

ALPENA FWCO NEWSLETTER

January - February 2013
Volume 3, Issue 1



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Alpena FWCO Biologist Conducts Fisheries Catch-at- Age Modeling Workshop

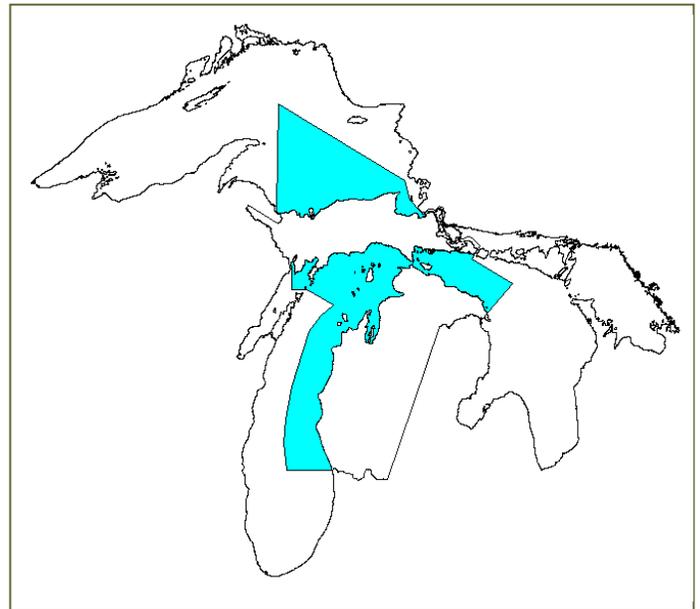
By Stephen Lenart

In January 2013, Alpena Fish and Wildlife Conservation Office (FWCO) fisheries biologist Stephen Lenart conducted a statistical catch-at-age modeling workshop for partner agencies involved in population modeling work in the 1836 treaty waters of the Great Lakes. Statistical models are used in the development of lake whitefish and lake trout harvest limits throughout the 1836 treaty waters of the Great Lakes. Development of these models is the responsibility of the Modeling Subcommittee (MSC), a consortium of biologists from federal, state (MI), and tribal agencies. The objectives of the workshop were 1) to provide an overview of the primary structure of lake whitefish population models for newer members of the MSC and 2) to assist members wishing to implement structural changes to the lake whitefish assessment models. Three partner-agency biologists attended the full-day workshop. Topics covered included 1) key considerations in the data input and template structure, 2) model diagnostics, and 3) helpful tools for analyzing/summarizing model output. The catch-at-age models developed for use in 1836 treaty waters are complex tools; maintaining structural consistency in the modeling approach is an important consideration for the MSC. Such workshops can help reduce the learning curve for new participants in the modeling process and the U.S. Fish and Wildlife Service should continue to play a key role in these efforts.

This work is directly linked to a number of objectives in the Service's *Fisheries Program Vision for the Future*, including 1) to develop and improve long-term partnerships with States, Tribes, other federal agencies, non-governmental organizations (NGOs), and other

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Map depicting 1836 treaty waters of the Great Lakes. Image credit: USFWS.

Service Programs to develop; and 2) to support, facilitate, and/or lead collaborative approaches to manage interjurisdictional fisheries.

2013 World Wetlands Day Celebrated at Carlson High School in Gibraltar, Michigan

By Eric Stadig

Who would have ever guessed that the country of Iran would be the focal point on world wetlands? On February 2, 1971, countries around the world signed an international treaty (Convention on Wetlands) in Ramsar proclaiming the international importance of wetlands. To celebrate the signing of the treaty, February 2nd was designated as World Wetlands Day and has been observed every year since 1997. This year, World Wetlands Day was celebrated at Carlson High School on Friday, Feb. 1st, in Gibraltar, MI.

To date, 35 wetlands in the United States have been selected as "Wetlands of International Importance" by the International Ramsar Convention on Wetlands, including one in Michigan - Humbug Marsh. Humbug Marsh was designated as a wetland of international importance on February 2, 2010. It represents most of the remaining unaltered marshland on the Detroit River and is located on the Detroit River in the cities of Trenton and Gibraltar, Michigan. Since its locality is adjacent to Carlson High School, it provides the students great access to a rare and extremely valuable habitat, which enriches their environmental education experiences.

This year, the fourth annual world wetlands day was celebrated at Carlson High School. Over 1,800 students in grades 6-12 from Carlson High School, Shumate Middle School, and schools in Flat Rock, Southgate, and Detroit joined the celebration. Students walked from booth to booth staffed by local representatives and environmental leaders, including fisheries biologists from Alpena Fish and Wildlife Conservation Office (Waterford Substation). Students learned about the ecological importance of wetlands, organisms inhabiting these unique ecosystems, and why the preservation of wetlands is important.

An aquarium containing fish species often found within wetlands provided a good ice breaker with the students while fisheries biologists Justin Chiotti, Margaret Hutton and Eric Stadig described what the Alpena FWCO is doing to monitor and preserve fish communities within wetland habitats. At times, 10-15 students gathered at the booth while they learned about lake sturgeon life



USFWS fisheries biologists, Margaret Hutton and Eric Stadig, educate students on what the Alpena FWCO (Waterford Substation) is doing to monitor and preserve fish communities within wetland habitats. Image credit: USFWS.

history, aquatic invasive species, and their career potential in the field of natural resources. Students were particularly interested in learning about the size and unique morphological traits of lake sturgeon, tools fisheries managers use to monitor fish populations (PIT/FLOY tagging techniques) and the effects of silver and bighead carp on aquatic systems.

Major players in the conservation field and local area organizations were also in attendance. They included members of the Wyandotte Nation Native American Tribe, scientists from the Land and Water Management Division of the Michigan Department of Environmental Quality, Dr. John Hartig from the Detroit River International Wildlife Refuge, and U.S. National Forest Service personnel. Individuals from numerous other environmental organizations (Pointe Mouillee Waterfowl Festival, Ducks Unlimited, DTE Energy, etc.) accounted for an additional 20 displays. This event is consistent with the Fish & Wildlife Service's priority of connecting children with nature and addressed the 'Partnerships and Accountability' and 'Public Use' priorities of the Fisheries Program's Vision for the Future. We look forward to doing it again next year.

Sulphur Springs Assessment and Restoration Project Completed

By Andrea Ania

The Sulphur Springs Assessment and Restoration project restored 400 linear feet of stream and 0.5 acres of high quality native riparian habitat in the Chagrin River Watershed (Ohio). Although there were delays due to heavy rains from hurricane Sandy, channel and floodplain construction and plantings were completed by mid-November thanks to the efforts of project manager Christina Znidarsic of the Chagrin River Watershed Partners, Inc. (CRWP). This project restores and reconnects a segment of Sulphur Springs that was dammed in the 1930's for recreation. The dam was breached in recent years, leaving an entrenched stream that was disconnected from its floodplain and lacked riparian vegetation.

The segment of Sulphur Springs that was restored is located in the South Chagrin Reservation of the Cleveland Metroparks (CM). The Chagrin River watershed is home to some of the last relict populations of native Ohio brook trout, dating back to the last glaciations over 10,000 years ago. Through restoration and monitoring, this project will assess if the stream is suitable for reintroduction of the state-

threatened native Ohio brook trout, or, alternately, high quality minnow species (reidside dace and southern redbelly dace) that are indicators of healthy headwater streams.

The Sulphur Springs Assessment and Restoration project was identified by Secretary of the Interior Ken Salazar as being among the 51 river projects selected nationwide to serve as models of the America's Great Outdoors Rivers, a program designed to conserve and restore key rivers across the nation, expand outdoor recreational opportunities and support jobs in local communities. Project partners include CRWP, CM, State of Ohio, and the Emerald Necklace Chapter of Trout Unlimited.

The CM will continue to monitor stream flow and water temperature into 2013 to measure post-construction conditions. The CRWP has also developed and continues to implement an education campaign to teach local residents about practices that minimize impacts to the watershed (rain gardens, rain barrels, shade trees, native landscaping).



Before (left): Historic impoundment and remnant outlet structures. After (right): Stream banks have been sloped and stabilized with native vegetation and old dam outlet structures have been removed to restore the stream and riparian area. Photo credit: USFWS.



Before (left): Immediately downstream of historic dam outlet structures and dyke. After (right): Structures have been removed and the dyke sloped back and stabilized with native vegetation to restore the floodplain and stream. Photo credit: USFWS.



Before (left) and After (right): View of stream channel downstream of historic dam outlet structures and dyke. Photo credit: USFWS.

The Friends of the Lake Huron Watershed group meets at the USFWS-Alpena FWCO office on the third Wednesday of each month at 4:30 p.m.

All are welcome to attend!

Third Graders at Wilson Elementary School Learn to Classify Mammals into Feeding Groups Based on Dentition

By Joseph Gerbyshak

As part of the Connecting People with Nature (CPWN) initiative, staff from the Alpena Fish and Wildlife Conservation Office (FWCO) have been teaching students at Wilson Elementary School for the past four years about environmental topics that meet their current science curriculum. This school year Alpena FWCO's staff adopted a new cohort of third grade students. Alpena FWCO staff will be teaching these students lessons once a month via hands-on, classroom activities and field trips until they reach the fifth grade. Alpena FWCO's involvement at Wilson Elementary School provides a change of pace for the students, while providing unique insight from conservation professionals.

Alpena FWCO biologist Joseph Gerbyshak presented a lesson about the classification of mammals into feeding groups based on the animal's dentition. Gerbyshak used mammal skulls as visual aids to demonstrate the different types of teeth of carnivores, omnivores, and herbivores. The students learned to easily identify carnivores by their characteristic elongated canines and sharp carnassial teeth. The distinctive long incisors and flat molars were used by the students to distinguish herbivores. The students quickly learned that omnivorous animals have teeth of both carnivores and herbivores. Once the students had learned these basic concepts, they were given skulls of unknown species of animal and tasked with classifying it based on the



Gerbyshak shows characteristics distinguishing different types of mammal teeth to a group of 3rd grade students at Wilson Elementary School as part of the Connecting People with Nature (CPWN) initiative. Photo credit: USFWS.

skull's dentition. After the students classified the animal into the correct feeding group, they tried to determine the correct species of animal from a list. Once they accomplished this task, they were asked to speculate what the animal normally eats in the wild. This generated some interesting and creative responses. The students enjoyed seeing the various mammal skulls up close and quickly learned how much care was needed when handling these delicate specimens.

Fish Biologist Chris Olds Talks at Career Daze for the Thunder Bay Junior High School

By Chris Olds

On February 21, 2013, Chris Olds spoke to four groups of 30 students about a "day-in-the-life" of a fisheries biologist at the Alpena Fish and Wildlife Conservation Office (FWCO). Chris gave an overview of his background with the U.S. Fish and Wildlife Service and why he decided to become a fisheries biologist. He outlined some educational prerequisites for those interested in pursuing a biology curriculum in college.

Chris also talked about the universities he attended to earn his degrees, his work schedule, and typical salaries. After discussing current programs at the Alpena FWCO, Chris opened the conversation up to questions from the students. Many of them wanted to know about the threat of Asian Carp to the Great Lakes and where the best fishing spots were on Lake Huron.

2013 Michigan AFS Annual Conference: Michigan Fisheries Community Schools Up North!

By Eric Stadig

Fisheries biologists Justin Chiotti, Margaret Hutton and Eric Stadig from the Alpena Fish and Wildlife Conservation Office (FWCO) - Waterford Substation of the U. S. Fish and Wildlife Service (USFWS) attended the 40th Annual Meeting of the Michigan Chapter of the American Fisheries Society February 19th-21st. The emphasis of the meeting was "Case Studies in Fisheries Research and Management." The three-day meeting brought together fishery biologists, technicians, university students, professors and retired members from across the region. Topics presented ranged from new approaches to data modeling, landscape genetics, and aquatic invasive species to unique presentations on such topics as feeding ecology of pelagic larval burbot.

The Alpena FWCO was well represented with multiple presentations during this conference. Fisheries biologists Margaret Hutton and Eric Stadig each presented a poster on one of their current projects on the St. Clair-Detroit River System (SCDRS). Margaret's poster highlighted the development of a monitoring program for juvenile lake sturgeon in the SCDRS and what has been learned so far. Eric's poster featured analysis of non-target species from USFWS Sea Lamprey Program fyke nets to assess fish assemblages in the SCDRS. This work included the discovery of cisco (*Coregonus artedii*) in the lower Detroit River over the last two years. Both posters were well received by the conference participants and the biologists answered many questions regarding their respective project as well as potential for future research and collaboration. Justin Chiotti gave an oral presentation on lake sturgeon work involving examination of their population demographics within the system over the last several years. His work emphasized the use of modeling programs to look at the potential health of the sturgeon population within the SCDRS.

The diversity of presentations and opportunities to meet with colleagues highlight the benefits of professional meeting attendance. Whether for first-time attendees or a retired fishery biologist, the 2013 Meeting of the Michigan Chapter of the American Fisheries Society was extremely beneficial for those who were there. It was a chance for individuals to



Fisheries biologist Eric Stadig explains how by-catch can be useful in determining fish assemblages in the St. Clair-Detroit River System. Photo credit: USFWS.



The 2013 Michigan AFS Annual Meeting in Gaylord, MI brought professionals together to network and share knowledge in fisheries science and management. Photo credit: USFWS.

encounter other professionals within their respective field, network and learn valuable information about the aquatic programs and projects being performed around the state.

Molding Young Minds at Eton Academy in Birmingham, Michigan

By Margaret Hutton

On January 25, 2013, U. S. Fish and Wildlife Service fisheries biologists James Boase, Eric Stadig, and Margaret Hutton gave a presentation for the high school students at Eton Academy in Birmingham, Michigan. Eton Academy's mission is to educate students with reading, attention and other learning challenges by building academic skills and self-confidence in an accepting and supportive environment. On this day, the high school students were learning about different careers and volunteer opportunities throughout their neighborhood. The primary goal was to give the students the necessary tools and connections to find jobs in prospective fields and areas of interest. James Boase discussed details of his job including projects occurring at the Alpena Fish and Wildlife Conservation Office - Waterford Substation such as the habitat restoration projects in the St. Clair-Detroit River System (SCDRS), with a focus on lake sturgeon, and invasive species monitoring. James has presented at the school in previous years and the students and faculty are very receptive and interested in the work that the Service is conducting.

After the presentation, students were allowed to ask questions and talk with Eric Stadig and Margaret Hutton. Both were able to provide stories and anecdotes on how they came to work for the Service. They also described what a typical field season entails from the work out in the field collecting samples to cleaning and repairing equipment as the need for maintenance arises. Many students seemed interested in volunteering and becoming more involved. Two other stars also made a good impression. The students were able to get up close with the Waterford Substation resident 2 year old juvenile lake sturgeon. This allowed them a chance to interact with a species that many had never seen before or ever would have encountered otherwise. This gave the students a new way to observe the natural resources at their disposal and many were interested in the fish and their role within the system.

As the Service looks to the future, it is important to reach out to students and inform them about the work that is occurring and potential ways they can stay



USFWS fisheries biologist, James Boase, discusses the different projects that are occurring in the SCDRS with the high school students of Eton Academy in Birmingham, Michigan. Photo credit: Margaret Hutton, USFWS.



USFWS fisheries biologist, Eric Stadig, give the students of Eton Academy the chance to meet two juvenile lake sturgeon while he answers questions about their life history and other projects occurring in the SCDRS. Photo credit: Margaret Hutton, USFWS.

involved. As students begin to think of the future, especially high school students, it is crucial for them to understand the resources and opportunities available. Giving the students the opportunity to volunteer during the field season gives them a chance to experience what the Service is committed to protecting, along with the work and tasks involved with doing the job safely and correctly. During these time periods, important connections are made with students who are looking towards their future.

Stretch the Mesh

By Kyle Krajniak

Alpena Fish and Wildlife Conservation Office's (FWCO) fisheries biologists recently completed mending gill nets that will be used for springtime sampling of juvenile lake trout. A total of 8000 ft (equivalent to 1.5 miles) of graded mesh nylon was mended in preparation for the 2013 field sampling season. Come spring, gill nets will be deployed at various depths and locations throughout northern Lake Huron to assess the condition, distribution, and densities of juvenile lake trout.

Nets are constructed in 100 ft panels of nylon mesh with each panel having a specific sized mesh. The size of the mesh is determined by the measurement diagonally from corner to corner of the square, more affectionately called "the stretch". Mesh sizes range from 2 to 4 inches in ½ inch increments, selected specifically for targeting the size distribution of Lake Huron's juvenile lake trout. To repair heavily damaged panels, the entire section of mesh can be removed and a whole new panel sewed in. When panels have minor damage, the process of mending individual holes by reconstructing the mesh squares becomes more efficient. The completed nets consist of two panels of each ½ inch increment mesh strung together resulting in a 1000 ft gang.

Construction and repair occurs on site at the Alpena FWCO in a specialized net room. The room has many unique features specific to gill net construction. Such features include dual stretching beams and cogs which provide 70 ft of continuous taunt net for mending or sewing, a dyed concrete floor for easier mesh visibility, sewing needle filler, and many others. These features, in addition to a skilled two man crew, allow for construction and repair to be done in a highly efficient manner.

The ability to skillfully construct and mend gill nets is becoming somewhat of a lost art due to the transition to trap net fisheries and as older generations of experienced commercial fishermen fade away. Fortunately, the Alpena FWCO has the knowledge and resources to keep nets hole-free and fishing well, yielding the info we need to restore lake trout in Lake Huron.



A completed panel of 3 inch mesh remains hung on the net stretcher in the net room at the Alpena FWCO waiting to be boxed in preparation for springtime sampling. Photo credit: USFWS.



Fisheries biologist Kyle Krajniak prepares to patch a torn hole. Photo credit: USFWS.

Fun During Free Fishing Weekend in Michigan

By Anjanette Bowen

A great time was had by all at the Fishing For Fun event hosted by the Besser Museum in Alpena, Michigan on February 16, 2013. The event was held during Michigan's Winter Free Fishing Weekend and brought together a number of fish oriented agencies and organizations to provide educational information and activities for families. The U.S. Fish and Wildlife Service (USFWS) - Alpena Fish and Wildlife Conservation Office (FWCO) and their Friends Group, Friends of the Lake Huron Watershed (FOLHW), were invited to host a booth at the event. The USFWS/FOLHW booth focused on aquatic invasive species, including Asian carp, and had a number of fish games for children. Children that visited the booth knew quite a bit about invasive species and enjoyed playing with the build-a-fish puzzle. Some other activities at the event included fish printing with Michigan Sea Grant, learning about lake sturgeon with Sturgeon for Tomorrow, and net mending with the Cross Family. The event was held in conjunction with the Reel Fun Fishing Tournament held on Grand Lake in Presque Isle County to raise funds for the Alpena River Center.



Friends of the Lake Huron Watershed members Gerry Kraft (left) and Tom Gilfillan (right) helped host the educational display at Besser Museum during Free Fishing Weekend. Photo credit: USFWS.

For the Health of It

By Eric Stadig

Fisheries biologists with the U.S. Fish and Wildlife Service (Alpena Fish and Wildlife Conservation Office-Waterford Substation) teamed up with Michigan Department of Natural Resources employees in Waterford, MI, to receive their bi-annual Adult First Aid, AED & CPR certification. All of the employees were taught the basics from assisting choking victims, identifying signs of stroke to the use of an Automated External Defibrillator (AED). The training is intended to prepare the staff with first aid, as well as, lifesaving techniques that can be applicable in emergency situations whether in the home, office or in the field.

Donald Danaher of the Red Cross (Detroit) taught the six-hour class. He led the hands on training, providing the group valuable insight on assessing and reacting to emergency situations. He conveyed his own stories from the field, as well as providing informational videos on



USFWS fisheries biologist Steve Hensler demonstrates proper technique to assist a choking victim. Photo credit: USFWS.

such topics as CPR, first aid and heart attacks. During the CPR lessons, employees partnered up and ran through the different scenarios of saving an unconscious victim including the appropriate implementation of CPR and the proper use of the AED on a CPR mannequin.

The Need to Breathe

By Margaret Hutton

James Boase, Justin Chiotti, Stephen Hensler, and Margaret Hutton from the Alpena Fish and Wildlife Conservation Office (FWCO) - Waterford Substation, attended an oxygen administration first aid course as a step towards completing the requirements for SCUBA (Self-Contained Underwater Breathing Apparatus) certification for the Department of the Interior. The course was taught at the Huron SCUBA dive shop in Ann Arbor, and focused on the ability to assist and administer oxygen to a distressed diver. Diving can be very rewarding but it can also be dangerous if done incorrectly. Primary injuries that occur to SCUBA divers are decompression illnesses, which include decompression sickness (DCS), or the bends, and aertial gas embolism (AGE). Both illnesses can be serious and require further medical treatment. By administering oxygen as soon as signs and symptoms are recognized, the diver has an increased chance of making a full recovery.

Many divers in the Great Lakes visit the waters that connect Lake Huron and Lake Erie, which include the St. Clair and Detroit Rivers along with Lake St. Clair. The draw for SCUBA divers includes multiple ship wrecks in the area along with the native wildlife that utilize these structures for shelter. Service employees from the Waterford Substation during the spring, summer, and fall months are commonly within these areas, sampling for threatened, commercial, and sports fish species. Due to the amount of people exploiting this area, the new training will allow us to provide assistance to any distressed diver as the situation arises.

The oxygen administration first aid course fulfills one of the requirements to become a diver for the Department of the Interior. Once fully certified, employees from the Waterford Substation will be able to assist other offices within Region 3 when SCUBA assistance is needed.

Once a SCUBA team is assembled, we will be able to better assess the effectiveness of Service projects in rivers and lakes, especially within the St. Clair/Detroit River System. Such projects include assessing the



Steve Hensler (right) administers oxygen and comforts Margaret Hutton (middle) while Justin Chiotti (left) assists in a mock drill to practice their first aid and oxygen administration skills. Photo credit: Eric Stadig, USFWS.

artificial spawning reefs placed near Belle Isle and Fighting Island in the Detroit River and the in the Middle Channel of the St. Clair River. The reefs provide necessary spawning habitat for threatened species, such as the lake sturgeon and northern madtom, along with important commercial and sports fish, such as lake whitefish and walleye. Made of limestone and fieldstone, the reefs should have interstitial spaces to protect the eggs. As a future dive team, the Waterford Substation will be able to confirm that sediment from upstream is not filling in these necessary spaces on the spawning reefs.

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“Our Mission is working with others to protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.”

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