



U.S. Fish & Wildlife Service

Alpena Fishery Resources Office FY 2007 Station Activities

Aquatic Species Conservation and Management

The Fisheries Program maintains and implements a comprehensive set of tools and activities to conserve and manage self-sustaining populations of native fish and other aquatic resources. These tools and activities are linked to management and recovery plans that help achieve restoration and recovery goals, provide recreational benefits, and address Federal trust responsibilities. Sound science, effective partnerships, and careful planning and evaluation are integral to conservation and management efforts. The Alpena Fishery Resources Office in Alpena, Michigan is actively involved with aquatic species conservation and management in the Great Lakes. The accomplishments listed below highlight activities related to aquatic species conservation and management conducted in Fiscal Year 2007 (October 2006-September 2007).

Maiden Assessment Cruise on the *M/V Spencer F. Baird*

*Submitted by Scott Koproski
Fishery Biologist*

During the month of October 2006, two cruises were made with the *M/V Spencer F. Baird* to perform annual adult lake trout spawning surveys on two offshore reefs in Lake Huron. Fishery Biologists Scott Koproski and Adam Kowalski along with Project Leader Jerry McClain were the biological crew for the assessment work. Captain Mike Perry, Marine Engineer Robert Bergstrom, and contractual employee Mark Brown were the vessel crew.



Photo- A. Woldt, USFWS

On October 18th, the *M/V Baird* departed the federal dock in Alpena and traveled to Six Fathom Bank. Three gangs of gill nets were deployed on this reef and retrieved on October 19th after anchoring for the night off the reef. On October 20th, the vessel departed for Yankee Reef where two gangs of gill net were deployed and lifted the following day after anchoring for the night off the reef. In recent years, it has been difficult to conduct the assessment at both reefs given the tumultuous weather that October brings and safety issues surrounding the aging vessel *M/V Togue*.

This year we were able to complete surveys at both reefs in a single week while working off the more stable and comfortable work platform provided by the *M/V Baird*. The difference between the two vessels is night and day and the *M/V Baird* will be an excellent vessel for fulfilling the Fish and Wildlife Service obligations towards lake trout restoration and enhancing our ability to contribute to the lakewide assessment program.

This is another example Alpena FRO and Jordan River National Fish Hatchery's commitment to the following Fisheries Program Vision for the Future priorities: "Aquatic Species Conservation and Management" and "Partnerships and Accountability".

Coded Wire Tag Extraction

*Submitted by Adam Kowalski
Fish and Wildlife Biologist*

During the month of October 2006, Fishery Biologist Adam Kowalski extracted and read coded-wire-tags (CWTs) from lake trout. CWTs are microscopic metal tags placed in the snouts of juvenile lake trout at the hatchery. Lake trout heads were collected during the spring fishery independent lake whitefish survey conducted by the Alpena FRO. Kowalski also extracted and read CWTs from lake trout sampled by the Michigan Dept. of Natural Resources. CWTs are extracted by cutting lake trout snouts into smaller and smaller pieces until the tag can be seen and removed. CWTs are read under a microscope, and each tag's unique number is recorded. The tag number, when compared to stocking records, yields information such as stocking location, stocking date, fish age, fish strain, and hatchery of origin.

In total, Kowalski removed and read over 100 tags from approximately 125 heads. Not all adipose clipped lake trout contain CWTs, because some lake trout shed their tag and some are erroneously fin clipped. Additional lake trout heads will be received from Bay Mills Indian Community (BMIC), Chippewa Ottawa Resource Authority (CORA), and the Michigan DNR creel program. These heads will be processed when received.

Data collected from lake trout CWTs are used to determine harvest limits, stocking locations, movement patterns, and post stocking survival rates of various hatchery practices. These outcomes are consistent with the Service's goal of building and maintaining self-sustaining populations of native fish species while providing recreational fishing opportunities and meeting the needs of tribal communities under the "Aquatic Species Conservation and Management" priority of the Fisheries Program Vision for the Future.

Alpena FRO Tags Lake Whitefish One More Time (Year 3 of 3)

*Submitted by Aaron Woldt
Fishery Biologist*

On November 7 and 8, 2006 staff from the Alpena Fisheries Resource Office (FRO) participated in a USFWS Restoration Act funded Lake Huron lake whitefish distribution study. Service staff involved included Treaty Unit Coordinator Aaron Woldt, Fishery Biologists Adam Kowalski, Scott Koproski, Susan Wells, and Anjie Bowen, and Fish and Wildlife Biologist Heather Rawlings. Staff conducted all tagging operations on the commercial trap-net boat the Blonnie W operated by Jim Presau Fisheries.

The goals of this study were to determine the spatial distribution and movement patterns of 8 selected lake whitefish stocks in Lake Huron and to determine the contribution of each stock to commercial fishery yields. The 8 stocks selected for this study were Detour, Alpena (Middle Island & Thunder Bay), Saginaw Bay, Burnt Island, South Bay mouth, the Fishing Islands, Douglas Point, and Sarnia. In all, 7 state, federal, tribal, and provincial partner agencies participated in this study. In 2004 and 2005 combined, study partners tagged and released over 21,000 lake whitefish in Lake Huron. The Service tagged 3,021 lake whitefish in 2004 and 2005 combined. To date, over 620 tagged lake whitefish have been harvested and reported by Lake Huron fishers.



In 2006, Service staff successfully Floy tagged and released 1,533 lake whitefish near Middle Island. Michigan DNR staff tagged approximately 1,500 lake whitefish in Thunder Bay in November, 2006. Tagged fish were measured for length, checked for lamprey wounds, sexed, assessed for maturity, scale sampled for ageing purposes, fin clipped, and released. A random subset of fish were also detained shortly prior to release to measure short term tag retention and handling mortality. Approximately 200 fish were lethally sampled and processed as well. Data from this study will be entered into a common database maintained by the Alpena FRO. Combined study data, including 2006 tagging, will be distributed to study partners early in 2007.

Studying the spatial distribution and movement patterns of lake whitefish stocks will allow managers to determine if the borders of current management units are biologically meaningful and to determine the contribution of each stock to the commercial fishery. This will allow for better harvest management and protection of lake whitefish stocks. This outcome is consistent with the Service's goal of maintaining self-sustaining populations of native fish species under the "Aquatic Species Conservation and Management" priority of the Fisheries Program Vision for the Future.

Alpena FRO Reads CWTs

*Submitted by Adam Kowalski
Fish and Wildlife Biologist*

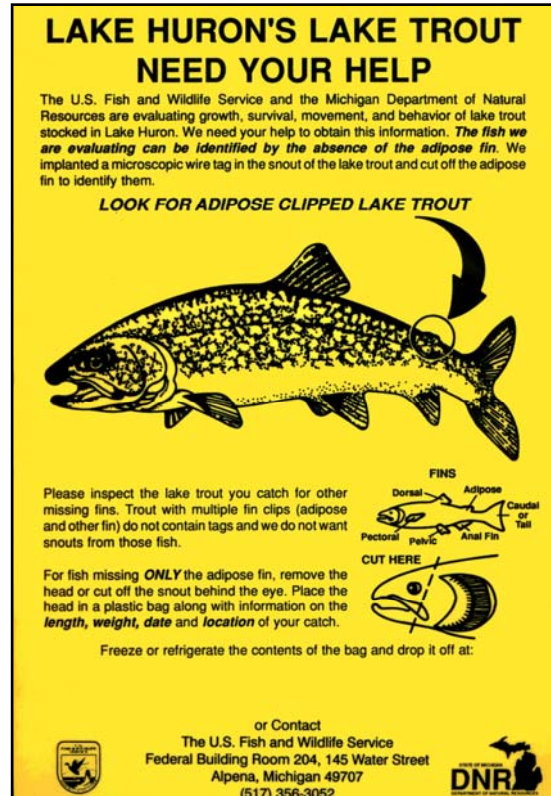
During the month of November 2006, Fishery Biologist Adam Kowalski extracted and read coded-wire-tags (CWTs) from lake trout. CWTs are microscopic metal tags placed in the snouts of juvenile lake trout at the hatchery. Kowalski looked at sport-fishery caught lake trout heads collected by Michigan DNR creel clerks in Lake Huron. Kowalski also removed tags from lake trout sampled by the Chippewa Ottawa Resource Authority (CORA).

CWTs are extracted by cutting lake trout snouts into smaller and smaller pieces until the tag can be seen and removed then read under a microscope. Each tag's unique number can then be compared to stocking records to yield information such as stocking location, stocking date, fish age, fish strain, and hatchery of origin.

In total, Kowalski removed and read over 250 tags from approximately 300 heads. Not all adipose clipped lake trout contain CWTs because some lake trout shed their tag and others experience fin regeneration that masks original multiple clip sequences. Additional lake trout heads will be received from Bay Mills Indian Community (BMIC), the Michigan DNR creel program, and processed along with heads from the Alpena FRO fall surveys. These heads will be processed when received.

Data collected from lake trout CWTs are used in several ways. First, lake trout age data are used in population models that determine lake trout harvest limits for parties to the Year 2000 Consent Decree. Second, stocking location data are used to determine lakewide lake trout movement patterns. Finally, two existing studies to determine differences in survival between large and small stocked lake trout and differences in survival of various lake trout strains depend on analysis of CWT data.

These outcomes are consistent with the Service's goal of building and maintaining self-sustaining populations of native fish species while providing recreational fishing opportunities and meeting the needs of tribal communities under the "Cooperation with Native Americans" and "Aquatic Species Conservation and Management" priorities of the Fisheries Program Vision for the Future. The multi-agency nature of this work is also consistent with the Service's goal of establishing and maintaining open, interactive communication with its partner agencies under the "Partnerships and Accountability" priority of the Fisheries Program Vision for the Future.



2006 Lake Whitefish (*Coregonus clupeaformis*) Sampling on the Detroit River

Submitted by Jim McFee
Fishery Biologist

Fisheries Biologists James Boase and Jim McFee, in conjunction with United States Geological Survey (USGS), completed a lake whitefish survey on the Detroit River. Sampling was conducted in both US and Canadian waters in the area downstream of the City of Detroit, from October 30 to December 4, 2006. Historically lake whitefish used the Detroit River for spawning, but in the recent past have been absent from the system. Sampling in the fall of 2005 produced two adult lake whitefish and numerous eggs, which warranted an increased sampling in 2006.



During the sampling period several methods were used to collect information on the stock structure of this species, including gillnets, egg mats, and egg pumping equipment. Service biologists concentrated on the gillnetting and assisted with the egg pumping, while USGS biologists focused on egg collection using the egg mats.

Nets were fished in three zones within the sample area. Before whitefish eggs were identified in the survey one zone was sampled per night with four 150 foot experimental gillnets. The mesh sizes ranged from three to six inch stretch on 25 foot panels. Once whitefish eggs were confirmed in the sampling gear netting was concentrated around the areas of egg collection.

During the first few weeks of the study drifting vegetation fouled the gillnets and diminished their effectiveness. Once the nets are choked with vegetation they become highly visible and avoidable by fish. As temperatures dropped the amount of vegetation in the river decreased resulting in increased catches.

Gillnetting produced no lake whitefish in 54 overnight sets, however several others species were collected. Gillnetting revealed eleven different species, including lake sturgeon and a steelhead (rainbow trout). Four lake sturgeon ranging in size from 365mm to 872mm received passive integrated transponder (PIT) tags and cinch FLOY tags after capture from the Fighting Island Complex, prior to release. The 365mm lake sturgeon is a young of the year (YOY), which was the first YOY sturgeon captured in the Detroit River in 40 years of sampling by biologists. A large, 712mm, male steelhead was also captured at the north end of Fighting Island, another rare find in the Detroit River.

Lengths were recorded for all other species, with more extensive data collected from walleye and yellow perch. Additional data collected included, aging structures (otoliths and dorsal spines), sex

data, and diet data of 33 walleye and 6 yellow perch. Aging structures will be analyzed this winter back at the lab.

This project is an ongoing look at the lake whitefish stocks that use the Detroit River for spawning. Sampling will continue in the fall of 2007 as water temperatures approach 10°C. In addition to gillnets some alternative gears may be used to capture whitefish to increase the number of adults that are handled.

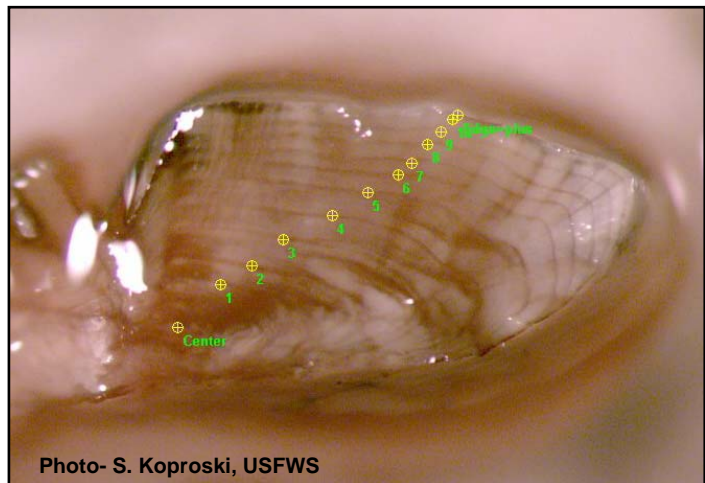
This effort provided a unique opportunity to create new partnerships with both governmental and non-governmental agencies to achieve common Great Lakes management objectives. Maintaining these collaborative relationships allows for the most efficient use of limited human and fiscal resources. This project is consistent with the “Partnerships and Accountability”, “Aquatic Species Conservation and Management”, and “Leadership in Science and Technology” focus areas of the Fisheries Program’s Vision for the Future.

Otolith Analysis from Fish Collected During 2006 Field Activities

*Submitted by Scott Koproski
Fishery Biologist*

Fishery Biologist Scott Koproski began working on otolith samples collected for age and growth analysis during the 2006 fishery independent lake whitefish survey. Otoliths were collected from all lake whitefish, lake trout, and burbot sampled during this survey. The otolith is the first calcified structure that begins to develop during the egg stage. It grows towards the anterior end of a fish and by viewing a cross-section of the otolith you can begin to see zones of summer and winter growth. The pattern resembles the rings of a tree.

Annual growth can be identified by counting the number of zones of compressed winter growth. In addition to counting the zones of winter growth you must pay special attention to the edge of the structure. Annulus formation varies geographically with northern regions seeing annulus formation later in the summer compared to southern regions. The growth past the last annuli must be classified as either new growth or growth from the previous year. If it is growth from the previous year, the annulus has not formed yet and the edge must be counted when assigning an age to the structure.



Koproski uses the “crack and burn” technique to differentiate the zones of summer and winter growth. By cracking the otolith laterally and placing the cracked portion into an alcohol flame, the cracked portion begins to darken to a golden brown color. Once the otolith is burned, it can be

viewed using a stereo-microscope. To help view the structure a drop of mineral oil is placed on the cracked section. The mineral oil smoothes out the structure while viewing it under the stereo-microscope and allows the age interpreter to see the image more clearly.

This work is an example for Alpena FRO's commitment to the Service's Fisheries Program Vision for the Future priorities of: "Aquatic Species Conservation and Management", "Partnerships and Accountability", and "Cooperation with Native American Tribes".

Percid Fin Ray Age Determination

*Submitted by Scott Koproski
Fishery Biologist*

During the month of February 2007, Fishery Biologist Scott Koproski and Lab Manager Roger Greil from Lake Superior State University (LSSU) began analyzing Percid fin rays collected during the 2006 gill net assessment of the St. Marys River. Both Alpena FRO and LSSU are members of the St. Marys River Fishery Task Group (SMRFTG). The SMRFTG is a sub-committee of the Lake Huron Technical Committee and is charged with monitoring and assessing fish populations within the St. Marys River. In 2006 the SMRFTG scheduled a river wide gill net assessment where each agency was responsible for deploying several gill net gangs in specific regions of the St. Marys River. The gill net gangs were 1000' in length and stretch mesh size ranged from 1.5"-6.0" increasing in ½" increments.

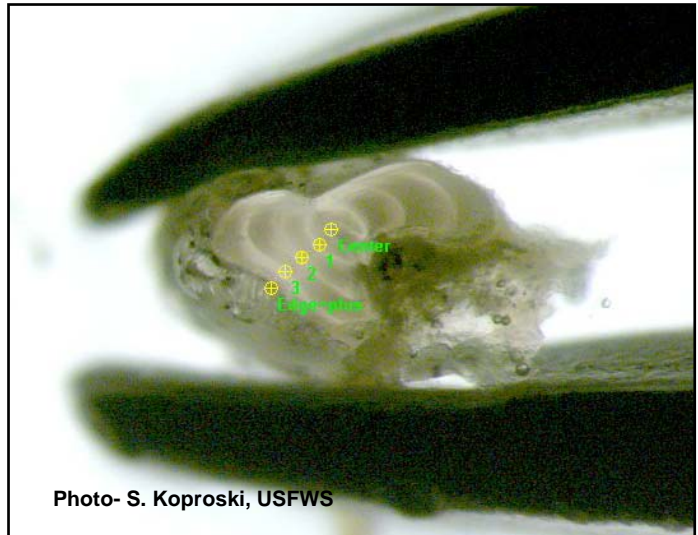


Photo- S. Koproski, USFWS

After all the sampling was completed by each agency, the aging structures were sorted and provided to the agency who volunteered to age specific species. Alpena FRO and LSSU were responsible for aging the Percid samples collected during the river wide assessment. Both Koproski and Greil cross-sectioned the fin rays collected from the Percids using a Dremel saw and counted the annuli present in the structure. Like many other calcified structures, seasonal growth patterns can be identified within the structure and ages can be assigned. Over 1000 Percids were encountered during the assessment and the samples were divided equally between Alpena FRO and LSSU. After all the aging is complete, a report will be produced by the SMRFTG and it will be presented to the Lake Huron Technical Committee.

This work is another example of Alpena FRO's commitment to the following Fisheries Vision Priorities: "Partnership and Accountability", "Aquatic Species Conservation and Management", and "Cooperation with Native Americans".

Alpena Gillnet Repair

*Submitted by Adam Kowalski
Fish and Wildlife Biologist*

During the month of February 2007, Fishery Biologist Adam Kowalski mended approximately 3,600 ft of assessment gillnet. The nets consisted of 100 ft panels of 2” to 6” stretch mesh strung in 1/2” increments and are used by the Alpena FRO for the annual fishery independent lake whitefish assessment in 1836 Treaty waters. Mending consists of inspecting every net for holes, broken floats, and broken ties. Holes are repaired by either sewing in new twine across gaps or by replacing large holes with new sections of net. If nets are damaged beyond repair, replacement nets are built.

Net repair is very important for collecting accurate and consistent data during our annual fisheries assessments. Nets must be strung similarly and repaired to the same standard each year to assure consistent gear selectivity across sampling years. Net repair and construction will continue throughout the winter until spring assessments start.

Gillnets are used by the Alpena FRO from summer through fall for lake whitefish and lake trout population assessments in Lake Huron. Lake whitefish and lake trout are native species harvested in both state and tribal commercial and sport fisheries. These population assessments are consistent with Service’s Fisheries Program Vision for the Future priority of “Aquatic Species Conservation and Management”. Much of the work is also required for implementation of the 2000 Consent Decree.

Sampling of Historic and Newly Created Lake Sturgeon Spawning Sites Resumes on the Detroit River

*Submitted by James Boase
Fishery Biologist*

Fisheries biologists James Boase and Jim McFee, in conjunction with biologists from the United States Geological Survey Great Lakes Science Center (Center), resumed sampling of historic and newly created lake sturgeon spawning sites on the Detroit River. Sampling was conducted in both US and Canadian waters of the Detroit River from October 30th to December 4, 2006 and then resumed after the ice was out of the river on March 19, 2007. Fall sampling focused on identifying lake whitefish use of the Detroit River, while spring efforts have been directed at all native species with



particular emphasis on walleye and lake sturgeon spawning locations.

During the sampling period in the fall and again in the spring several methods were used to collect information on fish species spawning in the Detroit River. Service efforts were directed at compiling age and growth data on the adult stages of species spawning in the river. Sampling included the use of gillnets, setlines and baited traps. Biologists from the Center used egg mats, egg pumping equipment and larval nets in an effort to identify early life-history stages of species spawning in the river, where they were spawning and when spawning was taking place. This research will continue through the spring of 2008.

Through this collaborative effort lake whitefish have been found spawning at a number of locations in the Detroit River for the first time in almost a century. Both adult and very young lake sturgeon have also been found occupying sections of the river in late fall and winter, indicating suitable nursery habitat exists and the fish may be residing in the river year round. Results from this research are providing insight on the remaining spawning habitats in the Detroit River and also providing insight on the utility of creating artificial spawning habitat.

This effort provided a unique opportunity to create new partnerships with both governmental and non-governmental agencies to achieve common Great Lakes management objectives. Maintaining these collaborative relationships allows for the most efficient use of limited human and fiscal resources. This project is consistent with the "Partnerships and Accountability", "Aquatic Species Conservation and Management", and "Leadership in Science and Technology" priorities of the Fisheries Program's Vision for the Future.

Alpena FRO and Jordan River NFH Collaborate on 2006 Lake Trout Stocking Poster

***Submitted by Aaron Woldt
Fishery Biologist***

Fishery biologists Aaron Woldt of the Alpena FRO and Tim Smigielski of Jordan River NFH created a GIS based map of stocking trips made by the *M/V Togue* in 2006. The *M/V Togue*, based in Cheboygan, Michigan, was the Service's offshore stocking vessel used to plant yearling lake trout in US waters of lakes Huron and Michigan in support of interagency lake trout rehabilitation programs. In 2007, the *M/V Togue* will be replaced by the newly christened *M/V Spencer F. Baird*.

Biologist Smigielski worked with Boat Captain Mike Perry to obtain coordinates for all waypoints and lake trout stocking locations used by the *M/V Togue* in both lakes Huron and Michigan. Woldt created a map showing *M/V Togue* trip paths, waypoints, stocking locations, total miles traveled, and total number of lake trout stocked in lakes Huron and Michigan. In 2006, the *M/V Togue* traveled 876 miles in Lake Huron stocking 1,059,268 yearling lake trout and 1,754 miles in Lake Michigan while planting 1,992,865 yearling lake trout. Woldt formatted a poster sized electronic version of this map on the Region 3 poster template and forwarded it to the Regional Office for printing. This map will be used by Region 3 personnel to educate public and Service employees

regarding *M/V Togue* operations and was displayed at the 2007 GLFC Combined Upper and Lower Lake Committee Meetings. Alpena FRO and Jordan River NFH staff will continue to develop collaborative efforts to advance the mission of the USFWS in Region 3.

This map of 2006 *M/V Togue* stocking trips will allow the Service to educate public and employees regarding the critical role the Service plays in lake trout rehabilitation efforts. This outcome is consistent with the Service's goal of implementing educational and outreach activities to educate public regarding Service activities under the "Aquatic Species Conservation and Management" priority of the Fisheries Program Vision for the Future

St. Marys River Lake Sturgeon Work

Submitted by Scott Koproski
Fishery Biologist

On April 3, 2007, Fishery Biologist Scott Koproski traveled to Sault St. Marie, MI, to meet with partners from Lake Superior State University and track lake sturgeon implanted with



sonic telemetry tags from 2006 field activities. Due to inclement weather and flow ice within the St. Marys River, the implanted lake sturgeon were not relocated. The north channel of the St. Marys River which wraps around the northern tip of Sugar Island was clogged with ice floating down river. This area is where 10 of the 12 implanted lake sturgeon were located during the last tracking activity that took place in January.

Even though tracking activities were unsuccessful, Koproski had a productive meeting with Roger Greil and Ashley Moerke from Lake Superior State University (LSSU). LSSU's partnership has been instrumental in the success of the lake sturgeon work taking place within the St. Marys River. They have provided vessels, crew, storage and office space, and their expertise related to the St. Marys River and lake sturgeon within the river. Without their partnership this project would not have been as successful as it was in 2006.

The project was funded by the National Fish and Wildlife Foundation – Bring Back the Natives fund. The funding secured by Koproski covered work that took place in 2006. Additional funds are being sought from the National Fish and Wildlife Foundation to continue the telemetry work in 2007 and beyond. The sonic tags implanted in the lake sturgeon have a 4 year battery life. By following these fish over subsequent years we hope to identify critical habitat within the St. Marys River that is necessary for different life stages and reproductive success of this pre-historic species.

This work is an example of Alpena FRO's commitment to the following Fisheries Program Vision Priorities: Aquatic Species Conservation and Management, Partnerships and Accountability, and Cooperation with Native American Tribes.

Saginaw River Watershed Lake Sturgeon Project

Submitted by James Boase
Fishery Biologist

Beginning April 17, 2007 Fishery Biologists James Boase and Jim McFee from the Alpena Fishery Resources Office (FRO) and volunteers Larry Hess, Barry Pulaski, and Larry Dinsmore began sampling for the evidence of lake sturgeon spawning in the Saginaw River watershed. This is the third and final year of the assessment work in the Saginaw watershed. Alpena FRO has used a number of volunteers from both the Shiawassee National Wildlife Refuge and their Partners Organization "Friends of the Shiawassee" during all three years and their assistance has been invaluable.



Anecdotal evidence suggests that lake sturgeon use the Saginaw River watershed during the spring spawning season, but very little is known about the importance of this watershed to the lake sturgeon population of Lake Huron. The primary goal of this project is to document lake sturgeon use of the Saginaw River watershed for spawning, one of the criteria for delisting the Saginaw River as an Area of Concern as stated in the Remedial Action Plan. A number of other partners have been involved with this project including the Michigan Department of Natural Resources, USGS Great Lakes Science Center, Dow Chemical, and the City of Frankenmuth. This project is funded through the Saginaw Bay Watershed Initiative Network (WIN) and the National Fish and Wildlife Foundation (NFWF).

In 2005 and 2006 efforts were focused on capturing adult lake sturgeon as they were expected to migrate into the watershed in the spring to spawn and, if spawning took place, capture and collect their eggs. We used setlines in an effort to collect adults fishing mainly in the deepest sections of the Saginaw River where the Cass, Shiawassee and Tittabawassee rivers converge. Although one adult lake sturgeon was sighted below the Dow Dam on the Tittabawassee River in 2005 high water prevented the capture of the fish and no spawning was documented that year.

In addition to setlines, egg-mats were also used. Egg-mats have been used all three years and have been placed below the Dow Dam on Tittabawassee River, the Frankenmuth Dam on the Cass River and below the Chesaning Dam on the Shiawassee River. During 2005 and 2006 eggs collected from the egg-mats were taken back the USGS laboratory at the Great Lakes Science Center in Ann Arbor and incubated until hatching. Hatched fish larvae were then raised until their yolk sacs were absorbed and the fish could be positively identified. Most eggs collected in the system were either walleye or various sucker species, no lake sturgeon eggs have been collect thus far.

After three years of no lake sturgeon spawning documented in the watershed our final assessment will focus on the suitability of the system to support lake sturgeon during spawning, determine if

habitat is available for egg survival, and if sufficient nursery habitat is available for larvae and juveniles during that first few months post hatching. Assessment of the habitat will take place during summer and fall 2007.

This project is an example of the Alpena FRO's commitment to the following Fisheries Vision Priorities: "Partnerships and Accountability" and "Aquatic Species Conservation and Management".

2006 Lake Huron Lake Whitefish Distribution Study Data Compiled

***Submitted by Aaron Woldt
Fishery Biologist***

In May 2007, Fishery Biologist Aaron Woldt compiled lake whitefish tagging data from Service and partner agencies in a shared database as part of a Great Lakes Fish and Wildlife Restoration Act funded Lake Huron lake whitefish distribution study. The goals of this study are to determine the spatial distribution and movement patterns of 8 selected lake whitefish stocks in Lake Huron and to determine the contribution of each stock to commercial fishery yields. The 8 stocks selected for this study are Detour, Alpena (Middle Island & Thunder Bay), Saginaw Bay, Burnt Island, South Bay mouth, the Fishing Islands, Douglas Point, and Sarnia. Partner agencies for this study include the Service, Chippewa Ottawa Resource Authority, Michigan Department of Natural Resources, Bruce Power, Chippewas of Nawash, Saugeen First Nation, and Ontario Ministry of Natural Resources.

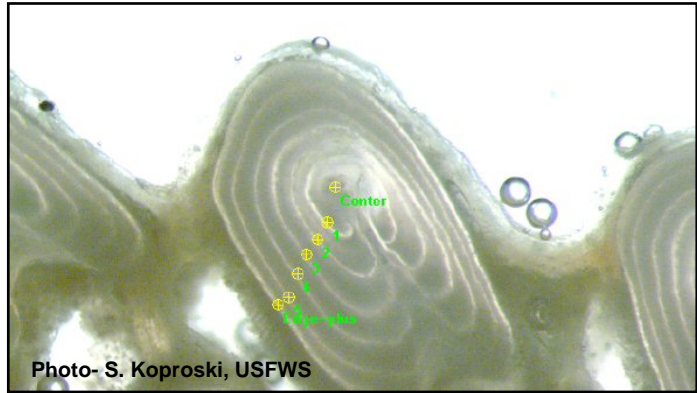
In the fall of 2006, over 12,000 lake whitefish were tagged by the 7 partner agencies across all sampling sites. From 2003 through 2006, over 36,000 lake whitefish have been tagged and released. Data was entered by each agency into a standard database designed by Woldt and sent to the Alpena FRO for inclusion in a central study database. Woldt provided each agency with data collection protocols and database formats prior to the study's start. Woldt has been working with agency data representatives to ensure data accuracy and timely entry. To date, 2006 data has been entered and proofed from 6 agencies. Once all data has been entered, Woldt will distribute copies of the central database to all partners. The full database is needed to accurately process tag returns and issue rewards. Each tag carries a \$5 or \$10 US reward.

Serving as database manager for this study aids efforts to determine the spatial distribution and movement patterns of lake whitefish stocks and to determine the contribution of each stock to the commercial fishery. This will allow for better harvest management and protection of lake whitefish stocks. This outcome is consistent with the Service's goal of maintaining self-sustaining populations of native fish species under the "Aquatic Species Conservation and Management" priority of the Fisheries Program Vision for the Future.

Lake Whitefish Age Determination

Submitted by Scott Koproski
Fishery Biologist

During the month of May 2007, Fishery Biologist Scott Koproski finished aging lake whitefish fin rays collected during the Lake Huron Lake Whitefish Distribution Study from 2004, 2005, and 2006. This study is funded through the USFWS Restoration Act, and there are 7 agencies (USFWS, Michigan DNR, OMNR, CORA, Chippewas of Nawash First Nation, Saugeen First Nation, Bruce Power) tagging approximately 15,000 lake whitefish lakewide in each of 3 years to better delineate lake whitefish spawning stocks in Lake Huron.



Biologist Koproski began aging fin rays from lethal samples collected during the tagging activities by cross-sectioning the fin ray and identifying annuli present within the sample. The cross-sectioned fin ray is placed on a glass slide, a drop of vinegar is placed on the sample, and then the sample is viewed under a stereomicroscope. Two distinct growth patterns are identified using this technique: broad summer growth and narrow winter growth. By counting the bands of winter growth, age estimates are obtained from the fin rays. Biologist Koproski analyzed over 800 fin ray samples collected during this study.

This work is an example of the Alpena FRO's commitment to the following Fisheries Program Vision for the Future priorities: "Aquatic Species Conservation and Management", "Partnerships and Accountability", "Cooperation with Native Americans", and "Leadership in Science and Technology".

Spencer F. Baird Open House held in Alpena

Submitted by Jerry McClain
Fishery Biologist

On Saturday June 9, 2007 the Service hosted an Open House in Alpena, Michigan to showcase the *M/V Spencer F. Baird* while it was in Lake Huron stocking lake trout. The event provided an opportunity for the general public to board and inspect this state-of-the-art fish stocking and stock assessment vessel and to talk with Service staff about the programs and work being



completed with the vessel. Numerous Service staff participated in the event and met with visitors as they arrived. Participants included Aaron Woldt and Jerry McClain (Alpena FRO), Tim Smigielski (Jordan River NFH), Nikolas Grueneis (Iron River NFH), Mike Perry, Bob Bergstrom and Dave Bohn (*M/V Spencer F. Baird*). Approximately 50 visitors were given tours of the vessel during the three hour event.

Hosting the open house in Alpena provided a unique opportunity for visitors to visually compare the *M/V Spencer F. Baird* with the *M/V Togue* that it replaced, as the two vessels are tied up next to each other on the Thunder Bay River. Several of the visitors returned on Sunday to watch fish loaded for a trip to the North Point Reef stocking site.



Photo- A. Woldt, USFWS

This event supports and is consistent with the “Public Use”, “Aquatic Species Conservation and Management”, and “Leadership in Science and Technology” priorities of the Service’s Fisheries Program Vision for the Future.

Michigan Islands Refuge Survey

Submitted by Scott Koproski
Fishery Biologist

During the month of June 2007, Fishery Biologists Scott Koproski and Adam Kowalski and Project Leader Jerry McClain began field work to obtain data on the fishery resources near islands located in Thunder Bay, Lake Huron with funding which was provided by the Service’s Challenge Grant Program. Two of the four islands where fishery data will be collected are owned by the Service and are part of the Michigan Islands NWR. The study is a cooperative effort between the Michigan DNR and the Service.

Targeted islands included Thunder Bay Island, Scarecrow Island, Sulphur Island and Grass Island. All four islands are important to the coastal fish species that reside and provide recreational fishing opportunities in the Thunder Bay area of Lake Huron. These islands provide important feeding, spawning, and nursery habitat to a variety of fish species but the status of these populations is unknown. By obtaining baseline data we will be able to monitor the trends of these populations and see what impacts habitat alteration, exotic species, and cormorant predation are having on these populations.

The project involves electro-fishing the perimeter of the islands. Effort was measured in ten minute intervals. After ten minutes of shocking, all fish collected were processed. Lengths were taken

from all fish encountered and weight was recorded from the sport fish. In addition to weighing the sport fish, a scale sample was removed for aging purposes.

Grass Island and Sulfur Island are located close to shore within Thunder Bay and Scarecrow and Thunder Bay Island are located on the outer edge of the Bay. During June the inner islands were sampled. However, due to inclement weather and long runs, Scarecrow and Thunder Bay Island have not yet been sampled. We plan on sampling the remaining two islands during August.

This project is another example of Alpena FRO's commitment to the following Fisheries Program Vision for the Future Priorities: "Aquatic Species Conservation and Management", "Public Use", and "Partnerships and Accountability".

Alpena FRO Hosts Lake Huron Lake Trout Stocking Media Days on M/V Baird

***Submitted by Aaron Woldt
Fishery Biologist***

On June 10 and 14, 2007, Alpena FRO staff in cooperation with staff from the Jordan River National Fish Hatchery (NFH), Iron River NFH, Pendills Creek NFH, Region 3 External Affairs, and the crew of the *M/V Spencer F. Baird* hosted media attended lake trout stocking trips. The purpose of the trips was to highlight the Service's lake trout stocking and restoration activities in Lake Huron and to showcase the Service's new stocking and fishery assessment vessel, the *M/V Spencer F. Baird*. On each trip, approximately 120,000 yearling lake trout were loaded onto the *M/V Baird* and planted adjacent to North Point Reef near Alpena.

Annamarie Iannetta, news director and evening news anchor of CBS affiliate WBKB Channel 11, observed the June 10 stocking event and prepared a two minute feature story about Lake Huron lake trout restoration and the Service's role in stocking and assessing this important native fish species. Ms. Iannetta's story featured Fishery Biologist Tim Smigielski, Fishery Biologist Aaron Woldt, Vessel Captain Mike Perry, and Seaman Dave Bohn explaining Region 3's lake trout restoration efforts from the hatchery, vessel, and assessment/management perspectives.

Julie Baker, staff writer for *The Alpena News*, and freelance journalist Tom Carney attended the June 14 stocking trip. Ms. Baker composed a front-page article for *The Alpena News* (June 15 edition) discussing the dynamics Lake Huron's lake trout populations, the Service's hatchery program and restoration goals, and the capabilities of the *M/V Baird* compared to the *M/V Togue*. Ms. Baker's story featured Fishery Biologist Aaron Woldt, Assistant Jordan River Hatchery Manager Denise Johnston, and Vessel Captain Mike Perry. Mr. Carney will be developing a feature story about the Service's Lake Huron lake trout program which he hopes to publish in a Great Lakes sport fishing publication.

Hosting media events allows the Service to educate and inform a wide range of public regarding the critical role the Service plays in lake trout rehabilitation efforts. This outcome is consistent with the

Service's goal of implementing educational and outreach activities to educate public regarding Service activities under the "Aquatic Species Conservation and Management" and "Public Use" priorities of the Fisheries Program Vision for the Future.

Alpena FRO Conducts 2007 Fishery Independent Lake Whitefish Survey in Northern Lake Huron

*Submitted by Adam Kowalski
Fishery Biologist*

For the month of July 2007, staff from the Alpena FRO and volunteers conducted a fishery independent lake whitefish survey in 1836 treaty waters of northern Lake Huron. Staff involved included Fishery Biologists Adam Kowalski, Scott Koproski, Anjie Bowen, James Boase, James McFee, Project Leader Jerry McClain, and Treaty Fisheries Unit Coordinator Aaron Woldt. Volunteers included Hanna Edwards, Jerry Kowalski, and Andre' Fournier. The purpose of this survey is to collect fishery independent abundance and biological data on lake whitefish stocks in treaty waters for use in statistical-catch-at-age population models that are updated annually to determine harvest regulations for tribal commercial fishers in 1836 treaty waters.



The effort involved the setting of 18 overnight, variable mesh gill nets at randomly selected sites in lake whitefish management unit WFH 04 (Alpena to Presque Isle) and lake whitefish management unit WFH 05 (Presque Isle to Hammond Bay). All whitefish collected were measured, weighed, checked for lamprey wounds, fin clips, and tags, sexed, assessed for maturity, and visceral fat content. Scales and otoliths were also taken for age determination and stomachs removed whole for diet analysis. Non-target species were worked up in a similar manner.

Six remaining sets will conducted during the month of August as weather permits. This survey will continue annually and be tailored to meet the needs identified by the Modeling Sub-Committee. All data from this survey will be compiled, maintained, and analyzed at the Alpena FRO.

Data collected from this survey will be used to set harvest limits in 1836 treaty waters and improve the accuracy of population models. This will allow commercial fisheries to continue while protecting the biological integrity of the stocks. This outcome is consistent with the Service goal of maintaining self-sustaining populations of native fish species while meeting the needs of tribal communities and is supportive of the "Aquatic Species Conservation and Management" and "Cooperation with Native Americans" priorities of the Fisheries Program Vision for the Future.

Habitat Assessment on the Maumee River, Ohio

*Submitted by Jim McFee
Fishery Biologist*

During the first two weeks of August 2007 Alpena National Fish and Wildlife Conservation Office Biologist Jim McFee joined forces with Ohio Division of Wildlife Fisheries Technician Adam Thompson to complete a qualitative habitat assessment on the Maumee River. The Maumee River is located mainly in Northwestern Ohio and flows 130 miles from the headwaters in Indiana to the Western Basin of Lake Erie. This watershed is the largest in the Great Lakes, draining 6,600 square miles.



Over the past several years Service Biologist James Boase has conducted lake sturgeon research on this Lake Erie tributary with funding provided by the National Fish and Wildlife Foundation. The research was designed to identify spawning lake sturgeon adults in the drainage. Work was completed by fishing large mesh gillnets near the mouth of the river in early spring to capture adults as they migrate upstream to spawning locations. In addition to gillnets, egg traps were placed at a suspected spawning location downstream of the first fish barrier (~RM 35). These traps are designed to collect eggs if spawning occurs in the area. Egg traps consist of a half cinder block wrapped with a hogs hair furnace filter and marked with a bullet style float. Results of this work produced no adult lake sturgeon in the lower river and no sturgeon eggs at the suspected spawning location. As a final stage of this project, habitat data was collected to confirm if suitable young of the year and juvenile lake sturgeon rearing habitat exists in the Maumee River. This data in conjunction with the previously collected gillnet and egg block data will be used to make a recommendation on the feasibility of stocking lake sturgeon in this drainage.

Qualitative habitat data was collected on the Maumee River from the mouth to the first fish barrier at approximately river mile 35. The fish barrier is a low head dam used to divert water to local canals. Data collection started at the mouth working upstream in the Ohio Division of Wildlife flat bottom jet boat. Once water too shallow for the jet boat was reached data was collected in a downstream direction using a canoe. At one kilometer intervals a transect was made from bank to bank. Along each transect 3-5 ponar grabs were made to identify the substrate. In addition to transect sampling several grabs were made at the upstream and downstream end of all islands. In shallow areas substrates were identified by sight. Substrates were classified by particle size (silt, gravel, etc.). After the entire length of river was completed an intensive habitat assessment was made at the suspected spawning area. In this area transects were established every 100m and the substrate was identified by sight at each location. Once again all islands were sampled at the upstream and downstream ends. At all locations a GPS waypoint was taken for future mapping of the system. During the survey 300 locations were marked and the substrate was identified.

The data collected is still in the process of being analyzed, but during data collection it appears that the system offers a high amount of sand substrate around the numerous islands. Sand is the preferred substrate of young of the year and juvenile lake sturgeon. This project is another example of agencies combining efforts to help conserve populations of a valuable species like the lake sturgeon.

This effort provided a unique opportunity to create new partnerships with both governmental and non-governmental agencies to achieve common Great Lakes management objectives. Maintaining these collaborative relationships allows for the most efficient use of limited human and fiscal resources. This project is consistent with the "Partnerships and Accountability", "Aquatic Species Conservation and Management", and "Leadership in Science and Technology" focus areas of the Fisheries Program's Vision for the Future.

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

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