

ALPENA FWCO NEWSLETTER

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“Free Spanning the Maple” Initiative – Another Fish Passage Barrier Removed!

By Andrea Ania and Chris Pierce (CRA)

A fish passage project is underway on the West Branch of the Maple River in Emmet County, Michigan at Ely Bridge Road. The project involves removing two undersized culverts and replacing them with a timber bridge. The culvert restricts aquatic organism passage, negatively impacting natural stream processes, and causing streambank erosion at the road-stream crossing.

The West Branch of the Maple River has the best trout habitat in the watershed with its cold water temperatures and forested corridor. The new bridge will provide unrestricted passage of all aquatic organisms and allow the river to flow more naturally. Migratory fish will have access to an additional 18 river miles of spawning, nursery and feeding habitat.

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The project is being completed in partnership with Conservation Resource Alliance (CRA), Emmet County Road Commission, Oleson Foundation, Harry A. & Margaret D. Towsley Foundation, Pat & Gill Clements Foundation, Baiardi Family Foundation, and the U.S. Fish and Wildlife Service. Aquatic habitat restoration projects contribute toward the “Aquatic Habitat Conservation and Management” and “Partnerships and Accountability” priorities of the Service's Fisheries Program Vision for the Future.



Left: Crossing before construction (2012). The inlet was filling with sediment. Right: Bridge during construction (Aug–Sept. 2014). Photo credits: USFWS.

Testing the Waters at Pendills Creek National Fish Hatchery

By Steven Gambicki

Pendills Lake, located in Michigan's Upper Peninsula, provides a backup water supply for the Pendills Creek National Fish Hatchery. The hatchery raises over 1 million lake trout each year for stocking in the Great Lakes. Water that is free of bacterial and viral pathogens is crucial for the health of fish at the hatchery. Each year staff from the La Crosse Fish Health Center in Wisconsin lead efforts to assess the bacterial and viral status of wild fish captured from Pendills Lake.

In mid-August, Steven Gambicki from the Alpena Fish and Wildlife Conservation Office in Michigan provided assistance to Ryan Katona and Beka McCann from the La Crosse Fish Health Center with fish sampling efforts on Pendills Lake. Pumpkinseed sunfish, yellow perch, brown bullhead and rock bass were targeted as representative species of the fish community. Trap nets were used to capture the fish, and after the fish were collected they were assessed for bacterial and viral pathogens.

Bacterial pathogens were assessed by collecting a swab from the kidney of each fish and applying it to a media to look for bacterial growth. If bacteria are found, they are isolated into a single colony and run through a series of biochemical tests to see if any certifiable bacterial pathogens are detected. Polymerase chain reaction, or PCR, is then used to verify the results. Viral pathogens were assessed by placing a sample from the kidney and spleen of each fish into a saline solution, which was further analyzed at the La Crosse Fish Health Center. These samples will be diluted and placed on appropriate fish cells to see if any viruses are detected. Any positive results will be confirmed with PCR. Results from bacterial and viral pathogen testing generally take between 28 and 42 days, and can depend on how toxic the samples are, or if there are any pathogens present.



Left: Ryan Katona and Beka McCann sorting fish. Middle: A beautiful day on Pendills Lake. Right: Beka McCann with a painted turtle captured in one of the nets. The turtle was returned to the water unharmed. Photo credits: Steven Gambicki, USFWS.



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Midwest Region Creates the “eTeam”

By Chris Olds

In preparation for the 2014 eDNA field season Alpena Fish and Wildlife Conservation Office biologist Chris Olds planned and coordinated eDNA sampling with assistance from the other Midwest Region FWCO eDNA lead biologists. This group was collectively referred to as “the eTEAM” and was comprised of biologists from each Midwest Region and Northeast Region FWCO, as well as the Regional eDNA Coordinator and the eDNA Lead from the Whitney Genetics Lab. This group was created to help each office follow all required procedures and share ideas/information. The group also provided a forum for sharing field experiences and challenges and ask questions about how situations were handled by offices.

The eTEAM held a training day in La Crosse, Wisconsin prior to the 2014 collection season, allowing each FWCO eTEAM member from across the regions to verify proper collection and filtration techniques. Participants were then able to walk through the Whitney Genetics Lab and see the final processing steps at the lab.

Mid-season meetings of the eTeam helped the FWCOs coordinate inter-office assistance and discuss data recording. With the eDNA season coming to a close, each FWCO had several hundred to several thousand data points that need to be entered into a Regional Database. Biologist Olds’ knowledge of GIS and its applications allowed him to lend a helping hand to other FWCO staff who were less familiar with the data entry requirements of the new regional database.

This collaboration is consistent with the Service’s priority of developing and improving the Great Lakes Restoration Initiative early detection program for Asian carp and other aquatic invasive species.

Keeping Tabs on the Next Generation of Lake Erie Lake Sturgeon

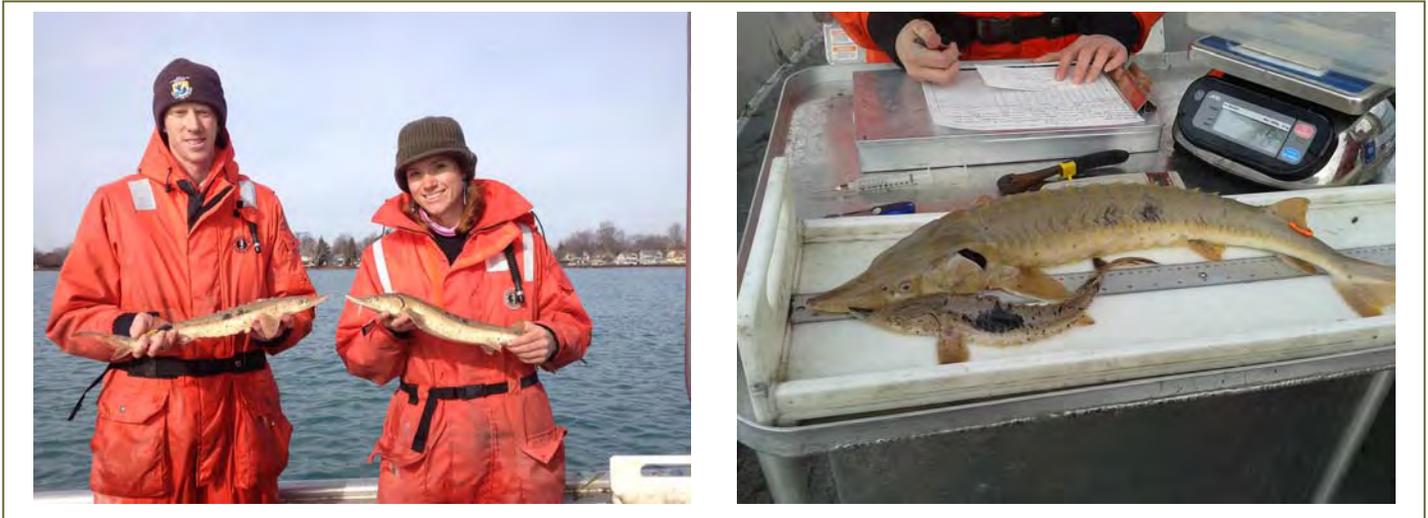
By Andrew Briggs

Lake sturgeon are a long lived fish species that can reach enormous lengths. They have been found to live more than 100 years and reach lengths greater than seven feet. However, lake sturgeon are an endangered or threatened species in much of their range, including the Great Lakes. In Lake Erie, they are thought to be extirpated from much of their historic habitats and spawning areas. Remaining spawning populations are known to exist in the Detroit and Niagara rivers and numerous lake sturgeon sightings have been made throughout Lake Erie.

In order to learn more about the remaining lake sturgeon populations in Lake Erie, a Juvenile Lake Sturgeon Index Survey for Lake Erie is being implemented. This survey is part of the binational



A juvenile lake sturgeon captured during fisheries assessments in the St. Clair–Detroit River System. Photo credit: James Boase, USFWS.



Left: U.S. Fish and Wildlife fish biologists Andrew Briggs and Margaret Hutton holding juvenile lake sturgeon. Right: Juvenile lake sturgeon captured during fisheries assessments in the St. Clair-Detroit River System. Photo credit: Justin Chiotti, USFWS.

Coordinated Science Monitoring Initiative where federal, state, and provincial agencies collaborate to conduct a lake-wide lake sturgeon assessment. Similar to the lake-wide juvenile lake sturgeon assessment conducted in Lake Superior (Schloesser et al. 2014), the objectives of this survey are to describe the current status of juvenile lake sturgeon in Lake Erie, create a means of estimating recruitment, year class strength, and population trends over time, and to describe and compare the biological characteristics of juveniles within and among locations throughout Lake Erie and over time. To meet these objectives, personnel from several U.S. Fish and Wildlife Service offices, Michigan Department of Natural Resources, Ontario Ministry of Natural Resources, Ohio Department of Natural Resources, New York State Department of Environment and Conservation, and Pennsylvania Fish and Boat Commission set gill nets targeting juvenile lake sturgeon at the mouths of thirteen known historic lake sturgeon spawning tributaries.

Fish biologists from the Alpena Fish and Wildlife Conservation Office – Waterford Substation conducted assessments near the Sandusky and Maumee rivers in

Ohio, and near the mouth of the Detroit River in Michigan and Ontario waters. Gill nets, 1000 feet in length consisting of 4.5, 8.0, and 10.0 inch mesh were used to target juvenile lake sturgeon. In addition to gill nets, water quality and substrate information was collected at each net location. No lake sturgeon were captured near the Sandusky, Maumee, and Detroit rivers this fall. However, seven were captured during the summer of 2013 at the mouth of the Detroit River using the same technique. Species commonly caught included channel catfish, common carp, freshwater drum, gizzard shad, and walleye.

Although few lake sturgeon were captured during these assessments, they are important for comparing future catches as lake sturgeon restoration efforts continue in Lake Erie and the other Great Lakes. Hopefully as restoration efforts continue, lake sturgeon catch rates will increase. Additionally, these assessments offer the opportunity for the Service to build and maintain partnerships. Collaborating with partners to conduct a lake-wide assessment of juvenile lake sturgeon would not be achieved without the dedication of multiple agencies.

The Friends of the Lake Huron Watershed group holds their monthly meeting on the third Wednesday of each month at 4:30 pm. The group meets at the U.S. Fish and Wildlife Service office at 480 W. Fletcher Street in Alpena, Michigan. All are welcome to attend!

The Partners for Fish and Wildlife Program Replaces Culvert

By Heather Rawlings

A Partners for Fish and Wildlife project in Cheboygan County, Michigan replaced a collapsing, undersized culvert on Stewart Creek and opened three miles of headwater stream habitat for native brook trout. The culvert at the Black River Road/Stewart Creek crossing was replaced with a large elliptical culvert. The downstream end of the culvert had failed, which was allowing sediment to wash into the stream, blocking fish passage, and causing collapse of the paved road.

The new culvert width (4.8 ft.) was sized to accommodate a bankfull storm event. Length (120 ft.) was long enough to provide a minimum of a 2:1 slope on the road shoulder and was placed at a diagonal to line up with the curvature of the stream. The culvert was buried two feet into the stream substrate in order for a false stream bed to be created inside the culvert. Construction was completed September 3, 2014.

Stewart Creek is a coldwater tributary of Black Lake. Black Lake is renowned for its inland lake sturgeon population and the large brook trout that inhabit both the lake and the Upper Black River. There are several active local non-profit organizations that work together to reduce non-point source pollution in the Black River Watershed. This project supports these activities.

The Cheboygan County Road Commission donated labor and equipment to improve the crossing. Service funds were strictly spent on materials. The Service Partners for Fish and Wildlife Biologist aided in project selection and design, and was on-site during the construction phase to assure the placement of this culvert provides the maximum benefit to our natural resources.



Top: Before construction this undersized culvert failed on the upstream end causing slumping up to the edge of the road bed. Middle: During construction, this 120 ft. long culvert was carefully placed 2 ft. into the stream bed. Bottom: After construction, the culvert has been properly set. Fieldstone has been placed around the culvert to eliminate erosion. The stream has already begun to build a false channel inside the culvert. Photo credits: USFWS.

U.S. Fish and Wildlife Conservation Offices Team Up!

By Eric Stadig

Fish biologists from the U. S. Fish and Wildlife Service Alpena Fish and Wildlife Conservation Office teamed up with members of the Lower Great Lakes Fish and Wildlife Conservation Office in upstate New York as part of a collaborative effort to monitor for non-native aquatic species. The monitoring is for a large-scale Great Lakes collaboration across multiple Service field offices and regions for the early detection monitoring program of non-native aquatic species.

This specific sampling event sampling took place within the Niagara River, a connecting waterway between the Lake Erie and Lake Ontario. From a Service perspective, Lake Erie falls between two regional jurisdictions and fisheries offices. The lake is shared by the Service's Midwest and Northeast regions. Alpena staff coverage includes the states of Michigan and Ohio, whereas Lower Great Lakes staff cover Pennsylvania and New York. The two offices share the workload on Lake Erie system sites, helping each office complete yearly monitoring goals.

This past year the two offices worked together to prioritize sampling for the Lake Erie system, which included the use of multiple crews, vessels and sampling types/gears (i.e. environmental DNA, ichthyoplankton, benthos, paired-fyke netting, daytime/nighttime electrofishing and bottom trawling) to maximize the likelihood of detecting a new non-native species. The biologists were impressed by the diversity of the Niagara River system, catching 44 fishes ranging from native species, such as banded killifish, American eels, and smallmouth bass to already established non-native fishes such as rainbow smelt, round goby, and Eurasian rudd. Field crews were happy to report that no new non-native species were discovered.

These efforts highlight the value of intra-agency cooperation including improving short-term sampling capability, as well as crew safety. The Great Lakes are vast, consisting of 21 percent of the surface freshwater found on the planet. Searching such a large area for new, non-native species requires collaboration among regional field offices to ease burdens such as staff constraints, project time availability, and limited



Top and Bottom: Native species such as American eels were captured during both nighttime and daytime surveys from the lower Niagara River (Lake Erie–Lake Ontario Corridor). Photo credits: Stephen Hensler and Eric Stadig, USFWS.

availability of sampling gears. With continued cooperation, we strive to effectively monitor the Great Lakes to help protect and support the \$7 billion commercial and sportfishing industries and help maintain the integrity of the ecosystem as a whole.

Partners for Fish and Wildlife Assists Arcadia Dunes

By Heather Rawlings

The Partners for Fish and Wildlife Program has worked since 2011 with the Grand Traverse Regional Land Conservancy and Designs by Nature to develop the eastern part of the Conservancy's Arcadia Dunes property into a 315-acre native grassland. Straddling the Manistee/Benzie County, Michigan line, this property extends from the shores of Lake Michigan to approximately five miles inland. Arcadia Dunes, which is a C.S. Mott Preserve, contains sand dunes, wetlands, forested property, and now a large contiguous native grassland. It truly offers unique scenic plant and wildlife viewing opportunities.

Partners biologist Heather Rawlings toured the maturing native grassland with Conservancy ecologist Angie Lucas on September 24, 2014. The Partners Program, in conjunction with the Conservancy and Designs by Nature, has funded 62 acres of the native grasslands, providing Michigan genotype grasses and forbs. These grasslands support a wide range of upland bird habitat and attract three state bird species of special concern: the grasshopper sparrow, northern harrier and western meadowlark. The sites are regularly monitored by the local Audubon Society, and are open to the public for hiking and bird viewing.

The northern 15-acre parcel was planted with warm-season grasses in 2013 and is now being prepped for the planting of forbs in the spring of 2015. Some work is required to get this site ready for the planting, such as removal of encroaching shrubs and trees, spot-treatment of several invasive species such as spotted knapweed, mullein, and white sweet clover, and re-planting of the fire break to purely red clover. Fall is by far the best time to view native grasslands due to the explosion of color that the little bluestem, big bluestem and Indian grass provides. We look forward to viewing the grasslands again in 2015 following the spring forbs planting.



*Little bluestem and Indian grass showcasing their fall colors!
Photo credit: USFWS.*



Sumac interspersed with little bluestem make the grassland a colorful place to visit during the fall season. Photo credit: USFWS.

Alpena FWCO Brings the Fish to Wildlife Weekend

By Andrew Briggs

Staff from the U.S. Fish and Wildlife Service (Service) Alpena Fish and Wildlife Conservation Office (FWCO) – Waterford substation attended Wildlife Weekend for the third consecutive year at Indian Springs Metropark in White Lake, Michigan. The two day event took place September 13th and 14th and was designed to allow children and adults to get a first-hand look (and feel) of the wildlife in their area. Activities included an animal skins and skulls table, wildlife crafts, pond dipping for insects, and an open lab to view pond creatures through microscopes. Other exhibits and presentations featured live animals, including amphibians, reptiles, mammals, birds, and a lake sturgeon. This year's event was the largest so far with roughly 125 attendees over the weekend.

The staff from the Alpena FWCO taught attendees about native fish species like the lake sturgeon, aquatic invasive species like Asian carps, and the equipment and techniques they use to conduct their research. Staff also conveyed the importance of conserving our native species and preventing the spread of invasive species. Many of the children even had the opportunity to touch a live juvenile lake sturgeon provided by the Service staff. Pamphlets and fish identification cards were handed out and many children walked away with temporary Service tattoos and stickers.

Wildlife Weekend offered the opportunity for the Service to maintain partnerships and build new ones. Partners who took part in Wildlife Weekend included the Great Lakes Zoological Society, Howell Nature Center, Monarch Watch, the Oakland Audubon Society, and Indian Springs Metropark. The event also was an opportunity to help foster environmental appreciation in children and adults alike.



Fish biologist Justin Chiotti displays a live juvenile lake sturgeon to a group of children during Wildlife Weekend at Indian Springs Metropark in White Lake, Michigan. Photo credit: USFWS.



Jessica Loughner from the Alpena FWCO - Waterford substation shows children a live juvenile lake sturgeon during Wildlife Weekend at Indian Springs Metropark in White Lake, Michigan. Photo credit: USFWS.

Scott Creek Culvert Replaced in the Thunder Bay Watershed

By Andrea Ania

The Thunder Bay Watershed, located in northeast lower Michigan, drains an area of about 1,250 square miles and covers five counties (Alcona, Alpena, Montmorency, Oscoda, and Presque Isle). The southern portion of the watershed supports coldwater fish communities. Scott Creek is a small, coldwater tributary located in the southern portion of the watershed. It feeds into the Lower South Branch of the Thunder Bay River and supports small populations of brook trout and mottled/slimy sculpin.

A new culvert was installed this September at the Hawkins Road crossing on Scott Creek. The old culvert (36 ft long by 2 ft diameter) was replaced with longer and wider culvert (80 ft long by 9+ ft diameter), which will help restore stream function and reconnect approximately two miles of the headwaters of the Lower South Branch of the Thunder Bay River. Other benefits of this project include reducing the amount of sediment entering the stream due to a longer culvert, chip sealing the road at the stream crossing, and implementing Best Management Practices for sediment and erosion control.

This project was completed in partnership with the Alpena County Road Commission, Great Lakes Restoration Initiative, and the National Fish Habitat Action Plan (Great Lakes Basin Fish Habitat Partnership). Aquatic habitat restoration projects contribute toward the “Aquatic Habitat Conservation and Management” and “Partnerships and Accountability” priorities of the Service’s Fisheries Program Vision for the Future.



Top: The old/original undersized and perched culvert. Middle: New and old culverts side-by-side during installation. Bottom: The new culvert after installation. Photo credits: USFWS.