

Glenwood Area Fisheries Newsletter

Minnesota Department
of Natural Resources

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Glenwood / Alexandria — this is bass country

When phone calls come in from out-of-state anglers interested in where to go fishing, how might the DNR direct them so they get the most enjoyment out of their visit?

First, it's important to explain that different species of fish occur naturally in different eco-regions of the state. Heading to that part of the state where the species of choice occurs naturally, usually increases the odds for a successful fishing vacation. If the caller is after largemouth bass, the Alexandria/ Glenwood Area would be an excellent choice. As most locals know, Douglas, Pope and Grant counties have plenty of largemouth bass fishing opportunities, and some pretty good smallmouth fishing too. That's because we're located in the bass-panfish region of the State – a region of Minnesota where the physical, chemical and biological attributes of most lakes are best suited to bass, panfish and northern pike. Generally, lakes of this type are medium in size, moderately fertile, water quality is good and vegetation growth is abundant. The amount of fish production, or fish biomass is high. Sight feeders like largemouth bass, smallmouth bass, sunfish and northern pike prefer the warm, clear water habitat, and seek refuge and prey amongst densely vegetated shallow areas.

Further to our north, lakes begin to change and become what are known as hard water walleye fisheries. Generally, these lakes are larger in size and contain less vegetation. Instead, they have miles and miles of windswept, rock/gravel shorelines ideal for walleye natural reproduction. Still further to our north and east are the soft-water walleye and trout lakes of the Arrowhead Region. After spending any time there, it doesn't take long to realize how vastly different those lakes are than the ones around here.

Minnesota's lake eco-regions are not defined by hard-lined borders however. Regions tend to blend together and contain a few similarities in each. Travelling across our State, we are reminded that while different regions offer different angling opportunities, all of Minnesota's fisheries together make up a natural resource that is the envy of much of the country.

2010 statewide inland size limit for muskellunge moved to 48 inches, except for a few metro area lakes.

Spring/summer 2010 on-shore fish id demos are being planned for school groups. Call the Glenwood Office to arrange a date and time.

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Study links shoreline development to spawning-site preference

Glenwood DNR Fisheries Scientist Jeff Reed recently completed a study that evaluated the potential effects of lakeshore development on nest site selection by black crappie and largemouth bass. “We know that a decline in the diversity of near-shore fish habitat is largely a consequence of human-induced alteration, and I wanted to see if there were any direct impacts on fish like

crappies and largemouth bass – species that anglers are definitely interested in”, said Reed. Lakeshore is becoming increasingly developed. Small, seasonal cabins continue to be replaced by larger permanent homes. Following in stride with this type of development is rippapped shorelines, docks and manicured lawns. Can such development impact fish? That was the question Reed aimed to answer.

To evaluate preferences for nest site location, black crappie and largemouth bass nests were located during the spawning season on a sample of Area lakes. Habitat and shoreline alterations were then measured adjacent to nest sites and compared to randomly selected sites on each lake. Habitat variables measured included things like the presence or absence of emergent vegetation, shoreline trees and canopy cover and whether or not the shoreline was altered by human activity. Reed found that black crappies were more likely to nest adjacent to undeveloped shoreline. They were



also more likely to nest in stands of emergent vegetation, particularly hardstem bulrush. Crappies also had a preference for shoreline that had a defined shrub layer. Largemouth bass were also more likely to nest near undeveloped shoreline, but were less dependent on hardstem bulrush. “Our findings suggest that increases in shoreline

development, especially that which results in the loss of hardstem bulrush, can have negative impacts on black crappies.” Reed’s work is supported by another Minnesota study that concluded that the removal of emergent vegetation usually accompanies shoreline development.

From a property-owner standpoint, what can we learn from this research and how should the community address the future of lakeshore development in and around the Glenwood/Alexandria area? Perhaps the message currently being taught to Area school children through the Glenwood educational outreach program has application for adults as well – that is, when living on the lake or in the woods, we should always try to minimize our impacts to the natural world around us as much as possible. As Henry David Thoreau once said, “A man is rich in proportion to the things he can afford to leave alone”.



The 2010 lake survey season—lakes on the list

Each year, the Glenwood Area Office conducts 12-18 lake surveys and population assessments on Area lakes. These surveys provide important information which we use to plan management activities. Data are collected using gillnets, trapnets and electrofishing equipment. The information is compiled and written into the form of a report during the winter months, with a completed version available to the public by summer of the following year. Fisheries surveys essentially fall into one of three categories: Full surveys (FS) include an evaluation of the fishery as well as vegetation, water chemistry, bottom substrates and shore and watershed features. Lake population assessments (PA) are the most common and evaluate the relative abundance and size structure of the fish community. Special assessments (SA) are occasionally conducted to answer a specific question regarding a particular species or habitat issue. Most Area lakes are on a 3-5 year rotation schedule. Survey dates, net site locations and electrofishing stations are all standardized so that comparisons from year to year can be made. Following is a list of field work proposed for 2010:

Aaron	PA
Ann	PA
Brophy	FS
Carlos	**
Emily	PA
Irene	PA
Johanna	PA
Little Osakis	PA
Lower Elk	PA
Malmedahl	FS
Minnewaska	PA
Moses	FS
Nelson	PA
Osakis	PA
Oscar	PA
Pocket	PA
Pelican (Glenwood)	PA
Red Rock	PA
Reno	PA
Smith	PA
Strandness	PA
Turtle	PA
Union (Forada)	PA

** Lake Carlos is part of a Statewide annual sampling study.

Fishing deep water? Here's what you should know about barotrauma

Minnesota's native gamefishes have evolved with an advanced organ commonly referred to as the swim or gas bladder. Gases are transferred into or out of the swim bladder through the circulatory system for the primary purpose of maintaining neutral buoyancy as barometric pressures change with water depth. SCUBA divers utilize an inflatable vest and weight belts to accomplish the same function. Barotrauma or gas bladder distension occurs when fish are hooked and rapidly reeled to the surface from a water depth of 30 feet or greater. The rapid change in barometric pressure causes an unnatural expansion of the swim bladder resulting in damaging physical stress. Visible

physical stress. Visible signs of barotrauma include bulging eyes and portions of the stomach or intestines forced out of the mouth or anus by the enlarged swim bladder. When fish are released, the large volume of gas in the bladder can prevent the fish from descending to its preferred depth, making it vulnerable to predation, especially fish-eating birds.

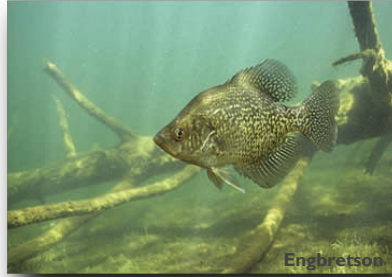
Barotrauma and associated fish mortality is increasingly being recognized as a serious conservation and fisheries management issue, particularly in catch and release fisheries or deep lakes where harvest is managed with special regulations. Published estimates of fish mortality from barotrauma vary from 10 to 40%, depending on severity, handling and environ-

mental conditions. Catch and release angling practices are promoted and necessary to sustain quality fishing opportunities in Minnesota, however the management value of catch and release fishing can be lost by even modest mortality of released fish.

When the spring and fall bites are on and catching is good in deep water, many anglers have a propensity to stay on the fish for fun or to increase numbers in the livewell. Claims of boating 50 to 100 walleyes per day are not uncommon. Under these conditions we encourage anglers to exercise restraint and consider the impact they may be having on the fishery.

Special sampling for black crappies: Lakes Irene, Latoka and Lobster —the results

Anglers asked the DNR to consider special black crappie regulations for Lakes Irene, Latoka and Lobster back in 2007. To help the consideration process, crappie abundance and size structure were evaluated for these lakes during the spring for the past 2 years. The following is what we found:



Lake Irene crappies averaged about 10 inches long, and it takes about 5 years for them to get to this size. The population can be approximated into three categories: About 15% is less than 8 inches, 70% is between 8 and 12 inches, and 15% is greater than 12 inches.

For Lake Latoka, the mean length of fish collected was 9.1 inches. Similar to Lake Irene, crappies were at least 10 inches by age 5. The 2004 and 2005 year classes (5 and 6-year old fish) comprised nearly 90 percent of the captured sample. Overall, the population can be approximated into three

length categories: 21% is less than 8-inches, 76% is from 8 - 12 inches, and 2% is greater than 12 inches.

Lobster Lake was a bit different than the other two. Mean length was 8.1 inches, and growth appears to be a little slower, with age 5 fish averaging about 8.9 inches. Similar to Lake Latoka however, was the relatively strong 2004 and 2005 year classes. About 44% of the population was less than 8-inches and 56% were 8 - 12 inches. There were no crappies over 12 inches sampled. As with Lakes Irene and Latoka, individual fish were all in good condition and no signs of disease or

parasitic infections were observed. Based on population data, the DNR has established three, standardized black crappie regulations with specific criteria to determine which regulation should be used. The three regulations are: 1), a five fish daily bag limit, 2), a 10-inch minimum size limit whereby fish must be 10-inches or more before they can be kept, and 3), a 10-inch minimum size limit together with a five fish daily bag. All three regulations are currently being used on a variety of lakes across the State. In some specific cases, the regulation appears to be working; in most though, no significant changes have resulted. Overall, special regulations in Minnesota designed to improve the average size of black crappies have been inconclusive.

The future of special regulations on Lakes Irene, Latoka and Lobster are being discussed internally. Public input meetings to help in deciding the best option will be forthcoming.

Land rules adjacent to public water —Who's in charge of what?

Folks can be understandably confused when it comes to what government agency they should contact before starting work on or near Minnesota public waters. Because Minnesotans place a high value on these waters, the government wants to make sure they're adequately protected. After all, our lakes and streams define our state as much as our cold winters. An acronym that's helpful to understand is the OHW, or the ordinary high water mark. The OHW is that zone of the shoreline where plants change from terrestrial to aquatic. Here's a quick overview to help you save some time and perhaps inform you of some facts you may not already know:

- **All water in Minnesota (surface and ground) is public property**
- **The surface of Minnesota's waters can be recreated upon as long as there is lawful public access**
- **The DNR regulates the aquatic zone, that is, everything below the ordinary high water mark (OHW)**
- **Local governments (county, township, city) have regulatory authority above the OHW**
- **Aquatic plants and the size of docks are under the authority of the DNR**

The DNR's Shoreland Habitat Program—restoring shoreline one piece at a time

The DNR's Shoreland Habitat Program was formed in 1998 to expand the diversity and abundance of native aquatic and shoreland plants throughout Minnesota. Natural shoreline restorations improve and protect the quality of fish and wildlife habitat; enhance and protect water quality, and raise the awareness of the importance of natural shorelines and aquatic vegetation. You may have seen a completed restoration project along the shore of your favorite lake. Since the inception of the program over 340 projects have been completed totaling more than 21 miles of restored shoreline.

One of the early objectives of the program was to demonstrate that native plant restorations transform high maintenance lawn-to-the-lake shorelines into more natural shorelines that are easier to live with throughout the year. After planting native flowers, grasses, sedges, and shrubs, shorelines revert back to what they once were and pro-

vide fish and wildlife habitat, water quality and shoreline protection, as well as have the natural beauty that surveys show a majority of lake users prefer. Hopefully, as more and more project sites are established, people will realize the value of native shoreland buffers and want to be part of the movement from the "engineered look" to the "natural look."

A helpful way to think about shoreline habitat is from a cumulative perspective. Just as a single 150-foot stretch of manicured lawn or riprap on a large lake does not have a large impact on the lake, likewise a small stretch of restored shoreline also does not have a large impact on fish and wildlife habitat or water quality on the entire lake. However, multiply each type of shoreline by 100 and you can see how the cumulative impacts can be significantly beneficial or harmful to a waterbody. A study of just 16 lakes in Douglas County found that close to 50 miles of

shoreline had been altered from its natural state and that one lake had lost as much as 75 percent of its natural shoreline!

One of the closer-to-home projects currently in progress is at Canary Beach Resort on Lake Villard. Owner Harold Kraft is a supporter of natural shorelines and stated "I like the idea of establishing a protective buffer between the water's edge and resort grounds. The flowers will be attractive to guests and it's self maintaining so it's less work for my staff. I guess you could say it's a winner all around".

At the Glenwood Fisheries Office, Lindy Ekola is the Shoreland Habitat Specialist. Her area extends from southern Pope County through all of northwestern Minnesota. If you would like more information about the Shoreland Habitat Program and/or ideas to help get you started on your own project, contact Lindy in Glenwood at 320-634-4573, or John Hiebert, Shoreland Habitat Program Coordinator in St. Paul, at 651-259-5212.



Before and after photos of a completed shoreland restoration

Employee Spotlight—Chuck Stadvold



Every fisheries office needs a go-to guy when it comes to needing experienced fisheries field assistance and competent mechanical equipment repair or maintenance. Chuck Stadvold has been that guy at the Glenwood Office for over 30 years. As a fisheries technician, he's involved with all facets of field operations and has the experience necessary to avoid repeating mistakes from the past as well as suggestions to improve operations for the future.

Chuck began his career with the DNR after graduating from Starbuck High School in 1970. "I needed a job and I

liked the outdoors so I thought working for the DNR might be a good fit".

Chuck's mechanical skills, developed while growing up on the family farm, would prove to be valuable assets at the Glenwood Office, where properly operating boats, motors and trailers are needed to complete field work in a safe and efficient manner.

For a long time, Chuck's employment classification with the DNR was as a laborer, occasionally in a temporary capacity only. "Sometimes, I really felt like I was in limbo, not knowing if State budgets would be sufficient to hire me back. A steady income, of course, was my ultimate goal". Years of good work as a laborer however paid off in the end, and Stadvold was hired on as a permanent Fisheries Technician in 2000.

Several things have changed at the Glenwood Office since Chuck was first hired; but then, some things are still pretty much the same. "Back in the

70's, we were much more involved with operating northern pike spawning areas and maintaining carp traps", says Stadvold. Now, "walleyes seem to pretty much dominate everything we do".

One of the traditional amenities at the Glenwood Office is its park-like setting and historic buildings, something Chuck takes particular pride in maintaining as well. Trout-viewing ponds are well visited to this day and often serve as scenic backgrounds for wedding and graduation pictures.

Retirement plans are starting to look pretty darned nice, admits Chuck. "I've had a great run here in Glenwood. It's been very interesting and I enjoy the people I work with". In a few years, Chuck plans to spend more time with his grandkids, fish a little more and continue his part-time hobby—fur trapping. Meanwhile, it's a busy time of year at the Glenwood Office and there's always something that needs tending to—"There's rarely a boring moment".

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