge of the area's history and cultural significance.



The Department of Transportation's Scenic Byway Grant program is competed for nationally, and yearly administers funding to enact improvements to specific roads that have been designated as scenic byways. The program requires a 20 percent grant match to be considered eligible for the program, which be provided by the Fish and Wildlife Service. Highway 35, which passes directly through the hatchery and follows the Mississippi River's progress through Wisconsin, was recognized by Congress as a scenic byway in June of 2000. Congressman

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Representative Ron Kind 3rd District Wisconsin (left) awards a check to hatchery manager Doug Aloisi and members of the Scenic Byway Commission, to build a new visitor center at the Genoa National Fish Hatchery.

the intrinsic value of the resources of the Upper Mississippi River Region, including its cultural, historical and natural resources. Exhibits will include historical accounts of the Battle of Bad Axe, (the last battle of the Blackhawk War of 1832) which happened just south of the hatchery, a native mussel exhibit, an exhibit of the Mississippi River as a highway (its use

Ron Kind of the 3rd district was recently on site to mark the event to present a commemorative check with members of the Wisconsin Scenic Byway Commission on hand to help accept. Construction is planned for the spring of 2012, with completion hoped for by the spring of 2013.

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

What's in the Bucket?

BY ADAM MCDANIEL AND BRETT WITTE, COLUMBIA FWCO

The first question the students from Derby Ridge Elementary School asked was...“What’s in the bucket?” That question along with many others was fielded by Adam McDaniel and Brett Witte of the Columbia Fish and Wildlife Conservation Office (FWCO) and Tim Haller from Big Muddy National Fish and Wildlife Refuge (NF&WR). Derby

school to see firsthand some of the plants and animals they had been learning about in biology class.

Columbia FWCO staff taught stream ecology while Tim Haller described the type of organisms that are found in and around a pond. Adam and Brett discussed techniques that biologists use to sample a small stream such as seining and backpack

electrofishing. The children were able to participate in what we call a kick seine - where fish are “chased” into a stationary seine through rocky areas where an active seine pass would be less effective. We also explained that a dip net with

small mesh can be a simple and inexpensive tool the kids could use to catch aquatic critters on their own. The 4th graders had the chance to get their hands on multiple fish species, frogs, tadpoles, crayfish and a small water snake —which received as much attention as the fishes in the

bucket.



-USFWS/BrettWitte

Students from Derby Ridge Elementary School explore the small creek behind their school.

Ridge Elementary School in Columbia, Missouri, is located within a city park composed of streams, forests, a pond and multiple hiking trails. This made it the perfect location for kids to get out of the classroom for an afternoon, and learn about the things in nature found right in their backyard. There were over 80 4th graders that walked to the park from their

This collaborative effort between Big Muddy NF&WR and Columbia FWCO was a great success. It was the first time we participated in an outreach event with Derby Ridge Elementary School and look forward to working with them in the future.

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

At La Crosse FWCO - Outreach Events in Full Swing

BY NICHOLAS BLOOMFIELD, LA CROSSE FWCO

As spring arrived in the La Crosse, Wisconsin area, students and teachers alike were ready to get out of the classroom and enjoy nature. At the La Crosse Fish and Wildlife Conservation Office (FWCO), we strive to participate in as many of these events as possible. They are not only fun for the kids, but we have fun teaching and sharing our knowledge with these willing and wide eyed audiences. It also helps to instill a sense of wonder and an appreciation for nature that many will hopefully retain for years to come.

several invertebrates along with vegetation, rocks and sticks. These were placed in small kiddie pools where the children could discover these aquatic creatures and learn of their importance to the ecosystem. Students were amazed at the diversity and abundance of invertebrates found in our area and vowed never to swim again. By the end of our time, however, this fear had subsided.

Our staff participated in a similar event for Montessori students, on May 20th at Perrot State Park. La Crosse FWCO volunteer April Ammann provided much assistance. We used the pools here too, with invertebrates captured from Trempealeau Bay. In both cases, the frogs and tadpoles stole the show from the invertebrates.

On May 17th and 18th, Mark Steingraeber and I participated in the annual River Education Days at Trempealeau National Wildlife Refuge, where their staff does a wonderful job organizing this huge annual event. This time Mark took over the invertebrate duties, while I ran a fish station with the help of La Crosse FWCO volunteer Derek Stelloh. We captured some bullheads, bluegill, a common carp, a golden shiner, and even a couple of turtles to share with

our groups. We also discussed why we sample fish, displayed a variety of gears used to collect fish, and fielded a variety of questions. One thing about fish and fishing is that it can help the quietest child share their stories with excitement. Fish can bring out the story teller in all of us!



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School children are fascinated by the frogs, tadpoles and invertebrates that live in their local waters.

La Crosse FWCO staff was able to participate in several of these events during May. On May 13th, a large event was held at Veterans Park in West Salem, Wisconsin, with several stations for students from Summit Elementary School to explore. Heidi Keuler and I ran an invertebrate station on the banks of the La Crosse River. As luck would have it, we collected

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

Ashland FWCO Biologist Receives “Resource Professional Award”

BY MARK BROUDER, ASHLAND FWCO

Earlier this year, in Stevens Point, Wisconsin (WI), the Trout Unlimited State Council (WI) presented Ashland Fish and Wildlife Conservation Office (FWCO) senior fish biologist Henry Quinlan with their “Resource Professional Award.” Following is the narrative submitted by Henry’s colleagues to Trout Unlimited on Henry’s behalf:

“Henry has been a fisheries biologist with the U.S. Fish & Wildlife Service in Ashland since 1996. As a “fed”, Henry does not have the management authority of his state counterparts. So to conserve, protect, and enhance depleted coaster brook trout populations, Henry has worked over 15 years to foster cooperation between the various resource parties involved. Henry has worked with state, federal, tribal, academic, and non-governmental partners to accomplish the following:

- *He cooperated in the establishment of a coaster brood stock management plan and the start of two coaster brook trout brood lines.*

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.

- *He spear-headed the stocking of coasters at four locations in Wisconsin, Minnesota, and Michigan.*
 - *He developed the innovative, solar-powered, PIT-tag technology being used on Whittlesey Creek to better understand coaster movement between tributaries and Lake Superior.*
- He has authored or co-authored many papers and reports that have expanded our understanding of coaster brook trout.*

Henry will say that he doesn’t have all the answers for what it will take to ensure coaster brook trout rebound for future generations. But Henry’s dedication, commitment, and professionalism will surely help others figure out the answers.”

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

2011 Great Lakes Lake Sturgeon Website Update

BY ANJANETTE BOWEN, ALPENA FWCO

The Great Lakes Lake Sturgeon website (<http://www.fws.gov/midwest/sturgeon>) was updated during May 2011 to include new information and partners. The site was established in 1999 to provide a forum for lake sturgeon restoration and management activities throughout the Great Lakes basin. It contains information from numerous agencies working on lake sturgeon management, research, conservation and restoration in the Great Lakes basin. Updates to

the site included the addition of 14 new researchers and six new partner agencies. A total of 84 researchers currently contribute to the site from 29 agency offices and 13 universities. During February 2011, the site received 18,342 visits and averaged 679 hits per day. The popular website is currently managed by Anjanette Bowen with the Alpena Fish and Wildlife Conservation Office (FWCO).



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

Green Bay FWCO Assists USGS with Northern Lake Michigan Assessment Surveys

BY DALE HANSON, GREEN BAY FWCO

Spring is the time for Lake Michigan Assessment Plan (LWAP) surveys, and this year the Green Bay Fish and Wildlife Conservation Office (FWCO) got an earlier start than usual when the U.S. Geological Survey (USGS) vessel was unavailable for survey work near Washington Island, Wisconsin, and Manistique, Michigan. Biologist Chuck Madenjian of the USGS's Great Lakes Science Center enlisted the efforts of the Green Bay FWCO vessel *Lake Char*, with crew Ted Treska, Ted Eggebraaten and Dale Hanson to assist from May 7th to May 12th. The LWAP

surveys are a cooperative effort involving state, tribal and federal agencies to assess predator species, such as lake trout and burbot, at 11 locations throughout Lake Michigan waters. These annual gillnet surveys are used to monitor relative fish abundance, lamprey wounding rates and other characteristics of the population including size, age and diets. Information from this survey is summarized by the Lake Trout Working group at the annual Lakes Committee meetings and used by managers to assess the relative progress towards lake trout rehabilitation efforts.



-USFWS photos

Crew members from the Green Bay Fish and Wildlife Conservation Office and the U.S. Geological Survey work together to conduct Lake Michigan Assessment Plan surveys.



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

LEED Gold Certified

BY MELISSA CHEUNG, NEOSHO NFH

The Neosho National Fish Hatchery (NFH) Visitor Center, which opened its doors to the public in December 2010, achieved Gold status according to the U.S. Green Building Council's LEED rating system. It is the first facility within the Fish and

Wildlife Service's Fisheries program to receive this prestigious rating. To learn about the specific details that qualified Neosho for a LEED Gold rating, please visit this website: <http://www.fws.gov/midwest/neosholeed.htm>.

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

Pendills Lake Wild Fish Survey

BY SARAH BAUER, LA CROSSE FHC

Sarah Bauer and Dustin Hart of the La Crosse Fish Health Center (FHC) and Anjanette Bowen of the Alpena Fish and Wildlife Conservation Office collected fish from Pendills Lake. The team set and



-USFWS
Sarah Bauer of the La Crosse Fish Health Center measures a yellow perch captured from Pendills Lake for fish health testing.

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

Trap Netting on Lake St. Clair, Michigan

BY JUSTIN CHIOTTI, ALPENA FWCO

Biologists Justin Chiotti and Ashlee Horne from the Alpena Fish and Wildlife Conservation Office (FWCO) joined employees from the Michigan Department of Natural Resources (DNR) Lake St. Clair Fisheries Research Station for a spring trap netting assessment on Lake St. Clair. Since 2002, the Michigan DNR has annually conducted spring trap net assessments on Anchor Bay in Lake St. Clair to monitor changes and trends in the fish community. This year, additional trap nets were set targeting muskellunge for gamete propagation in DNR hatcheries. Lake St. Clair supports one of the premier muskellunge and smallmouth bass fisheries in the State of Michigan.

Trap netting operations were conducted on the research vessel *Channel Cat*, a 46 foot steel hulled fish tug manned by employees Jack Hodge, Roy Beasley, Jeremy Maranowski and Mike Thomas from the Michigan DNR. Dominant fish species captured in trap nets included rock bass, yellow perch, channel catfish, smallmouth bass and walleye. Trap net catches also included lake sturgeon and muskellunge. Lengths and weights were collected from all fish species captured and fin rays were removed from

retrieved trap nets from the lake to collect rock bass, pumpkin seeds, yellow perch, northern pike, golden shiners and yellow

bullhead. A total of 791 fish were collected and a subsample of 157 fish were sampled for target pathogens. The fish were sampled for the same target pathogens as fish reared at the Pendills Creek National Fish Hatchery, because Pendills Lake serves as an alternative water supply to the hatchery. The La Crosse FHC screens water supplies for the six National Fish Hatcheries in the Midwest Region at least once a year. This testing is crucial to ensure the water supplies are free of certifiable pathogens.

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.

select fish species for age analysis. Walleye and smallmouth bass received jaw tags as part of a long-term tagging study which assesses movement patterns and angler exploitation. All lake sturgeon captured received external monel tags in addition to passive integrated transponder (PIT) tags. According



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The Alpena Fish and Wildlife Conservation Office joined forces with the Michigan Department of Natural Resources (DNR) to conduct a spring trap net assessment on Lake St. Clair, using the DNR's research vessel "Channel Cat."

to DNR data 2,261 lake sturgeon have been tagged in the St. Clair System since 1996. These tags allow researchers to estimate the population size and movements of lake sturgeon in the St. Clair system. Four muskellunge were captured during the first week of trap net operations. These fish were examined for maturity and released.

The Fish and Wildlife Service and Michigan DNR have collaborated on many projects in the St. Clair System and will continue to partner with each other to protect this fishery.



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Fish and Wildlife Service employee Justin Chiotti (left) and volunteer John Buszkiewicz hold a 1,750 mm lake sturgeon captured during Lake St. Clair trap net assessments.

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

Smallmouth Bass Spawn in Raceways at Genoa NFH

BY JENNIFER BAILEY, GENOA NFH

Smallmouth bass can be a tricky fish to produce. Adult brood fish can be sensitive to variable spring temperatures, and in past years, brooders have failed to produce offspring in outdoor ponds. Smallmouth bass are an important part of production for several programs at Genoa National Fish Hatchery (NFH). One of the major uses of hatchery produced smallmouth is the Endangered Freshwater Mussel Recovery Program. Smallmouth bass and a few other fish species host the larval stage of many freshwater mussels on their gills for a few weeks during the early stage of development. Without a suitable fish host, these mussels cannot live past the larval stage to help in restoration of the species in the wild. Sport fish restoration is another important mission of the smallmouth bass at Genoa NFH. The hatchery cooperates with several states and tribal governments to restore these important sport fish to areas where populations are in decline or need a boost to keep up with fishing pressure.

Spawning smallmouth bass indoors is a method that has been used at Genoa NFH to ensure fry production during cold springs when outdoor pond spawning may fail - and in warm years it can bolster bass production because brood pond space is limited on the hatchery. In April, eight pairs of smallmouth bass adult brood fish were placed in an indoor raceway in addition to the traditional method of stocking 40 pairs per acre in outdoor ponds. The raceway was equipped with nesting boxes and low lights. Male

smallmouths make a shallow nest out of gravel during the brooding phase. The males maintain this nest meticulously, keeping bits of plant material and mud out. Females are attracted to the best nests, lay their eggs in it, and leave the male behind to tend to the eggs. The nesting stage is very delicate for any species. Indoor nests are not only climate controlled, but allow easy access to biologists who monitor their progress. Once fry hatch, they are ferociously protected by the male as long as they stay in the nest. As soon as they start to rise out of the nest and begin to explore their new environment, they can no longer be guarded as well by the male. Biologists must transfer them to production ponds before the other adult bass eat them.

So far, two nests have been harvested from the raceway with three more brooding for next week, and many nests have been harvested from the pond. It looks like this year was a good year for both pond and raceway nesting! A couple of two-acre production ponds are being used to grow fry collected from both indoor and outdoor nests. The production ponds are free of potential predators, and are managed by hatchery staff to ensure healthy zooplankton populations which are essential food for growing smallmouth fry. In September, these ponds will be harvested for five-inch fingerlings, which will be stocked out for sport fishing or transferred to the mussel program for use as hosts.

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

Mass Marking Team Completes 2011 Chinook Salmon Tagging Season

BY JAMES WEBSTER, GREEN BAY FWCO

The Great Lakes mass marking team began the 2011 tagging and marking season by taking delivery of two new AutoFish™ tagging and marking trailers. The two trailers were purchased with Great Lakes Restoration Initiative funds as part of a regional project request by the Michigan Department of Natural Resources (DNR) through the Great Lakes Fish and Wildlife Restoration Act. The AutoFish system is a self-contained, mobile fish marking and tagging laboratory that has the ability to apply coded-wire tags and adipose fin clips to trout and salmon at



-USFWS/Jim Webster

The automated tagging and marking trailer GL4 is at the Illinois Department of Natural Resource's Jake Wolf Memorial Fish Hatchery near Pekin, Illinois, where 261,660 Chinook salmon were tagged and clipped.

high speeds with minimal handling stresses. The tagging trailer fleet of the Great Lakes Mass Marking program, headquartered at the Green Bay Fish and Wildlife Conservation Office (FWCO), now consists of four AutoFish™ trailers and one manual tagging and clipping trailer. In preparation for the spring Chinook salmon tagging season, these new trailers were delivered to the Wisconsin DNR Wild Rose Hatchery and to the Illinois DNR Jake Wolf Memorial Hatchery.

The tagging season began on March 8th at the Jake Wolf hatchery near Pekin, Illinois. By March 19th, 261,660 Chinook salmon were tagged and clipped-and the trailer was moved to the Indiana DNR Mixsawbah hatchery near La Porte, Indiana. There, 229,743 fish were tagged and clipped between March 21st and 24th. This trailer was then moved to the Wisconsin DNR Kettle Moraine hatchery near Plymouth, Wisconsin (WI) where during March 30th - April 2nd 239,237 Chinook salmon were tagged and clipped. Upon completion at Kettle Moraine, the trailer was moved to the Wisconsin DNR Les Voight hatchery near Bayfield, WI where 253,525 fish were tagged and clipped starting on April 15th. With the assistance of Northwest Marine Technology, the second new trailer was set up at Wild Rose hatchery near Waupaca, WI on March 28th and 717,203 Chinook were successfully tagged and clipped by April 7th.

At the Michigan DNR Wolf Lake hatchery near Kalamazoo, Michigan, 937,835 Chinook salmon were tagged and clipped during March 15th - April 7th. After the completion of the Wolf Lake project, beginning on April 12th, two AutoFish trailers worked in tandem at Michigan DNR Platte River Hatchery near Beulah, MI to tag and clip 2,050,744 Chinook salmon. The Platte River project was completed on May 13th and brought to a close the 2011 spring tagging and marking season.

This is the first year that all Chinook salmon released from hatcheries into Lakes Michigan and Huron have been mass marked. The 2011 spring tagging season began on March 8th and concluded on May 13th with a total of 4,689,947 hatchery reared Chinook salmon from seven hatcheries in four states tagged and clipped at an average output of 7,242 fish per hour. This collaborative tagging effort involving the Fish and Wildlife Service and four state agencies will benefit the management of the valuable Great Lakes Chinook salmon fishery by providing information about how the hatchery reared fish are moving within the basin and contributing to fisheries, as well as providing unbiased data to help managers determine levels of natural reproduction.

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

Catching Up with Spring at Neosho NFH

BY MELISSA CHEUNG, NEOSHO NFH

Over the last two months, hatchery staff at the Neosho National Fish Hatchery (NFH) has kept busy with springtime responsibilities. In addition to the scheduled tours, extended weekend hours, and increased visitors at the new visitor center, the staff has also been pre-occupied with fish production.

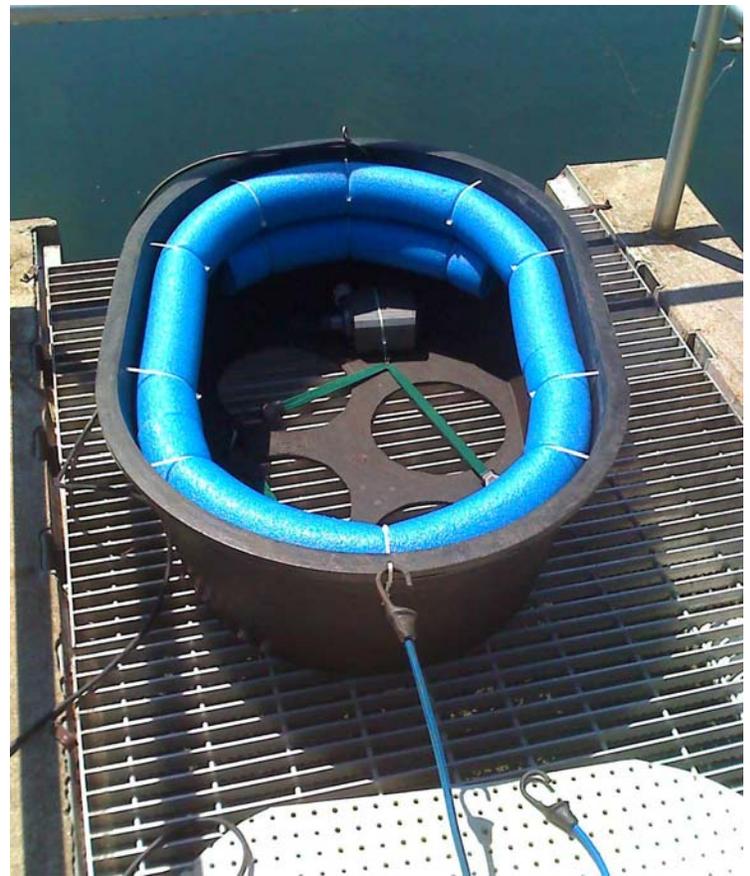
The pallid sturgeon broodstock from last year are back in the Missouri River. Of these adults, we attempted to spawn one female and male pair. Unfortunately, the female never released her eggs, even though she was gravid with what appeared to be fully developed eggs. None of the other fish were reproductive or a genetically viable match. This year's unsuccessful spawning of sturgeon is an example of the challenges still encountered with endangered pallid sturgeon propagation. The silver lining to the story is that we now have space to accommodate pallid sturgeon fry from Blind Pony State Fish Hatchery. These fish are about a month and a half old and occupy all the tanks we have for sturgeon fry. They are active and readily eat grated frozen brine shrimp. In addition to the new fry, the hatchery has ten new pallid sturgeon broodstock that will be held on-station until next year's spawning time. The juvenile pallid sturgeon from last year's spawn will be tagged and stocked by the end of summer.

As for rainbow trout, the raceways and tank room are completely full. Production fish have been moved to the raceways to avoid the warmer temperatures and increased sunlight currently in the ponds. The next stocking trip is in mid-June.

In addition to fish culture, graduate student Ben Bosman and Fish and Wildlife Service employee Bryan Simmons from Dr. Chris Barnhart's native mussel lab at Missouri State University visited Neosho NFH to retrieve some water samples. As part of their trip, they left us with a "tubweller", or floating upweller in a tub, and some fatmuckets (native mussels). These native mussels are considered common in the state of Missouri. While not endangered, they are susceptible to the same water quality and bank destabilization problems that all freshwater mussels face.

The fatmuckets were divided into four different buckets within the upweller system. Each bucket was

capped with mesh on both ends. The fatmuckets were positioned between the mesh screens. The mussels can then filter feed as water moves up through the compartment. The "used" water is then pumped out of the floating upweller (flupsy), continuously allowing new water to flow in from the bottom. The flupsy is teaching us how to optimize pond conditions for mussel growth. The mesh screens clogging more than once a week indicates that the set-up still needs tweaking. Through trial and error, staff is learning what works within the pond set-up.



-USFWS

The floating upweller (flupsy), is placed in a culture pond and continuously allows new water to flow in from the bottom and through buckets that have a screen on each end to allow water to pass through, but keep the mussels inside the container. You can see where the buckets will set in the flupsy, which also has a protective cover.

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

Crab Orchard NWR: Asian Carp Alert!

BY TERESA CAMPBELL, CARTERVILLE FWCO

The series of severe thunderstorms and heavy rain that hit Southern Illinois in early May led to record high flooding on Crab Orchard National Wildlife Refuge (NWR). The sheer volume of water pouring over the Crab Orchard Lake spillway created a possible avenue for fish passage from what was once thought to be an impassible barrier (and probably still is). This raised immediate concerns about the notori-



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The Crab Orchard Lake spillway (left) was considered an impassible barrier to invasive Asian carp until floodwaters inundated the barrier (right).

ous menaces of the Mississippi: Asian carp. This concern was compounded by a sighting made by Carterville Fish and Wildlife Conservation Office (FWCO) staff of silver carp jumping below the spillway on May 6th. Bighead and silver carp have been present below the spillway for years, but until recently there was no way for them to get past the spillway to infiltrate the lake. Although it still would

have been difficult, Asian carp are powerful swimmers, and may be able to traverse even such a high-flow event. Furthermore, bighead and silver carp tend to swim upstream in the spring to spawn, which may have increased their tendency to try to cross over the spillway. If these fish make it into Crab Orchard Lake and establish a reproducing population, it could be detrimental to popular fisheries, including bluegill, crappie and bass.

The severity of this possibility prompted action on the part of the Carterville FWCO, which is located on Crab Orchard NWR. It was decided that the most likely places to catch Asian carp, had they made it into the lake, would be the Little Grassy and Devil's Kitchen stilling basins, which are connected to Crab Orchard Lake via streams in high water. Carterville FWCO staff targeted the response efforts there, using seine and trammel nets to sample the stilling basins. Fortunately no Asian carp were found, providing some reassurance as to the safety of the lake.

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

Early Detection and Monitoring for Aquatic Invasive Fish Species on Lake Huron and the St. Marys River

BY ANJANETTE BOWEN, ALPENA FWCO

During September 2010, Alpena Fish and Wildlife Conservation Office (FWCO) conducted an annual survey to detect new populations and monitor existing populations of invasive fish species. Bottom trawling gear was used to detect new populations of Eurasian ruffe and round goby, and to monitor existing populations of round goby. Sampling was conducted at a total of seven nearshore locations in United States waters of Lake Huron and five nearshore locations in the St. Marys River. Efforts were expanded in the St. Marys River to include Munuscong Lake. A new sighting of round goby (three specimens) was discovered in Raber Bay in the St. Marys River. Round goby also continue to persist at

all Lake Huron sampling locations where they were previously found.

Eurasian ruffe and round goby are two invasive fish species that are thought to compete with native species for food and habitat resources. They are native to Eurasia and were unintentionally introduced into the Great Lakes. Eurasian ruffe have been found in Lakes Superior, Huron and Michigan, but are currently thought to be extirpated from Lake Huron. Round goby have been found in each of the five Great Lakes and are also in the Mississippi River system. Although both species have been found in the upper Great Lakes, only round goby have been detected in the St. Marys River, which is the connecting water-

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.

way between Lake Superior and Lakes Huron and Michigan. Round goby were captured in the southern portion of the St. Marys River near Drummond Island

for the first time during the summer of 2008 by recreational anglers.

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

Monitoring to Detect New Invasive Fishes in Lake Superior

BY MARK BROUDER, ASHLAND FWCO

Aquatic invasive species pose a significant threat to native fishes in the Great Lakes with at least 89 invasive fishes, invertebrates, fish disease pathogens, plant and algae already known in Lake Superior. These aquatic invaders have entered Lake Superior through shipping, recreational boating and fishing, aquarium trades, and ship passage structures that bypass natural migration barriers. The Ashland Fish and Wildlife Conservation Office (FWCO) sampled two known “hotspots” in Lake Superior for the first time during September 2010 - the upper St. Marys River near Sault Ste. Marie, Michigan (MI) and the Thunder Bay Harbor at Thunder Bay, Ontario.

A standardized protocol developed by the U.S. Environmental Protection Agency (EPA) was used to maximize the number of fish species detected through the use of fyke nets, electrofishing and bottom trawling. Through our sampling efforts at Sault Ste. Marie, a total of 2,428 fish comprising 27 different species were captured. Luckily, all those fish were known to be native to the area and no new invasive species were captured during monitoring efforts; however, at Thunder Bay, seven invasive species were identified during sampling: common carp, threespine stickleback, fourspine stickleback, rainbow smelt, round goby, tubenose goby and ruffe. In total, there were 1,384 fish captured (34% considered invasive) which comprised 25 total species (28% considered invasive). These monitoring efforts demonstrate the ability of invasive fishes to overwhelm and damage the native

species community and justify the need for continual efforts to prevent the spread of new invasive fishes. As the threat of new invasive species remains high,



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Eric Vacha (left) and Gary Cypinski sampled two spots in Lake Superior for aquatic invasive species this spring, the upper St. Marys River near Sault Ste. Marie, Michigan, and the Thunder Bay Harbor at Thunder Bay, Ontario.

the Ashland FWCO will continue monitoring efforts to detect new invasive fishes in Lake Superior. If a new invasive species is detected, various management actions could be implemented to minimize the risk of them permanently establishing a new population.

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

Camp Chickagami: Merging the Outdoors and Education

BY JOSEPH GERBYSHAK, ALPENA FWCO

Biologist Joseph Gerbyshak presented to a group of students at Camp Chickagami, an outdoor educational camp for kids, on June 2nd. Camp Chickagami is located on Lake Esau, a 275 acre lake in southern Presque Isle County. Attendees of the



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Joseph Gerbyshak of the Alpena Fish and Wildlife Conservation Office gave an interactive presentation on food webs in Lake Esau, by allowing students to sort through kick net samples of aquatic invertebrates as he discussed their importance to the food web.

camp were 6th grade students from Alpena Lincoln Elementary School. The field trip was a reward to the students for good behavior throughout the school year.

Gerbyshak gave an interactive presentation on food webs in Lake Esau. In order to demonstrate lower levels of the food web, students sorted through kick net samples for aquatic invertebrates. They were fascinated by the many large dragonfly and mayfly larva that were found in the samples. Moving up the food web, the students seined for small fish species. They captured numerous rainbow darters and were intrigued by the brightly colored markings on these fish. In order to capture a larger diversity of members of the food web, minnow traps and a mini-fyke net were set a day prior. The students were disappointed when the minnow traps came up empty. In anticipation of catching higher members of the food web, the students assisted in pulling the mini-fyke net. They were most interested in the catch of the mini-fyke net, a rock bass and crayfish. A better understanding was gained by the students on the predator prey interactions and food webs in Lake Esau. Educational sessions like this help connect children with nature by describing food web interactions while out-of-doors and providing hands-on demonstrations.

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 Alpena FWCO: <http://www.fws.gov/midwest/alpena/index.htm>

Mussel Information Presented to Local Students at Three Outreach Events

BY NATHAN ECKERT, GENOA NFH

Genoa National Fish Hatchery (NFH) staff recently participated in several outreach events to promote fish hatchery operations and our freshwater mussel restoration program. The three events were Riverfest at Pike's Peak near McGregor, Iowa, Norskedalen Environmental Education Day at Coon Valley, Wisconsin, and the Westby Rod and Gun Club 42nd annual youth shoot. The smallest event was

approximately 75 students while the largest exceeded 250. Each event varied in structure and presentation length; however, each group learned about the complex lifecycle of freshwater mussels, the reasons for their declines-as well as a 'show and tell' session to give examples of the variety in mussel shells that can be found locally.

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

Lake Sturgeon of the Bad River, Wisconsin

BY JOSHUA SCHLOESSER, ASHLAND FWCO

Population declines of lake sturgeon in Lake Superior, and really all the Great Lakes, started in the early 1800's when these large prehistoric fishes were disregarded by fisherman because they ripped commercial fishing nets and were thought to have little value. However, by the mid 1800's, fishermen revered the lake sturgeon for its valuable isinglass (oil) and delicious meat, leading to a booming commercial fishery targeted at lake sturgeon. This fishery was relatively short lived, and by the early 1900's lake sturgeon populations had collapsed, due in part to over-exploitation. Other factors responsible for the population collapse include degradation of spawning habitat and water quality, as well as construction of dams, which altered flow regimes and impeded spawning migrations. Had fishery management agencies at the time understood the vulnerability of lake sturgeon to over-harvest, precautions might have saved the lake sturgeon from population collapse.



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Josh Schloesser and Anna Varian display a 78 pound lake sturgeon that was captured in an assessment on the Bad River, Wisconsin.

Today, varieties of federal, state, tribal, and Canadian fishery management agencies all around Lake Superior, and the other Great Lakes, are working to rehabilitate populations of lake sturgeon. One such effort is occurring on the Bad River, Wisconsin (WI) where the Ashland Fish and Wildlife Conservation Office (FWCO) is cooperatively working with the Bad River Natural Resources Department to assess the current population status and better understand

the biology of lake sturgeon that spawn in the Bad River. From a gill net assessment conducted in the spring of 2010, where each fish was given a uniquely numbered tag and a variety of biological measurements were taken, biologists from the Ashland FWCO were able to estimate spawning population size, size and age structure of adults, and growth and mortality rates which are important to understand for effective fishery management.

A variety of fishery models were used to estimate these population indices, but collectively when all metrics are synthesized, they provide an overview of the population's health. From the 2010 spring spawning assessment, we estimated nearly 850 adult lake sturgeon were using the Bad and White (a tributary to the Bad River) Rivers to spawn in 2010, a significant increase over the last estimate of 250-350 in 1999. This estimate represents only a portion of the total population because male lake sturgeon only spawn every 2-4 years and females every 3-7 years. Biologists also estimated that a lake sturgeon 1,080 mm long was approximately 20 years old and at 1,417 mm was 40 years old. That's a growth rate of 337 mm in 20 years; however, biologists suspect these fish may actually be older than estimated, because it is hard to get an accurate age from older lake sturgeon, and typically age is underestimated after 14 years old. Lastly, total annual mortality was estimated to be <0.11 which is the proportion of fish that die from a combination of natural and fishing related mortality. Lake sturgeon mortality rates have never been estimated for fish in Lake Superior, so this information provides a baseline by which we can compare other populations in Lake Superior and is a step forward to managing for a sustainable harvest.

Sound management of the Bad River lake sturgeon population is critical for this rehabilitating population, because currently fish are harvested by state licensed sport anglers and tribal subsistence fishermen. A report synthesizing the population

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.

biology of Bad River lake sturgeon has been completed and is available at the Ashland FWCO (contact Joshua_Schloesser@fws.gov for an electronic copy). This report will be an integral part of lake sturgeon management to ensure the Bad River population is

sustainable into the future valuable. It will also assist cooperating agencies around Lake Superior and all the Great Lakes as they continue to implement lake sturgeon rehabilitation efforts.

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

Brook Trout Reintroduced to Trout Creek at the Oneida Reservation

BY DOUG ALOISI, GENOA NFH

For the past several years, the Oneida Tribe has partnered with local, state and federal partners to restore habitat and brook trout to the Trout Creek watershed. Trout Creek has undergone extensive habitat restoration to support a population of brook trout that has been re-introduced from a neighboring watershed. Original populations of brook trout had been extirpated when land use practices, pollution and channelization degraded habitat to the point that the stream could not support a healthy population.

The tribe successfully removed an impoundment to allow fish passage in the stream, water quality and food are at healthy levels, and the Ash Creek strain of brook trout have been captured and spawned by the Wisconsin Department of Natural Resources (DNR), and then transferred to Genoa National Fish hatchery (NFH) for rearing to three inch fingerlings for three consecutive years. At Genoa, the fish are provided with a healthy trout diet and ideal rearing conditions, free of predators and other threats young fish would encounter naturally in the wild. Fingerlings are also vaccinated at two inches to prevent furunculosis, a naturally occurring fish disease that could reduce survival for the young brook trout.

This spring, 2,351 young brook trout were transferred from Genoa NFH to the Oneida Nation and were released into 5 locations along Trout Creek. The locations were selected to provide ample food and habitat for the new population of brook trout on the Oneida Reservation. Once established, the population will help support the traditional lifestyle of members of the Oneida Nation. Many thanks to all of the partners in conservation who made this project a success: Green Bay Fish and Wildlife Conservation Office, The Oneida Nation, and Wisconsin DNR.

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



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Genoa National Fish Hatchery is producing the Ash Creek strain of brook trout as part to a restoration program on Trout Creek which is located on the Oneida Nation.

Fish and Wildlife Service Assists in the Transition of eDNA Surveillance

BY SARAH BAUER, LA CROSSE FHC

Environmental DNA or eDNA is genetic material deposited in the environment from organisms. The genetic material can be extracted and purified from soils, sediments, water, etc. A Polymerase Chain Reaction (PCR) test is then performed on the material to screen for the presence or absence of an organism of interest. eDNA screening is not a new management tool for biologists, but it might become a new tool in the Fish and Wildlife Service's arsenal for management of invasive species. An eDNA surveillance approach was developed by the University of Notre Dame to detect the presence or absence of bighead and silver carp in waterways.

Currently, an eDNA surveillance effort is underway in the Chicago Area Waterways (CAWS) to monitor the advancement of the invasive fish species bighead and silver carp. The eDNA surveillance method is a joint effort between the Illinois Department of Natural Resources (DNR), U. S. Army Corps of Engineers (USACE), U.S. Environmental Protection Agency (EPA), and several Fish and Wildlife Conservation Offices (FWCO). The La Crosse Fish Health Center (FHC) has been tasked to participate in the transition of this new management tool because the FHC routinely performs PCR assays to confirm the presence or absence of disease pathogens. In May, Sarah Bauer of the La Crosse FHC, and Nick Bloomfield, Louise Mauldin, and Mark Steingraeber of the La Crosse FWCO traveled to the Chicago Area for hands on eDNA training. The group was trained by USACE staff on how collect water samples while maintaining quality assurance of the samples.

After sample collection training was completed, Louise and Sarah traveled to the EPA facility in downtown Chicago for additional training on how to filter the water samples and follow quality assurance guidelines. After the water is filtered, the filter paper

is frozen and shipped to the USACE-ERDC (Engineer

Research and Development Center) facility in Vicksburg, Mississippi. At ERDC, a team extracts and purifies genetic material from the filters and

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.



-USFWS/SarahBauer

A water sample is being collected from a site in the Chicago Area Waterways for eDNA surveillance, to detect the presence or absence of invasive bighead and silver carp DNA.

screens for the presence or absence of bighead and silver carp DNA using the PCR techniques developed by the University of Notre Dame. The University of Notre Dame and USACE has trained staff at the La Crosse FHC since the beginning of this fiscal year. This training is to assist in a smooth transition if the Fish and Wildlife Service takes over the eDNA surveillance and to provide a transfer of knowledge and procedures to any new staff required for the eDNA surveillance.

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

Bridge Construction begins on the Maple River

BY HEATHER RAWLINGS, ALPENA FWCO

The Maple River is a high-quality, predominantly cold-water stream that flows roughly 23 miles and drains an area of approximately 148,000 acres before flowing into Burt Lake and into the Cheboygan River watershed in the northern lower peninsula of Michigan. The Maple River is one of only three rivers where the federally listed endangered Hungerford's Crawling Water Beetle (Beetle) is located in Michigan. According to the Hungerford's Crawling Water Beetle Recovery Plan, "In general, projects that reduce erosion at road crossings are likely to have overall benefits to this species" (U.S. Fish and Wildlife Service 2006).

A total of 25 road-stream crossing sites were identified as contributing excessive sedimentation to the Maple River watershed, as documented in the "Maple River Watershed: Road/Stream Crossing Inventory Report (Conservation Resource Alliance 2000)." One of these crossings, located in the headwaters, is the Pleasant View Road crossing on the West Branch of the Maple River. This crossing is a current priority of the local road commission and presented an opportunity to improve habitat with renovation at the site. The West Branch of the Maple is known to support the best trout fishery and coldest water within the watershed. To date, the Beetle has not been located in these waters.



-USFWS

Three culverts that were badly deteriorated and facing collapse (left) are being replaced by a bridge (right) which crosses the West Branch of the Maple River, which is a high-quality, predominantly cold-water stream in the northern lower peninsula of Michigan.

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 former crossing consisted of three 36" culverts, which were critically failing to the extent that they were blocking fish passage. Erosion from the road shoulders and embankment were contributing excessive sand to the river. The undersized and failing culverts were causing flooding and warming of upstream waters. A partnership was developed in 2008 to support the enhancement of this road crossing, and includes representation from the Conservation Resource Alliance (CRA), Emmet County Road Commission, Little Traverse Bay of Odawa Indians, Maple River Task Group, Michigan Department of Environmental Quality, Michigan Department of Natural Resources and the Fish and Wildlife Service. The Fish and Wildlife Service is supporting the project through two of its habitat programs- Partners for Fish and Wildlife and National Fish Passage Program. CRA is the lead partner and has coordinated fundraising for the project, raising \$450,000.

Construction began on April 25 and was completed by July 4, 2011. The project involves replacing the existing culverts with a 40 ft. wide timber bridge, which will accommodate the natural flow of the river. In addition, the embankments were stabilized and road runoff managed to reduce or eliminate sedimentation at the crossing. Alpena Fish and Wildlife Conservation Office (FWCO) biologists Ania, Gerbyshak and Rawlings made two site visits in May to check on construction progress. At that time, bridge footings and supports have been placed, and work on the deck scheduled to start after Memorial Day.

Benefits of the project will be 1) reinstated fish passage (primarily brook trout), allowing access to approximately 12 miles of the headwaters of the Maple River; 2) reduction of adverse fish habitat impacts from erosion and warming at the crossing, benefiting approximately 8 stream miles of fish habitat downstream to the Lake Kathleen impoundment; and 3) benefits to non-fish species currently suffering the impacts of sand erosion, flooding, and obstructed flow.

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

Region 3 Assists the National Park Service with MOCC Course

BY ADAM KOWALSKI ALPENA FWCO

Three Region 3 Motorboat Operator Certification Course (MOCC) instructors (Dave Wedan, Adam Kowalski, and Jeff Lucas) traveled to Bayfield, Wisconsin, to assist the National Park Service (NPS) MOCC instructors with a course. The NPS and Fish and Wildlife Service instructors teamed up to put on a three day MOCC course at Apostle Islands National Lakeshore from May 17-19. MOCC is designed to give training to Department of Interior (DOI) employees before they are allowed to operate DOI watercraft.

The class consisted of six NPS employees, six Fish and Wildlife Service employees, two Bureau of Indian Affairs (BIA) employees, and one Fish and Wildlife Service volunteer. MOCC policy requires a 3:1 student to instructor ratio when conducting on-the-water instruction. Region 3 has been developing a partnership with the Apostle Islands National Lakeshore MOCC instructors over the past few years. The size of this class and multi-agency involvement provided a

perfect platform for Region 3 to assist with this class and further develop our partnership.

The following is a list of topics covered during the course: in-water survival, proper use of floatation devices, proper anchoring techniques, required and recommended equipment for DOI vessels, changing a propeller, how to properly connect a boat trailer to a vehicle, how to tow a trailer with a vehicle, rules of the road, navigational aides, and proper boat handling.

Overall this course was a success, and all 15 students completed the training. Students reported that they learned a great deal and felt that this course provided the necessary tools to begin operating vessels in a safe and prudent manner.

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 Alpena FWCO: <http://www.fws.gov/midwest/alpena/index.htm>

SAF4102 - Motorboat Operator Certification Course (MOCC)

Course Description. This course gives participants the training required to permit operation of Service-owned watercraft. It reviews minimum requirements for safe operation of motorboats and includes a review of legal requirements, preparations, navigation, operations, emergency procedures, rescue, self rescue, trailering, fire suppression and basic seamanship. The course includes both classroom and on-the-water instruction. There is an on-the-water practical exam during which the student must demonstrate certain skills to pass as well as a written exam with a passing grade of 70 required.

Course Objectives. The objectives of the MOCC are to:

Provide attendees with specific skills and knowledge that will allow them to make an informed decision about their own safety, the safety of any crew member, as well as the safety of the vessel,

Familiarize attendees with state-of-the-art watercraft safety equipment and other gear, through demonstration and actual use, and

Allow attendees to demonstrate, through written examination and physical demonstration, that they have adequate grasp of motorboat handling techniques and knowledge to safely operate a motorboat in a normal work environment.

Headin' West

BY BRETT WITTE, COLUMBIA FWCO

On June 3rd, the Columbia Fish and Wildlife Conservation Office (FWCO) bid farewell to Fish Habitat Conservation Branch Chief Joanne Grady. Joanne began her career in Columbia almost 17 years ago; around the time some of our youngest employees were drawing their first breaths. Joanne's duties as a Fish and Wildlife Service employee included fish management in Missouri, Iowa and Illinois. She monitored the river as the new highway bridge was



-Ellie Milligan

Joanne Grady has fun at her going away party. After working 17 years at the Columbia Fish and Wildlife Conservation Office, Joanne heads for Denver to be the Aquatic Invasive Species Coordinator for Region 6.

constructed at Hermann, Missouri. She was a member of the Fish and Wildlife Service's inter-regional team to assess the U.S. Army Corps of Engineers shallow water habitat creation. The national paddlefish stock assessment database was managed by Joanne for MICRA for a decade - and for the last 12 years, Joanne brought the National Fish Passage Program to Missouri and western Iowa. She takes great pride in the free span low water crossings she helped create for the endangered Niangua darter. For the last two years, Joanne worked with National Fish Habitat Partnerships as they've developed from the ground up. This led to significant time spent in the Meramec and Bourbeuse watersheds and with the wonderful people who live there.



Joanne, her husband Mark, and their kids Michael and Meaghan are relocating to the "mile high" city of Denver, Colorado. Besides enjoying the low humidity and high elevation, Joanne will be vanquishing invasives from East and West as the new

Aquatic Invasive Species Coordinator for Region 6. Once Joanne gets settled, her proffered hospitality may be tested. Given her proximity to the Rocky Mountains, her home may double as a ski hostel during the cold months.

Congratulations on your new position Joanne! You and your family will be missed by many and we wish all of you the best on this new adventure.

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

Congressional Actions

S. 1201 (is) 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. [Introduced in Senate]

S. 52 (is) To establish uniform administrative and enforcement procedures and penalties for the enforcement of the High Seas Driftnet Fishing Moratorium Protection Act and similar statutes, and for other purposes. [Introduced in Senate]

H.R. 2373 (ih) To establish a regulatory system and research program for sustainable offshore aquaculture in the United States exclusive economic zone, and for other purposes. [Introduced in House]

H.R. 2351 (ih) To direct the Secretary of the Interior to continue stocking fish in certain lakes in the North Cascades National Park, Ross Lake National Recreation Area, and Lake Chelan National Recreation Area. [Introduced in House]

S. 651 (is) To require the Secretary of the Interior to convey the McKinney Lake National Fish Hatchery to the State of North Carolina, and for other purposes. [Introduced in Senate]

H.R. 1160 (ih) To require the Secretary of the Interior to convey the McKinney Lake National Fish Hatchery to the State of North Carolina, and for other purposes. [Introduced in House]

H.Con.Res. 15 (ih) Expressing the sense of the Congress that the United States Fish and Wildlife Service should incorporate consideration of global warming and sea-level rise into the comprehensive conservation plans for coastal national wildlife refuges, and for other purposes. [Introduced in House]

S. 1183 (is) To establish a national mercury monitoring program, and for other purposes. [Introduced in Senate]

S. 1224 (is) To amend Public Law 106-392 to maintain annual base funding for the Upper Colorado and San Juan fish recovery programs through fiscal year 2023. [Introduced in Senate]

S. 632 (is) To amend the Magnuson-Stevens Fishery Conservation and Management Act to extend the authorized period for rebuilding of certain overfished fisheries, and for other purposes. [Introduced in Senate]

H.R. 521 (ih) To amend the Federal Food, Drug, and Cosmetic Act to prevent the approval of genetically engineered fish. [Introduced in House]

S. 230 (is) To amend the Federal Food, Drug, and Cosmetic Act to prevent the approval of genetically-engineered fish. [Introduced in Senate]

H.R. 520 (ih) To amend the Federal Food, Drug, and Cosmetic Act to require labeling of genetically engineered fish. [Introduced in House]

H.R. 1646 (ih) To amend the Magnuson-Stevens Fishery Conservation and Management Act to preserve jobs and coastal communities through transparency and accountability in fishery management, and for other purposes. [Introduced in House]

S. 229 (is) To amend the Federal Food, Drug, and Cosmetic Act to require labeling of genetically engineered fish. [Introduced in Senate]

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

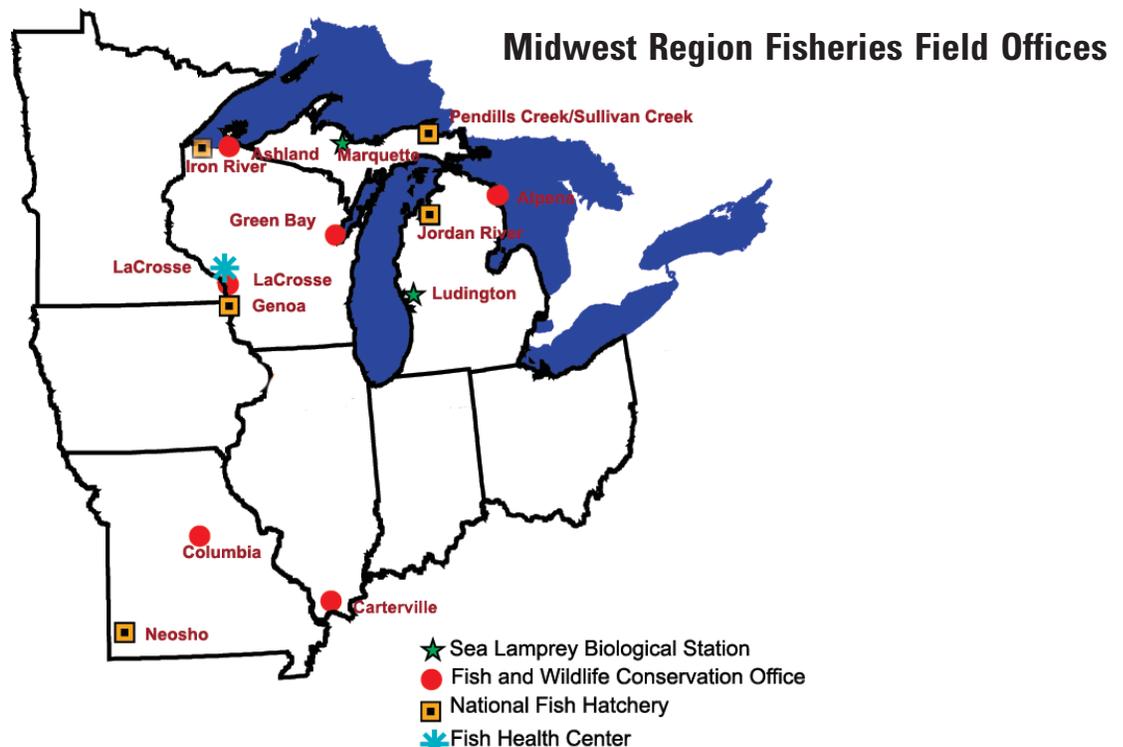
technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and relicensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

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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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
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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
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Becky Lasee (becky_lasee@fws.gov)
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LaCrosse Fish and Wildlife Conservation Office
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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

Aquatic Species Conservation and Management

- [Alpena FWCO Assists with Pendills Lake Fish Health Survey](#)
 - [Anjanette Bowen, Alpena FWCO](#)
 - [Pendills Creek NFH Stocks 960,000 LAT](#)
 - [Crystal LeGault Anderson, Pendills Creek NFH](#)

Aquatic Invasive Species

Public Use

Cooperation with Native Americans

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

Workforce Management

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A Coordinated Mass Marking Program for Salmonines Stocked into the Laurentian Great Lakes

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