



“Sturgeon Protection through Citizen Involvement”



Summary

The lake sturgeon is the largest, longest lived fish in Wisconsin. It is also the most negatively affected by illegal harvest and habitat degradation. Lake sturgeon inhabits waterways throughout Wisconsin but the largest population is in the Lake Winnebago System.

Sturgeon are sought after for their flesh but especially targeted for their eggs (roe) which is used to make caviar. Sturgeon species throughout the world have been poached to supply the demand for caviar resulting in almost all sturgeon populations becoming extirpated or drastically reducing their numbers making them nonviable reproducing populations.

Illegal harvest of sturgeon has occurred on the Winnebago System for over 100 years. Winnebago System sturgeon are vulnerable throughout the year but especially during the spring spawning through snagging, spearing and by hand as they are concentrated at over 50 identified spawning sites. Four river systems, totaling several hundred miles in length, are used by the spawning sturgeon with coverage by approximately 4 wardens.

There is a limited harvest of sturgeon is allowed, by spearing through the ice, every February. Annually over 10,000 licenses are sold for this spearing season. The “Sturgeon for Tomorrow (SFT)” organization was formed in 1978 by the spearers and other interested persons to represent sturgeon interests together with the Wisconsin

Department of Natural Resources (DNR) management program and to preserve the spearing heritage.

Conservation Wardens focus enforcement efforts on illegal sturgeon harvest particularly during the spawning period but limited resources could not protect the sturgeon at the over 50 identified spawn sites.

In the mid 1970's Conservation Wardens began a "Sturgeon Guard" program, which enlisted the help of other DNR employees to "stand guard" at some of the spawning sites freeing wardens to work other areas of suspected illegal harvest. Since that time the "Sturgeon Guard" program has evolved significantly, now enlisting hundreds of volunteer citizens who serve to protect these sturgeon 24 hours a day, through 12 hour shifts. Volunteers come from throughout Wisconsin, the nation and internationally. The high number of volunteers allows guards to be placed at most of the active spawning sites. Wardens patrol throughout the system checking on the guards and checking for changing activity at other sites. SFT is the primary external partner providing funding for the camp operations and as well as volunteers for guarding effort. The sturgeon Spawn has now become a community celebration for many of the river communities. The Guard Program has also increased the public awareness and appreciation of sturgeon.

The Sturgeon Guard program has played a significant role ensuring that the Lake Winnebago System continues to be known for the largest self-sustaining lake sturgeon population in the world.

Scanning

The lake sturgeon has been present in the Lake Winnebago system for thousands of years. In fact, cultures have developed around the lake sturgeon. The Menominee Indian Nation used the sturgeon as a food source and more importantly was an integral part of their religion. As Europeans moved into the area they also used the sturgeon as a food source but did not have the religious regard for the sturgeon. As commercial fishing took hold on the Winnebago system sturgeon were removed as a pest species since they damaged the fishing nets. As the European settlements and population increased so did the harvest of sturgeon. The Conservation Ethic and environmental concerns about the wide spread mismanagement of our natural resources created laws to reel in harvest of many species including sturgeon. These laws directly affected the harvest culture that had developed along the Winnebago system waters, including the Wolf River, and illegal harvest of sturgeon continued. This harvest met the local cultural need of subsistence food, economic gain through sale of the illegal sturgeon and social standing within the communities as the poachers were highly regarded by community members.

Unlike many fish species, overexploitation of sturgeon can extirpate the species very quickly. The reason for this is based on their biology. Although the sturgeon are the longest lived fish in Wisconsin, females do not spawn for the first time until they are 25 years old and then only spawn every 4 years thereafter. Males do not spawn until they are 15 years old and generally only spawn every other year. The Winnebago System sturgeon migrates out of the lakes and travel up one of 4 river systems to carry out their spawning. While sturgeon spawn at a variety of locations along these river systems, some travel until they reach a dam, which prevents further migration. The distances traveled on these rivers can be significant. Wolf River (125 miles), Embarrass River (110 miles), Little

Wolf River (60 miles), and the Upper Fox River (65 miles). Spawning sites are found throughout these rivers with over 50 identified.

The lake sturgeon is one species included in the sturgeon family. They can grow to well over 80" in length, in excess of 200 pounds and live for over 100 years. Other species of sturgeon can be smaller or larger, however all share a high vulnerability to overharvest and extirpation. Sturgeon populations throughout the world have suffered from overharvest, poaching and habitat degradation. The Lake Winnebago System lake sturgeon population was also facing this same pressure and could have faced extirpation if action was not taken to limit these effects.

Analysis

The first Wisconsin Conservation Warden was appointed in 1879 to protect the fishery on Lake Superior. Since that time, the Wisconsin Conservation Warden Service has expanded both in terms of numbers and responsibility. Wardens continue to enforce the State's fish and game regulations, which include sturgeon. Throughout the 1900's the illegal harvest of sturgeon, especially during the spring spawning run, occurred frequently. While at the spawning sites the sturgeon can easily be grabbed by hand, speared, and snagged with hooks. While not at the sites they were also harvested by using illegal "snag lines", which are suspended across the river and designed to snag the fish the sturgeon as they swim by. The number of wardens stationed along these rivers has been as low as 1 warden to the present staffing of 7 wardens covering over 360 miles of river. During the height of the illegal harvest, it was not uncommon for wardens to detect and remove hundreds of illegal snag lines from the rivers along with illegally harvested

sturgeon. While some of the poachers were apprehended many more were not. Reliance on the public providing information about illegal wildlife poaching is paramount for effective Conservation Law Enforcement but due to the “culture” and acceptance of this practice in these communities, information was rarely obtained requiring the wardens to patrol and detect these illegal practices most often on their own.

Response

During the sturgeon spawning period, Conservation Wardens worked long hours, both day and night, attempting to locate and apprehend those who were illegally taking sturgeon on these vast river systems. Some of the following enforcement techniques were utilized:

- Wardens conducted covert surveillance of suspected illegal activity at specific spawning sites and snag line locations. With over 50 identified spawning sites alone, it was difficult to predict where illegal activity would be taking place. Surveillance often lasted for several days. Available staffing only allowed coverage of approximately 3 sites at any one time.
- To locate the hidden snag lines, wardens in boats used drags, consisting of a weighted piece of steel with protruding hooks that could be dragged along the bottom of the river with a rope. While many snag lines were identified using this technique, this was very labor intensive and only effectively covered a fraction of the river systems. Many snag lines were removed from the rivers using this practice however (see photos in Appendix).

- Another strategy involved maintaining a visible presence on the rivers. While this served as a deterrent, poachers often had “lookouts” with communication systems that “tipped off” the warden’s presence.
- While very few “citizen tips” were called into wardens in the early years, when they were, wardens would utilize a variety of investigative techniques to attempt apprehending the poacher(s) and bring them to justice. The “poaching culture” dominated the communities and the incidence of reporting violations was extremely low especially considering the high amount of poaching occurring.

In the mid 1970’s now retired Warden Larry Kriese, stationed in Appleton, began a program that would later grow into what is now referred to as the “Sturgeon Guard Program”. The goal of this program was to have other DNR staff stationed at the primary spawning sites to deter the illegal harvest of sturgeon. These volunteers were directed to not interfere with any actions at the site but to make themselves as visible as possible and to gather any information concerning illegal actions at the site and to report this information to the Conservation Wardens for follow up. This allowed wardens to concentrate efforts on illegal harvest in other more remote areas.

The pool of volunteers for these early efforts was restricted to DNR employees and their families. There was no logistical structure built for this program during this time. From its inception, this program showed positive results of reducing the poaching of sturgeon.

Other improvements occurring at the same time showed positive results. Within the DNR Fisheries Management program, staff continued to increase their investment in sturgeon management. Species research efforts, tagging, population

assessments/estimates, and their own public outreach efforts all increased the DNR's and the public's knowledge of the Winnebago sturgeon population. There is a regulated spearing harvest of sturgeon each February on the Winnebago system lakes. In 1978, a sturgeon spearing organization was created by the spearers to support their sport as well as assist the DNR in sturgeon Management. Five "Sturgeon For Tomorrow" (SFT) chapters were created around Lake Winnebago. A Sturgeon Management Committee made up of DNR staff, SFT members and other fishing club members continues to this day, conferring on management practices and proposals.

Due to the early success of the Sturgeon Guard program and the limited DNR staff available the present Sturgeon Guard program format was developed. The changes included:

- Designating a headquarters building, known as "Sturgeon Camp", from which the Sturgeon Guard program and its operations could be managed from. While this camp has moved several times during its history, it is now located at a DNR facility north of Shiocton where it remains today.
- Designating Warden Supervisors as the Sturgeon Guard/Camp coordinators. Their responsibilities include all managing and coordinating all aspects of Sturgeon Guard program operations.
- Creating a scheduling and volunteer submission system that allows the general public to volunteer for these assignments.
 - Over 100 Sturgeon Guard volunteers are annually scheduled during the possible dates when the run may occur. Starting in 2013 the scheduling was

transferred from a phone call and mail in registration to an Internet based allowing the volunteers to self-schedule to a shift.

- Creating the infrastructure to provide logistical support for the program including a headquarters building, meals, identification of guards at the site, informational handouts and maps, and ensuring the safety of the guards while volunteering.
 - Guard scheduling is done for a 30 day period generally from April 1st through April 30th. The guards are scheduled to a 12-hour shift (7am to 7pm or 7pm to 7am). There are 18 slots open for each shift giving the total number of shifts at 60 with 1080 slots available.
 - Sturgeon do not spawn during the same period from year to year. The spawn is dependent on water depth (based on spring run-off) and water temperature. Guards are cancelled or activated depending on the spawning activity. The spawn can last from 4 days to 15 days. Guards and warden rovers cover the active spawning sites 24 hours a day and 7 days a week.
 - The spawning activity increases and decreases in sections of the river depending on the stage of the run with the lower river sites starting earlier than the upper river sites.
 - Guards are always paired up to ensure there are at least 2 at each active site. Sites that cannot have guards placed are covered by the warden rovers through visible patrol.
 - A warm breakfast and supper are provided to each volunteer. A caterer at Sturgeon Camp prepares these meals. In addition, provisions are made available for guards to fix a “Sack lunch” for their 12 hours shift..

- A “Sturgeon Hat”, whose design is changed every year, is provided so the guards are readily visible and recognizable to the public and the DNR at the spawning sites.
- Guards receive informational materials on sturgeon biology and DNR management.
- “Warden Rovers” are assigned to patrol through the river systems contacting the guards and also checking for spawning activity at other sites where guards are not assigned.
- Lodging is available at camp to any volunteer prior to or after their assigned shift.

Given funding challenges at the state government level, funding for this program could not be accomplished entirely by the DNR. The Sturgeon For Tomorrow organization has provided the additional funding needed to utilize Sturgeon Guards as well as many DNR Fishery projects. SFT donates approximately \$5000 annually to operate the guard program. To date, SFT has donated over \$700,000 to the DNR for sturgeon management.

Assessment

The appreciation of the public and their interest in viewing the sturgeon spawning activity on the Winnebago System sturgeon has grown exponentially especially during the past decade. Spawning sites having public access sites attract thousands of people each year.

The positive effects of the Sturgeon Guard program include:

- Providing a visible presence at the spawning sites to deter the illegal harvest of sturgeon and to share information about this very unique resource.
- Increasing the “ownership” of the sturgeon population with the public. The guards invest their time to protecting the sturgeon and with that investment a personal connection to the sturgeon’s viability is forged.
- Has assisted in changing the culture in the river communities. No longer is a poacher held in esteem by the communities and the illegal sale of all wildlife, especially sturgeon, is no longer an acceptable income stream.
- Willingness by the public to report violations that they witness or become aware of.
- Allowing wardens to focus their efforts on “violation tips” and other problem areas.
- The public has become aware of all the environmental issues that affect the Winnebago System. This awareness generates support for needed funding, support for management programs and any needed law changes.
- The effects of effective management practices of the sturgeon population including a significant reduction in the illegal harvest on the mature spawning sturgeon during the spawning run can be seen in the upward trend in the estimated fish in the spawning population shown in graphs in the appendices. Ryan Koenigs, Winnebago System Sturgeon Biologist stated that “The sturgeon guard program has played a large part in the building of our sturgeon population to where we are today with the largest lake sturgeon population in the world.”
- This Guard Program has since been successfully replicated in other venues across Wisconsin.

Agency and Officer Information:

- Wisconsin Conservation Wardens:
 - Field Wardens stationed in the Lake Michigan District (pre 1997) and Northeast Region (1997 to present) primarily those part of the Oshkosh and Wautoma Warden Teams.
 - Sturgeon Camp Coordinators (Warden Supervisors) from mid 1970's to present:
 - Larry Kriese, Retired Regional Warden
 - Address = 2762 White Pine Rd., Green Bay, WI 54313
 - Phone = (920) 434-0143
 - Email = themarshskico@gmail.com
 - Dennis Jones, Retired Warden Supervisor
 - Address = 2563 W. Ripple Ave., Oshkosh, WI 54904
 - Phone = (920) 235-5777
 - Email = dejones7580@sbcglobal.net
 - Todd Schaller, Recreational Safety Section Chief
 - Address = 101 S. Webster Street, Madison WI, 53703
 - Phone = (608) 267-2774
 - Email = Todd. Schaller@wisconsin.gov
 - April Dombrowski, Warden Supervisor
 - Address = 625 CTH Y, Suite 700, Oshkosh WI, 54901
 - Phone = (920) 424-3055
 - Email = April.Dombrowski @wisconsin.gov
 - Carl Mesman, Warden Supervisor
 - Address = 427 E. Tower Dr., Wautoma, WI., 54982
 - Phone = 920-787-3051
 - Email = Carl.Mesman@wisconsin.gov
- Fisheries sturgeon Biologists:
 - Dan Folz, Retired sturgeon Biologist
 - Address = 1860 Arlington Dr., Oshkosh, WI., 54904
 - Phone = (920) 233-7791
 - Ron Bruch, sturgeon Biologist
 - Address = 101 S. Webster, Madison, WI., 53707
 - Phone = (608) 267-7591
 - Email = Ronald.Brch@wisconsin.gov
 - Ryan Koenigs, sturgeon Biologist
 - Address = 625 E CTH Y, Suite 700, Oshkosh, WI 54901
 - Phone = (920) 303-5450

○ Email = Ryan.Koenigs@wisconsin.gov

- Sturgeon For Tomorrow (SFT) Organization - primary external partner.

Appendices:

- Historical photographic illegal harvest support. All persons in photographs are Conservation Wardens with recovered illegal sturgeon:



Spawning sturgeon Photographs. The size range of these fish is 40' to 80", 45 to 150 pounds.



- Sturgeon population estimates from inception of sturgeon Guard program to present:

