



## U.S. Fish & Wildlife Service Alpena National Fish and Wildlife Conservation Office

### September 2008 Station Activities

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The Alpena National Fish and Wildlife Conservation Office (NFWCO) is located in Alpena, Michigan and works to meet the U. S. Fish and Wildlife Service's Fishery and Ecosystem goals within Lake Huron, Western Lake Erie, and connecting waters of the St. Marys River, St. Clair River, and Detroit River. Activities include Aquatic Species Conservation and Management, Aquatic Habitat Conservation and Management, Aquatic Invasive Species, Cooperation with Native Americans, Leadership in Science and Technology, Partnerships and Accountability, Public Use, and Workforce Management – all of which are conducted in alignment with the Service Fisheries Program's Vision for the Future. The station is one of many field offices located within Region 3, the Midwest Region.

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## Aquatic Habitat Conservation and Management

### Wrapping up the Construction Season



*Mary Pawalek (Presque Isle Co., MI) stands in front of one of the earthen berms constructed on her property. This site was close to her deer blind and now allows her to access the blind with minimal walking. It also provides feeding and nesting habitat for migratory birds. Photo by Heather Rawlings.*

*Submitted by Heather Rawlings  
Fish and Wildlife Biologist*

September was a very busy month for the Alpena Partners for Fish and Wildlife (PFW) Program. Construction to restore wetlands was constant, thanks to a very wet spring and an early summer. As a result, contractors were now in a hurry to finish projects before the fall rains started. Six projects were completed in September, restoring a total of 15 acres of wetlands on the properties of six different landowners. Four of the projects were located in fallow farm fields and will provide excellent migration habitat for a variety of waterfowl and nesting habitat for the mallard duck. The other two projects were located in wooded habitat more suitable for the wood duck. One of the projects was located on a large parcel of property where the landowner and the PWF Program have

been working for over 10 years to restore a wetland complex. This was the sixth project completed on this property.

Completion of aquatic habitat restoration projects contributes to the “Aquatic Habitat Conservation and Management” component of the Service's Fisheries Program Vision for the Future.

## Oxbow Creek Culvert Replacement Completed



*Submitted by Andrea Ania  
Fishery Biologist*

On September 17, 2008, a 5 foot elliptical culvert was installed on Oxbow Creek at Oxbow Creek Road, providing 7.5 miles of unimpeded fish passage for native brook trout in the Black River Watershed. The Cheboygan County Road Commission installed the new culvert to replace a failing, undersized (24 inch) concrete culvert that was acting as a physical and thermal barrier to upstream fish movement and was a major source of sediment entering the system.

**Before** (inset) - An inadequately sized culvert at the Oxbow Creek Road stream crossing on Oxbow Creek. The culvert often became plugged and was a water velocity barrier to native brook trout. **After** - Several hours after culvert replacement the back-water is draining, and the channel is beginning to redefine itself. Photos by Andrea Ania.

The increased diameter of the new culvert will reduce water velocities and thermal pollution, allowing native brook trout upstream access to spawning and rearing habitat. Based on water temperature data collected by the Michigan Department of Natural Resources (DNR) and the Upper Black River Watershed Restoration Committee (UBRWRC), the old culvert acted like a dam, increasing summer water

temperatures and creating a thermal barrier to brook trout.

Optimal and lethal water temperatures for brook trout range from 57-66 °F and 70-79 °F, respectively (Brown 1971). Water temperature data will continue to be recorded next summer to measure the benefits of the new culvert on thermal pollution. The new culvert will also reduce sediment input to the stream, which was a major source of pollution, potentially destroying valuable brook trout spawning and nursery habitat downstream.

Water temperature data collected at Oxbow Creek Road-Stream Crossing on Oxbow Creek from 2004 to 2007. Data courtesy of Tim Cwalinski, Michigan DNR, Gaylord.

Year	Month	Hourly Average	Maximum
2004	June	63.2	78
	July	66.2	76.4
	August	63	74.9
2005	June	69	83
	July	70	83
	August	66	79
2006	June	67	87
	July	71	87
	August	66	91
2007	June	66	80
	July	66	81
	August	66	84

Brook trout are a native species to northern Michigan river systems. They have lost much of their habitat to development and increased road-stream crossings that were inadequately designed to handle water flow conditions, hinder fish movement, and contribute sediment. This project is consistent with the Black River Watershed Stewardship Initiative-Nonpoint Source Pollution Management Plan (2002). Partners for this project included Michigan DNR, UBRWRC, Cheboygan County Road Commission, and Huron Pines.

Completion of fish passage projects contributes toward the “Aquatic Habitat Conservation and Management” component of the Service's Fisheries Program Vision for the Future.

## Cooperation with Native Americans

### **Service Biologist Updates WFH05 Stock Assessment Model for 1836 Treaty Waters**

*Submitted by Aaron Woldt  
Fishery Biologist*

In September 2008, Fishery Biologist Aaron Woldt of the Alpena NFWCO updated the WFH05 stock assessment model in Lake Huron. This model is updated annually to assess the status of the lake whitefish population in WFH05 (Alpena) and to set safe harvest limits for tribal commercial fishers in accordance with the Year 2000 Great Lakes Consent Decree. As stipulated in the 2000 Great Lakes Consent Decree, preliminary lake whitefish harvest limits must be calculated by the Modeling

Subcommittee (MSC), reviewed by the Technical Fisheries Committee (TFC), and presented to the parties to the decree by November 1 each year.

Woldt summarized and formatted commercial catch and survey data provided by Mark Ebener of the Chippewa Ottawa Resource Authority and survey data from the Service to put into the stock assessment model. The updated WFH05 lake whitefish model yielded a recommended preliminary tribal lake whitefish harvest limit of 961,800 lbs. Woldt will continue to run model diagnostics and consult with MSC members prior to producing a final recommended harvest limit for this unit.

Preliminary lake whitefish harvest limits for all management units in 1836 Treaty waters of the Great Lakes will be presented to the TFC for review on October 22. The MSC will complete final lake whitefish harvest limits and present them to the TFC at its November 25 meeting.

MSC produced harvest limits, when reviewed by the parties and approved, will become binding 2009 lake whitefish harvest limits for 1836 Treaty waters. These harvest limits will allow lake whitefish fisheries to be executed while still protecting the biological integrity of the lake whitefish stocks. This outcome is consistent with the Service's goal of building and maintaining self-sustaining populations of native fish species while meeting the needs of tribal communities under the "Aquatic Species Conservation and Management" and "Cooperation with Native Americans" priorities of the Fisheries Program Vision for the Future.

## Partnerships and Accountability

### **Fishery Exploration Provided for Sandborn Elementary 5<sup>th</sup>/6<sup>th</sup> Graders**



*Submitted by Anjanette Bowen  
Fishery Biologist*

The Alpena NFWCO provided a fishery experience for Alpena Public School's Sandborn Elementary 5<sup>th</sup>/6<sup>th</sup> grade Science class on September 30. The event was held on the grounds of the Federal Building along the Thunder Bay River in Alpena, Michigan.

Students learned how to identify the parts of a fish's anatomy and how to use a dichotomous key to distinguish fish species. They were able to handle and recognize a number of fish species including the round goby (an aquatic invasive species), yellow perch, and

*Alpena NFWCO Fishery Biologist Andrea Ania teaches Sandborn Elementary students how to use a dichotomous key to identify fish. Photo by Scott Koproski.*

spottail shiner. Students also viewed and learned about how different fish sampling nets are used, including a beach seine, trap net, and bottom trawl. A bottom trawling demonstration was also provided to allow students to view fish sampling in action. The trawling was part of a fishery study to detect and quantify aquatic invasive species in the Thunder Bay River and other areas of Lake Huron and the St. Marys River.

This event was a great opportunity to introduce students to fish and fish sampling. Approximately 28 students participated in the experience. They were very interested and had many questions. The Alpena News attended the event and printed a photo in the newspaper on October 1<sup>st</sup> of Alpena NFWCO Fishery Biologist Andrea Ania talking with students.

Connecting children and people with nature is a priority for the U.S. Fish and Wildlife Service. This event also is consistent with the "Partnerships and Accountability" and "Public Use" priorities of the Service's Fisheries Program Vision for the Future.

## Alpena NFWCO Participates in Local Aquatic Education Program



*Submitted by Scott Koproski  
Fishery Biologist*

On September 22 and 23, staff from the Alpena NFWCO participated in the Lake Huron Water Quality Exploration workshop sponsored by Michigan State University Extension (MSU Extension). Fishery Biologists Scott Koproski, Anjanette Bowen, and Andrea Ania represented the Alpena NFWCO at the workshop. The event was hosted by NOAA at the Thunder Bay Marine Sanctuary, and workshop partners included NOAA, Michigan DNR, Michigan Sea Grant, MSU Extension, Discovery World, and AmeriCorp (Huron Pines and Headwaters Land Conservancy). Each partner was asked to demonstrate how their agency/organization promoted healthy ecosystems.

Staff from Alpena NFWCO presented information related to Aquatic Invasive Species (AIS) in the Great Lakes and the effects they are having on native fish populations. An overview of all documented AIS species was provided, and transport methods were also discussed. Students were most familiar with AIS species like round gobies, Eurasian ruffe, zebra mussels, and sea lamprey. Additionally, Alpena NFWCO staff provided simple but effective techniques that students could use to prevent the unintentional spread of

*Alpena NFWCO Fishery Biologist Anjanette Bowen answers questions as students view information on AIS. Photo by Scott Koproski.*

AIS species. For example, staff explained how important it is for recreational fishermen to not release unused minnows (i.e. bait bucket transfers) and how proper vessel cleaning can prevent the spread of AIS species from one watershed to another.

Over the course of two days, 200 students and faculty members from three school districts in northeast Michigan participated in the workshop and were reached by staff from the Alpena NFWCO.

This work is another example of the Alpena NFWCO's commitment to the following Fisheries Program Vision Priorities—"Partnerships and Accountability" and "Public Use."

## **Alpena NFWCO Assesses Walleye in the St. Mary's River**

*Submitted by Adam Kowalski  
Fishery Biologist*

During the week of October 6, Fishery Biologist Adam Kowalski traveled to Sault Ste. Marie, Michigan to assess walleye in the St. Mary's River. Using the Alpena NFWCO's electrofishing vessel, Kowalski along with Chuck Payment of Michigan DNR and Ben Turschak and Dan Operhall of Lake Superior State University sampled five sites (three in Lake Nicolet and two in a Lake Nicolet side channel) over two nights. The objective of this work is to determine the percentage of hatchery reared walleye in the St. Mary's River walleye population and to index juvenile walleye abundance. Hatchery stocked walleye are immersed in oxytetracycline (OTC) prior to release which leaves a mark on calcified structures like otoliths and vertebrae that is detectable in the lab under a black light. Data collected in this annual survey are used by management agencies to determine appropriate stocking levels and stocking locations within the St. Mary's River. The St. Mary's River is part of 1836 Treaty waters, and stocked walleye help support recreational and tribal subsistence fishing. This work is a priority for the St. Mary's River Fishery Task Group of the Lake Huron Technical Committee and is accomplished through the cooperative efforts of the Chippewa Ottawa Resource Authority, Michigan DNR, Ontario Ministry of Natural Resources, Department of Fisheries and Oceans Canada, and the Service.

Working in 1836 Treaty waters with Michigan DNR, Lake Superior State University, and other partners supports the Fisheries Program Vision priority of developing and improving long term partnerships with States, Tribes, other federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.

## **Public Use**

### **Planting a Butterfly Garden at Wilson Elementary School**

*Submitted by Heather Rawlings  
Fish and Wildlife Biologist*



*Second grade students from Alpena Public School's Wilson Elementary School planted a butterfly garden on their school grounds in cooperation with the Alpena NFWCO and the Partners for Fish and Wildlife Program. Photo by Heather Rawlings.*



*Second graders from Alpena Public School's Wilson Elementary School are pictured together after completing a butterfly garden on the school grounds. Photo by Heather Rawlings.*

The Alpena NFWCO partnered with Wilson Elementary School 2<sup>nd</sup> and 6<sup>th</sup> graders on October 10, 2008 to plant a 20 x 40 ft. butterfly garden on their playground. This was the first of what we hope are many projects with this school to encourage unstructured play of the elementary school students. This opportunity allowed children to take ownership of the project, to get dirty, and to teach the 2<sup>nd</sup> grade how to properly plant native plants. Fourteen different types of wildflowers and grasses were purchased from Wildtype Nurseries in Mason, Michigan, and all plants were

Michigan genotype. Plants were chosen for their hardiness in a sunny environment, height, color, and attractiveness to insects and birds. Biologists Andrea Ania and Heather Rawlings chose the plants and organized the project. The Partners for Fish and Wildlife Program purchased the plants, topsoil, mulch, and some hand tools required to complete the project.

Plastic structures called "fun timbers" were placed and staked-in delineating the location of the garden earlier in the week by the 6<sup>th</sup> grade and Service Biologists Adam Kowalski and Heather Rawlings. One of the Wilson Elementary School parents used their tractor with a small backhoe to remove the sod from the garden area, and the kids finished the sod removal manually with shovels. Friday morning (Oct. 10) Service employees Andrea Ania and Heather Rawlings were on-site with several strong 6<sup>th</sup> graders to direct the delivery of topsoil and mulch from contractor Sharboneau and Sons. The trucks were able to back right up to the garden to dump the soil, but 30 yards of soil had to be manually spread throughout the garden. The second grade class with teacher Mrs. Lisa Syma planted

the garden in the afternoon. Once the plants were in the ground, mulch was carefully spread throughout the garden to cut down on weeds and to retain more water for the plants during precipitation events.

The butterfly garden was planted adjacent to the playground, so the entire school can play in it, watch it grow, and observe fauna that come to use the garden. The tallest plants and grasses were planted in the back (big bluestem, switchgrass, and giant sunflower) and can reach 6-7 ft. tall. All of the classes (K-6) will use this site as a part of their school curriculum, but the second grade will have specific assignments involving the garden and will maintain it. Each year the Alpena NFWCO would like to add another component to this playground to eventually create a natural area on Wilson School's property to allow nature to be more tangible to the kids, and to encourage imagination, unstructured play, and a relationship with nature that the children may not be receiving at home. The Alpena NFWCO has "adopted" this second grade class and is making an effort to be in the classroom twice a month to assist the teacher by incorporating more experiences in nature with the children while emphasizing the current State of Michigan mandated school curriculum.

Sixty-five elementary school students assisted in the construction and planting of the butterfly garden, and the entire school will eventually benefit from these efforts. Outreach events such as these contribute toward the "Public Use" component of the Service's Fisheries Program Vision for the Future. This project also directly contributes to the Service's "Let's Go Outside!" children in nature initiative.

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For more information about Alpena NFWCO programs and activities contact us at:

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