





Fiscal Year 2006 Vol. 4 No. 4

Fish Lines

Region 3 - Great Lakes/Big Rivers

Leadership in Conserving, Enhancing, and Restoring Aquatic Ecosystems

A New Watershed-Based Approach for the Region 3 Fish Passage Program

(See the "Feature Story" on Page 5)







Before Fish Passage Improvement

During Construction

After Fish Passage Improvement

Dam removal and ramp installation on the White Earth River in Minnesota reconnected 40 miles of stream habitat important for walleye and lake sturgeon.







Before Fish Passage Improvement

During Construction

After Fish Passage Improvement

Modification of the grade control structure on Turkey Creek in Iowa removed a total of 2 barriers and reconnected 8 miles of stream habitat to benefit channel catfish, flathead catfish, flathead chub, paddlefish, sauger, and Topeka shiner.



Region 3 - Great Lakes/Big Rivers 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

Region 3 Focus Areas

1. Partnerships and Accountability

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.

2. Aquatic Species Conservation and Management

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.

3. 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.

4. Public Use

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.

5. Cooperation with Native Americans

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.

6. Leadership in Science and Technology

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.

7. Aquatic Habitat Conservation and Management

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.

8. Workforce Management

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.

The vision of the Service's Fisheries Program is working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support Federal mitigation programs for the benefit of the American public.

Implementing this vision will help the Fisheries Program do more for aquatic resources and the people who value and depend on them through enhanced partnerships, scientific integrity, and a balanced approach to conservation.

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Surplus Furniture Benefits Hurricane Relief

Great Lakes - Big Rivers Region Fisheries Field Offices

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.

Great Lakes - Big Rivers Region Fisheries Field Offices

Genoa

Columbia

Neosho

arge Rivers Coordination Office

Sea Lamprey Control Stations

Sea Lamprey Control Stations assess and control sea lamprey populations throughout the Great Lakes. The U.S. Department of State and Canadian Department of Fisheries and Oceans fund this program through the Great Lakes Fishery Commission.

Fishery Resources Offices

Fishery Resources 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 opportu-

nities; 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 hydropower operation and re-licensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities. In other Regions of the Service, FRO's are also referrred to as Fish and Wildlife Management Assistance Offices.

Green Bay LaCrosse LaCrosse LaCrosse Ludington Lacrosse Ludington Lacrosse Lacrosse

Pendills Creek/Sullivan Creek

Sea Lamprey Control Station

Fishery Resources Office

National Fish Hatchery

Fish Health Center

dination Offfice

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 throughout the region; 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.

List of Acronyms

DNR- Department of Natural Resources FHC- Fish Health Center

FRO-Fishery Resources Office

NFH- National Fish Hatchery NWR- National Wildlife Refuge

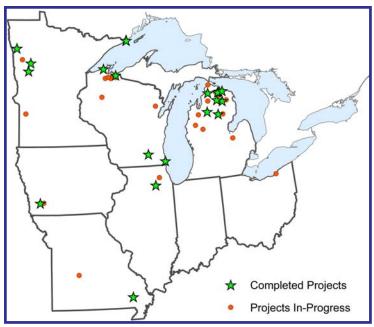
Feature Story - A New Watershed-Based Approach for the Region 3 Fish Passage Program

What could be more exciting than restoring the natural flow regime of our rivers by the removal of man-made barriers that block fish movement? Success is achieved by each fish passing through to the newly reconnected habitat.

That is exactly the important impact of the National Fish Passage Program since its inception in 1999 at project sites across Region 3 and throughout the rest of the United States.

Fish passage projects not only provide significant resource benefits such as restoring natural flow regimes, reducing sediment runoff, and increasing habitat available for aquatic organisms, but may also improve recreational fishing opportunities and increase public safety by removing unsafe dams.

Since 1999, the Fish and Wildlife Service has initiated 57 projects in Region 3. We invested over \$2 million in Fish Passage Program funds and another \$6.6 million in matching cash and in-kind support from 139 partners. That represents \$3.28 in partner support for every \$1 contributed by the Fish Passage Program.

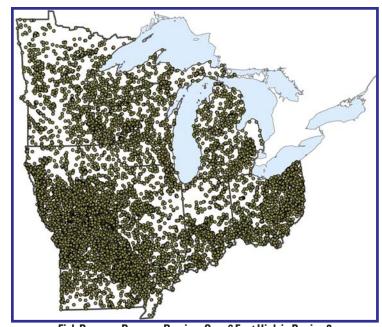


Completed and In-progress Fish Passage projects in Region 3 (1999-2006)

Projects have involved culvert renovations, dam removals, installation of fish passage structures or natural bypasses, stream grade control structure modifications, and barrier inventory and assessments. To date, 66 barriers have been removed and 432 stream miles reconnected. Projects currently in progress will remove 35 barriers and reconnect an additional 448 stream miles.

Despite these accomplishments, the number of remaining barriers to fish passage in Region 3 is staggering – 15,300 dams more than six feet high and hundreds of thousands of smaller barriers, such as culverts and road crossings. Many of these barriers not only affect fish but also other aquatic organisms—such as crayfish, freshwater mussels, and insects—by interrupting or altering biological and physical processes important for key aspects of aquatic life.

With this many barriers in Region 3 and limited financial resources, how can the Fish Passage Program be most effective?



Fish Passage Program Barriers Over 6 Feet High in Region 3
-Source: U. S. Army Corps of Engineers. 2005. National Inventory of Dams

In April 2005, a team of biologists initiated an effort to address this question, focusing on how the program could be, in the words of Assistant Regional Director for Fisheries Gerry Jackson, more "strategically opportunistic" in selecting barriers to propose for removal. The team includes Stewart Cogswell of the Green Bay Fishery Resources Office (FRO), Wisconsin; Mark Dryer of the Ashland FRO, Wisconsin; Nick Frohnauer and Joanne Grady of the Columbia FRO, Missouri; Susan Wells of the Alpena FRO, Michigan; and Tim Patronski, the Region 3 Fish Passage Program Coordinator.

The team's goal was to improve the existing process for identifying, proposing, and selecting projects for funding under the Fish Passage Program. The team established clear selection criteria to focus on projects that are part of larger watershed restoration efforts and will provide the most resource benefits. The team developed final criteria emphasizing projects that:

- address Fish and Wildlife Service priorities such as restoring native fish and other aquatic species, as well as our partner's priorities;
- provide important ecological benefits to a larger watershed or restoration focus area;
- have reasonable costs per unit mile; and,
- are expected to be completed within two years of being funded.

The new criteria were used to develop project proposals for FY 2006 and for selection of those to receive funding. The team came together again in February 2006 to evaluate the process and made recommendations for further improvement.



 $\hbox{-}Minnesota\ Department\ of\ Natural\ Resources$

Removal of the Dutton Locks dam and installation of step pools on the Pelican River in the Red River Valley of Minnesota. This project reconnected 10 miles of stream in support of lake sturgeon restoration efforts.





Removal of a dam and construction of step pools on the Pike River in Wisconsin reconnected 25 miles of habitat for salmonids and native warm water fish.





Installation of this step-pool fishway structure at Grand Portage Creek in Minnesota reconnected 3.5 miles of spawning and nursery habitat for coaster brook trout.





This culvert replacement at Mingo National Wildlife Refuge in Missouri reconnected 2.5 miles of stream habitat and approximately 1,500 acres of wetland habitat to benefit various species of gar, bass, sunfish, and darters.

-USFWS photos

In addition to implementing a watershed-based approach, the Region 3 Program continues to lead by example through coordination at the field office and national levels to improve key aspects of the program, including: accomplishment reporting, environmental and historic preservation compliance, and pre- and post-project monitoring.

The Fish Passage Program embraces partners from every level of government and a wide range of private and civic conservation groups. Many partners add significant matching funds that help stretch taxpayer dollars. Partnerships have been and will continue to be a key component to the program's success.

Working together with others to remove barriers to fish passage and restoring rivers to a more natural flow regime has helped the program become a model for cooperative conservation and one of the Fish and Wildlife Service's most popular initiatives.

For additional information about this article, contact: Tim Patronski, Fish Passage Program Coordinator at: Phone 612/713-5168; E-mail Tim_Patronski@fws.gov

Partnerships and Accountability

New Webpage Online for Midwest Driftless Area Restoration Effort

t the request of the La Crosse Fishery Resources Office (FRO), Frank Stone developed an Internet webpage (http:// www.fws.gov/midwest/ LaCrosseFisheries/projects/ Driftless.html) about ongoing restoration of the Midwest Driftless Area. The effort is being conducted by the La Crosse FRO and partners within the 24,000 square mile area of Southeast Minnesota, Northeast Iowa, Western Wisconsin, and Northwest Illinois. It is named the Driftless Area because it was circumvented by the Wisconsin glacier. The unglaciated Driftless Area is bound near Red Wing, Minnesota, to the north; on the west by St. Charles, Minnesota; on the east by Madison, Wisconsin; and near Clinton, Iowa, to the south.

Stone developed the website by using text and graphics provided by Louise Mauldin of the La Crosse FRO to help describe four project proposals submitted for 2006 under the National Fish Habitat Initiative.

Restoration of the Midwest Driftless Area is a geographically-focused, locally-driven, consensus-based effort to protect, restore, and enhance riparian and aquatic habitat. It is supported by a broad partnership of Federal, state, and local government; landowners; academic institutions; conservation organizations; sportsmen's groups; and other interested parties. Frank Stone, Ashland FRO



-USFWS

The Midwest Driftless Area is a 24,000 square mile region of Southeast Minnesota, Northeast Iowa, Western Wisconsin, and Northwest Illinois that was circumvented by the Wisconsin glacier. The area is circled in green on the above map.

Lake Huron Technical Committee Prepares for Lake Huron Conference

The Lake Huron Technical L Committee met in Port Huron, Michigan, in January for its annual winter meeting. Although a number of agenda items addressed charges before the committee, the primary focus was to prepare for the State of Lake Huron Conference to be held in Windsor, Ontario, in March. Each Great Lakes committee provides an update on the "State of the Lake" on a five-year rotational basis at annual Lake Committee meetings; in 2006, the focus is on Lake Huron. During the January meeting, technical committee members and resource experts gave draft presentations on their assigned segment of the Lake Huron fish community and heard comments and suggestions for changes.

Alpena FRO Project Leader Jerry McClain (aquatic invasive species), Treaty Fisheries Unit Coordinator Aaron Woldt (lake trout) and biologist James Boase (lake sturgeon) each provided a presentation on their respective assignments. McClain, Woldt, and Boase also served as lead authors for sections of the State of Lake Huron in 2004 report, which is expected to be delivered to the Great Lakes Fishery Commission for publication in its Special Publication series. The draft will be delivered to the commission in November 2006.

Participation as active members or resource experts on the Lake Huron Technical Committee is important for maintaining partnerships for effective management of Lake Huron fishery resources. *Jerry McClain, Alpena FRO*

Friends Meet with Friends

The Friends of the Neosho National Fish Hatchery traveled to Minnesota Valley National Wildlife Refuge to attend a workshop for Fish and Wildlife Service Friends groups. The Neosho Friends group sent four representatives. After their return, two members gave a report back to the hatchery crew. It sounded as if each participant had a wonderful time and brought back a grab bag full of tips.

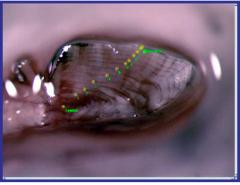
Roderick May, Neosho NFH

Aquatic Species Conservation and Management

Lake Whitefish Age Determination Completed

lpena FRO biologist Scott AKoproski finished aging lake whitefish otolith samples (bony structures in the fishes' heads) collected during the 2004 and 2005 distribution study. This three-year study is funded through the Great Lakes Fish and Wildlife Restoration Act and involves collaboration of seven agencies to tag whitefish at eight main basin sites in Lake Huron each year. The objective of this study is to delineate the spawning stocks of lake whitefish in Lake Huron. At each location, 1,500 to 3,000 lake whitefish had a Floy Tag inserted, were measured to the nearest millimeter, and had scale samples removed for age determination. In addition to the tagged fish, 50 male and 50 female lake whitefish are sacrificed daily for more extensive data collection. Biological data collection for these 100 fish includes length, weight, sea lamprey wounds, visceral fat index, sex, maturity, and removal of age structures (scales, otoliths, and fin rays).

Koproski used the "crack and burn" technique to identify annuli present within each otolith. When this technique is used, two distinct growth patterns can be identified: broad summer growth and narrow winter growth. By counting the bands of winter growth, age estimates can be obtained from the otoliths. A total of 500 fish were aged using this technique. Scott Koproski, Alpena FRO



-USFWS photo by Scott Koproski
Alpena FRO biologist Scott Koproski aged lake
whitefish otolith samples collected during the 2004
and 2005 lake whitefish distribution study in Lake
Huron. The otolith (bony structure in a fishes' head)
pictured here has growth rings identified which
enable a biologist to determine the age of the fish.

Monitoring Humpback Chub is Grand

Surveying endangered species is an exciting experience even in the worst of conditions; when that work takes you to the Grand Canyon, it is an exhilarating experience. Scott Yess completed a three-week detail with the Arizona FRO out of Flagstaff, Arizona, working with endangered hump-back chubs in a beautiful setting on the Little Colorado River. He enjoyed working with the highly motivated and efficient staff.

The humpback chub population has been hit hard by habitat loss and the introduction of several invasive species. The Little Colorado River has the best habitat for this rare species, but invasive species are competing with native fishes. Biologists from the Arizona FRO are working with their Federal, tribal, state, and private partners to stabilize and improve the populations. I highly recommend this field detail to others who would like to work in a beautiful remote area.

Scott Yess, La Crosse FRO

Pallid Sturgeon Prefer a "Heated Pool"

The pallid sturgeon at the ▲ Neosho NFH are doing great. Pallid sturgeon being cultured in heated raceways continue to outgrow those in unheated raceways by leaps and bounds. The average growth for the heated raceways was 1.6 inches in January, while the unheated raceway's growth only averaged 0.02 inches. As you can see, growth has practically stopped in the unheated raceways. The investment in heated raceways will provide larger fish at stocking and should enhance survival.

Roderick May, Neosho NFH



-USFWS
Federally endangered pallid sturgeon are being reared at the Neosho NFH as part of a recovery plan. The hatchery is warming culture water to produce a larger fish for stocking.

Lake Huron Coded-Wire Tag Data Computerized

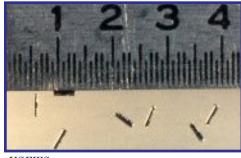
Biologist Aaron Woldt compiled lake trout coded-wire tag (CWT) data for submission to the common CWT database of the Lake Huron Technical Committee. It was created in 1999 by the Michigan Department of Natural Resources (DNR), Chippewa/Ottawa Resource Authority (CORA), Ontario Ministry of Natural Resources, U.S. Geological Survey Biological Resources Division (BRD), and the Fish and Wildlife Service.

Technical committee members use the information to evaluate lake trout movement, strain survival, effects of quality at release on survival, and effectiveness of the Northern and Mid-lake refuges. Woldt will use the database to update his analysis of Lake Huron lake trout movement and catch-atage models to set lake trout harvest limits in the lake's 1836 Treaty waters.

CWT's are microscopic tags placed in the snouts of hatchery lake trout prior to stocking. Tags are extracted from lake trout at harvest and yield information such as hatchery of origin, year planted, fish age, and strain. The Alpena FRO captures tagged lake trout in its fishery independent lake white-fish surveys and lake trout surveys in mid-lake. Alpena FRO also processes recreationally caught lake trout sampled by the Michigan DNR and CWT samples collected by CORA.

Woldt summarized all Fish and Wildlife Service and Michigan DNR sport CWT returns that colleague Adam Kowalski had processed in 2005. Woldt formatted all data to conform to common database standards and forwarded data to Scott Nelson of the BRD in Ann Arbor, Michigan, for inclusion in

the common database. Capturing, processing, and analyzing lake trout tag returns directly supports lake trout rehabilitation and influences setting of safe harvest levels by allowing agencies to assess lake trout movement patterns, differences in strain survival, effects of hatchery practices, and effectiveness of refuges.



-USFWS

Pictured are microscopic tags called coded-wire tags. They are placed in the snouts of hatchery-reared lake trout prior to stocking. Tags are extracted from fish at harvest and yield information such as hatchery of origin, year planted, fish age, and strain.

Aaron Woldt, Alpena FRO Gillnet Repair is an Important Part of Fishery Assessments

Diologist Adam Kowalski of the DAlpena FRO mended approximately 3,600 feet of assessment gillnet consisting of 100-foot panels of two- to six-inch stretch mesh strung in half-inch increments. Alpena FRO uses these nets for its annual fishery-independent lake whitefish assessment in 1836 Treaty waters of Lake Huron. Kowalski inspected each net for holes, broken floats, and broken ties. He repaired holes by sewing in new twine across gaps or replacing large holes with new sections of net. If nets were damaged beyond repair, replacement nets were built.

Net repair is important for collecting accurate and consistent data during fishery assessments. Nets must be strung similarly and repaired to the same standard each year to assure consistent gear selectivity across sampling years. Net repair and construction will continue throughout the winter until spring assessments start. Lake whitefish and lake trout are native species harvested in both state and tribal commercial and sport fisheries.

Adam Kowalski, Alpena FRO



-USFWS photo by Adam Kowalski

An Alpena Fishery Resources Office biologist mends gillnets in preparation for the upcoming field season. Net repair is important for collecting accurate and consistent data during fishery assessments.

Aquatic Invasive Species

Sampling Protocols Evaluated for Invasive Eurasian Ruffe and Round Goby

s requested by the Monitoring Aand Detection Committee of the Aquatic Nuisance Species Task Force, Ashland FRO biologist Gary Czypinski evaluated eight sampling protocols for detecting and monitoring invasive Eurasian ruffe and round goby, including bottom trawl, gillnet, seine, electrofishing, setline, angling, and traps. The protocols were evaluated against 13 elements composed of labor, cost, environmental, and logistical criteria. Other biologists throughout the country are evaluating protocols for collecting invasive European green crab, mitten crab, Asian clam, cordgrass, and swamp eel.

This experiment was initiated to determine the feasibility of assembling a library of sampling protocols for detecting and monitoring aquatic invasive species. Organizations will soon be able to choose a sampling protocol that most nearly aligns with their capability and objective. Gary Czypinski, Ashland FRO





Eurasian Ruffe



-USFWS



-USFWS

Round Goby



-Anjanette Bowen

Public Use

Sport Show Exhibit Promotes Environmental Awareness

C taff from the La Crosse FRO. Oupper Mississippi River National Wildlife and Fish Refuge (La Crosse and Winona Districts), Genoa NFH, and the La Crosse Fish Health Center hosted more than 3,200 visitors at a Fish and Wildlife Service display booth at the 29th Annual La Crosse Boat, Sports, and Travel Show held February 9 through 12 at the La Crosse, Wisconsin, Exhibition Center. An array of educational brochures, posters, photographs, videos, taxidermy mounts, live fish, and animal pelts were prominently displayed at the booth near the main entrance to the exhibition hall. Highlighted fishery resource topics included invasive Asian carps, freshwater mussels, migratory fish species such as American eel, paddlefish, and lake sturgeon, and the Habitatittude awareness campaign to discourage the release of aquarium fish and aquatic plants. The opportunity to talk with the large and diverse audience that attends this show makes participation a valuable outreach tool for all La Crosse area offices. Mark Steingraeber, La Crosse Tony Brady, Genoa NFH



-USFWS

La Crosse Fishery Resources Office, Upper Mississippi River National Wildlife and Fish Refuge (La Crosse and Winona Districts), Genoa National Fish Hatchery, and La Crosse Fish Health Center hosted more than 3,200 visitors who toured a Fish and Wildlife Service display booth at the 29th Annual La Crosse Boat, Sports, and Travel Show in La Crosse, Wisconsin.

Learning to Walk on Water

The statement, "And the safest **⊥** way to walk on water is...." opened a presentation by Whittlesev Creek NWR's Katie Goodwin to three of Sherry Collins' physical education classes at Washburn High School in Washburn, Wisconsin. The students got a lesson on ice safety and ice rescue before venturing on the frozen Chequamegon Bay on Lake Superior, for an ice fishing session. Additional instructors included Glenn Miller of the Ashland FRO. Pam Dryer and Mike Mylnarek of the Whittlesey Creek NWR, and Matt Symbal of the Red Cliff Tribe Natural Resources Department.

Approximately 60 students attended the sessions, and even though they caught no fish and raised no "fish-on" flags—except for the occasional "tripping" of a flag by one of the class jokers—the students had a good time learning the fundamentals of ice fishing. Collins has a unique approach in teaching her junior and senior

classes the different aspects of winter-time activities by hands-on experience. The class had previously participated in snow shoeing, downhill, and cross county skiing. One event coming up, tubing, has the five instructors eager to volunteer for that field trip. *Glenn Miller, Ashland FRO*



-USFWS

Students from the Washburn High School in Washburn, Wisconsin, received a lesson on ice safety and ice rescue from Fish and Wildlife Service, Wisconsin Department of Natural Resources, and Red Cliff Tribe Natural Resources Department instructors.

Cooperation with Native Americans

Biologists Discuss Sturgeon Restoration at the Fond du Lac Reservation

Henry Quinlan and Frank Stone of the Ashland FRO recently met with the tribal biologist from the Fond du Lac Indian Reservation in Wisconsin. They discussed lake sturgeon restoration efforts for the Upper St. Louis River in Minnesota, a tributary to Lake Superior, as well as other technical assistance options for 2006.

The focus of a previous tribal egg collection effort had been to gather eggs from the Menominee River, a tributary to Lake Michigan. Scientists believe the fish comprising this population maintain a river-resident tendency that matches the needs for the Upper St. Louis River. Recently; however, the Lake Sturgeon Technical Committee recommended that the tribe consider getting eggs from a Lake Superior tributary. The Fond du Lac Band is now considering this and other options for this important restoration effort.

The Ashland FRO provides technical assistance to tribes for routine projects as-needed; however, projects are often out of the normal scope of FRO responsibility and require a reimbursable agreement between the tribe and the Fish and Wildlife Service. Preliminary meetings such as this help identify the technical assistance needs of the tribe, those projects that will require reimbursable agreements, and the level of assistance that is needed. Frank Stone. Ashland FRO



Biologists from the Ashland FRO met with the tribal biologist from the Fond du Lac

the tribal biologist from the Fond du Lac Indian Reservation in Wisconsin to discuss lake sturgeon restoration efforts for the Upper St. Louis River in Minnesota, a tributary to Lake Superior.

Fish and Wildlife Service Reads Lake Trout Tags for Partners

Biologist Adam Kowalski from the Alpena FRO extracted and read 300 coded-wire tags (CWT's) from lake trout provided by the Chippewa Ottawa Resource Authority (CORA) and sport fishers. CORA collected lake trout samples during its spring fishery for lake whitefish and fall lake trout assessments. Michigan DNR staff and creel clerks collect sport fishery-caught lake trout samples at boat launches throughout Michigan.

CWT's are microscopic metal tags placed in the snouts of juvenile lake trout at the hatchery. When extracted, the tag number is compared to stocking records to yield such information as stocking location and date, fish age and strain, and hatchery of origin.

This concludes CWT extraction for the 2005 field season. All CWT's extracted and read at the Alpena FRO will be entered in the common CWT database of the Lake Huron Technical Committee. The data is shared among all contributing resource agencies as a valuable assessment tool. Adam Kowalski, Alpena FRO

Rail Survey Conducted in Kakagon and Bad River Wetland Complex

The Bad River Natural Re-**L** sources Department recently completed a three-year survey to assess sora, Virginia, and yellow rail populations in the wild ricedominated wetlands of the 16,000acre Kakagon and Bad River Wetland Complex on Lake Superior in Northern Wisconsin. This wetland complex has been an integral part of the ancestral home of the Bad River Band of Lake Superior Chippewa Indians for generations. It is the largest ecologically intact estuary system in the Upper Great Lakes and has been designated as a National Natural Landmark by the Department of the Interior. The cooperative project was developed and led by the tribe in partnership with the Fish and Wildlife Service's Great Lakes Coastal program and Ashland FRO, as well as the Bureau of Indian Affairs' Circle of Flight Program and the University of Minnesota Duluth's Natural Resources Research Institute.

Rails are small secretive migratory birds that are usually heard but not seen in wetlands. Sora, Virginia, and yellow are the only three rail species presently known to range in Northern Wisconsin. The sora is the most abundant rail species in North America. It breeds in Wisconsin and as far north as the Northwest Territories of Canada. The Virginia is less

common than the sora but occupies much of the same habitat — shallow, freshwater marshes with emergent vegetation interspersed with open water. Yellow rails are the least common and are found in freshwater marshes, but are more often located in sedge/meadow habitat.

Ted Koehler, Ashland FRO



-USFWS

A rail is banded as part of a study to assess sora, Virginia, and yellow rail populations in the Kakagon/Bad River Wetland Complex located in Northern Wisconsin on Lake Superior.

St. Croix Chippewa Request Technical Assistance

Deth Greiff, program director and tribal biologist from the St. Croix Chippewa Indians, asked the Ashland FRO to review and comment on a draft Tribal Wildlife Grant application. St. Croix Tribal Natural Resources staff proposes to participate on a joint effort with the Wisconsin DNR in a lake sturgeon mark/recapture population estimate on the St. Croix and the Namekagon river systems. Biologist Frank Stone reviewed the application and discussed the project proposal with the tribe. Frank Stone, Ashland FRO

From Wikipedia, the free encyclopedia

Tribe's Location:

St. Croix Band of Chippewa are located along the St. Croix River, which forms the boundary between the states of Wisconsin and Minnesota. St. Croix Band arrived in the area nearly 600 years ago when directed to move southward from Lake Superior to "the place where there is food upon the waters." In establishing a presence in the St. Croix River valley and its tributaries, the St. Croix Band entered into fierce territorial dispute with the Dakota and the Fox, though eight other Native American Tribes were located in the St. Croix River Valley. To this day in the Ojibwe language, the headwaters of the St. Croix River is called "Manoominikeshiinyag-ziibi" (Ricebird River), the St. Croix River below the confluence of the Namekegon River as "Gichiziibi" (Big River) and below the confluence of Trade River as "Jiibayaatigo-ziibi" (Gravemarker River). The name "St. Croix River" was based on the "Jiibayaatigo-ziibi" name of the river.

Neosho National Fish Hatchery Partners with the Peoria Tribe

The Peoria Tribe of Miami, Oklahoma, visited Neosho NFH and met with Hatchery Manager Dave Hendrix and Assistant Hatchery Manager Roderick May to discuss a potential partnership on a research project that involves propagating Neosho madtoms. It was agreed that the hatchery will enter into a memorandum of understanding with the tribe to provide expertise and a small amount of rearing space. Roderick May, Neosho NFH



Leadership in Science and Technology

Egg Stocking Experiment Continues in Whittlesey and North Fork Whittlesey Creeks

Staff from the Ashland FRO, Iron River NFH, and the Wisconsin DNR transferred coaster brook trout eggs from Iron River NFH to Northern Wisconsin's Whittlesey Creek on January 25. This is the second time coaster brook trout eggs have been planted under a seven-year experiment to restore this elusive fish to the Whittlesey Creek watershed, a tributary to Lake Superior near Ashland, Wisconsin, and Whittlesey Creek NWR.

Biologists stocked approximately 30,000 eggs of two life stages and two strains of eggs from Isle Royale origin brood stock—Tobin Harbor and Siskiwit Bay—in the creeks. Eventually, as fish are sampled during assessments, biologists will determine strain composition and contribution.

The eggs were loaded into Astroturf (artificial turf) bundles at the hatchery and transported to the creek in Styrofoam containers or coolers. At the stream, the Astroturf bundles were loaded into egg boxes to provide a substrate that is stable and can prevent sand deposition from smothering the

eggs. An egg box consists of Astroturf bundles sandwiched within a frame which is then anchored to the streambed. The boxes were placed in areas of moderate to slow current that were outside of sand deposition zones. When possible, boxes were also placed close to areas that will provide juvenile habitat once the eggs hatch. In order to monitor egg development, eggs trays were used. An egg tray holds 50 individual eggs that can be visually checked for development and hatching success.

Jonathan Pyatskowit, Ashland FRO



-USFWS

Staff from the Ashland Fishery Resources Office, Iron River National Fish Hatchery (NFH), and Wisconsin Department of Natural Resources transferred coaster brook trout eggs from Iron River NFH to Northern Wisconsin's Whittlesey Creek on January 25. The eggs were placed in protective boxes and will hatch in the creek.

Aquatic Habitat Conservation and Management

Michigan Stream Team Secures Funding to Begin Field Work

he Michigan Stream Team, **L** comprised of representatives from the Michigan DNR, Michigan Department of Environmental Quality (DEQ), U.S. Geological Survey (USGS), Michigan Department of Transportation (DOT), Natural Resource Conservation Service (NRCS), U.S. Forest Service (USFS), Calhoun Conservation District, Michigan State University (MSU), and the Fish and Wildlife Service, met on Januarv 25 at the East Lansing Field Office. Formed to develop regional curves showing bank full dimensions versus drainage areas for physiographic provinces in Michigan, the team has received enough funding to begin fieldwork to gather data.

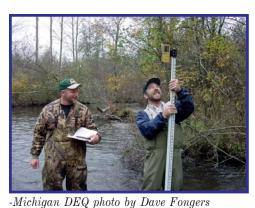
Regional reference curve development is important to all natural resource professionals concerned with river restorations. This critical data will take the guesswork out of river restorations in Michigan, and provide information necessary to develop successful and stable outcomes for projects. Alpena FRO biologists Heather Rawlings and Susan Wells serve as Fish and Wildlife Service representatives on the team.

The Michigan DEQ is providing funding for the next three years for a position to lead data collection efforts — Kristine Bosley-Morse, an employee of the Calhoun Conservation District and a graduate student at Michigan State University who has been working with the team since its inception. MSU made a strong contribution to the project by committing to purchase a total station (surveying unit) to assist with stream surveys. The Michigan DNR has

applied for and received a twoyear grant that will fund DNR staff involvement, including a field crew to assist Bosley-Morse. USGS has committed to providing gaging data and analysis to the field crews. All of the resource agencies will be needed to complete initial site checks, gain access permission from private landowners, and assist with future training efforts.

At the January meeting, Dave Fongers from the Michigan DEQ announced that the team's website was nearly complete. The website is now on-line and can be accessed by going to the Michigan DEQ's home page (http:// www.michigan.gov/deq), and searching "Michigan Stream Team." The website also contains the final version of Protocol for Field Surveys of Stream Morphology at Gaging Stations in Michigan, a document that serves as procedural protocol to conduct regional reference curve field data collection, which the team developed in 2005.

Heather Rawlings, Alpena FRO



Michigan Stream Team members Ralph Resnick (Michigan Department of Environmental Quality) and Chris Frieburger (Michigan Department of Natural Resources) collect survey data in a 2005 field exercise. The Team was formed to develop regional curves showing bank full dimensions versus drainage areas for physiographic provinces in Michigan.

Ashland FRO Assists with Galligan Farms Project

alligan Farms operates a dairy Uand farming operation within the Whittlesey Creek watershed near Ashland, Wisconsin, approximately two river miles upstream from Whittlesey Creek NWR. They are a valuable partner in conservation and restoration of the stream and watershed. In the fall of 2005, the owners implemented multiple practices to reduce the input of sediment into Whittlesey Creek. These actions will improve water quality and fish habitat for brook trout and other aquatic species. Watershed improvement practices took place at seven different locations on the farm and included sediment catch basins, grade stabilizations, and runoff reduction improvements.

Through the Partners for Fish and Wildlife Program, the Ashland FRO provided assistance on the project. In addition to Galligan Farms and the Fish and Wildlife Service, partners on the project include the Ashland, Bayfield, Douglas, and Iron County Land Conservation Department and the Natural Resources Conservation Service.

Ted Koehler, Ashland FRO

Workforce Management

Surplus Furniture Benefits Hurricane Relief

he Fish and Wildlife Service L transferred surplus office furniture from the La Crosse FRO and the La Crosse District Office of the Upper Mississippi River National Wildlife & Fish Refuge to the City of Tomah, Wisconsin, in February. The City of Tomah has a sister-city relationship with the City of Waveland, Mississippi, which is located on the coast of the Gulf of Mexico and suffered catastrophic damage in 2005 as a result of hurricanes Katrina and Rita. The City of Tomah has already shipped several semi-truck loads of relief supplies to Waveland. The former Fish and Wildlife Service office furniture will be shipped in the near future to Waveland for use by city government officials as the city continues to recover and rebuild.

 $\begin{array}{l} \textit{Mark Steingraeber, La Crosse} \\ \textit{FRO} \end{array}$



-USFWS

Surplus office furniture from the La Crosse Fishery Resources Office and the La Crosse District Office of the Upper Mississippi River National Wildlife and Fish Refuge was transferred to the City of Tomah, Wisconsin. The furniture will eventually make its way to the hurricane ravaged community of Waveland, Mississippi.

Hurricane Devastation Bigger than Biologist Ever Imagined

urricane Katrina hit the Gulf **▲ L**Coast more than six months ago and still the destruction is overwhelming. Scott Yess of the La Crosse FRO helped storm victims pick up the pieces and put their lives back in order during a month-long detail to Mississippi to assist with debris removal. The two primary functions for Federal detailees such as Yess involve site assessment and quality assurance of the debris removal process. The first response team to a piece of property is site assessors who work in two-person teams. Finding lots in Mississippi still presents problems, since many road signs and street signs are missing and houses are gone.

Once the crew finds the parcel, they mark property lines and hazards, mark trees for removal, and draw a map of the parcel. They contact the landowner to gather information on utilities and provide information to the owner on the project. This work sets the table for the contractor and quality assurance team for the actual removal work. As a quality assurance official, Yess' primary duties were to act as a liaison between the property owner and the contractor and oversee the work and safety issues. This was very satisfying work because most landowners were thrilled with the results.

Assistance is still needed on the Gulf Coast. If you would like more information on this volunteer experience, please call Scott Yess at 608-783-8432.

Scott Yess, La Crosse FRO

Ashland FRO Operations Plan and Work Activity Guidance Updated for 2006

shland FRO staff met to Aupdate the station's Operations Plan for 2006-2007. Staff worked to format and align the new plan with the goals, objectives, and focus areas of the Fish and Wildlife Service's National Fisheries Vision. They identified work activities, lead biologists, and work effort in a Work Activity Guidance spreadsheet. Exercises and planning documents like this serve to enhance workload management, performance, accountability, and communication about what we do and why.

Mark Dryer, Ashland FRO

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-Jerry French Postcard Collection; Booth Bay - circa 1905

Windows in time

A Glimpse into our Proud Past

The Booth Bay hatchery was located on Booth Bay, near Brunswick, in Sagdahoc County, Maine. This hatchery was established in 1903 and was transferred to the Division of Fishery Research in 1950.

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