



U.S. Fish & Wildlife Service - Midwest Region

Fisheries & Aquatic Resources Program

Fish Times

Genoa NFH Partners to Conduct Mussel Study

Raceways Boil with Tagged Paddlefish

Region 3 Coastal Program Completes Strategic Plan

Biologists Discuss Michigan's Mussel Recovery Efforts



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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

4 Genoa NFH Partners to Conduct Mussel Study

Partners began another joint project to test different feeding regimes for newly transformed mussels.

BY TONY BRADY, GENOA NFH

5 Raceways Boil with Tagged Paddlefish

Columbia NFWCO assists in tagging approximately 15,000 paddlefish at Missouri's Blind Pony State Fish Hatchery near Sweet Springs.

BY BRIAN ELKINGTON AND JOANNE GRADY, COLUMBIA NFWCO

6 Region 3 Coastal Program Completes Strategic Plan

The Fish and Wildlife Service's Midwest Regional Coastal Program – Great Lakes recently completed its initial five year strategic plan.

BY TED KOEHLER, ASHLAND NFWCO

7 Biologists Discuss Michigan's Mussel Recovery Efforts

Partners met to discuss Great Lakes mussel issues, especially those affecting the Huron Erie Corridor.

BY JAMES BOASE, ALPENA NFWCO



-USFWS

Walleyes are removed from Clifford Lake, located on the Rydell National Wildlife Refuge. Walleye fry are stocked each spring and trapped as fingerlings in the Fall to fill high priority stocking requests.

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

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-USFWS/Matt Mangan

Mike Stahl of the Carterville National Fish and Wildlife Conservation Office retrieves a net.

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Conservation Briefs 8-20

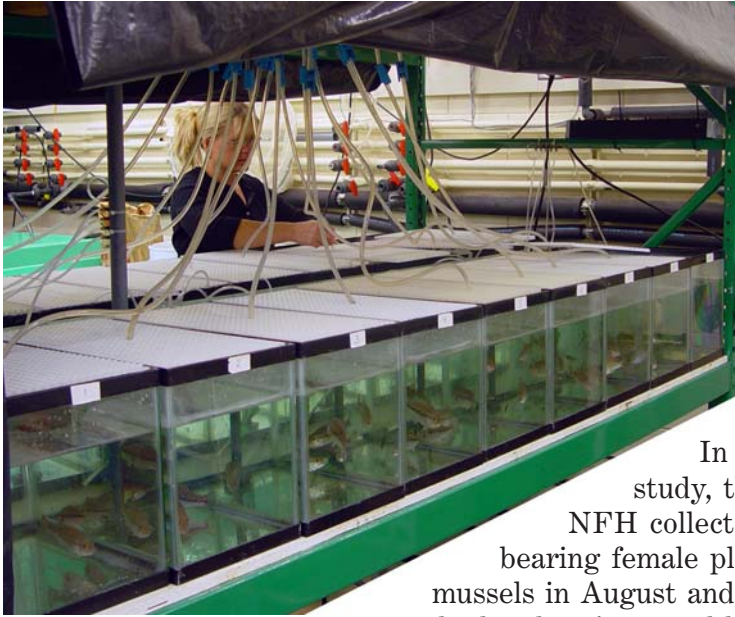
- 8 La Crosse Friends Group Banquet is a Huge Success
BY HEIDI KEULER, LA CROSSE NFWCO
- 8 Biologist Addresses Michigan Community College
BY AARON WOLDT, ALPENA NFWCO
- 9 La Crosse FHC Meets with National Park Service to discuss VHS
BY KEN PHILLIPS, LA CROSSE FHC
- 9 Annual Operating Plan Public Meetings Held in Missouri
BY TRACY HILL, COLUMBIA NFWCO
- 9 Trempealeau NWR Hosts Annual 8th Grade Environmental Week
BY HEIDI KEULER, LA CROSSE NFWCO
- 10 Lake Trout Gametes Fly the Friendly Skies
BY KURT SCHILLING, IRON RIVER NFH
- 10 Fish Health Samples Taken from Walleye and Sauger in the Mississippi River
BY SARAH BAUER, LA CROSSE FHC
- 11 Tracking Catfish
BY SARA MARSO, COLUMBIA NFWCO
- 11 Great Success during 2007 Annual Walleye Harvest from Clifford Lake
BY DAVE WEDAN, LA CROSSE NFWCO
- 12 Lake Huron, St. Marys River Ports Surveyed for New Invasive Species
BY ANJANETTE BOWEN, ALPENA NFWCO
- 12 Asian Carp Information Provided for Environmental Health Association
BY ANJANETTE BOWEN, ALPENA NFWCO
- 13 "Operation Redhorse" - Mission Accomplished
BY JEFF FINLEY, COLUMBIA NFWCO
- 14 Columbia NFWCO Investigates Walleye at DeSoto NWR
BY BRIAN ELKINGTON, COLUMBIA NFWCO
- 14 Genoa NFH meets Future Leaders
BY JENNY WALKER, GENOA NFH
- 15 Come One, Come All!
BY ANGELA BARAN, IRON RIVER NFH
- 15 Alpena NFWCO Participates in Annual Lighthouse Festival
BY SCOTT KOPROSKI, ALPENA NFWCO
- 15 Zoo Animals Get Special Treat from Iron River NFH
BY STEVE REDMAN, IRON RIVER NFH
- 16 Fall Walleye Surveys with the Great Lakes Indian Fish and Wildlife Commission
BY FRANK STONE, ASHLAND NFWCO
- 16 Menominee Tribe Concerned about VHS
BY COREY PUZACH, LA CROSSE FHC
- 16 Service Biologist attends Technical Fisheries Committee Meeting
BY AARON WOLDT, ALPENA NFWCO
- 17 Columbia NFWCO meets with Leading River Restoration Ecologists
BY CLAYTON RIDENOUR, COLUMBIA NFWCO
- 17 Coaster "Body Art" Update
BY ANGELA BARAN, IRON RIVER NFH
- 18 Kabasa Wetland Restoration Project
BY TED KOEHLER, ASHLAND NFWCO
- 18 Habitat Assessment and Monitoring Program Completes 2007 Field Season
BY CLAYTON RIDENOUR, COLUMBIA NFWCO
- 19 Hazmat Transportation Certification Training Completed
BY MARK STEINGRABER, LA CROSSE NFWCO
- 19 Cross-Training isn't Just for Athletes
BY PATTY HERMAN, COLUMBIA NFWCO
- 20 AFS Student Chapter Comes to the Rescue
BY ANGELA BARAN, IRON RIVER NFH
- 20 Streams 101 Training
BY JOANNE GRADY, COLUMBIA NFWCO

Congressional Actions 21
Midwest Region Fisheries Divisions 22
Fisheries Contacts 23
Fish Tails 23

Genoa NFH Partners to Conduct Mussel Study

BY TONY BRADY, GENOA NFH

Most successful projects are those projects in which partners come together and share expertise. The Genoa National Fish Hatchery (NFH) and the U.S. Geological Survey's Upper Midwest Environmental Sciences Center (UMECS) have been conducting joint research projects for decades. In recent years, a good portion of this collaborative research has focused on freshwater mussels, including testing the effects of therapeutic compounds commonly used on fish and on larval mussel, or *glochidia*, encysted on the gills of fish. Tests are also underway determine the effectiveness of a chemical to combat invasive zebra mussels and the chemical's effects on native mussels.



-USFWS
Michelle Bartsch of the Upper Midwest Environmental Sciences Center prepares aquaria to house largemouth bass that are inoculated with mussel larvae (glochidia).

Juvenile mussels were expected to drop off the fish during the first week of November at which time they will be counted and evenly distributed in the feeding chambers. The juvenile mussels will be monitored over the next four months to determine growth and survival of the different feeding regimes. This applied science should help on-the-ground efforts to culture propagated juvenile mussels on a production scale, with the ultimate goal to restore mussel populations in the wild.

In October, Genoa NFH and UMECS began another joint project, testing different feeding regimes for newly transformed mussels. The largest bottleneck for survival of freshwater mussels is their first 120 days of life. While researchers have been able to rear mussels on different diets, nothing to date has been able to match what has been seen in nature.

In preparation for this study, the staff from Genoa NFH collected three larva-bearing female plain pocketbook mussels in August and quarantined them at the hatchery's mussel building. In late October, these mussels were taken to UMECS where Genoa's mussel biologist and UMECS researchers harvested glochidia from the females and used the larvae to inoculate largemouth bass. Juve-



-USFWS
Tony Brady from the Genoa National Fish Hatchery prepares mussel larvae which will be inoculated onto the gills of largemouth bass, where the young mussels will be nourished during this early life stage.

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

Raceways Boil with Tagged Paddlefish

BY BRIAN ELKINGTON AND JOANNE GRADY, COLUMBIA NFWCO

Brian Elkington, Joanne Grady, Jeff Finley, Sara Marso and Chris Clemens from the Columbia National Fish and Wildlife Conservation Office (NFWCO) assisted the Missouri Department of Conservation (MDC) in tagging approximately 15,000 paddlefish at Blind Pony State Fish Hatchery near Sweet Springs. Working in teams of four, biologists injected each 10-20 inch paddlefish with a tiny piece of stainless steel called a coded-wire tag. The tag is the same diameter as a mechanical pencil refill (0.5 mm). Each fish was scanned with a detector to ensure the tag was successfully implanted and then returned to a raceway.

Every coded-wire tag is etched with a unique number that will be read by Columbia NFWCO staff upon the fishes' recapture by MDC biologists or creel clerks. These tags, once entered into the national database, allow us to compare important information such as growth and movement from release to recapture. Missouri's 2007 stocked fish should be large enough to be collected in sampling gear in five to seven years.

MDC produced and tagged just over 65,000 fish this year. The paddlefish we helped tag were released into the Lake of the Ozarks. Additional stocking sites included Table Rock Lake, Truman Lake and the Black River. Some fish were also held for a tag retention test.

The Missouri Department of Conservation has been tagging paddlefish with coded-wire tags since 1995. The agency was a founding member of the Paddlefish/Sturgeon Committee and the Mississippi Interstate Cooperative Resource Association (MICRA) paddlefish stock assessment project. MICRA's 12-year data set is the largest inland fisheries tagging database in the world. The Region 3 Fisheries and Aquatic Resources Program has assisted MICRA states with tag-reading and database management since 1997. Columbia NFWCO has also assisted MDC with fish tagging on an annual basis since the project's inception.



-USFWS/BrianElkington

Joanne Grady from the Columbia National Fish and Wildlife Conservation Office passes a paddlefish to the tagger at the Blind Pony State Fish Hatchery.

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

Region 3 Coastal Program Completes Strategic Plan

BY TED KOEHLER, ASHLAND NFWCO

The Fish and Wildlife Service's Midwest Regional Coastal Program – Great Lakes (CPGL) recently completed its initial five year strategic plan. The East Lansing Ecological Services Field Office and the Ashland NFWCO, which jointly administer the CPGL, worked together to produce the final document, a three-year effort that began with the visioning process and ending with the plan.

The CPGL is committed to maintaining the strategic plan as a living document. As we improve our ability to address trust resource issues in the Great Lakes, our guidance documents and approaches will change. The plan addresses each of the five Coastal Program goals established in the vision document by describing objectives, five-year performance measures and key strategic activities. As the CPGL pursues its goals, our biologists will work under the backdrop of adaptive management, always seeking to re-assess and improve our capability and expertise, and ultimately, our conservation product.

At the beginning of the strategic planning process, stakeholders across the Great Lakes provided insight into the internal and external factors that affect the Coastal Program's current performance or could affect future endeavors. That input provided valuable direction for the plan's design and content. Coastal Program



-USFWS

Coastal counties of the United States include the Great Lakes and comprise less than 25% of America's land area, but are home to more than 50% of our total population.

the nation's rivers remain free-flowing. Consequences of habitat loss include decreases in fish and wildlife populations and many other natural, social and economic impacts that have the potential to decrease quality of life.

At the heart of the Fish and Wildlife Service's mission are the conservation and management of Federal trust resource species such as migratory birds, threatened and endangered species, inter-jurisdictional fish, certain marine mammals, and species of international concern. With a focus on voluntary, cooperative conservation, the Coastal Program works under the premise that fish and wildlife conservation represents a shared responsibility across all lines of interest and society. To that end, the CPGL engages willing partners to conserve and protect valuable fish and wildlife habitat. We provide funding, technical assistance and planning tools needed to make on-the-ground conservation affordable, feasible and effective to benefit Great Lakes trust species.

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

Biologists Discuss Michigan's Mussel Recovery Efforts

BY JAMES BOASE, ALPENA NFWCO

Historical research indicated that Michigan tributaries and the Great Lakes once supported a rich diversity of native mussels. Biologists from the Michigan Department of Natural Resources (DNR), Michigan Natural Features Inventory, Michigan Chapter of The Nature Conservancy, Genoa NFH,



-USFWS/Jim Boase

Biologist Tony Brady from the Genoa National Fish Hatchery surveys a stream for native mussels.

reintroductions of mussels in tributaries of the Mississippi River. Similar to the populations on the Mississippi River system, mussel populations in the Huron Erie Corridor and tributaries to the Great Lakes have been declining or have been extirpated from many areas because of the negative effects of invasive species. Since the invasion of those non-native mussels in the 1980's, native mussels have been steadily declining or have been eliminated from many of these areas. Although zebra mussels do not directly parasitize native mussels, they attach themselves in large numbers to the shells of the native mussels, preventing mussels from foraging, reproducing and dispersing their progeny.

The goal of this meeting was to bring together the key agencies working to restore native mussels so that research gaps could be determined and future research needs identified. The Alpena NFWCO will continue to enhance existing partnerships and build new partnerships in an effort to solve ongoing resource problems regarding native mussels in an environment of shrinking funding.

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

Jordan River NFH, East Lansing Ecological Services Field Office and the Alpena NFWCO met in September to discuss Great Lakes mussel issues, especially those affecting the Huron Erie Corridor, and to provide a forum for discussing recent research findings and future rehabilitation efforts. Topics of discussion included new propagation techniques, supplemental stocking, species reintroductions and relocations of native mussels to areas not affected by invasive zebra and quagga mussels.

Tony Brady from Genoa NFH and Roger Gordon from Jordan River NFH presented examples of recent innovative propagation techniques that have been used in supplemental stockings or



-USFWS/Jim Boase

The smaller invasive zebra mussels are attached to these native mussels, preventing them from foraging, reproducing and dispersing their progeny.

La Crosse Friends Group Banquet is a Huge Success

BY HEIDI KEULER, LA CROSSE NFWCO

On Oct. 10, 2007, 182 people from the La Crosse/Onalaska, Wis., community attended the first *Friends of the Upper Mississippi River Fishery Services* banquet. The



-USFWS

Neil Rettig, a nationally-known filmmaker, received the Silver Eagle award for his work with filmmaking and the natural world. The award is the Midwest Region's most prestigious award given to individuals outside the Fish and Wildlife Service and was presented at the *Friends of the Upper Mississippi River Fishery Services* banquet.

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.

banquet included a silent auction, raffle, dinner, music and an award ceremony. Four awards were given to the North American Squirrel Association for its work with disabled hunters and anglers. Other award recipients included Don Hultman (manager of the Upper Mississippi River National Wildlife and Fish Refuge) for his service with the Cooperative Conservation Program; Doug Aloisi (project leader of the Genoa NFH) for his effort with endangered species at the hatchery; and Emmy-award winner Neil Rettig for his work with filmmaking and the natural world. Rettig's work including 88 films has resulted in numerous other awards. He has partnered with National Geographic, Audubon and the Discovery Channel.

More than 70 sponsors donated over \$7,500 in prizes including fishing poles, a muzzleloader, wildlife prints, photographs, a trail camera and cash. The banquet raised \$5,000 for the development of a permanent educational exhibit for the new Eco-Park, a zoo slated to open in La Crosse in 2009. The Friends group hopes to have an exhibit about the Mississippi River in the zoo's nature center.

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

Biologist Addresses Michigan Community College

BY AARON WOLDT, ALPENA NFWCO

Biologist Aaron Woldt of the Alpena NFWCO was invited to speak at the Fall 2007 Conference of the Michigan Community College Biologists (MCCB). The group serves as a forum for sharing information, instructional techniques and new teaching ideas among the biologists of 29 community colleges in Michigan. Woldt delivered a presentation on viral hemorrhagic septicemia (VHS) in the Great Lakes that included descriptions of the origins of VHS, clinical symptoms, current Great Lakes distribution of VHS, methods that resource agencies and concerned public can use to limit the spread of VHS, and impacts of the disease to the Great Lakes region. Microbiologist Ken Phillips of the La Crosse Fish Health Center (FHC) provided much of the information presented and served as co-author of the presentation.

Approximately 20 to 25 community college biology professors attended the presentation. Woldt fielded questions regarding efforts to limit spread of VHS, especially at fish production facilities, and monitor new occurrences. Woldt's presentation was well received, and many attendees expressed thanks for the high quality of information provided regarding VHS and ways to pass this information on to community college students around Michigan.

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

La Crosse FHC Meets with National Park Service to discuss VHS

BY KEN PHILLIPS, LA CROSSE FHC

Rick Nelson and Ken Phillips of the La Crosse FHC attended an information gathering session sponsored by the National Park Service units on Lake Superior — Isle Royale National Park, Apostle Islands National Lakeshore, and Pictured Rocks National Lakeshore — to identify potential policies and practices that would prevent or slow the spread of viral hemorrhagic septicemia virus (VHS) into Lake Superior, specifically these National Parks. VHS was first reported in the Great Lakes in 2005 and has been responsible for numerous fish kills throughout the basin. Lake Superior is the only Great Lake where VHS has not been detected. The National Park Service will review the information and plan to ask for further input from session attendees as they work to develop a plan to limit or control the spread of VHS into Lake Superior.

For further info about the La Crosse FHC: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/lacrosse-fhc.pdf>

Annual Operating Plan Public Meetings Held in Missouri

BY TRACY HILL, COLUMBIA NFWCO

The U.S. Army Corps of Engineers (Corps) held a public meeting in Jefferson City, Mo., in October to brief the public about its operation plans for the main stem Missouri River system for the 2008 operating year. Under the current water conditions, it is likely that a spring pulse-flow (high water event) will occur during March. It is less likely that a second pulse-flow event will occur in May. Corps personnel gave presentations on system operations, explaining to the public under what conditions these experimental flows could occur. The main concerns raised by the public related to levee damage that had occurred during Spring 2007 and what these increased flows might mean for Missouri residents.

Project Leader Tracy Hill, Branch Chief for Missouri River Studies Wyatt Doyle and biologist Jeff Finley attended the meeting representing the Fish and Wildlife Service. They answered questions from the public concerning fisheries work on the river and how pulse-flows benefit aquatic species.

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

Trempealeau NWR Hosts Annual 8th Grade Environmental Week

BY HEIDI KEULER, LA CROSSE NFWCO

On October 16 and 17, 2007, La Crosse NFWCO employees Heidi Keuler and Ann Runstrom presented a fish capture presentation at the Trempealeau NWR Annual Environmental Days for over 100 8th grade students from the Trempealeau area. This event, organized by the Trempealeau County Extension Office and the Trempealeau NWR, ran from October 17-19, 2007. During the four days, approximately 300 children visited Lock and Dam 6, Perrot State Park, and Trempealeau NWR. At the Trempealeau NWR, children listened to two presentations, one on fish biology and the other on duck biology. Ann and Heidi showed students how biologists capture fish with shocking and netting techniques and then demonstrated backpack shocking near the Refuge shore with the students watching. Only a few live fish were observed including bullheads and young of the year bluegills.

Brian Pember from the Winona District Office of the Upper Mississippi River Wildlife and Fish Refuge and Vickie Hirschboeck from the Trempealeau NWR presented “Ducks on a Stick” and taught the budding biologists all about duck physiology and ecology. The eighth graders especially enjoyed this presentation because they got to touch the beautiful soft feathers of the ducks. Both presentations helped students see how important it is to conserve our natural resources and to help them discover the mysteries of nature. It is just one of the many programs the Midwest Region hosts that contributes to the “No Child Left Inside” Campaign. The Annual Environmental Days at Trempealeau are great for not only the students, but also for strengthening the partnership between Fisheries and Refuges.

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

Lake Trout Gametes fly the Friendly Skies

BY KURT SCHILLING, IRON RIVER NFH

Iron River NFH recently did something rather odd with milt collected from its male lake trout. Over a three-week period, next day commercial air freight was used to deliver the lake trout sperm to Sullivan Creek NFH for fertilizing lake trout eggs.

Both hatcheries maintain multiple strains of lake trout brood stocks, including the Klondike strain of Lake Superior lake trout. The fish at Iron River NFH are not yet mature enough to produce eggs, but are mature



-USFWS
Biologist Nick Grueneis of the Iron River NFH spawns a male lake trout into a bag for shipping. The milt will be used to fertilize lake trout eggs at the White River NFH in Vermont.

enough to produce sperm. The fish at Sullivan Creek NFH are the same age but both sexes are mature. To ensure the best possible mix of genetic material, biologists decided to use sperm from the Iron River NFH fish to fertilize the eggs at Sullivan Creek NFH. The entire process was not difficult, but did require quite a bit of coordination between the two facilities and with the commercial delivery company.

Sullivan Creek NFH biologists checked their female lake trout early Monday mornings and notified Iron River NFH how many were ready to spawn (this is done by feeling the abdomen of the fish). In turn, Iron River NFH biologists collected sperm from an equivalent number of male lake trout. The milt was stripped into special plastic bags, filled with pure oxygen and placed into a chilled container for shipping by overnight delivery. The following day, the sperm arrived at Sullivan Creek NFH to fertilize eggs collected from female lake trout. In all, 151 male lake trout were used for this process. The newly fertilized

lake trout eggs were packaged in special shipping containers and shipped to White River NFH in Vermont. The eggs will be incubated and hatched at White River NFH, and if all goes according to plan, result in 250,000 yearling lake trout for stocking into the Lower Great Lakes.

This project is just one example of the constant cooperation and coordination that occurs between and among programs in the Fish and Wildlife Service. We are proud to work with each other, especially for the benefit of lake trout rehabilitation in the Great Lakes.

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

Fish Health Samples Taken from Walleye and Sauger in the Mississippi River

BY SARAH BAUER, LA CROSSE FHC

Sarah Bauer and Eric Leis of the La Crosse FHC and Dave Wedan of the La Crosse NFWCO electro-fished walleyes and saugers in Pool 9 of the Mississippi River near the Genoa, Wis., lock and dam. Since the sampling occurred at night, the fish were

put on ice and taken to the La Crosse FHC for fish health screening the next day. The fish were tested for bacteria and viruses, and if they are certified disease free, they may be a source of brood stock for Genoa NFH.

For further info about the La Crosse FHC: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/lacrosse-fhc.pdf>

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.

Tracking Catfish

BY SARA MARSO, COLUMBIA NFWCO

On Oct. 3, student employee Sara Marso of the Columbia NFWCO joined technician Ryan Lueckenhoff from the University of Missouri-Columbia Cooperative Fish and Wildlife Research Unit to track catfish in the



-USFWS

Student employee Sara Marso prepares telemetry equipment to locate tagged catfish in the Missouri River to help determine fish movements.

Missouri River as part of doctoral research to determine the home range fidelity of both flathead and blue catfish in the Missouri River. Many fish of both types were tagged and released in both 2005 and 2006, and 80 were tagged and released last spring. Tracking occurs on 40 miles of the Missouri River around Glasgow and Dalton, Mo., covering 20 miles each day. The goal is to determine how far these fish move throughout the day and night along with any seasonal migrations, and to determine which parts of the River these species of catfish utilize.

Lueckenhoff and Marso motored to the end of the reach and ran upstream to find their fish. Following a GPS map, they would find one of the study points and drop a PVC pipe containing the telemetry receiver into the water. If a transmission is received, there is a chirping sound. The closer you are to the fish, the louder the chirping. When hit just right, the code for the fish appears on the screen for the telemetry receiver. The code is recorded and another location is searched for other tagged fish.

After a beautiful day on the river, all of the fish that had been residing in this reach were located. While many of the fish have remained in this vicinity, some of the fish have traveled many miles, and one was even caught in Nebraska.

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

Great Success during 2007 Annual Walleye Harvest from Clifford Lake

BY DAVE WEDAN, LA CROSSE NFWCO

In October, Dave Wedan from the La Crosse NFWCO and Dave Bennet, Bob Hiltner, and Jay Ciucci from the Rydell National Wildlife Refuge (NWR) set fyke nets in 70 acre Clifford Lake, initiating the Fish and Wildlife Service/Minnesota DNR annual walleye harvest and stocking effort. Additional crew members included Dan Kumlin and Jeff Lockington from Genoa NFH. Each spring, Genoa NFH staff provided newly hatched walleye fry for stocking into Clifford Lake, a shallow freeze-out lake. After a summer of growth, these young-of-the-year walleyes are netted, transported and stocked in tribal, Federal and state waters.

The continued rearing success at Rydell NWR has made it a premier source of walleye fingerlings for stocking Minnesota tribal and state waters. The 2007 harvest included 20,280 fish netted by the Fish and Wildlife Service crew and 20,704 fish netted by the Minnesota DNR crew for a total of 40,984 walleyes (approximately 5-8 inches). After the harvest, Genoa NFH staff transported 20,280 walleyes to Upper Bass and Sandy Lakes on the Red Lake Reservation and North Twin Lake on the White Earth Reservation. The other 20,704 walleyes were taken to 10 lakes managed by the Minnesota DNR.

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

Lake Huron, St. Marys River Ports Surveyed for New Invasive Species

BY ANJANETTE BOWEN, ALPENA NFWCO

The Alpena NFWCO conducted surveillance for new populations of invasive species and documented the existing fish community at shipping ports and rivers in Northwestern Lake Huron and the St. Marys River in early October. Crews sampled seven sites in Lake Huron



-USFWS/AnjanetteBowen

Alpena NFWCO biologist Jim Boase sorts fish captured during efforts to survey Lake Huron and St. Marys River ports for new populations of invasive species.

and six in the St. Marys River with bottom trawling gear, targeting 30 minutes of effort at each sampling site.

Crews captured 33 species. Bottom water temperatures ranged from 14 to 21.2° C and averaged 17.4° C in Lake Huron and 15.2° C in the St. Marys River. No new populations of invasive species were detected. Eurasian ruffe were not found at any locations, and round goby continue to persist at Lake Huron locations. Neither ruffe nor goby have been found in the St. Marys River to date. Biologist Anjie Bowen coordinated survey efforts with assistance from other staff biologists.

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

Asian Carp Information Provided for Environmental Health Association

BY ANJANETTE BOWEN, ALPENA NFWCO

Alpena NFWCO biologist Anjanette Bowen was invited to provide a presentation on Asian carp at the Northern Michigan Environmental Health Association's educational meeting in October. "Asian carp" refers to four species of non-native carp — bighead, silver, black and grass — that have become established and are spreading in the Mississippi River basin. Asian carp may reduce the diversity of native species and be hazardous to water users. Biologists are concerned that Asian carp may spread into the Great Lakes.

Bowen's presentation included topics such as the identifying characteristics of Asian carp, their current distribution, and concerns associated with their

increase in numbers and spread to new areas. She also discussed efforts to slow the spread of Asian carp into the Great Lakes via the Chicago Dispersal Barrier Project and provided information on what the public can do to prevent the spread of Asian carp and other invasive species.

At the end of the presentation, Bowen played a video detailing the jumping behaviors and problems associated with Asian carp. Titled "Nuisance Fish," the video was recorded in partnership with Bill Dance, the Tennessee Wildlife Resources Agency, and the Fish and Wildlife Service. It can be viewed on the Asian Carp Management web site at: <http://www.asiancarp.org/>.

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

“Operation Redhorse” - Mission Accomplished

BY JEFF FINLEY, COLUMBIA NFWCO

Seeking alternatives to non-native black carp for snail control in commercial fish farms is a high priority for Southern aquaculture farms. Recently, Mike Stahl of the Carterville NFWCO contacted Columbia NFWCO and proposed collecting native river redhorse for a snail control study in cooperation with Southern Illinois University. River redhorse have long been extirpated from Illinois, but Missouri still boasts relatively hardy populations in streams south of the Missouri River.



-USFWS/JeffFinley

Student employee Mike Stahl from the Carterville NFWCO poses with a river redhorse collected on the Meramec River near St. Louis, Missouri.

200 yards, sorted out the other species of redhorse and then ran through it again. After the second run, we had collected over 50 river redhorse, more than enough for the study.

Technician Joe McMullen best summed up the day by saying, “We really looked like we knew what we were doing.” I couldn’t agree with him more. Our cooperation with Carterville NFWCO and the university demonstrates how collectively we can research native alternatives to black carp and control the spread of aquatic invasive species as outlined in the Fisheries Program Vision for the Future.

The Meramec River runs north into St. Louis County, a convenient location to meet mid-way between Carterville and Columbia NFWCOs. By 10 a.m., we were shocking an unusually low river in a light drizzle hoping to get lucky. After about an hour of shocking, we had collected only a few other redhorse species. As we ventured further down stream, we noticed water streaming from a large culvert. The warm water smelled like a laundromat, and we quickly deduced it must be effluent from a treatment plant. As soon as the anodes of the electro-fishing boat entered the plume, redhorse and buffalo begin to roll to the surface. We shocked downstream for about



-USFWS/JeffFinley

Displayed is a net-full of native river redhorse. These fish will be used in a snail control study in aquaculture ponds as an alternative to using non-native fish such as black carp.

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

Columbia NFWCO Investigates Walleye at DeSoto NWR

BY BRIAN ELKINGTON, COLUMBIA NFWCO

On Oct. 24, Brian Elkington and Joe McMullen from the Columbia NFWCO, along with staff from DeSoto NWR, Iowa DNR and two volunteers from the University of Nebraska-Lincoln teamed up to electro-fish DeSoto Lake in Missouri Valley, Iowa, as part of a long-term monitoring and management program started in the 1970's. The overnight sampling consisted of four 30 minute night electro-fishing runs targeting walleye and largemouth bass. The largest fish caught was a bigmouth buffalo weighing 32 pounds. Data collected that night will be analyzed and incorporated into the annual DeSoto Lake Management Plan. Our biologist team uses this information to make management decisions to help improve DeSoto Lake's recreational fishing.

The lake and refuge draw upwards of 26,000 visitors each year. Recreational fishing is an important part of DeSoto NWR. With our continued work, we hope to maintain and continue to improve opportunities at this popular fishing destination.

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

Genoa NFH meets Future Leaders

BY JENNY WALKER, GENOA NFH

October is an excellent time for a visit to Genoa NFH. This is the end of the production season, when fall fingerlings are of stocking size, juvenile mussels are released into the wild and pond fish are harvested for the season. Area school programs take advantage of the opportunity to visit at a time when students can see what the hatchery produces throughout the year.



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Genoa NFH staff shows a presentation to a group of students on the wall of the warm-water culture building.

Last month, 157 students and 15 adults visited the hatchery for scheduled tours, and hatchery staff visited 125 students. De Soto High School students spent part of their school's annual Career Day visiting with staff and exploring different career opportunities at the hatchery.

High school students from Lansing, Iowa; Hillsboro, Wis.; and other area schools saw some of the fish and mussels produced at Genoa. Waukon Junior High School seventh graders enjoyed a visit by one of the hatchery's biologists, who introduced them to the life cycle and ecology of endangered freshwater mussels such as the winged mapleleaf and Higgins' eye pearlymussel. The highlight of October's educational activities was the opportunity to participate in Longfellow Middle School's *School on the River* program.

This year, six adults and 100 students assisted hatchery staff while learning about fish culture, lake sturgeon restoration and the freshwater mussel restoration program when they helped infest channel catfish with larvae, or glochidia, of the pocketbook mussel. Getting hands-on experience and helping freshwater mussels and fish is a good way to help develop an interest in wildlife conservation. These students are bright, dedicated workers and promise to be leaders in science one day soon.

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

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.

Come One, Come All!

BY ANGELA BARAN, IRON RIVER NFH

On Aug. 11, Iron River NFH held its fourth annual Open House. The public was invited to “check the place out,” get guided tours from staff, find out what is done to keep fish healthy, and see what other types of critters are raised at a hatchery. Ken Phillips from the La Crosse FHC was on hand to explain what is being done to make sure fish are healthy before they are stocked into the Great Lakes. Nick Starzl set up displays showing how freshwater mussels are being restored and how specific fish are needed to raise each species of mussel. After filling their heads with knowledge, visitors filled their bellies with cookies, coffee and lemonade donated by local businesses.



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Visitors to Iron River NFH's fourth annual open house were greeted with staff presentations.

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

Alpena NFWCO Participates in Annual Lighthouse Festival

BY SCOTT KOPROSKI, ALPENA NFWCO

The Great Lakes Lighthouse Festival began in 1994 as a conference and picnic gathering of lighthouse keepers. It is now a four-day annual event hosted by the city of Alpena, Mich. This year marked the 12th year of the Great Lakes Lighthouse Festival, which promotes the history of lighthouses around the Great Lakes and works towards preserving them for future generations to enjoy.

The Alpena NFWCO has participated in this event for the last 10 years. The festival draws a variety of individuals—not just lighthouse enthusiasts—and provides an opportunity for Fish and Wildlife Service staff to interact with the public. The weekend of Oct.

12, Project Leader Jerry McClain and biologists Scott Koproski and Susan Wells participated in the event. Alpena NFWCO personnel staffed a booth and passed out pamphlets highlighting some of the Fish and Wildlife Service's accomplishments and programs. Staff presented interactive activities for children to provide exposure to the natural resources which may inspire a young biologist, ecologist, or technician. Many questions were fielded by staff at this event. More than 100 people visited the booth and took a few minutes to discuss natural resource issues, concerns or management practices.

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

Zoo Animals Get Special Treat from Iron River NFH

BY STEVE REDMAN, IRON RIVER NFH

This past August, the Lake Superior Zoo in Duluth, Minn., hosted an annual M.A.D. (Members Appreciation Day) Safari event. More than 800 members attended this year's event, which highlighted the “best of the zoo's best” as a thank you for their support. Biologist Steve Redman provided several excess adult lake trout and brook trout from the Iron River NFH, not only delivering the fish, but also helping zoo keepers to release them into the exhibits – sacrificing the fish for a special feeding demonstration of various animals. Polar bears, Kodiak and grizzly bears, river otters and snapping turtles all eagerly awaited their “treat,” creating quite a display for onlookers. When the demonstrations were over, many people had questions about the hatchery and its role in Great Lakes restoration. This event served as an excellent outreach opportunity to explain the mission of the Iron River NFH.

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

Fall Walleye Surveys with the Great Lakes Indian Fish and Wildlife Commission

BY FRANK STONE, ASHLAND NFWCO

Ashland FRO's Frank Stone completed a six-week project assisting the Great Lakes Indian Fish and Wildlife Commission in determining recruitment levels of juvenal walleyes. The objective of these surveys was to estimate relative abundance of young-of-the-year walleyes in several lakes in northern Wisconsin and Michigan. The data from these surveys will be used in conjunction with spring population estimates to set safe harvest levels for the 2008 tribal spearing season. During the project, Stone conducted fishery surveys on a total of 23 lakes.

These sampling efforts take place at night, when walleye activity is the highest and catch efficiency is maximized. Using a boat electro-fishing system, fish collection is relatively fast and efficient. Both length data and scale samples were collected. These data reflect the lake's recruitment values and are combined with the spring population surveys to yield the information needed to help determine the number of adult walleye that can be safely harvested.

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

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

Menominee Tribe Concerned about VHS

BY COREY PUZACH, LA CROSSE FHC

On Oct. 17, members of the Menominee Tribe assisted Dave Wedan of the La Crosse NFWCO in collecting 100 fish on Legend Lake to be screened for viruses and bacteria, including the viral hemorrhagic septicemia, or VHS, virus.

With the threat of VHS in the Midwest, the tribe has concerns with VHS in reservation waters. In particular, they were concerned with Legend Lake, which is connected to the Lake Winnebago system

through a series of streams and rivers. VHS was isolated out of Lake Winnebago and Lake Butte des Morts in Spring 2007. VHS is a deadly fish virus which was isolated in the Great Lakes in 2003. In 2005, massive fish kills began occurring in the Great Lakes region. The virus causes hemorrhaging in the fish's organs and externally in the eyes, skin and fins. At this time, VHS has been isolated from 25 different species in the Midwest Region.

For further info about the La Crosse FHC: <http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/lacrosse-fhc.pdf>

Service Biologist attends Technical Fisheries Committee Meeting

BY AARON WOLDT, ALPENA NFWCO

Biologist Aaron Woldt of the Alpena NFWCO attended the Technical Fisheries Committee (TFC) meeting. The primary focus was to present 2008 preliminary harvest limits for lake whitefish in 1836 Treaty waters of lakes Huron, Superior and Michigan. As stipulated in the 2000 Consent Decree, preliminarily recommended lake trout harvest numbers must be calculated by the Modeling Subcommittee (MSC), approved by the TFC and presented to the parties to the decree by Nov. 1 each year. John Netto

of the Green Bay NFWCO presented tables of lake whitefish harvest limits for 1836 Treaty waters to the TFC for review. Harvest limits presented at this meeting, when reviewed by the parties and approved, will become binding 2008 lake whitefish harvest limits for 1836 Treaty waters. These harvest limits will allow lake whitefish fisheries to be executed while still protecting the biological integrity of the lake whitefish stocks.

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

Columbia NFWCO meets with Leading River Restoration Ecologists

BY CLAYTON RIDENOUR, COLUMBIA NFWCO

Leading scientists in the fields of river ecology and restoration assembled on the Missouri River to discuss challenges facing scientists in restoring endangered pallid sturgeon. Scientists toured a remnant large channel sandbar, a newly constructed side chute, and engineered dikes modified to improve fish habitat near Columbia, Mo. Columbia NFWCO's Clayton Ridenour represented the Fish and Wildlife Service. Also in attendance were Dr. N. LeRoy Poff of Colorado State University; stream ecologist Dr. Charles F. Rabeni of the University of Missouri Cooperative Research Unit; scientists from U.S. Geological Survey Columbia Environmental Research Center (CERC); and University of Missouri graduate students.



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(left to right) Robb Jacobson, N. LeRoy Poff, Doreen Mengel, Kristen Veum, Charles Rabeni, and Meagan Montgomery (near boat) are leading scientists in the fields of river ecology and restoration on the Missouri River. They assembled on the Missouri River to discuss challenges facing scientists in restoring endangered pallid sturgeon.

Missouri River ecology. The pallid sturgeon is a long lived fish with long generation time and many years of study may be required before their response to habitat restoration efforts can be determined.

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

Coaster "Body Art" Update

BY ANGELA BARAN, IRON RIVER NFH

This spring, Iron River NFH elastomer-tagged two additional brood lots of coaster brook trout: Siskiwit Bay strain isolated at Genoa NFH and Tobin Harbor strain reared at Iron River NFH. As spawning began in the fall, crews performed a full inventory on both groups of tagged fish. The inventory revealed that more than 90 percent of both strains retained visible tags. An ongoing inventory of the Tobin Harbor strain isolated at Genoa, tagged in spring 2006, is also being performed. Initial glances at the fish

seemed to show no tags, but they were visible under special flashlights.

To date, 464 fish have been tagged, 270 of which still have visible tags. This group was tagged in three locations, with three different colors. This initial study helped determine the location and colors that were easiest to see and tag, and which retained the tags the best. Plans are now in the works to tag two more brood classes and two production lots this spring.

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

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

The tour began with discussions of current techniques and efforts to restore the endangered pallid sturgeon. Hydrologist Dr. Robb Jacobson and ecologist Aaron Delonay of CERC discussed technology advancements to map the river bottom and follow individual pallid sturgeon implanted with tracking devices. Poff broadened the scope beyond a single species approach by asking important questions about the need to consider river ecosystem restoration, providing an opportunity to showcase our fisheries research and monitoring work. Ridenour explained the objectives and discussed many of the preliminary findings from the Habitat Assessment and Monitoring Program, which monitors fish assemblages associated with areas that have been modified to improve fish habitat and areas unmodified since channelization. Ridenour talked about the need to understand how pallid sturgeons interact with other species and fit into the contemporary Missouri River ecosystem. The group concluded with a discussion of the complexity of pallid sturgeon recovery and Mis-

Kabasa Wetland Restoration Project

BY TED KOEHLER, ASHLAND NFWCO

The recently completed Kabasa Wetland Restoration Project consisted of four wetland restoration sites totaling five acres, and enhancement of 10 acres of



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The Kabasa Wetland Restoration Project consisted of four wetland restoration sites totaling five acres, and enhancement of 10 acres of upland grass waterfowl nesting cover through a deferred haying/grazing agreement.

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.

upland grass waterfowl nesting cover through a deferred haying/grazing agreement. The restoration took place on former agricultural land in Bayfield County, Wis. A Habitat Development Agreement was signed to protect the restored area for 10 years.

Species benefiting from the Project include migratory waterfowl such as wood ducks, mallards and American black ducks, as well as migratory songbirds such as sedge wrens and song sparrows. The landowner has been actively managing his entire 114-acre farm for wildlife, and the restored wetlands and protected uplands will help enhance this management. Partners on the project include the landowner, Bayfield County Land Conservation Department, Ducks Unlimited and Ashland NFWCO. Funding from the Fish and Wildlife Service was provided through the Partners for Fish and Wildlife Program.

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

Habitat Assessment and Monitoring Program Completes 2007 Field Season

BY CLAYTON RIDENOUR, COLUMBIA NFWCO

Field work for the Habitat Assessment and Monitoring Program (HAMP) concluded for the 2007 season on Oct. 31. We concentrated on 18 selected river bends on the Lower Missouri River between St. Louis and Kansas City. HAMP is based on an experimental design intended to provide both general monitoring information and data to answer specific questions related to the effect of habitat construction. Within this design, we can ask questions about fish communities *Before* and *After*, and compare to a *Control* reference condition in response to an *Impact* (i.e., habitat construction).

This was the third field season for the biological portion of HAMP. An independent science review panel reviewed the program in 2006 and provided recommendations to refine the program in 2007. All HAMP data sheets have been sent to the Missouri Department of Conservation for electronic entry and should be available for analysis in early 2008. Field effort for Columbia NFWCO's portion of HAMP is an estimated 2,800 samples and 150,000 to 200,000 fish captured. Memorable fish captures for the season include seven pallid sturgeons—including one adult with a telemetry tag from a U.S. Geological Survey (USGS) tracking study. Other significant captures include a flathead chub. Flathead chubs historically were an abundant species in the Lower Missouri River, but now are seldom captured. Other uncommon fish HAMP collected included several species of darters and young-of-the-year skipjack herring.

Both the biological and physical portions of HAMP are intended to monitor shallow-water habitat being built by the Army Corps of Engineers on the channelized portion of the Missouri River, to provide aquatic habitat diversity. Although the underlying intent of HAMP and other mitigation projects is to recover the pallid sturgeon, it is recognized that improved aquatic habitat will benefit many other species, including those sought by anglers.

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

Hazmat Transportation Certification Training Completed

BY MARK STEINGRABER, LA CROSSE NFWCO

Because Fish and Wildlife Service employees occasionally need to prepare Hazmat for domestic or international transportation, the La Crosse NFWCO recently purchased the Hazmat Transportation Training Modules from the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration.

Hazardous Materials Regulations issued by the U.S. Department of Transportation (DOT) govern the transportation of hazardous materials, or Hazmat, in interstate, intrastate and foreign commerce. The primary goal of the regulations is to protect the public and those whose occupations involve preparing or shipping Hazmat. To minimize these risks, the DOT issues specific requirements for the preparation and shipment of Hazmat by different modes of transit. The regulations require training for all Hazmat employees to increase safety awareness and reduce incidents. Employers — including Federal agencies — must train, test, certify and retain records of current training. Recurrent Hazmat training is also required. A violation of any Hazardous Materials Regulation, including skipping training, may result in a civil penalty of up to \$32,500 for each violation and, in certain cases, criminal penalties of up to \$500,000 and imprisonment of up to five years.

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

Cross-Training isn't Just for Athletes

BY PATTY HERMAN, COLUMBIA NFWCO

Late summer presented an opportunity for several Columbia NFWCO staff to “cross-train” with other Missouri River project crews. This was a great opportunity to expand experiences and work skills and train on the gears, procedures and operations unique to each project. Cross-training is a useful team-building method and recognizes strengths in crew members that may have otherwise gone unnoticed. It is also part of a sound business management plan, allowing crews to recruit experienced staff when help is needed and improving safety, familiarity with the river, sampling techniques and data collection.

Each project has complex and specialized methods and gear for sampling, collecting, and reporting data. “Trainees” learn all facets of sampling including gear deployment, repair, boat driving and data recording. Habitat Assessment and Monitoring Program crews stern trawled and push trawled using three types of gear on the Missouri River. Mitigation crews bow-trawled and drifted trammel nets inside chutes of the River. Inter-agency training occurred as well. Darby Niswonger and Ryan Dirnberger of Missouri Department of Conservation’s Missouri River Field Station spent a day stern-trawling with the Pallid Monitoring crew and discussing the finer elements of data recording and trawl boat design. A hatchery-stocked pallid sturgeon was caught while sampling and, to commemorate the capture, Nick Utrup rewarded Darby and Ryan with pallid sturgeon collector coins.

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

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



-USFWS/Colby Wrasse

Patty Herman and Brett Witte from the Columbia National Fish and Wildlife Conservation Office remove fish from a trawl on the Missouri River near St. Charles, Missouri.

AFS Student Chapter Comes to the Rescue

BY ANGELA BARAN, IRON RIVER NFH

In October, the Northland College American Fisheries Society Chapter assisted the Iron River NFH with spawning operations. Their arrival was just in time to help the short-staffed hatchery crew spawn coaster brook trout, collect and record length/weight data, and collect ovarian samples for disease testing. These students jumped right into the mix, and after a couple fish, were proficient fish spawners. The

added hands enabled the hatchery staff to complete the spawning for the week rather than the two it would normally take. The college students benefitted too, talking to the staff about jobs in the Fish and Wildlife Service. Several interested students also asked how they could volunteer... prompting the hatchery staff to leap into action and get them the information!

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

Streams 101 Training

BY JOANNE GRADY, COLUMBIA NFWCO

Columbia NFWCO Branch Chief of Fish Conservation Joanne Grady attended the Streams 101 workshop taught by the Missouri Department of Conservation's Streams Unit. The week-long workshop included information on stream geomorphology, hydrology and hydraulics, and their inter-relationship with stream biota. Streams Unit staff used the Lane's Balance theory to teach the participants about stream dynamics. We were encouraged throughout the workshop to consider the "Water, Sediment, Energy, Vegetation" Concept.

The course included a canoe trip on the Lamine River to look at erosion sites. "Hands-on" practical exercises included scenarios describing various

landowners and their potential stream dilemmas. Participants worked in teams to: interview the landowners, look at historic stream information, aerial photo series, watershed materials, sediment and sandbar clues. This information was used to propose solutions to the landowners' potential problems which were presented to the Streams Unit instructors for review.

The Department of Conservation uses this course to train their private lands and fisheries staff members who make contact with landowners. The October session included biologists, engineers, hydrologists and policy makers from several agencies and independent firms. The class was a great experience!

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

Congressional Actions

H.R. 1495 (enr) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Enrolled bill]

S. 1248 (pcs) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Placed on Calendar Senate]

H.R. 1495 (eas) [Engrossed Amendment Senate]

H.R. 4455 (ih) To authorize the Secretary of the Interior to provide international wildlife management and conservation programs through the Wildlife Without Borders Program in the United States Fish and Wildlife Service, and for other purposes. [Introduced in House]

H.R. 2764 (enr) Making appropriations for the Department of State, foreign operations, [Enrolled bill]

H.R. 2764 (eah) This Act may be cited as the "Consolidated Appropriations Act, 2008". [Engrossed Amendment House]

H.R. 3891 (ih) To amend the National Fish and Wildlife Foundation Establishment Act to increase the number of Directors on the Board of Directors of the National Fish and Wildlife Foundation. [Introduced in House]

H.R. 767 (rh) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Reported in House]

H.R. 767 (ih) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Introduced in House]

H.R. 767 (eh) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Engrossed in House]

H.R. 1533 (ih) To provide for the establishment of a national mercury monitoring program. [Introduced in House]

S.J.Res. 17 (rs) Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. [Reported in Senate]

S. 843 (is) To provide for the establishment of a national mercury monitoring program. [Introduced in Senate]

H.R. 767 (rfs) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Referred in Senate]

H.R. 767 (rcs) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Reference Change Senate]

S.J.Res. 17 (es) Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. [Engrossed in Senate]

S.J.Res. 17 (is) Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. [Introduced in Senate]

S.J.Res. 17 (rcs) Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. [Reference Change Senate]

H.R. 3663 (ih) To amend the Fish and Wildlife Act of 1956 to establish additional prohibitions on shooting wildlife from aircraft, and for other purposes. [Introduced in House]

H.R. 1495 (eh) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Engrossed in House]

H.R. 1495 (pcs) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Placed on Calendar Senate]

H.R. 3227 (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]

H.R. 1495 (ih) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Introduced in House]

H.R. 1495 (rh) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Reported in House]

S. 1766 (is) To reduce greenhouse gas emissions from the production and use of energy, and for other purposes. [Introduced in Senate]

S. 2302 (pcs) To provide for the continuation of agricultural programs through fiscal year 2012, and for other purposes. [Placed on Calendar Senate]

H.R. 2643 (rh) Making appropriations for the Department of the Interior, environment, and related agencies for the fiscal year ending September 30, 2008, and for other purposes. [Reported in House]

H.R. 2643 (eh) Making appropriations for the Department of the Interior, environment, and related agencies for the fiscal year ending September 30, 2008, and for other purposes. [Engrossed in House]

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

Midwest Region Fisheries Divisions

National Fish Hatcheries

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

Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, stock rainbow trout in fulfillment of federal mitigation obligations and assist with recovery of native mussels and other native aquatic species.

National Fish and Wildlife Conservation Offices

National Fish and Wildlife Conservation Offices conduct assessments of fish populations to guide management decisions, perform key monitoring and control activities related to invasive, aquatic species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisher-

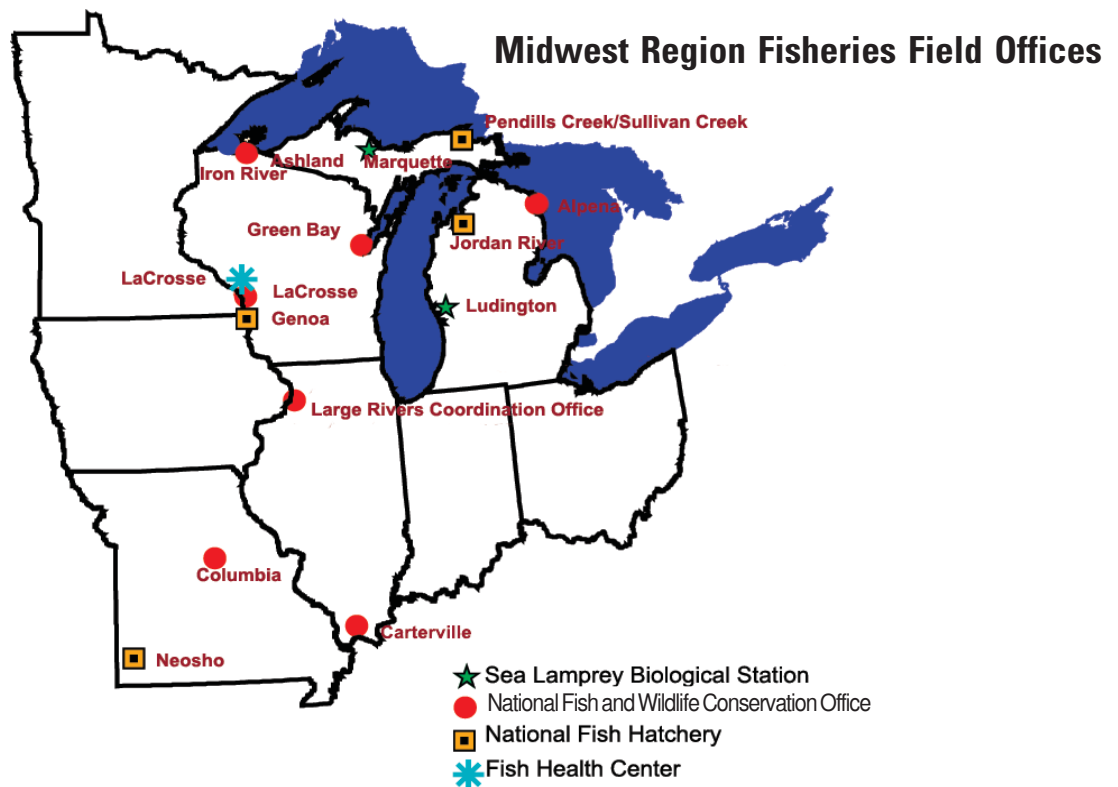
ies databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and re-licensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments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

Sea Lamprey Biological Stations

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

Fish Health Center

The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state, tribal and private 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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Iron River National Fish Hatchery
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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

Aquatic Species Conservation and Management

- Record Fall Fingerling Harvest at the Genoa National Fish Hatchery
 - Nick Starzl, Genoa NFH

Aquatic Invasive Species

Public Use

- Iron River NFH Excess Fish gets a New Home
 - Steve Redman, Iron River NFH

- Field Trip!
 - Angela Baran, Iron River NFH
- MU Homecoming “Bloat”
 - Jeff Finley, Columbia NFWCO
- Fisheries Field Day for Lincoln F&W Students
 - Jeff Finley, Columbia NFWCO
- Cub Scouts Meet Fish of the Big Muddy

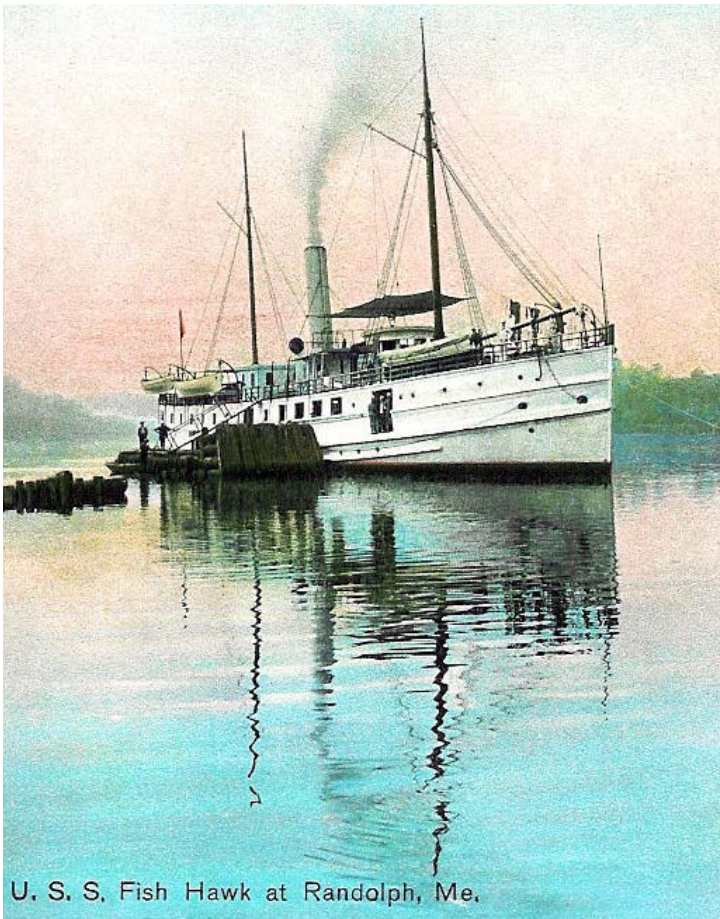
Cooperation with Native Americans

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

Workforce Management

- La Crosse NFWCO Shows “What it Takes to Be a Biologist” at La Crosse Area Career Expo
 - Heidi Keuler, La Crosse NFWCO
- MU Fisheries Techniques River Field Day Year 3
 - Jeff Finley, Columbia NFWCO



U. S. S. Fish Hawk at Randolph, Me.

-Jerry French Postcard Collection; U.S.S. Fish Hawk (circa 1910)

Water Under the Bridge

A Glimpse into our Proud Past

The U.S.S. Fish Hawk was commissioned in 1880 for use as a research vessel for oceanographic studies. The Fish Hawk was retired from service in 1912.

The Fish Hawk was probably the first vessel ever constructed by any nation for the sole purpose of fishery research. Its construction was inappropriate for some types of research, so the U.S.S. Albatross was constructed in 1883 and was used in more “open ocean” operations.