

Glenwood Area Fisheries Newsletter



February 2018

An unwanted distinction: Alexandria-Glenwood Area one of the top regions in the state for AIS

It began in 1995 when the Area's first aquatic invasive species (AIS), Eurasian water-milfoil, was discovered in Douglas County's Lake Oscar. Then came another Eurasian water-milfoil sighting in southern Pope County's Lake Gilchrist. Since then, other invasive species have followed, including zebra mussels – first seen in Lake Le Homme Dieu in 2009, and now Starry stonewort confirmed in 2017 in Lake Minnewaska. All told, the Glenwood Office Management Area contains 51 waterbodies infested with AIS – one of the highest areas in the state.

Much concern at this time must be focused on Lake Minnewaska where a patch of Starry stonewort was discovered in the Starbuck Marina last year. Starry stonewort is an invasive green alga that was first found in North America in 1978 in the St. Lawrence River and has spread inland since. It's now found in much of Michigan's Lower Peninsula and many locations in New York State. It's also been found in Indiana and was discovered in southeastern Wisconsin in 2014. It was first recorded in Minnesota in 2015 in Lake Koronis, Stearns County. Starry stonewort spreads rapidly and can grow tall and dense, forming mats on the surface that interfere with recreation and potentially displace native plant species.

To the right is a table listing all AIS waters in Douglas, Pope, Grant and Stevens Counties which comprise the Glenwood DNR Office's Management Area.



Starry stonewort

LAKE NAME	COUNTY	AIS	YEAR LISTED AS INFESTED
Oscar	Douglas	Eurasian water-milfoil	1995
Gilchrist	Pope	Eurasian water-milfoil	1997
Minnewaska	Pope	Eurasian water-milfoil	1998
Alvin	Douglas	zebra mussel	2009
Carlos	Douglas	zebra mussel	2009
Darling	Douglas	zebra mussel	2009
Geneva	Douglas	zebra mussel	2009
Jessie	Douglas	zebra mussel	2009
Le Homme Dieu	Douglas	zebra mussel	2009
Victoria	Douglas	zebra mussel	2009
Brophy	Douglas	zebra mussel	2011
Cowdry	Douglas	zebra mussel	2011
Lottie (Taylor)	Douglas	zebra mussel	2011
North Union	Douglas	zebra mussel	2011
Stoney (Stony)	Douglas	zebra mussel	2011
Carlos	Douglas	Eurasian water-milfoil	2012
Emily	Pope	zebra mussel	2012
Irene	Douglas	zebra mussel	2012
Le Homme Dieu	Douglas	Eurasian water-milfoil	2012
Minnewaska	Pope	zebra mussel	2012
Shallow Pond	Pope	zebra mussel	2012
Ida	Douglas	zebra mussel	2013
Miltona	Douglas	zebra mussel	2013
North Oscar	Douglas	Eurasian water-milfoil	2013
Charley	Douglas	zebra mussel	2014
Emily	Pope	Eurasian water-milfoil	2014
Grill Lake	Douglas	zebra mussel	2014
Latoka	Douglas	zebra mussel	2014
Lobster	Douglas	zebra mussel	2014
Long Lake	Douglas	zebra mussel	2014
Louise	Douglas	zebra mussel	2014
Maple	Douglas	zebra mussel	2014
Mary	Douglas	zebra mussel	2014
Mill Lake	Douglas	zebra mussel	2014
Mina	Douglas	zebra mussel	2014
Reno	Pope	zebra mussel	2014
Round	Douglas	Eurasian water-milfoil	2014
Scandinavian	Pope	Eurasian water-milfoil	2014
Skoglund Slough	Douglas	zebra mussel	2014
Turtle	Douglas	zebra mussel	2014
Andrew	Douglas	zebra mussel	2016
Little Osakis	Todd	zebra mussel	2016
Osakis	Douglas/Todd	zebra mussel	2016
Pocket	Douglas	zebra mussel	2016
Signalness (Glacial Lakes State Park)	Pope	zebra mussel	2016
Big Chippewa	Douglas	zebra mussel	2017
Burgen	Douglas	zebra mussel	2017
Devils	Douglas	zebra mussel	2017
Elk (Hoffman)	Grant	zebra mussel	2017
Little Chippewa	Douglas	zebra mussel	2017
Marion	Douglas	zebra mussel	2017
Minnewaska	Pope	Starry stonewort	2017
Redick Swamp	Douglas	zebra mussel	2017
Round	Grant	zebra mussel	2017
Spring	Grant	zebra mussel	2017
Stowe	Douglas	zebra mussel	2017
Turtle	Grant	zebra mussel	2017
Victoria	Douglas	Eurasian water-milfoil	2017
Whiskey	Douglas	zebra mussel	2017

Lake surveys scheduled for 2018

The following lakes are scheduled to be surveyed this summer by Glenwood fisheries staff. A standard survey consists of electrofishing for Largemouth Bass during the month of May followed by gill netting and trap netting completed during the months of June-August.

Lake	County	Date (Week of)
Lottie (Taylor)	Douglas	August 6
Mill	Douglas	June 11
North Union (Union)	Douglas	August 6
Oscar*	Douglas	July 30
Rachel	Douglas	June 25
Smith	Douglas	July 23
Stony	Douglas	August 6
Cottonwood	Grant	June 4
Lightning	Grant	June 11
Mustinka R. Flowage	Grant	June 4
Ann	Pope	August 20
Minnewaska	Pope	June 18
Nelson	Pope	June 25
Reno	Pope	July 9
Scandinavian	Pope	July 16
Osakis	Douglas/Todd	August 13
* Additional Muskellunge survey		April

New Northern Pike regulations go into effect May 12, 2018

Northeast Zone: Bag limit 2 (Not more than 1 over 40" in possession. All from 30-40" must be immediately released.)

North-central Zone: Bag limit 10 (Not more than 2 over 26". All from 22-26" must be immediately released.) Includes the Alexandria-Glenwood Management Area. Map included in the 2018 Minnesota Fishing Regulations booklet or: <http://www.dnr.state.mn.us/pike/index.html>

Southern Zone: Bag limit 2 (Minimum size 24".)



Glenwood DNR's Walleye stocking, fall 2017

The following is a summary of Walleye stocked in 2017. Abbreviations include fry (just hatched), fingerling (fgl, age-0, 3-8" long), yearling (yrl) and adult (adl, >1 yr old).

Lake	Number fry stocked	Pounds of fgl, yrl or adl stocked	Number of fgl, yrl or adl stocked
Aaron*		667	10,544
Ann	185,000		
Barrett	422,000		
Carlos		461	17,057
Charlotte	425,000		
Cottonwood		251	3,751
Darling		554	16,978
Emily	2,200,000		
Freeborn	172,000		
Geneva		295	5,711
Gilbert	190,000		
Gilchrist		418	8,147
Grove		230	2,454
Hattie	464,000		
Ida	875,500	156	395
Irene		379	16,939
Johanna	700,000		
Le Homme Dieu		880	29,134
Linka		144	439
Lobster*		1,986	33,680
Long (Stevens County)	636,000		
Long (Douglas County)	100,500		
Lower Elk	131,000		
Miltona*	2,759,000		
Mina		65	511
Minnewaska*	3,291,000	3,186	51,186
Moses*		1,186	7,430
Mustinka Flowage*		125	2,500
Nelson	267,000		
Osakis*	3,390,000	463	5,708
Oscar		380	2,585
Page	340,000		
Pelican (Pope County)		844	4,716
Pelican (Grant County)	1,522,000		
Perkins	517,000		
Pomme de Terre	2,500,000		
Rachel		332	5,195
Red Rock		521	9,272
Reno	2,029,000		
Scandinavian		230	3,778
Smith		728	3,451
Thompson	74,000		
Turtle		192	1,326
Vermont*		200	1,410
Victoria*		258	4,478
Westport	203,000		

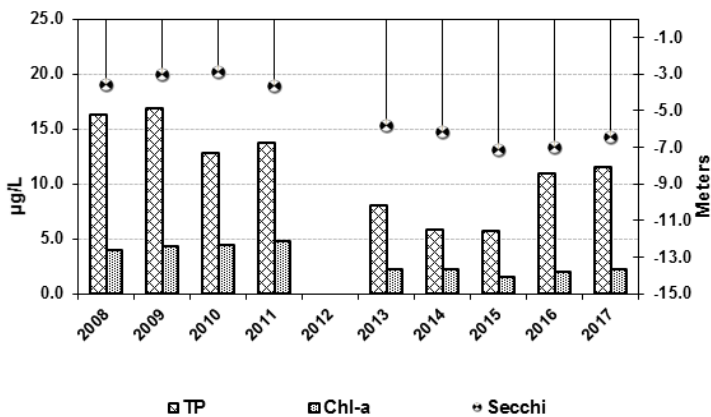
* Includes fish from the private sector

Annual monitoring on Lake Carlos— what's the DNR up to?

People may be noticing a more frequent presence of DNR researchers on Lake Carlos over the past several years. That's because Lake Carlos is part of a statewide monitoring program called Sentinel Lakes.

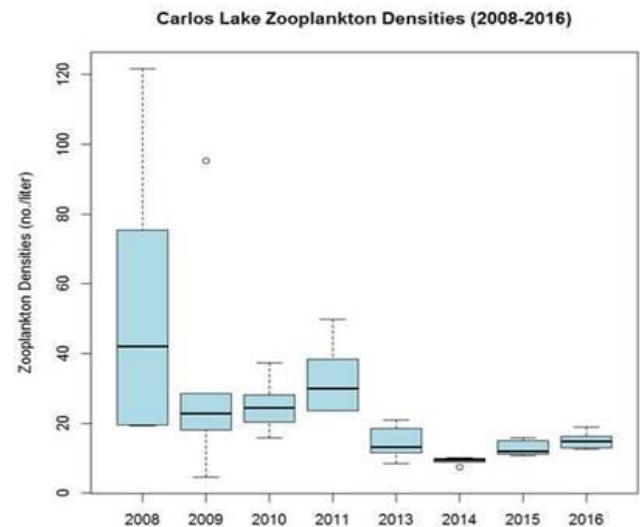
Sentinel means to guard and keep watch. The sentinel lakes program monitors important biological, physical and chemical trends from a representative sample of 25 lakes across the state in order to detect and better understand the effects of environmental stressors which will help guide management that sustains fisheries and water resources for future generations. Annual field-work operations involve the evaluation of metrics that are the most relevant and sensitive in terms of indicating the status of lake habitats and fish communities. This involves the actual measuring of watershed and water quality, zooplankton, aquatic plants, and fish species abundance and diversity.

A quick glance at the graph below illustrates water quality measurements that help to assess the productivity, or *fertility* of Lake Carlos. Despite a relatively short data set (9 years),



it appears that water clarity (secchi disc) has increased over time while total phosphorus and chlorophyll-a have decreased, possibly coinciding with zebra mussel establish-

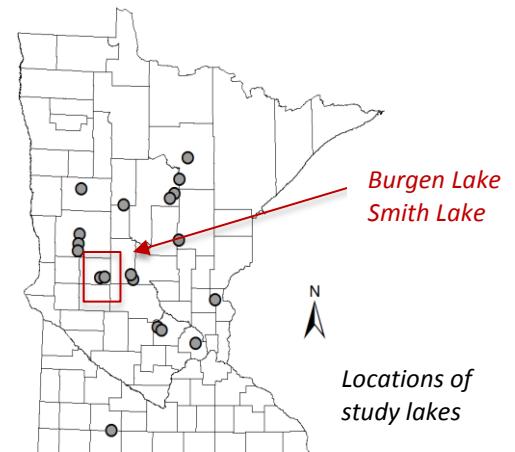
ment. Increasing water clarity due to reductions in phytoplankton are illustrated, but what, if any biological impacts are occurring due to the establishment of zebra mussels? We can see from the following graph that when phytoplankton (algae) decreases due to zebra mussels, zooplankton (microscopic animals) in turn, have less to eat and their abundance begins to decline. Over time, it's possible that young gamefish or other prey species such as



Cisco will have less to eat (zooplankton) and their abundance in turn may be impacted. We know that Cisco are an important prey species for top predators like Walleye and Northern Pike, so if Cisco or other prey species have less to eat, well, you get the idea. This phenomenon is called *trophic cascading* because changes at the primary level in the food chain cascade its way all the way through the food chain to the top predatory level. We have not seen this scenario play out to this extent yet and it may not, but it is possible and it's why invasive species like zebra mussels present larger problems which aren't always so readily apparent.

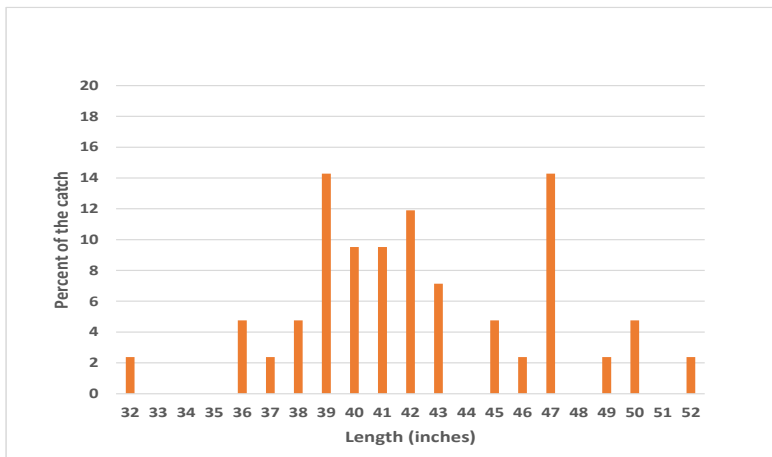
Researchers find no significant difference between high or low Walleye stocking densities

DNR researchers Jeff Reed and Dave Staples compared the performance of two differing stocking densities of small, 72 mm (approximately 3-inch) fingerling Walleyes in 19 Minnesota lakes. Fingerlings were stocked annually from 2008 to 2011 in June at densities of either 30 (low) or 60 (high) per littoral hectare. Although gill nets yielded low sample sizes, they found no significant difference between gill-net catch rates at age 3 between treatments or years. On average, small Walleye fingerlings contributed 15% (0–72%) to the overall gill-net catches in stocked lakes. In lakes where small fingerlings have had a record of success, the researchers recommend managers stocking this life stage use the lower treatment density (30/littoral hectare) and consider it a maximum rate when seeking stocking efficiencies.



Lobster has healthy Muskellunge size distribution. Fingerling stockings completed in 2017

All three Area Muskellunge lakes received fingerling stockings this past fall: Miltona (1,403), Lobster (347), and Oscar (160). The targeted spring survey on Lobster Lake was compromised by stubborn weather. April water temperatures were in the upper 40s to begin the survey, but failed to reach above 50—temperatures when netting is most successful. Despite this, 42 adults were captured ranging in size from 32 to 52 inches.



Lake spotlight: Maple Lake, Douglas County

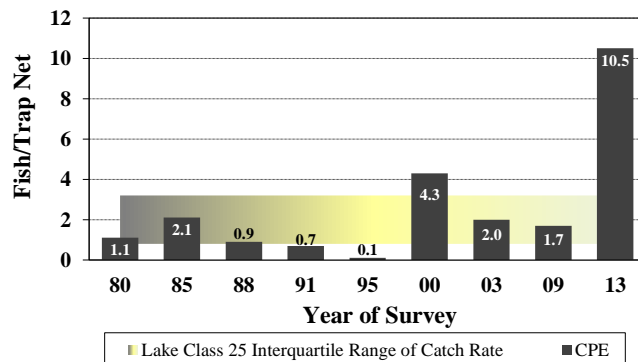
Maple Lake is a moderate-sized (815 acres), clear water lake located approximately six miles south of Alexandria in Douglas County. The basin has a maximum depth of 78 feet and average depth of 16 feet. Due to Maple Lake's large bays, approximately half of the lake area is considered to be a littoral zone, which is that area 15 feet or less in depth. Water quality is very good, typically exceeding 10 feet during summer months. A water clarity measurement in May 2013 was over 32 feet. Maple Lake supports abundant panfish and northern pike populations. It is the only Lake in Douglas County with a special Black Crappie regulation which requires all crappie less than 10 inches be released. The bag limit is five. Walleyes are above average in abundance and provide a popular fishery. Largemouth Bass are also abundant but grow quite slowly.

A good portion of Maple Lake's shoreline contains hardstem bulrush which is a valuable emergent plant. Not only does bulrush provide excellent habitat for all kinds of fish, it actually cleans the water by absorbing nutrients and pollutants that would otherwise grow more algae.

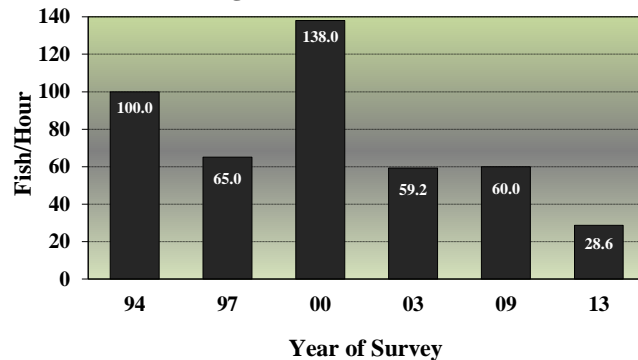
Two improved public access sites are located on the north and east shorelines. A handicapped accessible, floating fishing pier is located near the north boat launch and is a great place for shore-based fishing.

Maple Lake is primarily managed for Walleye and Black Crappie. The following graphs are summaries of how different fisheries in the lake are doing. Questions can be directed to the Area Fisheries Office in Glenwood.

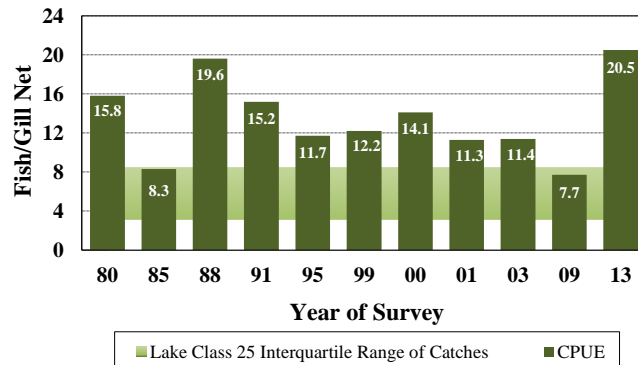
Black Crappie Catch Rates



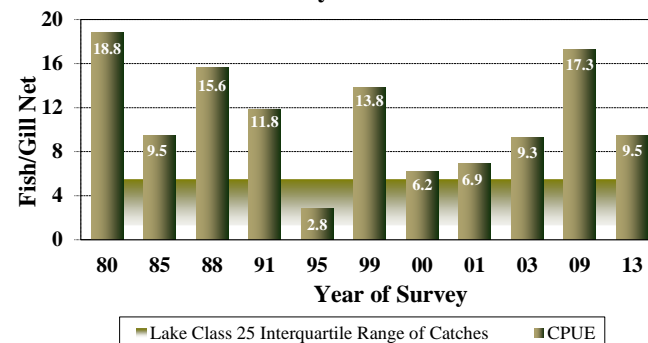
Largemouth Bass Catch Rates



Northern Pike Catch Rates



Walleye Catch Rates



Employee spotlight: Jerry Wendlandt



Jerry attended University-Wisconsin-Stevens Point where he obtained B.S. degrees in Wildlife and Fisheries Sciences and Water Resources. Summers during undergraduate school were spent working as a Student Worker/Paraprofessional at the Lake City Fisheries Office. To further his education, Jerry went

on to graduate school at Murray State University in Murray, Kentucky and graduated with a M.S. degree in Fisheries Biology.

Jerry started his full-time career with the DNR in 1990 when he accepted a position as a Fisheries Specialist at the Glenwood Area Office and has worked in that office since that time. His job duties included assisting with fish production and lake survey, managing Aquatic Management Areas, and data analysis and report writing. In November, 2015, he was promoted to his current position at the Glenwood Office as the Regional Aquatic Plant Management (APM) Specialist. The position is responsible for reviewing applications from lakeshore property owners who want to alter or remove aquatic vegetation in front of their property. "APM is challenging trying to balance the aquatic habitat that will be destroyed with a reasonable lake-use a property owner expects. Issuing approximately 1,000 permits each year in a work area that extends from southern Pope County all the way north through Becker County keeps me busy as there are over 100,000 acres of water in my work area".

The Glenwood Area Fisheries Office is located at:

23070 North Lakeshore Drive
Glenwood, MN 56334
PH: 320.634.7321
Newsletter Editor— Al Schmidt:
alan.schmidt@state.mn.us

Glenwood Fisheries Staff:

Dean Beck - Area Supervisor
Bill McKibbin - Assistant Area Supervisor
Sue Mulville - Office & Admin Specialist
Al Schmidt - Fisheries Specialist
Chris Smith - Fisheries Specialist
Chris Uphoff - Fisheries Specialist
Michelle Krecklau - Fisheries Technician
Mike McInerny - Research Scientist
Jeff Reed - Research Scientist
Lindy Ekola - Shoreland Habitat Specialist
Jerry Wendlandt - APM Specialist
Casey Schoenebeck - Sentinel Lakes Program



mn
**DEPARTMENT OF
NATURAL RESOURCES**