U.S. Fish & Wildlife Service - Midwest Region

Fisheries Program

Fish Lines

Inspiring Youth Programing

Volunteers a Win-Win Situation

Lake Sturgeon 101 and Other Stuff

Columbia FWCO Goes Back to School

Endow-Bio Inc. Supports FWS Mission

Conserving America's Fisheries

U.S. Fish & Wildlife Service

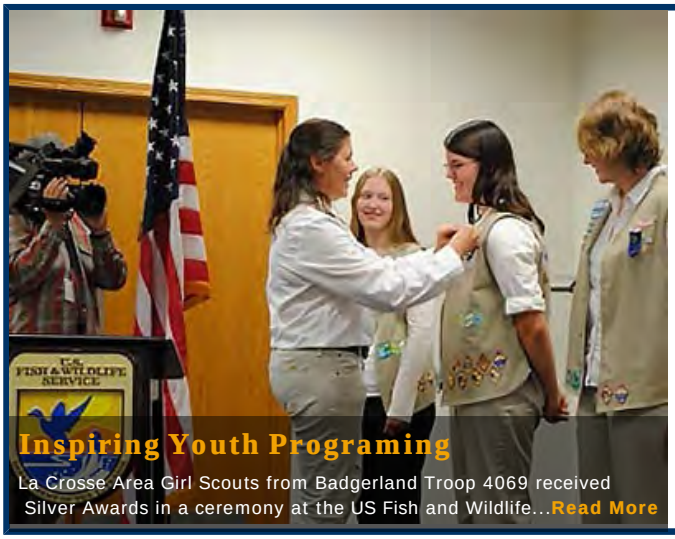
Fisheries, Midwest Region

Conserving America's Fisheries

Fish Lines

Jan 29, 2015

In this Issue



Field Focus

Pendills Creek National Fish Hatchery

Pendills Creek National Fish Hatchery (NFH), located near Brimley, Michigan is one of the Midwest Region's oldest working lake trout hatcheries...**Read More**

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Fish Tails

"Fish Tails" refers to articles that are submitted by field staff that do not appear as a feature in the current edition of Fish Lines. These articles provide examples of the diverse work that the Service's Midwest Fisheries Program and partners perform on behalf of our aquatic resources and for the benefit of the American public.

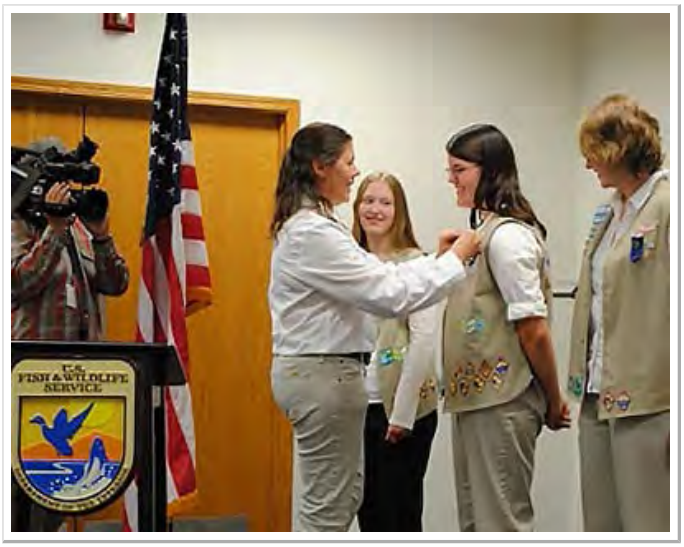
Field Notes

"Field Notes" is an online searchable database that showcases hundreds of employee-written summaries of field activities and accomplishments of the U.S. Fish and Wildlife Service from across the nation.

Last updated: January 29, 2015

Inspiring Youth Program at La Crosse FHC

BY NICHOLAS BERNDT, LA CROSSE FHC



Troop leader Kim Amundson presents the Silver Awards to the Cadets. Credit : Nick Berndt, USFWS

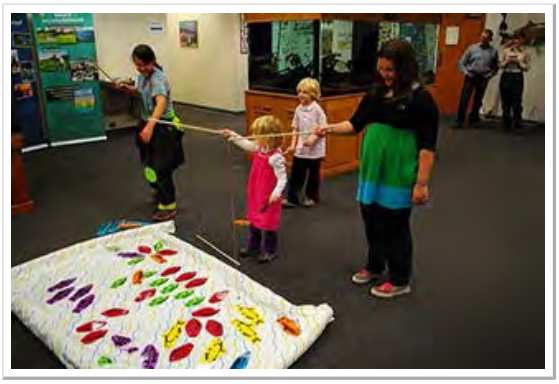
La Crosse Area Girl Scouts from Badgerland Troop 4069 received Silver Awards in a ceremony at the US Fish and Wildlife Service (FWS) La Crosse Fisheries Resource Center. The award is the most prestigious and highest ranking award a Girl Scout Cadet can receive. Their projects are the culmination of years of planning and work by the Scouts, and their projects will be a fun and interactive way to engage area youth with ecology of the Mississippi River.

Girl Scout Cadets Grace Amundson, Jennifer Hamann, and Amanda Clements worked with Troop Leader Kim Amundson and USFWS biologist Jennifer Bailey to help each Scout develop projects that would have a positive and lasting effect on community youth with a focus on nature, fishing, and the aquatic ecology of the upper Mississippi and the La Crosse area. Ms. Amundson, Ms. Hamann, and Ms. Clements dedicated over 150 hours of research, designing, and hard work to create a group of related activities and games that are interactive, educational, and fun for all ages for the Visitor Center located at the USFWS La Crosse Fisheries Resource Center.

You are never too young...to learn how to cast. Credit: Nick Berndt, USFWS

The items are also packable and transportable so our outreach staff can add them to educational presentations anywhere. The first game is a “fishing pond” where pre-school aged and young elementary players use a fishing rod with a magnet at the end to catch as many fish as they can within a certain time frame. Each fish species is color-coded and is valued according to their abundance in real environments, so the activity can double as a math and ecology exercise for elementary or middle school players. Higher level predators such as northern pike have a higher point value because there are less of them in the “pond”. This abundance is relative to the higher amount of lower scoring bluegill. This shows how predator and prey are balanced in an ecosystem. The second game is a fishing skills contest where players take turns casting to a bull’s-eye and scoring as many points as possible. Many of the kids in the upper elementary and middle school age group this game is aimed at have never used a real fishing rod and reel before. It’s a great way to encourage patience, hone casting skills, and practice some addition by adding up scores. It also gives kids confidence and an experience they can take into a real world fishing environment. The third activity is a Fish and Wildlife Scavenger Hunt. In this activity informational cards with images and related facts by fish and freshwater mussel species, both taxonomic and ecological, are scattered around the Visitor’s Center. Each card has a picture of a fish or freshwater mussel native to the Coulee Region, and has a paragraph describing its natural history. These include some of the less glamorous, but no less important species such as mooneye and big mouth buffalo. The package comes complete with a Sustainability and Maintenance Plan, as well as digital copies for updating or reprints, and contact information for repairs or re-stocking by the Cadets.

These tools are expected to have a long life cycle in the Community and will help area youth connect with fish and mussels of the upper Mississippi River and area fishing holes. Fishing and enjoying the natural beauty of the Mississippi River are one of this community’s best assets; with a little help and introduction more families may enjoy more of it for a healthy, lifelong relationship with nature.



These children try their luck in the fishing pond! Credit Nick Berndt, USFWS

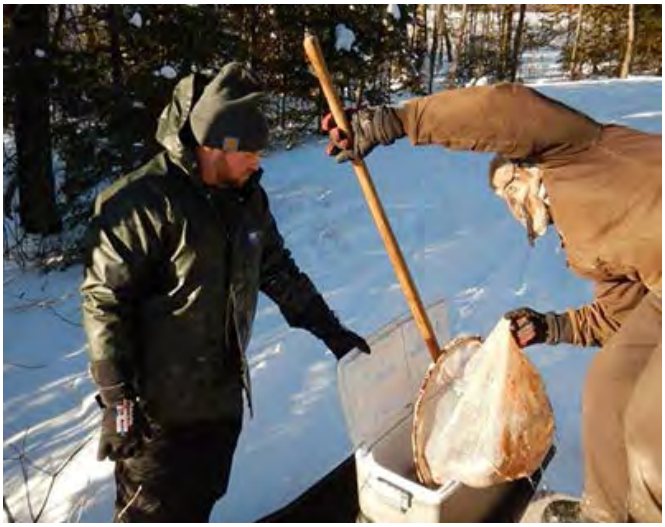
We thank the Girl Scout Cadets for all their hard work and will be utilizing the teaching tools they gave us whenever we can. We wish them the very best in their future endeavors!

Integrating Volunteers into Exciting Hatchery Operations Results in a Win-Win Situation

BY SHAWN SANDERS, IRON RIVER NFH

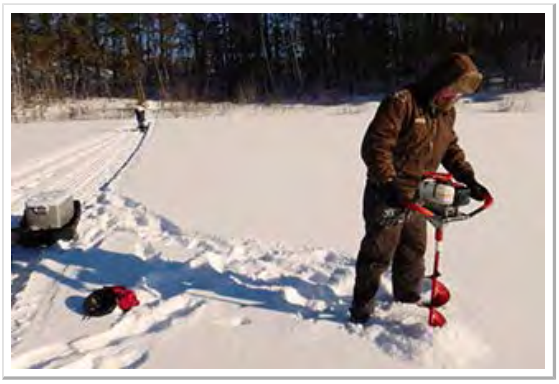
As an agency, the U.S. Fish & Wildlife Service is tasked with a number of public trust activities that are "exciting" and "unique." Because most of the general public has not seen these unique events such as spawning, stocking and handling fish, it can be fulfilling for volunteers to be involved in the accomplishment of these tasks.

So, at Iron River National Fish Hatchery (NFH), we are fortunate to have a local group of volunteers that is ready, willing, and able to help us with tasks that help us complete our mission. This group was formed to focus on hiking and snowshoeing in the Iron River, Wisconsin area, with the group often found on the trails every Tuesday, even in the middle of a north Wisconsin winter. Iron River NFH and the Hiking group come together throughout the year to share in some of the resource projects that the hatchery undertakes. Projects like trail maintenance and fish stocking become an opportunity to share workload and of course lots of stories and coffee once it's done. When and wherever there has been a need, this group has come to our aid.



Brandon Keesler, fisheries technician with Iron River NFH and Nick Boggio an 1854 treaty authority employee, load coaster brook trout into coolers for final transport to the lake. Credit: Mallory Mackey, USFWS

Earlier this winter the snow covered trails brought us together when tree and brush clearing was needed on the hatchery trail system. Hatchery staff was able to focus on cutting the branches and trees that had grown into the trail area, while the hiking group cleared the debris. This event was a win-win for both groups, since the hiking group is motivated to keep the trail maintained and it would have taken the hatchery much longer without their help. The group was a pleasure for hatchery staff to work with. Sharing the workload also reinforces to the community that the hatchery's trail system is theirs to enjoy and be part of.



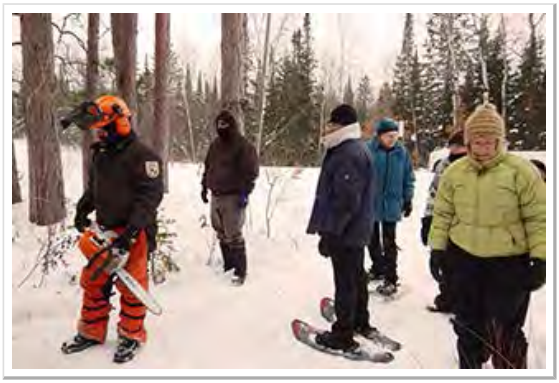
An ice auger was used to open holes in the ice for stocking coaster brook trout. Credit: Mallory Mackey, USFWS

A colorful male coaster brook trout in the winter sunlight. Credit: Mallory Mackey, USFWS

The most recent event occurred on January 12th, 2015, a "Volunteer Brook trout Stocking Day". Retired brook trout that had been used for egg collections were released in three area lakes: Perch, Wanoka, and Anderson Lakes in Bayfield and Douglas counties. Nature provided a beautiful snow-covered backdrop to another fun-filled day, as all group members were highly engaged in stocking these large brook trout (some would even call them trophy-sized). Gaining more than just man-power and muscles, the hatchery employees had the chance to share our mission in a manner that is otherwise not shared. A hands-on course that gives our friends the chance to "walk in our shoes" as we together share and make the mission of our agency a reality. Hopefully the hiking group will tell others where to go ice fishing this year and, maybe they will take advantage of a

couple of these new brook trout honey holes themselves.

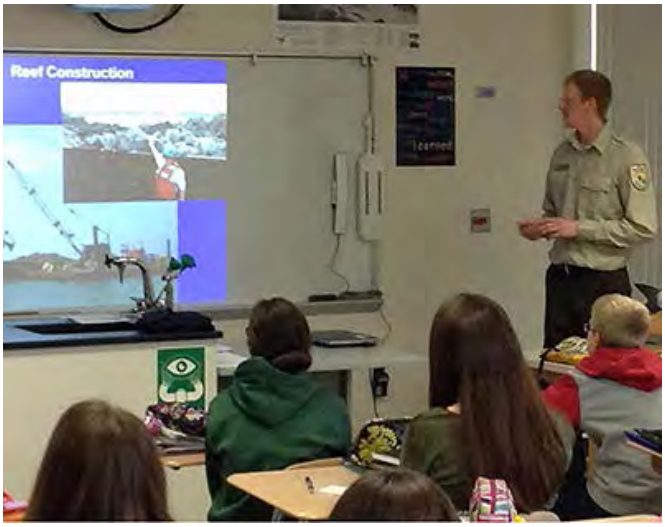
A group of volunteers take time out for a photo after a day of stocking coaster brook trout in woods of Northern Wisconsin. Credit: Mallory Mackey, USFWS



Fish Biologist Shawn Sanders with Iron River NFH, warms up a chainsaw while volunteers get started on an afternoon of trail clearing. Credit: Mallory Mackey, USFWS

Lake Sturgeon 101 and Other Stuff

BY ANDREW BRIGGS, ALPENA FWCO - WATERFORD MI SUBSTATION



Service Fish biologist Andrew Briggs educates a group of 8th graders at Waldon Middle School in Lake Orion, Michigan. Credit: Jon Gray, Waldon Middle School

Engage today's youth in the importance and conservation of our natural resources is a high priority of the US Fish and Wildlife Service. Today's youth are the future of natural resource conservation; however, with the expansion of urban areas, fewer youth get to experience nature first hand. At Waldon Middle School in Lake Orion, Michigan, 8th grade students in Mr. Jon Gray's classes are getting the opportunity to raise lake sturgeon and Chinook salmon.

The students are participating in the Sturgeon and Salmon in the Classroom programs, run by the St. Clair-Detroit River Chapter of Sturgeon for Tomorrow and the Michigan Department of Natural Resources. These programs give the students a hands-on opportunity to learn about the life history and habitat requirements of Lake sturgeon and Chinook salmon.

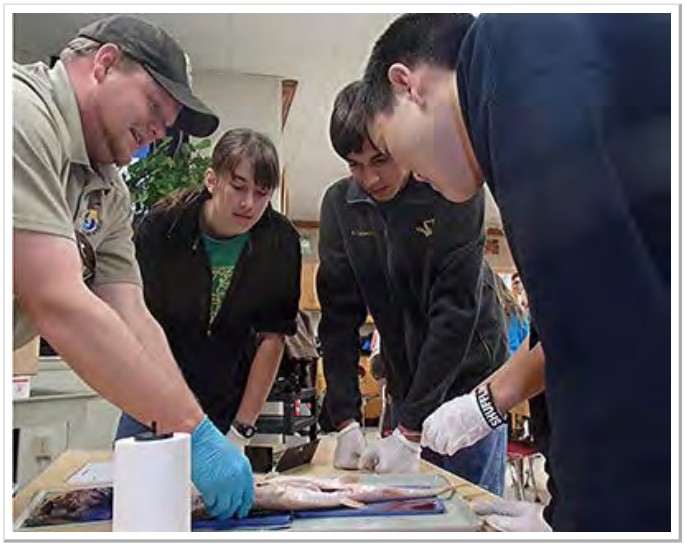
To further educate his students on lake sturgeon physiology, biology, and conservation, Mr. Gray invited fish biologist Andrew Briggs of the Alpena Fish and Wildlife Conservation Office (FWCO) – Waterford substation to speak to his four classes. Aside from information on lake sturgeon, Andrew also discussed what the Alpena FWCO is doing to assess and improve habitat and combat the spread of invasive species. For the many students that had an interest in future jobs in biology, Andrew discussed the tasks that he completes as a fish biologist and the steps he took to become a fish biologist.

Students took great interest in Andrew's presentation and had the opportunity to ask questions during and after his talk. Questions included…how big was the largest lake sturgeon that Andrew ever caught?... what is the most lake sturgeon Andrew has caught in one day? And… how did invasive species get to Michigan? The 100 students that participated in the presentation came away with a better understanding and appreciation of lake sturgeon and became aware of some of the career opportunities that are available to them in biology.

Columbia FWCO Goes Back to High School

BY AMBER MASTERS, COLUMBIA FWCO

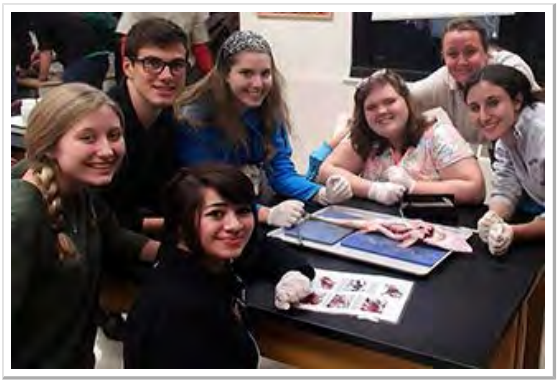
Earlier this winter, Columbia Fish and Wildlife Conservation Office (FWCO) fisheries technicians Amber Masters, Sarah Ettinger-Dietzel, Ja'var Henry and Cal Yonce brought a bit of the Missouri River to Hickman High School in Columbia, Missouri. Hickman Biology Club member Molly Vornholt, club president Kyle Perry and biology teacher Dan Miller invited the Columbia FWCO to present at one of their monthly, after-school Biology Club meetings. Rather than lecture a group of teenagers who had been in classrooms all day, the Columbia FWCO employees decided to assemble an assortment of hands-on activities in order to get the students actively involved and hopefully spark a lifelong interest in fisheries biology.



After students dissected this Shovelnose sturgeon, Cal Yonce, fisheries technician with Columbia FWCO points out its internal anatomical features. Credit: Terese Dishaw, Hickman High School

Amber delivered a short presentation on the Columbia FWCO and a brief overview of our current projects, sharing pictures of our various adventures hanging out with Missouri River's inhabitants. Although condensed, the presentation included the importance of conservation, information on career-paths and a few pointers on how to get involved with fisheries, volunteering.

After the presentation, technicians directed students to different stations set up around the classroom. Sarah decorated one of the back tables with a variety of bottles and jars containing preserved specimens. Among the fishes present were interesting Missouri River species such as Longnose Gar, Chestnut Lamprey, a variety of uniquely-patterned darters and tiny, baby Black Bullheads. In addition, students saw small versions of the infamous Missouri River invader the Silver Carp and potential future problem-causers such as Round Gobies and the fearsome Snakehead. Students were also given the opportunity to pick through jars full of small, unknown species in a challenging attempt to identify some of the diminutive and uncharacteristic young fishes, most less than two inches in length.



Hickman Biology Club members (with the help of Columbia FWCO fisheries technician, Sarah Ettinger-Dietzel) display their first dissection with pride! Credit: Terese Dishaw, Hickman High School

The highlight of the hour, however, was the dissection. Thanks to field crews' efforts the previous week, the techs had aces in their pockets in the form of three Shovelnose sturgeon and two Blue catfish. For many of the students, it was their first experience dissecting, or even being in the same room while a dissection was taking place.

Initially, the students made observations on the external anatomy, noting the differences between the rough, armored skin of the sturgeon and the smooth, scale-less skin of the catfish and asking about the reasons for barbels, the large rostrum on the sturgeon and the sharp fin spines on the catfish. The students, however, were anxious to get started on the dissections. The technicians provided a general guide in how to cut and where to look for various organs, but the majority of the cutting and gutting was done by the students themselves. Naturally, there were a few "Ewwww! I'm not touching that!" moments, but overall the students were engrossed in learning about the anatomy of fishes. The technicians were impressed by the attentiveness exhibited by an age group notorious for being easily distracted. The students made keen observations on how the physiology of each species worked and perceived several differences between them, making insightful comments on how the unique adaptations would benefit the fish's survival in the Missouri River. Mr. Miller also participated in the dissections and was thrilled to see his students so engaged in a biology lesson. His gratitude to the Columbia FWCO and to the four technicians was hard to miss, as he surveyed his active classroom while wearing an ear-to-ear smile. The technicians, too, left the classroom with healthy grins after sharing such a rewarding experience with an impressive group of young people. The crew at the Columbia FWCO hopes to continue providing lessons like this and many other educational outreach opportunities for Hickman and other area schools.

Endow-Bio Inc. Supports FWS Mission at the Genoa NFH

BY DOUG ALOISI, GENOA NFH

Freshwater mussel species of the Upper Mississippi River. Credit: USFWS

Endow-Bio Incorporated is a non-profit organization dedicated to promoting ecosystem biodiversity and conservation by fund-raising and financial support of conservation organizations. The Genoa National Fish Hatchery (NFH) was contacted in 2014 by Endow to be one of four beneficiaries in 2015. The Genoa NFH freshwater mussel recovery and restoration program was recognized by Endow as an effort that promotes biodiversity in freshwater ecosystems, and promotes conservation of this imperiled aquatic fauna. We were honored to be considered as a beneficiary that supports ecosystem biodiversity, in good company with other notable organizations in 2014 such as Prairie Biotic Research and the Center for Coastal Studies. Through Endow-Bio's 2014 efforts a total of $1609 was collected and distributed to the hatchery in early 2015. This donation will go directly to support freshwater mussel conservation through mussel propagation cage building supplies and food for host fish production. Many thanks are owed to Endow-Bio for supporting our freshwater mussel conservation efforts in 2015. Also many thanks go to Congressman Ron Kind (WI-3rd district) and his sponsorship of the National Fish Hatchery Volunteer Act of 2006, which created legislation permitting direct donations such as these to be transferred directly to fish hatcheries in support of their mission.

About Pendills Creek NFH

BY CRYSTAL LEGAULT ANDERSON, PENDILLS CREEK NFH

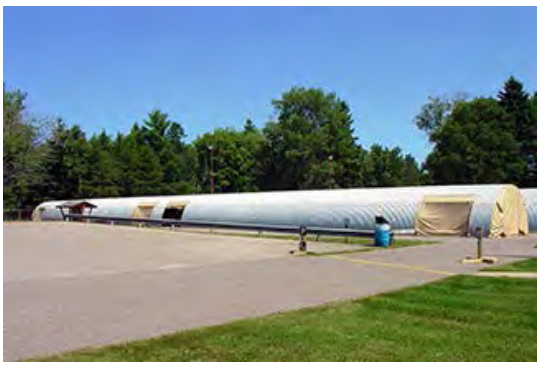
Original office at Pendills Creek NFH. Credit USFWS

New office at Pendills Creek NFH. Credit USFWS

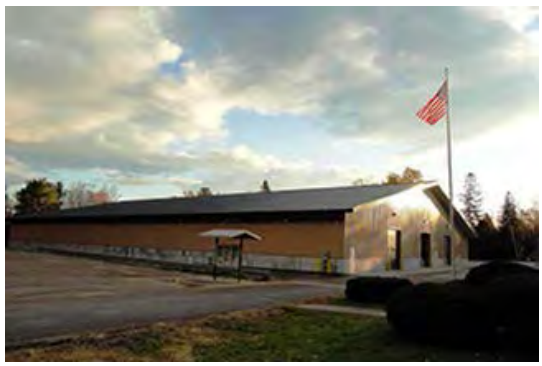
Pendills Creek National Fish Hatchery (NFH), located near Brimley, Michigan is one of the Midwest Region's oldest working lake trout hatcheries. Service staff raised and released their very first lake trout into Lake Superior in 1952. With lake trout restoration goals met in Lake Superior in 1996, Pendills Creek NFH has continued to stock fall fingerling and yearling lake trout into Lakes Michigan and Huron. The hatchery's current lake trout goals are to stock 100,000 fall fingerling and 1,000,000 yearling lake trout into Lake Michigan each year.

Pendills Creek is a sister-station of the Sullivan Creek NFH located 30 miles west of Sault Sainte Marie, in the Eastern Upper Peninsula of Michigan, bordering the Hiawatha National Forest.

Over the past 60 years or so, the Pendills Creek facility has seen many construction projects and aquaculture improvements. Major construction of Pendills Creek NFH began in 1951 with the intake dam and first set of raceways. An intake further upstream on Videan Creek, including a bypass canal for Pendills Creek, was built in 1954. More raceways were added in 1958. All raceways were replaced between 2008 and 2009. A hatchery building was constructed in 1961, destroyed by fire in 1975, reconstructed in 1978, and the exterior renovated in 2013. Effluent treatment facilities were constructed in 1984, with plans for complete overhaul in the near future.



Quonset hut raceway covers. Credit USFWS



New raceway building at Pendills Creek NFH. Credit: USFWS

The first outdoor raceways were open and exposed, which allowed unlimited predation by a variety of birds and predators. In response, a very beneficial series of construction projects was undertaken to protect fish in the outdoor raceways. Initially the raceways were covered with Weather ports. These provided protection from the sun, but not from most predators; and were found to be unsuitable for the winter snow conditions in Michigan's UP, with total collapse of more than one occurring in the 1990s. Next metal Quonset hut type structures were set over the raceways; which were much sturdier, but still were not predator proof. Finally, in 2010, the raceways were encased in a clear-span steel building, which can handle the snow load, provides protection from the sun and has reduced the predation numbers to nearly zero.

The list of additional aquaculture improvements includes a bulk liquid oxygen tank and filtration building with one set of low head oxygenators and drum filtration for the incoming creek water supply in 2006; with a second set of oxygenators and drum filters installed along with ultra violet sterilization in 2013. A traveling screen which resides in its own building was added in 2010 to

remove course debris from the creek water prior to entering the filtration building.

Pendills Creek NFH has been through numerous facility improvements over the years, and is ready to continue to support the Great Lakes lake trout rehabilitation program far into the future.

Fish Tails

Articles submitted by field staff that do not appear as a feature within Fish Lines. These articles provide examples of the diverse work that is performed on behalf of aquatic resources.

Lake Trout Dissection at Alpena's Ella White Elementary School

BY CHRIS OLDS, ALPENA FWCO

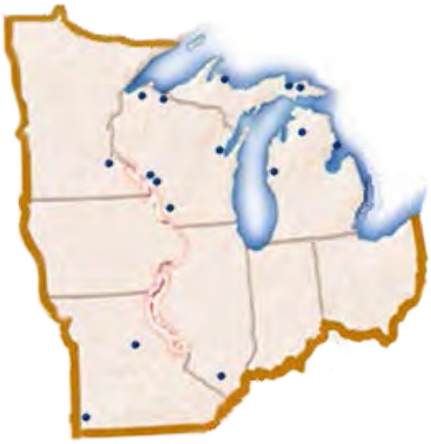
Alpena Public School teacher Bob Thomson frequently invites Alpena Fish and Wildlife Conservation Office (FWCO) biologists to come in and give talks about the work they do. However, on December 9, 2014 fish biologists Chris Olds and Adam Kowalski brought their work to Mr. Thomson's class of 5th graders. Mr. Thomson's class raises lake trout from eggs to the "fingerling" stage in collaboration with the Michigan Department of Natural Resources. Some students, however, had never had the opportunity to see or handle an adult lake trout. So Chris and Adam brought six adult lake trout collected during the FWCO's fall lake trout assessment at Six Fathom Bank Refuge for the kids to examine and dissect. Needless to say the kids were a little overwhelmed at the sheer size of the lake trout, but that amazement quickly turned to all smiles as they began to go through the dissection process.

The dissection process followed the same format as that used by the FWCO's Lake Huron Fisheries Assessment Unit when collecting biological information from lake trout captured during surveys on Lake Huron. The students examined the external surface of the fish for fin clips, sea lamprey wounding, and any abnormalities on the surface of the fish. Then they looked at the gills, and all internal organs identifying form and function of each. Plus, as an added bonus the kids were able to find different parasites in the swim bladder, stomach, intestine, and pyloric caeca. Parasites were placed on slides and viewed under the microscope to examine the anatomy and the function of the parasites while in its host. If the big fish didn't get the kids excited the large intestinal tapeworms and nematodes in the swim bladder definitely did. By the ended the day all the kids left with a better understanding of fish anatomy and biology and had rejuvenated their enthusiasm about their own lake trout culture program in class.

Outreach events such as this support the US Fish and Wildlife Service priority of Connecting People with Nature. Through augmenting school science curriculums, Service biologists hope to encourage students to become scientifically literate citizens and passionate conservationists in the future.

Midwest Region Fisheries Divisions

National Fish Hatcheries



The Region's National Fish Hatcheries (NFH) focus on native species recovery and restoration. Primary species include: lake trout, endangered pallid sturgeon, and endangered, threatened, and native mussels. Other major programs include coaster brook trout and lake sturgeon restoration, fulfilling tribal trust responsibilities for native aquatic species, and cost reimbursed rainbow trout production for recreational fishing. Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, and develop and maintain brood stocks of various species and strains.

Fish and Wildlife Conservation Offices

Fish and Wildlife Conservation Offices (FWCO) conduct assessments of fish populations to guide management decisions, play a key role in targeting and implementing native fish and habitat restoration programs; perform key monitoring and control activities related to aquatic invasive species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's National Fish Passage Program, National Fish Habitat Partnerships, Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisheries databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and relicensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

Sea Lamprey Biological Stations

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

Fish Health Center

The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state and tribal hatcheries in the region; conducts extensive monitoring and evaluation of wild fish health; examines and certifies the health of captive hatchery stocks; and, performs a wide range of special services helping to coordinate fishery program offices and partner organizations. The Whitney Genetics Lab serves as a leading edge genetics laboratory and conducts environmental DNA (eDNA) sample processing for early detection of invasive species.

Whitney Genetics Lab

The Whitney Genetics lab provides environmental DNA (eDNA) surveillance for the early detection of invasive Silver and Bighead carp as part of the Asian Carp Regional Coordinating Committee's plans to detect, monitor, and respond to the threat of invasive carp in the Great Lakes. The lab also provides analysis for determining the ploidy of wild-caught Black and Grass carp, two more invasive carp species.

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