

RYBA: The Newsletter of the Minnesota Chapter of the American Fisheries Society

A Cast from the President Brian Nerbonne

The Shutdown Blues

I write this President's Cast as the legislature and the governor attempt to wrap up their budget deal and round up enough voters to hold their nose and vote yes. The optimists in the room think a deal that nobody likes is a sign of a good compromise, but I'm inclined to think it also might mean that everybody knows a bad deal when they see one. I'm glad to see that the dramatic cuts to state government won't come to pass (at least this year), but borrowing against our future is going to make it that much harder to maintain this level of service into the future unless revenue truly does increase.

As one of the "non-essential" employees of the DNR, I for one am anxious to get back to work. The wet weather has made it difficult enough this year to get things, and now carving 2+ weeks out of the heart of the field season is making it that much tougher. I'm sure many of you can relate. This shutdown is not just about an interruption to our paychecks: it means important conservation work is not getting done. Many of the more obvious functions of state government were allowed to continue, but examples like closing our state parks hopefully will give the public an appreciation for what their tax dollars provide.

Lost in all of the budget issues around the shutdown is that after the close of the legislative session Governor Dayton vetoed the Natural Resources Policy Bill. With that veto, issues that the MN Chapter sent comment letters opposing such as Lutsen Mountain's exorbitant water appropriation from a trout stream, and a significant reduction in the number of lakes with northern pike special regulations

(including Cass Lake) were blocked. Hopefully our voice amongst the chorus in opposition to these changes helped to influence that choice.

It is obvious that it will be everyone's job to vigilant both at the state and federal level to stand up for protection of our natural resources. That means both policy and funding. The MN Chapter of AFS will do our part, but everyone will need to do their part as well to keep the conservation ball rolling up the hill, rather

Minnesota DNR Update Owen Baird

Here are a couple of projects being worked on by Minnesota Department of Natural Resources employees:

Pelagic Habitat Preference of Walleye, Northern Pike, Muskellunge, and Cisco in Elk Lake

Elk Lake is a 271 acre lake in the headwaters of the Mississippi River located in Itasca State Park. Currently, multiple research projects are in progress on the lake making it an ideal study site for collaborative work. The objectives of this study are to define the movement patterns of walleye, northern pike, muskellunge, and cisco in relation to depth, temperature, and oxygen and to identify the overlap between large predators and cisco during different periods of lake stratification throughout the year.

Acoustic tags were surgically implanted into the target species this past spring for monitoring throughout 2011. The acoustic tags transmit the depth and temperature of the tagged individuals in 1-2 minute intervals which are record by submerged hydrophones throughout the lake. These data are then downloaded from the hydrophones, providing a time-stamped record of where the tagged fish

Minnesota DNR Update, con't

were relative to the surface and how long they were at different temperatures. This information can then be evaluated against the pelagic habitat data (temperature and oxygen) which is collected through bi-weekly temperature and oxygen profiles.

The results will characterize walleye, northern pike, muskellunge, and cisco habitat preferences throughout the year, and will complement current work in Elk Lake. This information will lead to a better understanding of how fish populations respond to changes in pelagic habitat. The results will also lend insight into each species thermal preference, predator-prey interactions, and limitations of current assessment techniques. These data will aid fisheries managers as they face decisions on how to manage sportfish populations as aquatic habitat and species assemblages change in the future.

This work is funded by the Minnesota Department of Natural Resources, the Federal Aid in Sport Fish Restoration Act, and Hugh C. Becker Foundation. For more information contact Andrew Carlson, MNDNR Research Scientist.

Sensitive Lakeshore Identification: A Conservation Strategy for Minnesota's Lakeshores

This is a cooperative project between the Minnesota DNR and several north-central Minnesota counties. The goal of the project is to identify areas along lakeshores that provide unique or critical ecological habitat. Once those areas are identified, local and state resource managers will use the information to help ensure that sensitive habitats are receiving sufficient protection.

Sensitive areas are places that provide unique or critical ecological habitat. These areas along the shore or in near-shore areas of the lake are crucial to the health

and well-being of fish, wildlife, and native plants. Many fish and wildlife species, including many species of greatest conservation need, are highly dependent on naturally vegetated shorelines as habitat for feeding, resting, and mating and juvenile life stages. Development and land alteration in the immediate shoreland and on the shoreline may have significant negative impacts on these species. Shoreland zoning ordinances, implemented by local units of government, regulate development activities and can help minimize impacts.

The sensitive lakeshore protocols being used by the DNR consist of three components: field surveying lakeshores to assess habitat quality and use by high priority animal species, developing an ecological model that objectively incorporates various field assessments into a sensitivity index, and compiling and delivering information on sensitive lakeshores to various land and resource managers.

Minnesota's recently developed Alternative Shoreland Management Standards provide several tools for local governments to protect water quality. One of the key tools in the new standards is a process that allows local units of government to increase the protection of ecologically sensitive shoreland. Areas that are identified as sensitive, such as sections of shoreline, whole bays, or whole lakes, can be put into a more protective zoning category (e.g., local governments can reclassify a natural environment class to a special protection class). Lakes that would benefit the most with the application of this innovative tool are some of Minnesota's most valuable lakes—large lakes with significant undeveloped shorelands.

Once the DNR's sensitive shoreland assessment surveys are finalized, the counties plan to use the information to evaluate whether its current zoning codes sufficient protect those sensitive areas. The counties may implement sensitive shoreland area zoning in certain areas to enhance water quality and near-shore habitat protection.

Funding for this effort was provided by the Min-

Minnesota DNR Update, con't

Minnesota Environment and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources (LCCMR), and by the State Wildlife Grants program, Grant, administered by US Fish and Wildlife Service. For more information contact Paul Radomski, Project Manager or see <http://www.dnr.state.mn.us/eco/sli/index.html>.

AFS Parent Society Meeting, Twin Cities 2012 Brian Borkholder

Committee Chairs have been filled, but there's still plenty of opportunities to volunteer for AFS 2012. Committee Chairs have committee positions to fill with willing and able volunteers. While we have some volunteers already lined up, there are PLENTY of spaces that still need warm bodies. Please contact one of the following Chairs to volunteer for a committee:

Program Committee:	Pete Jacobson & Charles Anderson (MN DNR)
Accommodations:	Tim Goeman (MNDNR)
Local Arrangements:	Joel Hoffman (EPA - Duluth)
Social Committee:	Patrick Ceas (St. Olaf College)
Information Management:	Tom Jones (MNDNR)
Volunteer Coordination:	Linda Erickson-Eastwood (MNDNR)
Finance:	Brian Borkholder (FDL) & Don Pereira (MN DNR)
Student Activities:	Marcus Beck (UMN) & Kyle Zimmer (UST)
Media Committee:	Edie Evarts (MNDNR)

If you've already signed up using the Google Docs form, you will probably be receiving a call from a Chair here in

the near future. You don't need to live in the Twin Cities area to be an effective volunteer. You will need to have access to email (maybe a non-work account?), and be willing to participate in regular conference calls to mark progress. Much of the additional tasks can be performed via email and phone, and won't require access to the Twin Cities or the various venues. So please don't let your personal geography influence your decision to volunteer. All that is required is a willingness to participate in this team effort. Thanks to all who have already stepped up to help the Chapter pull off this endeavor. It's going to be a fun ride!

- AFS 2012 Planning Committee (Don, Ann, and Brian)

DNR Roundtable Meeting Report Marcus Beck

Ed.'s note: Marcus submitted this report last quarter and I neglected to include it in the last issue. Thanks for attending Marcus!

This January I had the pleasure of representing our chapter at the 2011 DNR Roundtable. As a student I learned a great deal about practical management issues from a variety of stakeholders and DNR employees. For example, annual agency expenditures exceed revenues by \$2.6 billion dollars with an anticipated negative balance by 2015. Paramount to this discussion was a debate over increasing license fees (Minnesota ranks 37th nationwide). Most attendees ostensibly supported a modest increase in license fees given the state of the budget and current rates of inflation. The proposed legislative bill to increase the number of allowed lines for an individual angler to two was also discussed. A majority of stakeholders were strongly against the proposed legislation, particularly because a substantial increase in fishing mortality is expected and current management practices and regulations are based on one line.

Minnesota's stakeholders possess a great deal of passion and knowledge on our natural resources. As a graduate student, I was most surprised by the amount of credibility placed in research in support of management activities. Stakeholders repeatedly voiced concerns that management decisions are based on sound science, particularly in regards to the potential impacts of aquatic invasive species. Indeed, Minnesota's natural resources face many challenges. These challenges cannot be effectively

DNR Roundtable Meeting Report con't

addressed without adequate support from stakeholders. An invaluable preliminary step to protecting our natural capital is to engage Minnesota's stakeholders in constructive dialogue, a practice the DNR has implemented at the roundtable for years.

Federal Update Joel Hoffman

Mark Vinson at the US Geological Survey Lake Superior Biological station reports that their next major undertaking in Minnesota waters is this summer's multi-trophic level survey, in which 56 stations will be sampled across four depth zones in conjunction with the US Environmental Protection Agency and Fisheries and Oceans Canada. USGS recently finished their annual spring forage fish survey in Minnesota waters. A highlight was catching three sturgeon just outside the Duluth-Superior Entry. Dan Yule with the USGS has been looking at cisco and smelt interactions near Duluth this spring.

Henry Quinlan at the US Fish and Wildlife Service Lake Superior Fish and Wildlife Conservation Office (FWCO) reports that they have two upcoming projects that will include a focus on Minnesota fishery resources/research to be conducted by the USFWS Ashland FWCO include. The first is early detection monitoring for non-indigenous fish (crayfish and mollusks are also captured) in the St. Louis River estuary. The objectives of this project are to provide early detection of new non-indigenous fishes and to contribute to development, evaluation, and refinement of the US EPA early detection methods. Several cooperating agencies contribute to this project, including Fond du Lac Band of Lake Superior Chippewa, 1854 Treaty Authority, US EPA, and Wisconsin DNR, The work takes place in late August through early September. The second project is the Great Lakes / Upper Mississippi Range-wide Brook Trout Status, Distribution and Threats Model Development As a follow up to the US FWS finding of "not war-

ranted" to the petition to list coaster brook trout as an endangered or threatened species, the US FWS recommended a range-wide status assessment for brook trout throughout their native range in the U.S. Ashland FWCO is leading the effort to conduct this range-wide status assessment. Ashland FWCO is working with staff involved with the Eastern Brook Trout Joint Venture and will utilize a compatible approach to conduct a Great Lakes/ Upper Mississippi brook trout status, distribution and threat evaluation. Minnesota DNR central office and field office biologists will be contacted with a request for relevant fishery data and to tap into biologists knowledge of current and developing threats to brook trout habitat in their respective areas of the state.

The US EPA National Health and Environmental Effects Research Laboratory's Mid-Continent Ecology Division (MED) will lead water quality sampling across Lake Superior in conjunction with the multi-trophic level survey. Also, researchers at MED are working with the Duluth-Superior community to help develop GIS tools and fish habitat models to support remediation and restoration efforts in the lower St. Louis River.



Got news? Share it with the group? We want to hear about upcoming projects, research, activities, programs, and functions that affect fisheries and Minnesota fisheries professionals. Send your news and updates to RYBA editor Scott Mackenthun at mack0247@umn.edu, subject line RYBA.