NORTH CENTRAL DIVISION OF THE AMERICAN FISHERIES SOCIETY

Walleye Technical Committee

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2011 Summer Meeting Minutes

WTC-ETC-CTC Joint Meeting, E.B. Lyons Interpretive Center, Dubuque, IA • July 27-28, 2011

Chair Andy Jansen called the meeting to order at 8:52 AM on Thursday, July 28, 2011. Seventeen members were present. A request for additions to the agenda was made, and hearing none, the agenda was approved as written. Minutes from the 2010 Winter meeting were approved as sent to members and posted on the website.

State and Provincial Reports:

Missouri (Tory Mason):

2011 stocking numbers included:

Bull Shoals = 435,954	Norfolk = 221,131	LOZ = 331,134
Osage River = 190,909	Truman Lake = 139,099	Salt River = 66,000
Pomme de Terre = 52,874	Jacomo Lake = 19,947	Long Branch = 24,057

Longview Lake (930 acres) was selected to analyze how annual high stocking rates impacted the walleye population. Previous stockings were variable and consisted of three different sized fish for a study in 1987. In 1993 and 1996 the lake was supplementally stocked with advanced fingerlings to further analyze stocking success. The current evaluation began in 2001. Since then over 400,000 walleye fingerlings (~50/acre/year; range 46-70) have been stocked into Longview Lake, with most fish being approximately 1 inch in length. Condition of stocked fish was variable and appeared related to plankton density. Two years after the increased stocking began, spring electrofishing catch rates began to increased from ~30/hour to ~73/hour for walleye ≥ 15 inches in length. Fall sampling for young of year (YOY) walleye ranged from 2-12 YOY/hour . In 1997, 2001 and 2011 population estimates (Schnabel method) were 159, 184 and 312 fish/acre respectively.

A stocking evaluation is being conducted in northwest Missouri small impoundments. Two lakes have been stocked with 1-2" walleye fingerlings at 20/acre. These fisheries are being evaluated using reward tags.

Bilby Ranch Lake (110 acres) received 2,750 <2" fingerlings every other year (study complete). This lake had 16 tag returns from over 140 tagged fish over the course of the study resulting in a corrected exploitation rate of 17%. 100% of the fish captured with tags were harvested, 50% of anglers were targeting walleye while only 31% were targeting largemouth bass.

Mozingo Lake (1000 acres) received 20,000 <2" fingerlings every other year (study will be completed in 2012).
2008 – 15.5% year one; 30.5% exploitation
2009 – 14.8% year one; 33.9% exploitation
2010 – 13.5% year one; 21.3% exploitation
2011 – 21.4% so far.

167 tag returns from 848 tagged fish provides a cumulative corrected exploitation rate of 28%. About 57% of fish were caught in May and June with 89% of those harvested; 54% of anglers were targeting walleye, 22% were targeting largemouth bass, 19% crappie and 5% other.

Biologists on Bull Shoals Lake worked with a local angler group to collect walleye aging structures. Structures were collected from a total of 195 walleye and has generated some questions and will be used as baseline age/growth information for an upcoming study. Walleye were estimated to be reaching 20" by age three through back-calculations.

In Stockton Lake, annual stockings of walleye in three consecutive years (750,000 in 2010) has resulted in "better than average" walleye fishing.

Black River walleye is considered a unique strain in Missouri that they are trying to maintain the genetic integrity. The fish were stocked (9,500 fingerlings) into the St. Francis River in 2011. Additionally, there is a current exploitation study (2009-2010) on the Black River.
2009 – 36% corrected tag return rate @ 60% harvest = 23% fishing mortality
2010 – 26% corrected tag return rate = 14% fishing mortality

Missouri is currently hoping to expand its number of walleye fisheries statewide.

Kansas (Ron Marteney):
Saugeye production has increased in recent years for small impoundment stockings to create angler opportunities and to control crappie populations. With concerns over genetic integrity of walleye, administrators decided to stock triploid saugeye. The department recently got a new press to pressure eggs to induce triploidy. They have also begun using tanic acid in saugeye production instead of fullers earth as fullers earth had too low of hatch rate for saugeye when trying to induce triploidy.

In 2010, approximately 89 million walleye eggs were collected for stocking.

There is a project proposal being evaluated to look at growth, survival and other population parameters in diploid and triploid saugeye.

Research projects underway
Weston Fleming – MS student at Fort Hayes State University. Weston is comparing various aging structures for walleye, and assessing age, growth and recruitment in Cedar Bluff Reservoir.

Wisconsin (Steve Gilbert):

1. Walleye Regulations

    A. 2011 Proposals
    Several regulation changes related to walleye management in the state were presented at our spring 2011 public state wide hearings. All passed except the one that would have raised the minimum size limit to 18 inches and reduced the bag limit to 3 on waters throughout a 19 county area in Southern Wisconsin.

    Ben Heussner presented the details of this regulation proposal in his talk given at the WTC. The regulation passed on a state wide vote but lost in several counties

in the region where the new regulation would go into affect. For this reason the proposal was withdrawn at this time.

B. Future Proposal Process
Due to the passing of recent legislation the process for making fisheries rule changes will be more complex. Rule proposals will now be reviewed by the Governors' office. Proposals will also be reviewed for economic impacts. This will likely add a year to the current two year process.

2. Research
   A. Walleye Vs Bass
   A project titled Climate Change and Resilience of Sport Fisheries in Lakes was recently funded by USGS. The focus of this project is looking at "critical thresholds" that create changes in fish communities. This will include changes of waters from walleye to bass dominated ecosystems.

   Parts of the project will be carried out by UWSP and UW Madison students and staff.

   B. Walleye mortality rates paper
   Michael Hansen published a paper on fishing and natural mortality rates on Escanaba Lake in the recent issue of NAJFM.

   Michael J. Hansen, Andrew H. Fayram, and Steven P. Newman (2011): Natural Mortality in Relation to Age and Fishing Mortality on Walleyes in Escanaba Lake, Wisconsin, during 1956-2009, NAJFM, 31:3, 506-514

3. Hatchery Production
   Wisconsin continues to evaluate stocking of large walleye fingerlings. Current requests by managers are more than the system is currently producing. Production facilities are currently looking at ways to increase numbers of fish greater than six inches in length.

4. Staff Update
   As with other states in the region funding and retirements have created many vacancies in the state fishery program. Currently there are over 51 vacant positions in fisheries. Plans are to fill some of these positions based on need in the next year. Anyone interested in employment with WDNR should visit the following web sites for details on the application process:

   www.dnr.wi.gov or wisc.jobs

   The biologist exam will be offered some time this fall.

Iowa (Randy Schultz):
Working on two impoundment walleye projects.

1. Big Creek walleye stocking evaluation.

Big Creek Lake is an 883 ac impoundment located near Des Moines. Intense angling pressure (116 h/ac) and numerous angler trips (32,000) reflect the importance of this fishery to central Iowa anglers. Preferred stockings of 8-in walleye fingerlings have been reduced due to the popularity of this size fish. We are attempting to evaluate the contribution of fry, freeze-branded 2-in and freeze-branded 8-in walleye at this impoundment. Tributaries to Big Creek are believed to have the capability to provide adequate habitat and prey for 2 in fingerling stockings, and this stocking method warrants further investigation.

During 2011 32,000 2-in walleye fingerlings were freeze-branded and stocked in two tributaries to Big Creek. Fall nighttime electrofishing will be conducted to evaluate success of the stocking. We determined initial (2h) mortality to be 5.2%. We attempted to hold 100 freeze-branded and 100 control fish for 2 wk to evaluate long-term mortality. Fish were held in separate circular tanks and fed walleye starter diet. On day 8 we started experiencing large scale mortalities in both tanks. Neither one week nor two week mortalities differed between treatments (chi square = 0.98; df = 1; P = 0.32 and chi square = 0.0.49; df = 1; P = 0.48, respectively). Eight inch walleye fingerlings will be differentiated with a unique freeze-brand and stocked this fall.

During spring 2010 195 walleye were collected and tagged with Carlin dangler tags to evaluate exploitation within Big Creek. Nearly all tags that were returned came from the shallow upper end of Big Creek during summer months. Emigration was evident with two tagged fish caught below Big Creek in the Des Moines River. We attempted to conduct a windshield surrogate postcard survey to determine tag return rates, but only 7% of postcards were returned. We estimated 2010 exploitation to be 32% after compensating for a 25% non-reporting rate and 9% tag loss (Quist et al. 2010).

Quist, M. C., J. L. Stephen, S. T. Lynott, C. S. Guy, J. M. Goeckler, and R. D. Schultz. 2010. Exploitation of walleyes in a Great Plains reservoir: harvest patterns and management scenarios. Fisheries Management and Ecology 17:522 – 531.

2. Rathbun Lake outmigration study.

We are working with Michael Weber (SDSU) to utilize MARK to evaluate walleye emigration in an effort to convince the USACE to assist with a non-physical barrier placement at Rathbun Lake to retain Iowa broodfish walleye. Much attention has been given to the restoration of the walleye population at Rathbun Lake, Iowa. Large-scale declines in the 80's was met with a concerted research effort to improve and sustain this population and by the late 90's the biomass had effectively been tripled and restoration goals were met. However, recent high levels of out-migration have placed the sustainability of this population in jeopardy. Since the spring of 2008 more than 11,000 walleyes, totally more than 17,000 lbs have been collected post-passage in the Rathbun Lake tailrace, VI-tagged, and returned to Rathbun Lake. Spring 2011 estimates of the Rathbun Lake walleye population are 8,270 broodstock (i.e. $\geq$ 17 in) and 27,269 adult walleyes (i.e. $\geq$ 12 in). Total biomass is estimated at 6.4 lbs / ac for Rathbun Lake. Multiple estimates suggest that a minimal estimate of adult walleye loss in 2010 and 2011 likely exceeds 10% and 17%, respectively. This is especially troubling in that this was during a period of the year in which walleyes are generally believed to be their least vulnerable to passage and flows were only moderate. Minimal estimates of broodstock loss from 2010 to 2011 during record floodwater discharge approaches 40%. The associated valuation of fish loss as evidenced by recapture efforts in the tailrace exceeds $600,000 since spring of 2009. We therefore suggest that the

construction and operation of a nonphysical barrier is critical to the sustainability of this important walleye fishery and the cost effectiveness of such a structure is obvious.

Preliminary modeling results indicate:

1. Smaller fish are more likely to leave reservoir
2. The greater the distance from the dam that walleye are returned to the lake (furthest distance up-lake) the less likely fish are to be found again in the tailrace
3. Greater discharge = greater movement

Although these results are not "rocket-science", they do provide firm data to justify placement of a non-physical barrier in Rathbun Lake.

South Dakota (Justin VanDeHey):

Flooding on the Missouri River was extensive this spring with the highest water levels since construction of the mainstem dams. The river connected to its floodplain in many areas for the first time in a long time. Biologists are hypothesizing that this may be good for fish recruitment and hopefully some of the native species will have a strong year class. However, the thermocline had not set up as of the middle of July in the reservoirs with water temperatures holding in the 50s. Only time will tell the impacts of this flooding.

Research projects underway

Megan Thul – MS student, South Dakota State University is continuing work to assess potential recruitment bottlenecks of walleye possibly due to interspecific competition with freshwater drum. Megan has a field component (diets, stable isotopes) and a mesocosm component she is working on.

Mark Fincel – PhD student, South Dakota State University is wrapping up his research on walleye in Lake Oahe looking at diets and bioenergetics post-establishment of gizzard shad in the reservoir and since the return of high smelt numbers. Mark recently took a position in Pierre, South Dakota with the South Dakota Game, Fish and Parks Department.

Justin VanDeHey – Completed PhD research assessing the impacts of stocking adult, pre-spawn gizzard shad on walleye and yellow perch populations. Walleye benefitted from the presence of age-0 gizzard shad, although not as much as in some systems where prey was more limiting. The introduction of shad did not seem to impact yellow perch, at least in the eutrophic systems where the study was conducted.

Dan Dembkowski – PhD Student, South Dakota State University is beginning work looking at yellow perch biomass estimates in South Dakota glacial lakes and the impacts that smallmouth bass populations are having on yellow perch.

Nebraska (Jason DeBoer):

Research projects underway

Jason DeBoer – PhD Student, Nebraska Cooperative F&W Research Unit: 2 more years of data collection. Watershed-scale and reservoir-scale recruitment models being developed from 17 years of gillnet data at 5 reservoirs.

Peter Spirk – MS Student, Nebraska Cooperative F&W Research Unit: Sexually dimorphic growth of walleye, population-level response to regulation changes via harvested fish.

Chris Uphoff – MS Student, UN-Kearney: Still collecting data (last field season) on seasonal food habits of walleye using stable isotope analysis.

Seth Lundgren – MS Student, UN-Kearney: yellow perch stocking feasibility study in 8 borrow pits along I-80 in Nebraska. Only complication appears to be LMB predation.

Jordan Katt – Biologist, NGPC: Sherman Reservoir male WAE population estimate. 2009-2011, VIE tagging/anal fin punch during spring WAE egg take; tagged >3500 fish tagged, population in flux. Also monitor length-frequency distribution in response to regulation change (slot limit) in 2009; increased relative abundance of female walleye within slot.

The Nebraska Game and Parks Commission has sought to enhance walleye fisheries in major reservoirs throughout the state because of the walleye's popularity. Length-limit evaluations were completed on 18 reservoirs. Populations of walleye regulated by an 18-inch minimum-length limit had greater catches of preferred- to memorable-length (20-25 inches) and memorable- to trophy-length (25-30 inches) fish than did populations regulated by a 15-inch minimum-length limit. Catches of stock- to quality-length (10-15 inches) and quality- to preferred-length (15-20 inches) walleye did not differ between populations regulated by these two length limits, which we suggest is indirect evidence that recruitment of walleye was similarly affected by these two regulations. There is a possible interaction between catches, especially for of quality- to preferred-length walleye, and waterbody size that is differentially influenced by these two regulations.

In addition, walleye fingerling stocking evaluations were attempted on 18 major walleye reservoirs throughout the state. Analysis of this project was confounded for a variety of reasons, including detection of OTC marked fish in reservoirs where they were not stocked. Further discussion is underway.

Michigan (Patrick Hanchin):

1. In 2011, the Michigan DNR walleye production/stocking returned to nearly pre-VHS levels though only 2 of 3 Great Lakes broodstocks were used (Bay de Noc and Muskegon River; Tittabawassee River was not used).

2. Keweenaw Bay Indian Community began stocking walleyes from the Portage Lake brood source and is looking to build a walleye pond or enter a cooperative arrangement with a local walleye club.

3. The Chippewa Ottawa Resource Authority (CORA) raised walleye to levels equal to that of pre-VHS using brood sources from Bay de Noc and the St. Mary's River.

4. The DNR, Little Traverse Bay Bands of Odawa Indians, and Michigan State University recently initiated a study to examine abundance, seasonal distribution, movement, recruitment dynamics and predation/diets of walleye in the Inland Waterway (Emmet and Cheyboygen counties).

5. In April of 2010, the court ruled in the DNR's favor on all counts of a lawsuit from a commercial fisher who sued to commercially harvest walleye in Saginaw Bay. A summary judgment was made without proceeding to trial or hearing oral arguments.

Research projects underway

Seth Herbst, PhD student at Michigan State University. (See point #4 above). Seth's research is being conducted on 4 interconnected lakes which connect to Lake Huron (blocked by a lock-n-dam). The lakes range from Oligotrophic to eutrophic and since 1998 have been invaded by zebra mussels, alewives and now have a tribal harvest. In 2009 the population estimate showed a declining population compared to 1998 which prompted the study. The study will assess

movement between the lakes, provide a forage assessment and index reproduction in the system. This is being conducted in collaboration with the MDNR, and the Little Traverse Bay Bands of Odawa Indians.

Little Traverse Bay Band of Odawa Indians (Max Field) received a state wildlife grant to conduct fisheries research on inland waterways and they are hoping to renew the grant to assess movement of fishes and increase knowledge on habitat usage and other parameters.

Financial Report:

WALLEYE TECHNICAL COMMITTEE FINANCIAL REPORT
July 1, 2011

	INCOME	EXPENSES	BALANCE
Beginning Balance, December 1, 2010			**$26,027.08**
Mystery deposit	**$100.00**		**$26,127.08**
Editor services		**$5,000.00**	**$21,127.08**
Interest accrued from December through July	**$135.91**		
Ending Balance as of July 1, 2011			**$21,262.99**

Walleye Synopsis Update (submitted by Patrick Hanchin, Steering Committee Chair)

The book is complete, printed and available on the AFS website at the bookstore. All authors have or will receive a complimentary copy and all organizations who donated money for production costs, including state chapters of AFS, will receive a copy. These could be raffled off at chapter meetings as a fundraiser.

Walleye/Sauger Special Session and Sauger Social at the Seattle AFS meeting:

142nd Annual meeting of the American Fisheries Society, Seattle, Washington Sept. 4-8, 2011

Symposium: Biology, Management, and Culture of Walleye and Sauger: Status and Needs
Thursday, Sept. 8, 2011, 8 am to 5:30 pm

On Tuesday, 6 to 8 pm, Sept. 6, 2011, there will be a *SAUGER SOCIAL* and book signing at Ivar's Acres of Clams on Pier 54 in Seattle. Ivar's Acres of Clams is a Seattle landmark and is the original Ivar's restaurant dating back to 1938. It is a 14 block downhill walk from the Washington State Convention Center where the AFS annual meeting is being held.

The cost per person is $47 (includes Washington state sales tax, gratuity, and a large slice of Sauger sheet cake). The price of the meal is for the seafood buffet. There will be a cash bar. Please make your reservation with John Bruner as soon as possible as the capacity of the private dining room is limited to 50 people. There are less than 25 spots left and it is first come, first served for the reservations now. Reservations close August 2, 2011.

Barton, Bruce A. (editor). 2011. Biology, Management, and Culture of Walleye and Sauger. American Fisheries Society. Bethesda, Maryland. 600 pp.

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John

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Sander Travel Award:

The Sander travel award gives $100.00 for student travel to the Midwest Fish and Wildlife Conference in December, and a matched is requested from the student's state chapter AFS for an award total of $200.00. The deadline for application for this award is September 30th. If you are interested or know an interested student please send applications to chair Andy Jansen at his email address: **andrew.jansen@ksoutdoors.com**

Adjournment: Meeting adjourned at 10:25 AM

Respectfully submitted,
Justin VanDeHey, Immediate Past Chair, Walleye Technical Committee