U.S. Fish & Wildlife Service

Fish Lines

Region 3 - Great Lakes/Big Rivers

Leadership in Conserving, Enhancing, and Restoring Aquatic Ecosystems

Fiscal Year 2005
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Pallid Sturgeon -The Missouri River Dinosaur

-USFWS photos

Series of photos depicting Fisheries involvement in pallid sturgeon recovery: (Lt. to Rt.) (Top Row) This photo shows the size of young-of-the-year sturgeon collected in an assessment trawl on the Lower Missouri River; Biologist Louise Mauldin from the Columbia Fishery Resources Office (FRO) describes the difference between a federally endangered pallid sturgeon and the more common shovelnose sturgeon to Acting Director Matt Hogan; Stern trawling has collected more juvenile pallids than other gear types, this method allows biologists to sample specific habitats that are too deep to seine; (Middle Row) Winter gill net assessments are conducted in the Missouri River; Seining for young-of-the-year pallid sturgeon; These pallid sturgeon are being reared at the Neosho National Fish Hatchery (NFH) in Neosho, Missouri; (Bottom Row) An addition is being added at the Neosho NFH to enhance pallid sturgeon production; Wyatt Doyle from the Columbia FRO holds an adult pallid sturgeon captured during assessment operations; Neosho NFH staff prepare to stock cultured pallid sturgeon.

(See the "*Feature Story* on Page 5)

To view other issues of "Fish Lines", see our Regional website at: (http://www.fws.gov/midwest/Fisheries/)

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.

Inside this Issue

Click here to visit our Fisheries Web Site

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.

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.

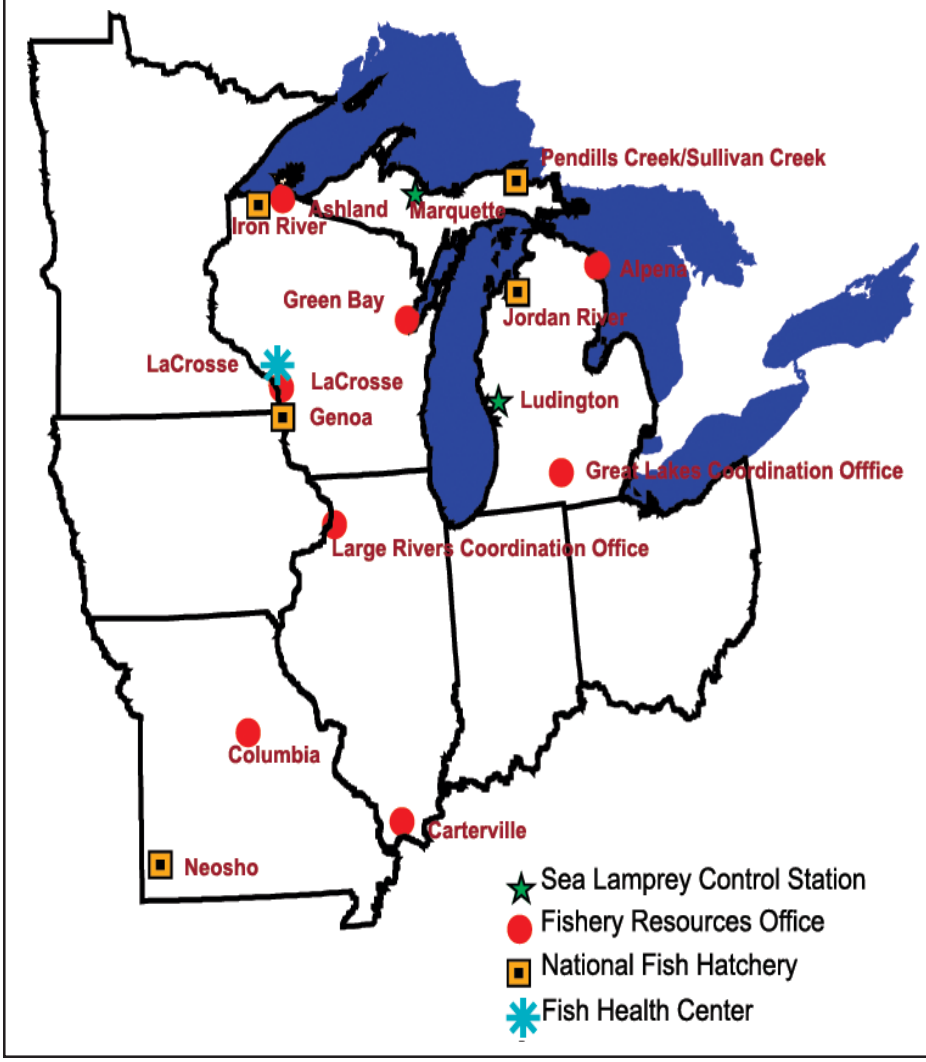
Fishery Resources Offices

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 opportunities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisheries databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and 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.

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 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.

Great Lakes - Big Rivers Region Fisheries Field Offices



List of Acronyms

DNR- Department of Natural Resources
FHC- Fish Health Center
FRO- Fishery Resources Office
NFH- National Fish Hatchery
NWR- National Wildlife Refuge

Great Lakes - Big Rivers Regional Fisheries Program

Pallid Sturgeon - The Missouri River Dinosaur

It has been touted as a living fossil, the Missouri River dinosaur and the ugliest fish in North America. The early fossil record indicates its rise in existence during the Cenozoic Era, and for 60 million years it has thrived in the muddy rivers of the North American continent.

-photo by Ken Bouc, Nebraska Game and Parks Commmisssion

Pallid Sturgeon

Pallid sturgeon evolved within the diverse environments of the Missouri and Mississippi Rivers at a time when flood plains, backwaters, chutes, sloughs, islands, sandbars, and main channel waters formed the large-river ecosystem.

Though the pallid sturgeon (*Scaphirhynchus albus*) survived the modern ice age some three million years ago, the Dark Ages, the Industrial Revolution, Westward expansion and the fall of Communism, it has only recently experienced changes so extreme that they threaten its very existence. In less than a century, overfishing, caviar trade, habitat destruction, pollution, dam construction, changes in river flows and hybridization have forced the pallid sturgeon to the brink of extinction.

The U.S. Fish and Wildlife Service (Service) listed the pallid sturgeon as an endangered species in 1990, and since then, biologists have worked hard to save this species, clinging to threads of hope that they will be successful. A coalition of federal, state and tribal agencies, conservation organizations, and concerned citizens has come together, each playing a critical role in trying to recover this ancient fish.

The Army Corps of Engineers (Corps), Missouri Department of Conservation, Nebraska Game and Parks Commission, South Dakota Department of Game, Fish and Parks, and the Service in Regions 3 and 6 are all working cooperatively to implement a program to assess pallid sturgeon and other native species throughout the Missouri River, from Fort Peck Dam in Montana to the mouth near St. Louis.

Here in the Great Lakes-Big Rivers Region, the Fisheries Program is a small, but very important player in the pallid sturgeon recovery effort. Columbia Fishery Resources Office and the Neosho National Fish Hatchery, both located in Missouri, are just two of the Service offices in this region that are actively engaged in pallid sturgeon recovery efforts on the Missouri River. Ecological Services Field Offices and National Wildlife Refuges are also critical to the effort.

-USFWS

Columbia Fishery Resources Office (FRO) staff trawl for endangered pallid sturgeon in the Lower Missouri River. Fishery assessments of remnant populations are a critical component in the recovery plan.

The pallid sturgeon is one of eight species of sturgeon found in North America and one of only three that live entirely in fresh water. They grow to lengths exceeding six feet and weigh more than 100 pounds, and they are thought to live beyond 60 years. Female pallid sturgeon reach spawning age at 15 to 20 years, and males at five to seven years. While science cannot pin down the exact reason for their decline, pallid sturgeon's unique life characteristics—long life and slow growth—may have contributed to their decline. Long-lived species are more sensitive to overfishing, accumulate toxins over time and take longer for these species to replenish themselves. This combined with habitat loss have spelled disaster for the species.

Neosho NFH is one of eight federal and state hatcheries raising pallid sturgeon for stocking into the Missouri River. All pallid sturgeon raised at hatcheries are tagged each with an individually numbered tag before they are put into the river. This helps biologists distinguish between the wild and hatchery raised pallid sturgeon, provides important information to help understand more about this species and what can be done to save it.

-USFWS photo by Louise Mauldin

Staff from Neosho National Fish Hatchery (NFH) and Columbia FRO tag pallid sturgeon that were reared at the hatchery. All cultured fish are tagged to help biologists distinguish between wild and hatchery reared fish.

Only in their fourth year of raising pallid sturgeon, the staff at the Neosho NFH are increasing the number of pallid sturgeon raised at the hatchery, both by refining their culture techniques and by increasing the amount of tank space. In 2004, the original sturgeon building was expanded through a partnership with the Corps. This new addition allows the hatchery to raise an estimated 4,000 pallid sturgeon each year and up to an additional 1,000 under ideal conditions. The Corps and the Service are working together on another project to construct a new building for culturing pallid sturgeon at the Neosho NFH. This new building will enhance the hatchery's ability to rear pallid sturgeon. The cooperative efforts of the Corps and Service are a result of the Biological Opinion for the operation of the Missouri River and compliance with the Endangered Species Act.

The pallid sturgeon raised by the hatcheries are critical for the recovery of the species. Biologists estimate that all of the wild sturgeon in the Missouri River will be gone in about 10 years. By adding hatchery-raised pallid sturgeon to the wild populations, biologists can obtain more accurate estimates of the population of wild fish by comparing them to the number of stocked fish.

The hatchery-raised pallid sturgeon are released into the Missouri River, where they have a greater chance to find some of the newly created shallow water habitat that is so critical for their survival. The new habitat is courtesy of the Corps, who undertook an aggressive effort in 2004 to create an estimated 1,200 acres of new habitat.

The Columbia FRO is monitoring some of the newly created habitat to see if pallid sturgeon, both wild and hatchery-raised, are using it. The information collected from this effort will help guide the designs of future habitat projects and benefit other fish species in the river by providing a greater diversity of habitats.

In addition to the habitat work, the Columbia FRO is responsible for pallid sturgeon recovery in some 200 miles of the Missouri River, stretching from Kansas City, Missouri, to St. Louis. They serve as the Chair for the Middle Missouri River Basin Workgroup, a multi-stakeholder forum for coordination of on the ground recovery efforts, and on the Pallid Sturgeon Recovery Team. The staff serving on the Pallid Sturgeon Recovery Team help to plan, research and

develop pallid sturgeon recovery efforts and are making great strides in scientific and technological breakthroughs. The office also coordinates multi-state research efforts aimed at recovering pallid sturgeon in the lower Missouri.

-USFWS

A trap net is being set on sand bar habitat in the Lower Missouri River in efforts to catch young-of-the-year pallid sturgeon.

Since 1999, Columbia FRO biologists have captured 84 pallid sturgeon in this stretch of the river. Forty two of them were from the more than 68,000 pallid sturgeon stocked by federal and state hatcheries. Nineteen were wild sturgeon and 23 were of unknown origin. Also in 1999, biologists from Columbia FRO collected a larval pallid, verifying the first known case of natural reproduction in the lower Missouri River in more than 50 years. The larval fish was collected in a naturally formed side chute on the Lisbon Unit of the Big Muddy National Fish and Wildlife Refuge. In 2004, the Columbia FRO had a banner year, collecting 28 pallid sturgeon, and biologists have collected 19 pallid sturgeon so far this year, including one that migrated through Gavins Point Dam. This is the second time biologists have documented a pallid sturgeon passing downstream through this dam.

Though this increase in catch of pallid sturgeon could be attributed to success in recovery efforts, it is more likely a result of increased sampling effort, more experienced sampling crews and a greater number of fish in the system from stocking. As knowledge increases about the specific habitat requirements, it becomes easier to predict where and when pallid sturgeon might be in certain parts of the river.

-USFWS

The Columbia FRO and the U.S. Geological Survey finally recaptured this pallid sturgeon. Staff needed to implant a new sonic transmitter and archival tag. Information from the tags will further our understanding of the habits of this federally endangered fish species.

Biologists are optimistic about the recovery of pallid sturgeon, though it will require additional time and dedication to discover the habits of this ancient fish and to undo a century of damage. Biologists hope that the newly created pallid sturgeon habitat, in conjunction with more natural river flows and augmentation from stocking will prove to be the successful combination for fish and wildlife recovery. *Jeff M. Finley, Columbia FRO*

For more information about the U.S. Fish and Wildlife Service pallid sturgeon activities occurring at the:

Columbia Fishery Resources Office, please visit their website at http://www.fws.gov/midwest/ColumbiaFisheries/.

Neosho National Fish Hatchery, please visit their website at http://www.fws.gov/midwest/Neosho/

Columbia, Missouri Ecological Service Field Office, please visit their website at http://www.fws.gov/midwest/ColumbiaES/.

Big Muddy National Fish and Wildlife Refuge, please visit their website at http://refuges.fws.gov/profiles/index.cfm?id=33590.

DeSoto National Wildlife Refuge, please visit their website at http://www.fws.gov/midwest/desoto/.

Partnerships and Accountability

Fish and Wildlife Service Director and Pallid Sturgeon on the Big Muddy

Fish and Wildlife Service Acting Director Matt Hogan traveled to Columbia, Missouri, in March and got to see his first pallid sturgeon up close and personal. Hogan, along with staff from the Columbia Fishery Resources Office (FRO), the Columbia Ecological Services (ES) and Private Lands offices, and the Big Muddy National Fish and Wildlife Refuge, toured the Overton Bottoms unit of the refuge to see ongoing cooperative efforts with the U.S. Army Corps of Engineers. Staff briefed Hogan on the various programs and projects in the Columbia area and important Missouri River issues.

During Hogan's visit, Columbia FRO staff set gill nets at Overton Bottoms in an effort to capture pallid sturgeon brood stock for the Pallid Sturgeon Recovery Program. Within a few minutes of leaving the boat ramp, the acting director got a firsthand look at a pallid sturgeon capture near a recently constructed pilot chute. The fish was taken to the Missouri Department of Conservation's Blind Pony State Fish Hatchery to be used as brood stock in pallid sturgeon recovery efforts. The addition of this wild fish to the brood stock program will augment genetic diversity and provide more offspring for future stocking. Collection of this fish supports the native species goal of the Fisheries Program Vision for the Future by aiding in recovering fish populations protected under the Endangered Species Act.
Louise Mauldin, Columbia FRO

-USFWS

Biologist Louise Mauldin holds a pallid sturgeon captured during a fishery assessment on the Missouri River. Observers of the operation include (from left to right): Ecological Services Field Supervisor Charlie Scott, Acting Director Matt Hogan, and Refuge Manager Tom Bell.

-USFWS

Louise Mauldin describes the difference between a Federally endangered pallid sturgeon and a shovelnose sturgeon to Acting Director Matt Hogan.

Fish and Wildlife Service and Bass Pro Shops - Aquatic Education with a New Aquarium in Columbia, Missouri

Following his day on the Missouri River, Acting Director Matt Hogan helped Bass Pro Shops to open the new Sportsman's Warehouse in Columbia. One of the new store's most prominent features is an 11,000-gallon aquarium stocked with fish collected from the Missouri River system and elsewhere, courtesy of the Missouri Department of Conservation—with some help from Service staff in Columbia. Along with the Missouri Department of Conservation and Bass Pro, the Fish and Wildlife Service also co-sponsored an educational forum called "Evening for Conservation" the night before the store's grand opening. Biologists Corey Lee and Andy Starostka from Columbia FRO, and Andy Roberts from the Columbia ES Field Office, staffed a booth that educated visitors about various fish, the new store's aquarium and the aquatic resources of the Missouri River. Attendees asked many questions and were eager to learn about the Fish and Wildlife Service's programs involving the Missouri River and its floodplain. The evening was a success with hundreds of people attending the event. Open lines of communication with stakeholders about the Missouri River fishery is critical in establishing an active constituency for aquatic resource conservation.
Corey Lee, Columbia FRO

Friends of the Upper Mississippi River Fishery Services Host Meeting

The Friends of the Upper Mississippi River Fishery Services is a cooperative Friends group that supports three Fish and Wildlife Service Fisheries offices on the Upper Mississippi River near La Crosse, Wisconsin—the La Crosse FRO, La Crosse Fish Health Center (FHC) and Genoa National Fish Hatchery (NFH). The group held its April meeting onsite at the Genoa hatchery.

April is a busy month at Genoa, with spring river netting operations in full swing. Northern pike spawning season has just ended and the walleye spawning run is in high gear. The Friends group members were treated to a walleye spawning demonstration and a walking tour of the station, and enjoyed fried flathead catfish prepared by the station's own maintenance crew, Jeff Lockington and Dan Kumlin. Turnout was excellent with 30 folks coming out on a beautiful spring day to talk fish and make "Friends." The group also planned future volunteer opportunities for the Friends group, and there was a great amount of interest in upcoming lake sturgeon tagging and mussel infestation activities. *Doug Aloisi, Genoa NFH*

Region 3 Fishery Offices Participate in "Scaling Up" Congressional Outreach

Region 3 Fishery field and regional office staff joined Fish and Wildlife Service employees from across the country during the week of March 7 in Washington, D.C., to educate Congressional members and their staffs about the important work the Fisheries program does to conserve, restore, and enhance the nation's aquatic resources. The Fisheries and Habitat Conservation Program set a goal to visit 200 members of Congress to express appreciation for funding to restore aquatic habitat provided in the 2005 budget. The Fisheries staff delivered the key message of "Providing Habitat CPR for Healthy Fish and Wildlife, Healthy Habitat, Healthy Economies and Healthy People" to 203 Congressional members. In addition to the opportunity to interact with elected officials, the week's activities also included the Second Annual Hook and Cook Reception, capping off a successful week of "Celebrating Habitat." *Mark Dryer, Ashland FRO*
Tracy Hill, Columbia FRO
Rick Westerhof, Jordan River NFH

Biologist Makes Presentation at "Carnival of Communication"

Columbia FRO staffer Wyatt Doyle and two other state and federal biologists, representing participating agencies in the Pallid Sturgeon Monitoring Program, presented results of pallid sturgeon collection since efforts began to inform funding agencies, agency leadership and other Missouri River stakeholders how sampling efforts have taken the program to this level and what the vision of the future is. The Columbia FRO has been part of pallid sturgeon monitoring since 1999 and continues to provide leadership in recovery of the species. The ability of Columbia FRO to work in collaboration with multiple agencies and share information with non-scientists promotes accountability and enhances our ability to recover the species through ensured funding and identification of common goals. *Wyatt Doyle, Columbia FRO*

Neosho's Seahorse is Back

The seahorse is back at Neosho NFH, compliments of the Friends of the Neosho National Fish Hatchery. No, not a real live seahorse, but a new bronze replica of a winged seahorse that long, long ago sat upon the flag pole at the hatchery. That original seahorse went to the museum at Spearfish, South Dakota, so a mold could be cast and a replica made, but somehow it was never shipped back. After many years of trying by hatchery personnel, some members of our Friends group convinced the powers-that-be to send us the mold that was made from that original seahorse. Replacing that seahorse was on the Friends group list of things to do and our hats' off to them, they

got the job done! Now we have a beautiful bronze winged seahorse that stands about three feet tall, as well as our own mold. The statue and mold cost the Friends group $2,500.
Roderick May, Neosho NFH

Agents Report on Sea Lamprey Control Activities at Upper and Lower Great Lakes Annual Meetings

Marquette Biological Station biologists Jessica Richards and Lisa Corradin presented information on 2004 sea lamprey control activities and 2005 plans at the Upper and Lower Great Lakes annual meetings sponsored by the Great Lakes Fishery Commission. Several staff biologists from the Marquette and Ludington Biological Stations also attended the meetings, which are extremely beneficial for maintaining effective partnerships with other agencies. The sea lamprey management program continues to work closely with partners to control populations of sea lampreys in tributaries of the Great Lakes to protect the fishery and related economic activities in the basin (an estimated annual benefit of $4 billion to $6 billion each year to the region). The Service delivers a program of integrated sea lamprey control in the U.S. waters of the Great Lakes as a contracted agent of the Great Lakes Fishery Commission.
Jessica Richards, Marquette Biological Station

-GLFC

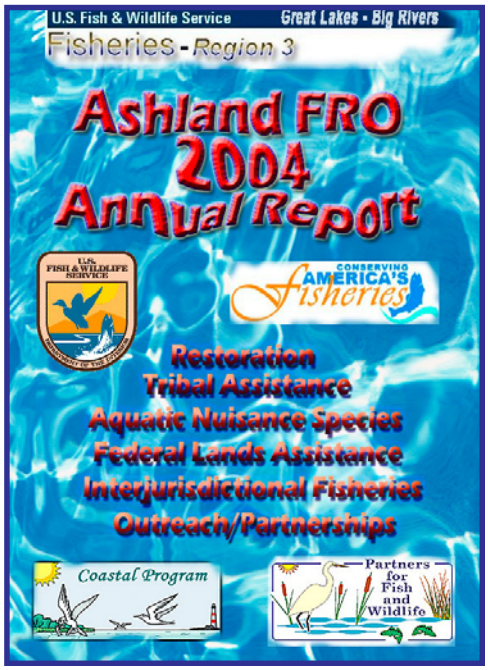
Biologists from the Marquette and Ludington Biological Stations attended the Lake Committee meetings in Ypsilanti, Michigan. They presented the 2004 sea lamprey control activities and 2005 plans for the program.

Jordan River NFH and Alpena FRO Represent the Fish and Wildlife Service at Upper Lakes Meeting

Biologists Tim Smigielski of Jordan River NFH and Aaron Woldt of Alpena FRO participated in the Upper Lakes Meeting sponsored by the Great Lakes Fishery Commission, in Ypsilanti, Michigan. Smigielski delivered an interpretive poster demonstrating the 2004 Great Lakes lake trout stocking trips made by the M/V *Togue* and participated in an evening session of the Lake Michigan Technical Committee's Lake Trout Task Group. Woldt designed this year's trout stocking poster and has passed the baton to Tim for future years.
Tim Smigielski, Jordan River NFH

Ashland FRO's 2004 Annual Report on the Internet

Ashland FRO has compiled a final listing of its 2004 accomplishments into a report that is available on the station's Web site. The annual report summarizes the station's efforts on restoration projects, tribal assistance, interjurisdictional fisheries, federal lands assistance, aquatic invasive species and outreach/partnerships. The report is available at http://www.fws.gov/midwest/ashland/accom_rpts/accom04/annualrpt04.html.
Frank Stone, Ashland FRO



Aquatic Species Conservation and Management

Genoa NFH Begins 2005 Higgins' Eye Pearlymussel Propagation Efforts

As the birds return from their southern winter homes and the bees begin buzzing from one flower to the next, Genoa NFH is busy with Higgins' eye pearlymussel propagation activities at its famous Clam Palace. Genoa NFH has been involved with Higgins' eye recovery since 1999, when zebra mussels began affecting critical habitat areas for this endangered mussel in the Mississippi River.

Spring is the time of year when volunteers from the U.S. Geological Survey, La Crosse FRO, Twin Cities ES Field Office, regional office; and the Wisconsin, Minnesota, and Iowa DNRs assist Genoa staff by being part of a "bucket brigade" that assists Higgins' eyes in completing their life cycles. In small buckets, volunteers expose largemouth and smallmouth bass to Higgins' eye larvae, or *glochidia*, for several minutes, and then bring the fish to a station to check the level of infestation. A target rate of 400 glochidia per fish is the goal of this infestation process, which has a potential to produce more than 3.2 million juveniles this summer.

SCUBA divers from Genoa NFH and Minnesota DNR have been scouring the bottom of the St. Croix and the Mississippi rivers for egg-bearing or *gravid* females, collecting 25 adult Higgins' eye pearlymussels so far, to infest 2,000 largemouth bass. Divers will collect at least 50 additional female mussels in coming weeks (water levels permitting) to infest an additional 6,000 large- or smallmouth bass. Two to three weeks after the infestation, fish will be released into Mississippi River tributaries in Wisconsin and Iowa or will be placed in cages in Lake Pepin, Minnesota, and Ice Harbor in Dubuque, Iowa. Higgins' eye pearlymussels propagated in cages are protected from predators such as carp and suckers, providing an opportunity to quantify the success of this program. Higgins' eye propagation efforts have produced more than 10,000 juveniles in cages in the past five years, and more than 3,500 two or three year old sub-adult mussels have been placed back into the upper portions of the Mississippi River.

Zebra mussels, an invasive species, reproduce in excessive numbers, and their young attach to hard surfaces such as native mussel shells, forming a thick layer encrusting the outsides of the native mussels. The encrusting layer of zebra mussels robs all food from the native mussels and prevents the natives from completing their complicated life cycle. Native mussels such as the Higgins' eye require fish to carry their larval form. Higgins' eye use a "fishing lure" to attract fish close enough to release glochidia into the fish's mouth, where the glochidia attach to the gills of certain species of fish for several weeks. While on the fish's gills, the glochidia receive nutrients needed to complete their metamorphoses into free living juvenile mussels that drop to the river bottom.

Tony Brady, Genoa NFH

-USFWS

Kurk Welke from the Wisconsin DNR (left) and Biologist Tim Patronski place host fish in their buckets as part of the "Bucket Brigade." The buckets contain mussel larve, called glochidia, which attach to the gills of fish. The glochidia receive nutrients needed to complete this early phase of their life cycle.

Jordan River NFH Crew Fin Clips 2 Million Yearling Lake Trout

Bolstered by numerous potluck meals, the staff and fin clipping crew at Jordan River NFH completed clipping of the 2004 brood year of lake trout between February 7 and March 29. The crew marked approximately two million fish with left ventral fin clips, averaging nearly 59,000 fish per day (based on a 6 ¼-hour workday), or 873 fish per hour per clipper. This fin clip serves to identify these fish as hatchery origin lake trout to researchers who may later collect some of them while doing biological surveys. The total cost of this year's fin clipping operation was $36,590, which covered the wages of both the fin clipping crew and the biologists who oversee the operation. The size of the fin clipping crew ranged daily from eight to 15 people, or an average of about 11 people, mostly permanent-intermittent employees.

Clarice Beckner, Jordan River NFH

Jordan River NFH Crew Tags 162,000 Yearling Lake Trout

A crew of five permanent-intermittent staff at Jordan River NFH coded-wire tagged and adipose fin-clipped 161,945 yearling lake trout between January 25 and February 1, at a cost of approximately $3,360. The crew tagged five strains of trout with a unique code number: Lewis Lake, Seneca Lake, Superior Apostle Island, Superior Isle Royal and Superior Traverse Island strains. The adipose fin-clip identifies that the fish has been tagged. The tagging effort remains paramount to lake trout rehabilitation programs in lakes Huron and Michigan, and the 2004 year class will be released at 22 different sites around the lakes. Tag return data will be used to monitor and evaluate the Fish and Wildlife Service's interagency lake trout rehabilitation efforts in both lakes, specifically to compare survival rates of lake trout strains in lakes Michigan and Huron, characterize the movement patterns of Lewis Lake strain lake trout released into Lake Huron, and assess sea lamprey predation rates on lake trout in Northern Lake Huron.

Clarice Beckner, Jordan River NFH

-USFWS photo by Wayne Talo

A coded wire tag is being injected into the nose cartilage of a yearling lake trout. Tag return data from harvested fish is used to monitor and evaluate rehabilitation efforts.

Ashland FRO and Whittlesey Creek NWR Search for Coaster Brook Trout

Ashland FRO Biologist Glenn Miller, Whittlesey Creek NWR Biologist Mike Mlyarnek and Northland College student volunteer Becca Schoon conducted assessments for brook trout fry on Whittlesey Creek near Ashland, Wisconsin, before spring run-off. The crew searched the main stem and north fork of Whittlesey Creek for signs of brook trout fry and signs of redds, or spawning nests. Although no brook trout were captured, the crew did capture coho salmon fingerlings, took water temperatures and recorded stream velocity.

Glenn Miller, Ashland FRO

-USFWS

Northland College student volunteer Becca Schoon searches for brook trout fry in Whittlesey Creek near Ashland, Wisconsin. The creek has been stocked with coaster brook trout which live most of their lives in Lake Superior and migrate into tributary streams in the fall to spawn.

Columbia FRO Completed Fort Leavenworth Winter Fishery Survey Field Work

After anecdotal information surfaced that a federally endangered pallid sturgeon had been captured in Corral Creek, a tributary of the Missouri River that runs through the Fort Leavenworth Army installation, Fort Leavenworth contracted with the Columbia FRO to further explore pallid sturgeon presence and community structure in the Corral Creek tributary and the adjacent stretch of the Missouri River.

Sampling efforts took place during the week of March 1 and including 14 overnight experimental gillnet sets and 11 trammel net drifts. Blue sucker was the most common species captured while trammel netting. Biologists also captured five shovelnose sturgeons with trammel nets. Goldeye were the most abundant of the 21 species caught in gillnets. The sampling crew also captured 96 shovelnose sturgeon, one shovelnose/pallid hybrid and a coded-wire tagged paddlefish. Catch rates and species diversity were comparable to other Missouri River segments for the winter sampling season. Sampling will continue this spring targeting pallid and shovelnose sturgeon in the lower portions of tributaries, tributary mouths, and potential pre-spawn staging areas. A more complete community assessment is planned for the summer.

Nicholas Frohnauer, Columbia FRO

-USFWS

This blue sucker, which is a species of conservation concern, was captured during a fishery assessment near Fort Leavenworth. The purpose of the assessment was to see if federally endangered pallid sturgeon were present in Corral Creek, a tributary of the Missouri River.

Spring Netting Yields Big Returns for Local Outdoor Enthusiasts

Each spring, with the advent of the walleye spawning season, Genoa NFH returns to the Upper Mississippi River with its nets to capture adult northern pike and walleye as a source of eggs for production programs. Once the eggs are taken, the adult fish are returned to the river. The resulting offspring become a valuable resource to supply host fish for endangered mussel recovery efforts, support fishery management plans on tribal and refuge lands, and supply state natural resource agencies for cooperative efforts which benefit fishery resources.

Genoa's spring netting supports a myriad of other operations, including the wild fish health survey conducted by the La Crosse FHC and ongoing studies conducted by the USGS's Upper Midwest Environmental Science Center in Onalaska, Wisconsin. Another side benefit of the netting operation is access to adult walleye to supplement lakes. At the request of the Wisconsin DNR's La Crosse office, two local water bodies in Vernon County, Sidie Hollow Lake and Runge Hollow Lake, received 175 adult male walleye averaging one to four pounds. These fish will not reproduce in these small impoundments but should supply many hours of enjoyment to the hundreds of anglers that visit this state park and recreation area. These multi-talented walleye also contribute (albeit unknowingly) to the management of these lakes by reducing populations of pan fish before they become overpopulated and growth rates decline. Genoa's netting program is extremely popular and biologically sound as only a small number of walleye males are removed from a healthy population, and they are moved to enclosed impoundments in the same watershed. Many thanks go to our hatchery volunteers who assisted with the netting and transfer of the walleye adults.
Doug Aloisi, Genoa NFH

-USFWS

A volunteer proudly shows off a large female northern pike captured during the spring netting season. Genoa NFH spawns wild walleye and northern pike brood stock each spring as a source of eggs for production programs.

-USFWS

The hatchery crew from Genoa NFH carefully remove fish from a trap net. Each spring nets are set to capture native fish species as a source of eggs for numerous production programs.

Inspection is a Sign of Spring at Jordan River NFH

The arrival of biologist Cory Puzach from La Crosse FHC during March marked the arrival of spring at the Jordan River hatchery. Fish health assessments are performed semi-annually at Jordan River NFH. The results of the heath assessment are still pending, but will be available prior to spring stocking.
Tim Smigielski, Jordan River NFH

Pallid Sturgeon Construction Project Moves Ahead at Neosho NFH

The pallid sturgeon construction project at Neosho NFH is progressing with the completion of the 1,600-foot deep well system. Testing revealed that the new well will produce around 825 gallons per minute. The contractors are now pouring concrete for the footings and walls for the new sturgeon culture building. The site is starting to look like a hatchery!
Roderick May, Neosho NFH

Pallid Sturgeon

New facilities for rearing federally endangered pallid sturgeon are being constructed at the Neosho NFH.

Aquatic Invasive Species

Cooperators Monitor Sea Lamprey Population in Chagrin River, Lake Erie

The long-term effectiveness of the Sea Lamprey Control program is measured by the abundance of spawning-phase lampreys in the Great Lakes. Monitoring of spawning-phase sea lampreys is conducted through assessment trapping with a variety of portable and permanent traps. And the cooperation of partners is critical in the continued monitoring of sea lamprey abundance, which determines our progress toward the achievement of fish community objectives in the Great Lakes.

Case Western Reserve University and the Ohio DNR will monitor sea lamprey catches in the Chagrin River on Lake Erie in 2005. The Daniels Park Dam in Willoughby, Ohio, which had previously blocked sea lamprey migration, was washed away during a high water event last year. Traps and nets will be monitored near the Gates Mills dam and in the East Branch Chagrin River to determine the size of the lamprey population and the distance that sea lampreys are now able to migrate upstream.
Jessica Richards, Marquette Biological Station

-GLFC

Marquette Biological Station employees Mary Wilson and Michael Blohm are monitoring invasive sea lamprey trap catch.

2004 Ruffe Surveillance Report Available Online

Monitoring activities in 2004 for the Eurasian ruffe are summarized in the 13th Annual Ruffe Surveillance Report, a combined effort of the fishery resources offices of Ashland, Alpena and the Lower Great Lakes, and the Ontario Ministry of Natural Resources. The report is available on the Web at http://midwest.fws.gov/Ashland.

The ruffe (pronounced "rough"), an invasive fish that was likely introduced into western Lake Superior by ship ballast water during the mid 1980s, competes with native fish species for food and space. A control program was established under federal legislation enacted in 1990. Annual ruffe surveillance activities have been ongoing since 1991.

The 2004 document reports on monitoring activity primarily outside of the documented ruffe range in the Great Lakes basin. In Lake Superior, biologists collected five ruffe within the periphery of the fish's established range, and found one ruffe for the first time in the Marquette harbor of Michigan, extending the ruffe's range about 69 miles east along the south shore of the lake. A single ruffe specimen was found for the first time in Big Bay de Noc, Lake Michigan, by the Michigan DNR, extending the ruffe's range about 6.3 miles east from Little Bay de Noc. Biologists captured no ruffe from Lake Huron, the first time since they were found there in 1995. No ruffe were reported captured from inland lakes and streams in the Great Lakes basin.
Gary Czypinski, Ashland FRO

-USFWS

Eurasian Ruffe

Alpena FRO Biologists Attend Invaders of the Great Lakes Seminar Hosted by Michigan State University

Alpena FRO Biologist Anjanette Bowen attended the "Invaders of the Great Lakes: Options for Prevention and Management" seminar held at Michigan State University in East Lansing. The seminar was held during Agriculture and Natural Resources Week and was sponsored by Michigan State University, Michigan Sea Grant, Michigan Department of Environmental Quality, North American Lake Management Society and the U.S. Geological Survey. A variety of university and resource agency speakers provided information on the current state of invasive species within the Great Lakes and technology that is being developed that may provide control. Other Fish and Wildlife Service representatives in attendance were Bob Kavetsky and Burr Fisher of the East Lansing Field Office
Anjanette Bowen, Alpena FRO

Public Use

Hatchery Provides Fun, Educational Evening to Local Kids... and by Popular Demand "Fish are Fun" Program Will Return for Fall

As the sweat beaded on his forehead, his ever-observant eight-year-old son yelled out from the crowd, "Man, dad, are you sweatin'!" Jordan River NFH Biologist Tim Smigielski was sweating for good reason, as he frantically tried to accommodate nearly 60 people who showed up at the hatchery to attend the last of three programs in the winter outreach series "Fish are Fun." This was nearly triple the attendance of the February program. Tim was short on chairs and refreshments, but not short on information, and there was certainly no shortage of questions from the wide-eyed viewers. The children and parents learned about non-native species such as sea lamprey that threaten the Great Lakes ecosystem and found out how they can help defend our natural resources against these invaders. Visitors toured the hatchery and learned about lake trout rehabilitation and cold water fish culture. At the end of it all, the kids passed a test by identifying images of invasive and native Great Lakes aquatic species. Each child received sunglasses with the "Conserving America's Fisheries" logo and Smigielski told the group that because of their attendance at programs like this, "The future is so bright we gotta wear shades!" Many parents asked that the program continue and were willing to help, where necessary—and so Smigielski will sweat it out next fall at more "Fish are Fun" programs, which may draw even more people as a result of some free publicity. Joanie Moore of Mancelona, Michigan, is the chair of the Mancelona Bass Festival Committee and has been involved with the hatchery's outreach program since 2004, when Smigielski led a contingent of hatchery employees and volunteers to participate in the Bass Festival for the first time. Moore attended the January "Fish are Fun" program with her children and took a photo that was published in the February 9 edition of the *Antrim County News*.

The photo caption read, in part: "*The U.S. Fish and Wildlife Service Jordan River National Fish Hatchery recently hosted the first of three programs in a series, "Fish are Fun!" The winter program is part of an effort by the U.S. Fish and Wildlife Service to increase awareness concerning the Service's mission and programs in the Great Lakes Region. The program, geared toward elementary school-aged children, will focus on brook trout during its next program on February 15, and exotic invaders on the third and final date, March 15. The evenings begin with an interpretive tour of the hatchery, and conclude with a short, informative PowerPoint presentation. Above, fishery biologist Tim Smigielski shows the children lake trout eggs that are incubating and soon to hatch into fry. A fish tank, located in the visitor's welcome center, contains fingerling lake trout that have been reared at the hatchery.*"
Tim Smigielski, Jordan River NFH
Wayne Talo, Jordan River NFH


ANTRIM COUNTY NEWS

CALENDAR

Hatchery program continues Tuesday

Tim Smigielski reaches out to the community while educating the next generation.

Photo by Joanie Moore

-photo by Joanie Moore

Tim Smigielski, from the Jordan River NFH, reaches out to the community while educating the next generation.

Jordan River Staff Participate in Annual Kid's Ice Fishing Event

Northland Sportsman's Club of Otsego County, Michigan, hosted its annual kid's ice fishing derby in February, and Jordan River NFH was on hand to provide games and prizes. Well over 100 youngsters participated in the derby, which was held at the Otsego Lake State Park. The sportsmen's group and various sponsors supplied minnows and wax worms for the hopeful perch anglers; and afterward, the club hosted a luncheon and awards ceremony. During lunch, Jordan River Assistant Project Leader Denise Johnston and volunteer Janet Smigielski worked the kids' fish identification game. Designed for last year's hatchery festival and lent to the sportsmen's club for the derby, the game was very popular with the youngsters, who received Fish and Wildlife Service logo pens, magnets and coloring books for their participation.
Tim Smigielski, Jordan River NFH

Rainbow Trout Program Flourishes at the Neosho NFH

Neosho NFH stocked 32,582 rainbow trout (17,371 pounds) in Lake Taneycomo during February as part of their mitigation commitment. In addition, 1,125 rainbow trout (734 pounds) were stocked into Hickory Creek and Capps Creek. The hatchery provided 60,600 surplus three-inch fish to the state of Oklahoma. Surplus fish result from a critical need to make sure enough fish are being raised to cover high priority commitments. Rearing extra fish to three inches provides a satisfactory inventory at minimal cost.
Roderick May, Neosho NFH

Fishery Booth Makes a Big Splash at the Fishing Expo

As the snow melts and the ice slowly disappears from the Upper Mississippi River, thoughts turn to spring and the fishing that will soon take place on the river. To help fishermen gear up for the fast and furious fishing season, the Omni Center in Onalaska, Wisconsin, held its annual Mississippi Valley Fishing Expo in March. The La Crosse FRO, Genoa NFH and La Crosse FHC joined forces to staff a booth at the expo. Many of the more than 3,000 people who attended the expo visited the Fish and Wildlife Service booth, which featured displays on native mussels, mounted fish, an aquarium with trout and lake sturgeon, a video on invasive carp and endangered mussels, and numerous posters on a variety of aquatic topics. A majority of the questions and concerns were about invasive Asian carp and our native mussels. The lake sturgeon in the aquarium and large mount were also a big hit. Fish and Wildlife Service staff gave out sunglasses, key chains and coloring books to children.

One of the prize attractions of the expo is the large casting tank used to demonstrate different lures and styles of fishing. Watching a lure in action is always better when there are fish to watch as well, and this year Genoa NFH partnered with local commercial fishermen to stock the casting tank with northern pike, largemouth bass, yellow perch, bluegill, black crappie, and shortnose gar from Pool 9 of the Mississippi River. Fifty fish were collected under Genoa NFH's collection permit for this event. We want to thank commercial fisherman Jim Boardman and his crew for braving a late winter storm that delivered more than 12 inches of snow to provide fish for the tank. Fish were returned to the river after the event by the Wisconsin DNR. In addition to supplying fish for the expo, Boardman's Fisheries also assisted Genoa NFH in supplying 80 yellow perch for research to be conducted at the fish culture center at the U.S. Geological Survey Upper Midwest Research Science Center.

Holding the expo in March is perfect timing for spring fever anglers. The Fisheries staff heard very positive comments about their display and the expo in general. This event was an excellent outreach opportunity and should be attended every year.
Scott Yess, La Crosse FRO
Tony Brady, Genoa NFH

-USFWS

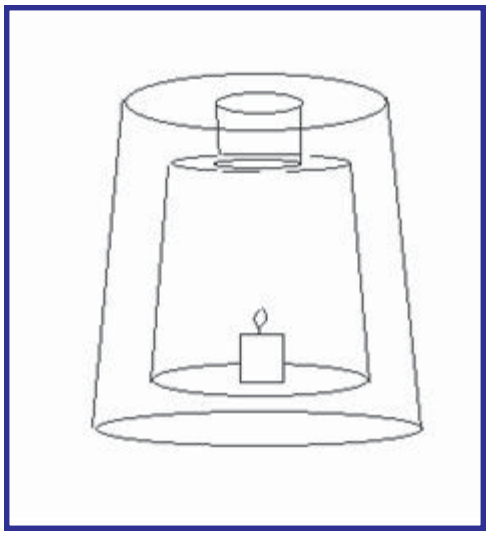
Upper Mississippi River Fisheries stations sponsored a booth at the Second Annual Mississippi Valley Fishing Expo. The event attracted over 3,000 people.

Fisheries Staff Attend Great Waters Fly Fishing Expo

The Fisheries program hosted a booth at the Great Waters Fly Fishing Expo the weekend of April 1-3 at the Sheraton hotel in Bloomington, Minnesota. More than 125 vendors participated in the event, including the local Minnesota DNR offices and the National Park Service. The Great Waters Expo is not only the first major fly fishing show in the Upper Midwest, it is the first major fly fishing show anywhere to encourage a connection between the sport of fly fishing and environmental stewardship and conservation. The fundamental philosophy of this event is that it is no longer enough simply to be an angler; one must adopt an active conservation ethic to preserve and protect our fly fishing waters. The focus at the 2005 Expo was the unique Driftless Area of Southwest Wisconsin, Northwest Illinois, Northeast Iowa and Southeast Minnesota.
Dave Radloff, Regional Office

Ashland FRO Staff Contribute to "Book Across the Bay"

Staff at the Ashland FRO contributed their non-work time to make ice luminaries for an extremely popular community cross-country skiing event called "Book Across the Bay." Nearly 1,500 participants skied 10 kilometers (6.25 miles) across Chequamegon Bay (a Lake Superior bay in Wisconsin) from Ashland to Washburn, at night. The trail is lighted by 750 large ice luminaries, made by freezing water in a five-gallon pail to form a clear ice structure, like a light bulb, within which a candle is placed. It's an art/science to do it just right. The Ashland FRO volunteers made more than 100 luminaries and are "on call" to do it again next year.
Mark Dryer and Glenn Miller, Ashland FRO



This is a diagram of a luminary that was used during "Book Across the Bay", which is a cross country ski event across Chequamegon Bay near Ashland, Wisconsin. Luminaries are made by freezing water in a five gallon pail to form a clear ice structure, like a ligh bulb, within which a candle is placed.

Ashland Offices Discuss Fish and Wildlife Service Role in Conservation Biology

Mark Dryer from the Ashland FRO and Pam Dryer from Whittlesey Creek NWR spoke to the Conservation Biology class at Northland College, in Ashland, Wisconsin, about Fish and Wildlife Service authorities, programs, and activities for conservation of fish, wildlife, and their habitats, as well as national, regional, and local issues.
Mark Dryer, Ashland FRO

Boyne City Girl Scouts Tour Jordan River NFH

The Boyne City Girl Scout Troop toured Jordan River NFH in March. Seven girls and two troop leaders learned about the hatchery during their two hour tour from tour guide and Hatchery Manager Rick Westerhof. The group was very interested and impressed with the facility, and they had endless questions regarding hatchery activities. We hope the tour inspired a few of them to consider natural resources careers.
Rick Westerhof, Jordan River NFH

Hatchery Hosts Snowmobile Picnic

On a cold, windy Saturday in January, approximately 40 people from the Elk Country Sno-Riders of Atlanta and Hillman, Michigan, used Jordan River NFH as a stop and picnic site for their weekend snowmobile tour. The hatchery provided the facilities and grilling equipment, and the Sno-Riders brought their own food. Hatchery Assistant Manager Denise Johnston and Biologist Tim Smigielski provided hatchery tours and information. The snowmobile group intends to make this picnic an annual event.
Tim Smigielski, Jordan River NFH

Lake Sturgeon Presentation Given to Association of Lifelong Learners

Biologist Adam Kowalski gave a lake sturgeon presentation to a group of community members called the *Association of Life Long Learners* at the Alpena Community College (ACC). The presentation highlighted the history of lake sturgeon in the Great Lakes, general biological characteristics of lake sturgeon, habitat and spawning requirements, past and current harvest of lake sturgeon, current research projects, and future research needs.

The Life Long Learners are a group of adult and senior community members that solicit educational presentations of all types to promote learning in the later years of life. This was a great opportunity for the Alpena FRO to talk with a group of community members regarding projects that the Fish and Wildlife Service does in the local community.
Adam Kowalski, Alpena FRO

Cooperation with Native Americans

Lake Sturgeon Restoration Program is Off and Running!

Spring has sprung on the rivers in Central Wisconsin and that means lake sturgeon are making their annual spawning runs in the larger tributaries of Lake Winnebago and the Mississippi and Wisconsin River systems. Genoa NFH is once again collecting gametes from this ancient species for restoration efforts across the Upper Midwest. Crews from Genoa began collecting fertilized eggs in mid-April as part of a cooperative project involving the Fish and Wildlife Service, Menominee Nation of Wisconsin and Wisconsin DNR to restore lake sturgeon populations on the Menominee Reservation in Northeast Wisconsin.

This long-term restoration program, which has been in place since the mid 1990s, has produced thousands of fingerling lake sturgeon for tribal waters. In addition to this program, Genoa NFH produces tens of thousands of fingerling lake sturgeon annually for restoration programs in Northern Minnesota and Missouri involving multiple state and tribal cooperators.

Roger Gordon, Genoa NFH

-USFWS

Roger Gordon from the Genoa NFH collects lake sturgeon eggs in a project involving the Menominee Nation and Wisconsin DNR.

Service Biologist Co-Chairs Modeling Subcommittee Meeting for 1836 Treaty Waters

Biologist Aaron Woldt from the Alpena FRO and Shawn Sitar from the Michigan DNR co-chaired the March meeting of the Modeling Subcommittee (MSC) of the 1836 Treaty Waters group's Technical Fisheries Committee (TFC). The primary focus of this meeting was to generate preliminary 2005 harvest limits for lake trout in 1836 Treaty waters of lakes Huron, Superior and Michigan. As stipulated in the 2000 Consent Decree, preliminary lake trout harvest numbers must be calculated by the MSC, reviewed by the TFC, and presented to the parties to the decree by March 31 each year.

Woldt and Ji He of the Michigan DNR presented an update of the status of Northern Lake Huron (MH-1 and MH-2) lake trout stock assessment models, model diagnostic output, and preliminary 2005 lake trout harvest limits. Lake Huron preliminary lake trout harvest limits for 2005 increased slightly from 2004 levels due to continued lower than target total mortality rates and increases in stock biomass due to decreasing mortality. In 2005, the Lake Huron models were updated to include time varying weight at age and time varying maturity at age to capture recent shifts in these parameters in Lake Huron lake trout populations. These preliminary limits were presented to the TFC for review on April 6.

The 2000 Consent Decree is a 20-year fishery allocation agreement for 1836 Treaty waters signed by the State of Michigan, United States, Bay Mills Indian Community, Sault Ste. Marie Tribe of Chippewa Indians, Grand Traverse Band of Ottawa and Chippewa Indians, Little River Band of Ottawa Indians, and Little Traverse Bay Bands of Odawa Indians. The MSC computed final lake trout harvest numbers and presented them to the parties by April 30, as stipulated in the Decree.

Aaron Woldt, Alpena FRO

Announcements Mailed for 2005 Tribal Wildlife Grant and Tribal Landowner Incentive Grant Programs

The Ashland FRO mailed an announcement to all of its tribal contacts alerting them to the opening of the 2005 Tribal Wildlife Grant (TWG) and Tribal Landowner Incentive (TLIP) Grant programs. Our intent is to insure that tribal resource managers and biologists are aware of this resource funding opportunity and to remind them to contact the Ashland FRO for any technical assistance they may require.

The TWG and TLIP programs will provide new funding opportunities to tribes for actions and activities that protect and restore habitats benefiting fish and wildlife species of tribal significance. These grant programs also support the efforts of tribal governments to develop or augment the capacity to manage, conserve, or protect fish and wildlife species of concern through the provision of funding and technical support.

Frank Stone, Ashland FRO

Leadership in Science and Technology

Pallid Sturgeon Brood Stock Collection Begins for the Missouri River Stocking Program

In late March, Missouri River biologists, hatchery managers and geneticists identified an imminent need to collect pallid sturgeon brood stock from the Lower Missouri River as an alternative to using fish originating from the Upper Missouri River basin. Because of the danger in collecting and hauling sturgeon in warm temperatures, the group suggested an immediate effort be made to collect local brood stock to produce offspring for next year's stocking. In response, Columbia FRO shifted its sampling efforts to finding mature pallid sturgeon for propagation at Gavins Point NFH. In the first three days of effort, biologists collected five mature fish for the stocking program, exceeding the previous five months effort by two fish. Water temperatures now exceed the safe collection threshold, meaning these fish will be the only available brood stock from the Lower Missouri River to produce pallids for stocking in 2006. A collaborative effort by Missouri Department of Conservation's Blind Pony State Fish Hatchery allowed fish to be promptly transported to South Dakota.

Endangered pallid sturgeon restoration within the Missouri River will be enhanced by having fish that represent genetic diversity from the Lower Missouri River. Our ability to identify sites to collect these fish was paramount to quick collection and relationships between state and federal hatchery partners were strengthened through this effort. *Wyatt Doyle, Columbia FRO*

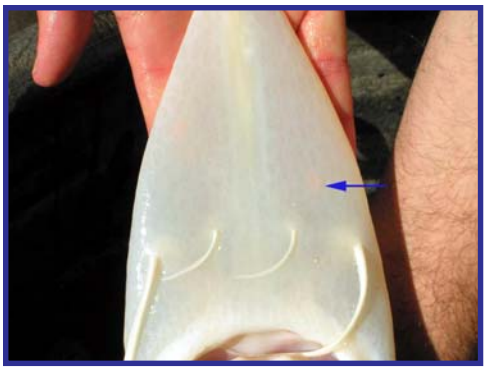
-USFWS

Biologists Corey Lee, Colby Wrasse, and Nick Frohnauer load Missouri River pallid sturgeon brood stock for transport. The fish will be used as a source of eggs for stocking programs.

Pallid Sturgeon Passes Through Gavins Point Dam

Columbia FRO recaptured a 1997 year class pallid sturgeon known to have traveled more than 700 miles downstream and through South Dakota's Gavins Point Dam – representing the third stocked pallid sturgeon to go through the dam and the longest recorded distance a stocked pallid sturgeon has traveled. The other two pallids were captured by the state of Nebraska 200 miles downstream of the dam. Recapturing these fish allowed biologists to gather information about the lasting effect of latex elastomere marks. It was unknown exactly how long these markings would be visible at the time of tagging; however, this fish was easily detected by its three distinct red marks, proving this tagging method is viable past eight years. Because the passive integrated transponder tag used in this fish was corrupted, the colored markings enabled biologists to determine stocking location, survival, age and growth of the fish. The recapture of this fish has provided new data from one of the first pallids stocked in the Lower Missouri River by Gavins Point NFH.

Increasing our understanding of endangered species movements and habits will enable hatcheries and biologists to make better decisions about genetic population issues and stocking success. Implementation of elastomere technology propels our project forward to obtain better data than what was previously available. *Wyatt Doyle, Columbia FRO*



-USFWS

This is a view of the rostrum and mouth of a recaptured pallid sturgeon. The arrow points to one of three elastomere tags in the rostrum of this fish (faint red color). This fish was tagged in 1997 and determined to have traveled 700 miles downstream and through Gavins Point Dam (near Yankton, South Dakota).

Iron River NFH Brook Trout Get Oxytetracycline Marks

Frank Stone from the Ashland FRO recently completed a brook trout marking project with biologists from Iron River NFH. The information gained from this project will give fishery managers a better means of estimating the survival of stocked brook trout fingerlings, an important facet of fishery management.

The treatment procedure with oxytetracycline (OTC) involves keeping the fish for several hours in a small holding tank containing 700 parts per million of OTC. During the treatment period, the OTC seeps into the bony structures of the fish, including the otoliths. Known as "ear stones,"

otoliths are small, white structures found in the head of all fishes other than sharks, rays and lampreys that provide a sense of balance to fish in much the same way that the inner ear provides balance in humans. When viewed using a microscope and ultraviolet light, the presence of an OTC mark will be noted as a yellow-gold band within the otolith. The use of OTC will hopefully serve as an inexpensive fish marking tool that will allow future assessment efforts to verify the recruitment levels of brook trout that originate from hatchery programs.
Frank Stone, Ashland FRO

Columbia FRO Collaborates with U.S. Geological Survey on Sturgeon Research

Throughout March, Columbia FRO continued its partnership with the U.S. Geological Survey's (USGS) Columbia Environmental Research Center to conduct pallid sturgeon research on the Missouri River. Both offices are dedicated to recovering this federally endangered species by identifying its biological requirements. Using gill nets, Columbia FRO captured large, gravid female shovelnose sturgeon, a closely related species, for USGS biologists to implant with sonic transmitters. By following the movements of sturgeon throughout the spring, biologists will be able to locate their spawning sites.

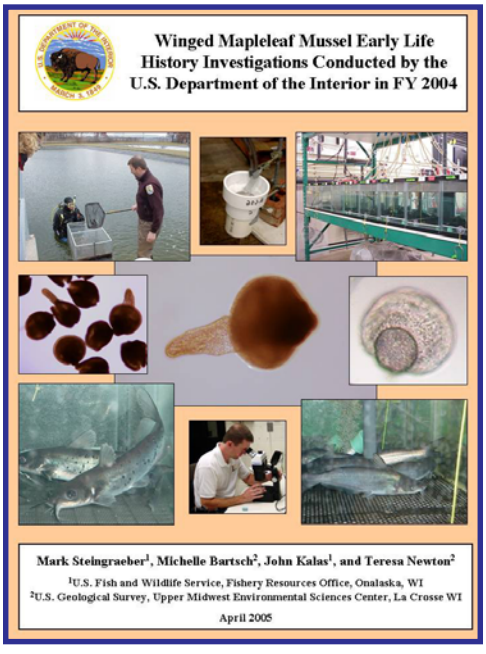
Understanding where sturgeon spawn in the Missouri River is an important step in preserving these crucial habitats. Columbia FRO is also assisting USGS with the recapture of pallid sturgeon previously implanted with sonic transmitters. The recapture of these fish will provide valuable data, and allow USGS biologists to replace transmitters if necessary and check the general condition of the fish. By combining resources and working together, the Columbia FRO and USGS are able to more efficiently conduct research on the federally endangered pallid sturgeon in the Missouri River.
Colby Wrasse, Columbia FRO

-USFWS

Project Leader Tracy Hill and Aaron Delonay from the U.S. Geological Survey (USGS) surgically implant a telemetry device into a sturgeon. The cooperative efforts of the Columbia FRO and USGS are to conduct pallid sturgeon research on the Missouri River.

La Crosse FRO and Partners Complete Winged Mapleleaf Report

In April, colleagues from the La Crosse FRO and the USGS completed preparation of a report titled "Winged mapleleaf mussel early life history investigations conducted by the U.S. Department of the Interior in FY 2004." This publication provides a detailed summary of the early life history investigations conducted by agencies of the U.S. Department of the Interior in fiscal year 2004. These studies identified the blue catfish and channel catfish as two suitable host fish species upon which larvae (glochidia) of the federally endangered winged mapleleaf mussel will transform into juvenile mussels. Analysis of thermal data collected during these studies also revealed apparent threshold temperatures necessary for transformational development to proceed without interruption (>49°F) and for transformed juveniles to release from host fish (63° to 68°F). These fundamental early life history findings are already being used to help restore winged mapleleaf populations in the St. Croix National Scenic Riverway in Minnesota and Wisconsin. Information in the report can also be used to develop ecologically relevant propagation strategies to help restore populations at other sites throughout this species' historic range, and may guide the development of improved propagation strategies to help recover other listed mussel species. Fifty-seven copies of the report were distributed widely by mail for refuges, Ecological Services and Fisheries offices, and the Washington office, as well as other federal and state agencies, academia, non-government organizations and Congressional representatives. The report is available on Region 3's freshwater mussel Web site at: http://midwest.fws.gov/mussel.
Mark Steingraeber, La Crosse FRO



Aquatic Habitat Conservation and Management

Ashland FRO and Whittlesey Creek NWR Check on Stream Improvements

Loss of large woody debris and sediment loading has reduced the value of Whittlesey Creek to coaster brook trout, a rare form of brook trout that spends its life in Lake Superior, migrating to creeks or rivers to spawn before moving back out into the lake. To try to improve the situation, biologists placed a series of five large log structures in the stream near Ashland, Wisconsin last fall to decrease the impact of flood flows, bank erosion and sediment load on brook trout habitat. The logs also create pools and expose gravel that will be used by spawning trout and salmon, benefiting some 1,200 feet of stream bed on private land.

Ashland FRO and Whittlesey Creek NWR biologists are evaluating the log jams to record how Whittlesey Creek and brook trout respond to these manipulations. TheFish and Wildlife Service is stocking Whittlesey Creek with coaster brook trout,

Glenn Miller, Ashland FRO

-USFWS

This log structure was placed in Whittlesey Creek (a tributary to Lake Superior near Ashland, Wisconsin) in Fall 2004 to decrease the impact of flood flows, bank erosion, and sediment load on brook trout habitat.

Missouri River Agency Coordination Team Meeting

Project Leader Tracy Hill from the Columbia FRO attended the quarterly meeting of the Missouri River Recovery's Agency Coordination Team (ACT), intended to brief state and federal agencies on the progress of this program. Under the Missouri River Fish and Wildlife Mitigation Project, a variety of aquatic and terrestrial habitats acquired by the U.S. Army Corps of Engineers have been restored and developed in the Missouri River and its floodplain to enhance habitats for fish and wildlife. Monitoring will enable the ACT to determine whether the mitigation sites are performing as expected. Columbia FRO continues to partner with state agencies to conserve and increase native fish populations in the Missouri River and to identify, and take appropriate actions that will help achieve desired resource goals and outcomes.

Tracy Hill, Columbia FRO

Research Ready to Continue at the Lake Sturgeon Spawning Reef on the Detroit River

Following a year of delays, post-construction evaluation is set to begin at the site of an artificial lake sturgeon spawning reef on the Detroit River. Researchers from Alpena FRO and the USGS' Great Lakes Science Center initiated a pre-construction assessment at the proposed site in spring 2003 with the goal of documenting fish use of the site to evaluate efficacy of placing artificial substrate in this system. Located at the northeast end of Belle Isle, the reef is actually three reefs located close to one another, each composed of different substrate materials — crushed limestone, field stone and coal cinders. All three materials have been successfully used as lake sturgeon spawning habitat at other locations around the Great Lakes. Construction of the reef was delayed first by funding and contracting issues in the fall of 2003, and then by weather conditions in the spring of 2004. By July 2004, construction of the reef was complete but it was too late to assess lake sturgeon spawning for the year.

Assessment methods used in 2003 included large mesh gillnets and baited setlines for lake sturgeon, egg mats for collecting fish eggs, and experimental gillnets and baited minnow traps for other fish species. Results revealed that the area was not being used by lake sturgeon and only a few potential egg predators (crayfish, madtoms, rockbass and round goby) were captured at the site. Eggs captured on the egg mats were taken back to the USGS lab in Ann Arbor and later identified as walleye. Although researchers had suspected that walleye were using the Detroit River for spawning, it was not documented until that time. The same assessment methods used in 2003 were again employed in 2005 to document lake sturgeon use of the spawning reef. During the first two weeks of sampling, biologists captured male and female walleye spawners in gillnets and walleye eggs from the egg mats. As water temperatures increase over the next few weeks, researchers expect to begin capturing lake sturgeon spawners at or near the reefs. If biologists capture sexually mature lake sturgeon, they will implant the fish with ultrasonic transmitters and follow them over

the next three years. Information gained from this work will provide insight about the origin of the lake sturgeon using the newly constructed reefs and the home range of those individual fish.

The Fish and Wildlife Service and the USGS pooled resources to efficiently monitor this site. Major contributors for this project include Michigan Sea Grant, Environmental Protection Agency, U.S. Army Corps of Engineers, Great Lakes Fishery Trust, Michigan DNR, City of Detroit and Detroit Edison. If successful, this will not only be the first artificial spawning reef constructed in the Great Lakes specifically for lake sturgeon, but will also serve as a demonstration of a partnership effort working for the common good of a state listed species.
James Boase, Alpena FRO

-USFWS

Lake Sturgeon Egg

Following a year of delays, post construction evaluation is set to begin on the Detroit River at the site of an artificial lake sturgeon spawning reef. Alpena FRO and USGS Great Lakes Science Center researchers initiated pre-construction assessment in 2003.

Partners Program Permits Filed for the 2005 Field Season

Alpena FRO Partners for Fish and Wildlife Coordinator Heather Enterline submitted permits to the Michigan Department of Environmental Quality and the State Historic Preservation Office, along with Intra-Service Section 7 Biological Evaluation Forms, where needed, to the East Lansing Field Office in preparation for the 2005 field season. She also completed National Environmental Policy Act Compliance checklists and the Hazardous Substance Examination Checklist before bids were taken or any projects initiated. Some initial site inspections were completed, but the ground was frozen and there was two feet of snow cover, so we were unable to survey at that time.
Heather Enterline, Alpena FRO

Lake Huron Basin Team Collaborates with the Fish Passage Program

Susan Wells attended the Michigan DNR-sponsored Lake Huron Basin Team meeting and provided a brief overview of the Fish Passage Program. She led a discussion on the development of a process for including the basin team in the field ranking of fish passage projects. After discussion, the group concluded that the basin team will identify specific projects or project types that are a priority for the DNR. In August, Wells will attend the Lake Huron Basin Team meeting to formally review new and pending DNR projects submitted to the Alpena FRO, rank them, and then add them to the Fish and Wildlife Service's Fishery database, which will be an annual process.
Susan Wells, Alpena FRO

Thunder Bay Project Implementation Working Committee Meeting

Biologist Aaron Woldt participated in a working committee meeting for the Thunder Bay Power Company Thunder Bay River Project Implementation. Woldt is the Fish and Wildlife Service representative on the committee, which was created to assist Thunder Bay Power in meeting the requirements of its Federal Energy Regulatory Commission (FERC) license.

The primary focus of the March meeting was the pending sale of the Thunder Bay River Projects to North American Hydro. Scott Klabunde and Bill Pickerel from North American Hydro joined the meeting via conference call to answer questions regarding status of the sale and property transfer, FERC license transfer, and future plans for working with the committee. The sale is expected to be finalized by the end of April. Klabunde said that North American Hydro will provide a chairman for the working committee and is committed to continuing the multi-agency and multi-user group structure of the committee.

Representatives from Michigan DNR, Thunder Bay Power and the Fish and Wildlife Service attended the meeting, along with representatives from the Michigan Hydropower Relicensing Coalition, Hubbard Lake Sportsmen and Improvement Association, Montmorency Conservation District, Thunder Bay Audubon Society, and Northeast Michigan Council of Governments. Landowner Jack Matthias also participated.
Aaron Woldt, Alpena FRO

Workforce Management

Geno Adams Joins Columbia FRO Crew

Columbia FRO welcomed biologist Geno Adams on March 21. Adams comes to Columbia from Brookings, South Dakota, where he received his M.S. degree in 2004 from South Dakota State University. His Master's work dealt with population characteristics and general movement patterns of lake sturgeon in Rainy Lake, Minnesota, and Ontario. Prior to this, Adams worked as a biological technician in Voyageurs National Park in Northern Minnesota, where he participated in research and management projects dealing with the park's many aquatic resources. Adams received his B.S. degree from Iowa State University in 2002. He has previously worked with the Iowa and Minnesota Departments of Natural Resources, and his diverse background brings small stream, large lake and small impoundment expertise to the Columbia FRO.
Geno Adams, Columbia FRO

-USFWS

Geno Adams joined the Columbia FRO staff in March and did not hesitate to grab a fish for a picture. Geno comes to Columbia from Brookings, South Dakota where he received his M.S. degree from South Dakota State University.

Area Agency on Aging Employee Leaves Hatchery for Another Position

Norma Sparks began working at the Jordan River NFH in October 2003 as part of the Area Agency on Aging program of Traverse City, Michigan, that places senior citizens in local work environments. The Area Agency on Aging normally places clients for six months at a time, but because Sparks enjoyed working at the hatchery, she was allowed to stay longer. Her last day was April 8. Sparks's duties included keeping the main hatchery building neat and clean, a very important job at the hatchery that can often be overlooked. She also took initiative to keep our visitor's center stocked with brochures and supplies. Hatchery staff helped Sparks learn new job skills such as fax machine and copy machine operation. Computer training and answering the phone during Clarice Beckner's absence were also important tasks. Sparks accepted a position at a resale shop that is operated by the Antrim County Commission on Aging. We appreciate her hard work and dedication and wish her well in her new endeavor.
Clarice Beckner, Jordan River NFH

-USFWS

Norma Sparks worked at the Jordan River NFH as part of the Area Agency on Aging program.

Columbia FRO Staffer Speaks at Middle School Career Day

Biologist Jeff Finley represented Columbia FRO at Smithton Middle School Career Day, giving a presentation on career opportunities with the Fish and Wildlife Service that emphasized fisheries conservation. Finley gave the seventh grade students the opportunity to learn more about the diverse fisheries of the Missouri River during a question and answer session. Students were very curious about the specific adaptations of paddlefish, sturgeon, catfish, drum, gar and buffalo to living in a turbid environment. Fiberglass reproductions of native fish were a huge hit. The school is closely located to the Columbia FRO, and students had many questions about equipment and operations they frequently observe from their classrooms. Smithton Middle School faculty expressed a desire to partner with Columbia FRO in initiating a mentoring program.
Jeff Finley, Columbia FRO

-USFWS

Students at Smithton Middle School were given a presentation regarding career opportunities with the Fish and Wildlife Service.

Jordan River NFH Hires Animal Caretakers for the Annual Marking Program

Last June the necessary paperwork was submitted to request the hiring of eight more animal caretakers to assist in the fish marking program at Jordan River NFH. After numerous delays, the vacancies opened in mid-January. Finally, three of the employees entered on duty on March 21, March 22 and March 23 respectively. We are still working to get the final three hired. Because it takes so long to go through the recruitment process for jobs that are of intermittent nature, by the time you contact those that were hired, their work situation has changed and they are not always willing to accept the position. We are looking at ways to streamline this process. Thanks to Human Resources for working so hard on these vacancies during their staff shortage.
Clarice Beckner, Jordan River NFH

-USFWS photo by Clarice Beckner

A crew of temporary employees, called fin clippers, mark approximately two million lake trout each spring at the Jordan River NFH. Pictured are: (Lt. to Rt.) (Front Row) Donna Buning, Patricia Milligan, Sharon Huffman, Christy Reinhardt, Leona Stanek; (Back Row) Louise Eckler, Bonnie Olund, Rose Harvey, Robert Lee, Clara Finch; (Not Pictured) Marylin Barber, Peg Botens, Sylvia Kesteloot, Debbie Petersen, Brian Waters.

Draft Standard Operating Procedure Manual Presented

Region 3 administrative assistants met in La Crosse, Wisconsin, in February to discuss administrative rules and regulations, and common administrative problem areas. Clarice Beckner, administrative assistant from the Jordan River NFH, took the opportunity to show the group the standard operating manual (SOP) for administrative personnel that she has been working on. For many years, Beckner had hoped to complete such a manual, but it was not until last year that she began gathering the information. With so much information required for administrative personnel to have available in order to perform their jobs, the SOP is an attempt to compile the most important information and make it available in one to two notebooks. This should save time when looking for information on how to complete reports and procedures that are not done on a routine basis. The manual is also a good place to store information about the station, such as electric meter numbers and procedures unique to the field station. Everyone interested will be able to review the manual's content, along with a list of items to be added.

The SOP manual was very well received by the group and 14 people have asked for copies of the completed manual. Beckner explained that the manual is a "work in progress" and will need to be updated routinely as procedures change in order to remain an effective administrative tool. The group discussed the need for a tool that not only would assist current administrative personnel, but would also be of great assistance to new administrative personnel and to project leaders when the administrative position is vacant.

Beckner hopes to finish the current updates within the next month or so. At that time a copy of the completed manual will be sent out to the 14 offices that have requested a copy. Beckner plans to provide updates to everyone, as needed. She has also asked the group to send her suggestions for topics/information to be included in the future updates. Any questions or comments can be sent by email to: clarice_beckner@fws.gov.
Clarice Beckner, Jordan River NFH

-USFWS photo by Wayne Talo

Clarice Beckner is the Administrative Assistant at the Jordan River NFH. She has completed a draft copy of a "Standard Operating Procedures" manual for administrative personnel. The intent of the manual is to store information for completing reports and procedures along and also serve as a storage site for station information.

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A Glimpse into our Proud Past

Fish and water are loaded into milk cans at the Manchester NFH for distribution to stocking sites.

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