

NORTHLAND COLLEGE



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LoonWatch Mission

Engage, educate and connect students and citizens with resource professionals.

**Wisconsin Loon
Population Survey**

Training Workshops

**Sigurd T. Olson Loon
Research Award**

Resource to
Answer Citizen
Questions

**Annual Lakes
Monitoring Program**

Educational Materials

Work Study and
Interns



Website

Advisory Council

Speakers' Bureau

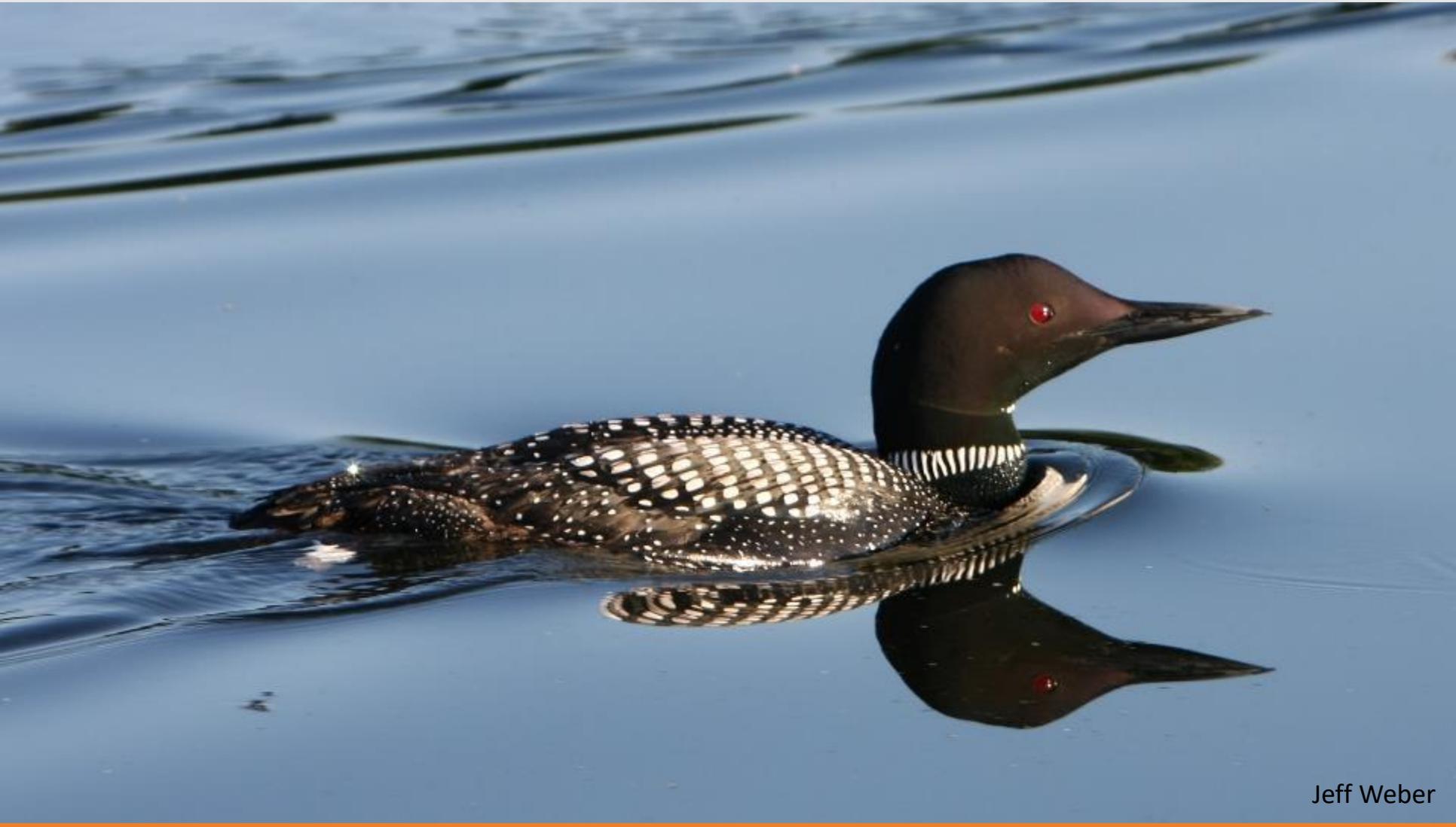
**Get the Lead
Out!**

Presentations
and Events

**Loon Appreciation
Week**



Common Loon



Jeff Weber



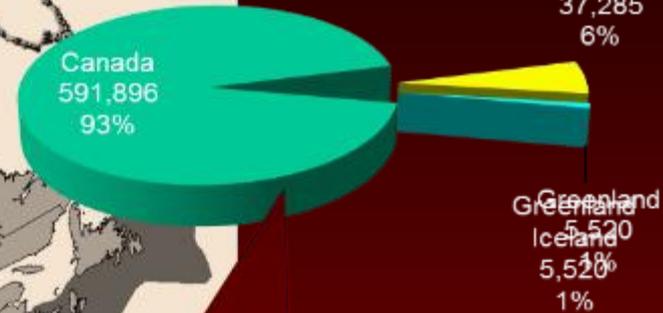
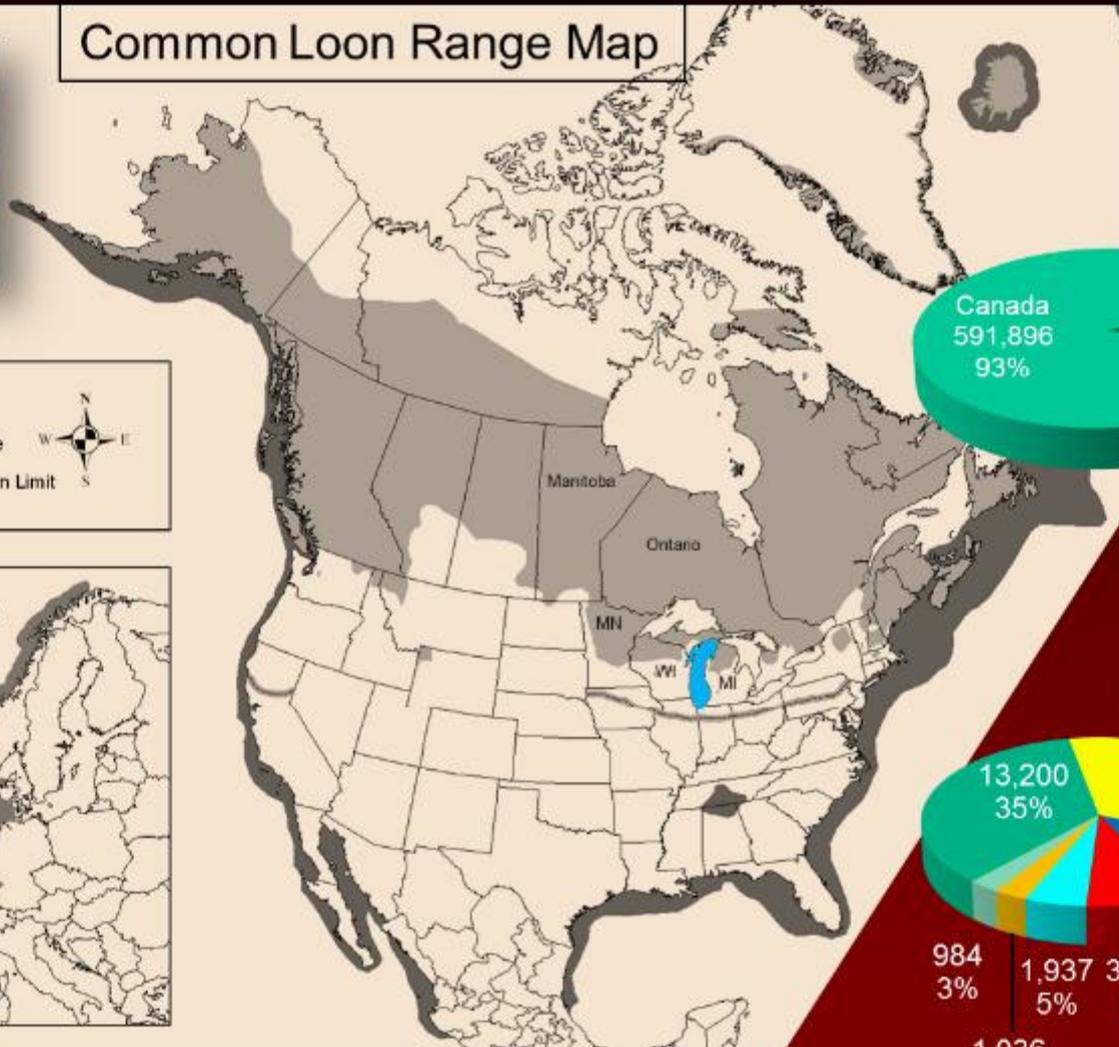
¼ Mile Aquatic Runway



Linda Grenzer

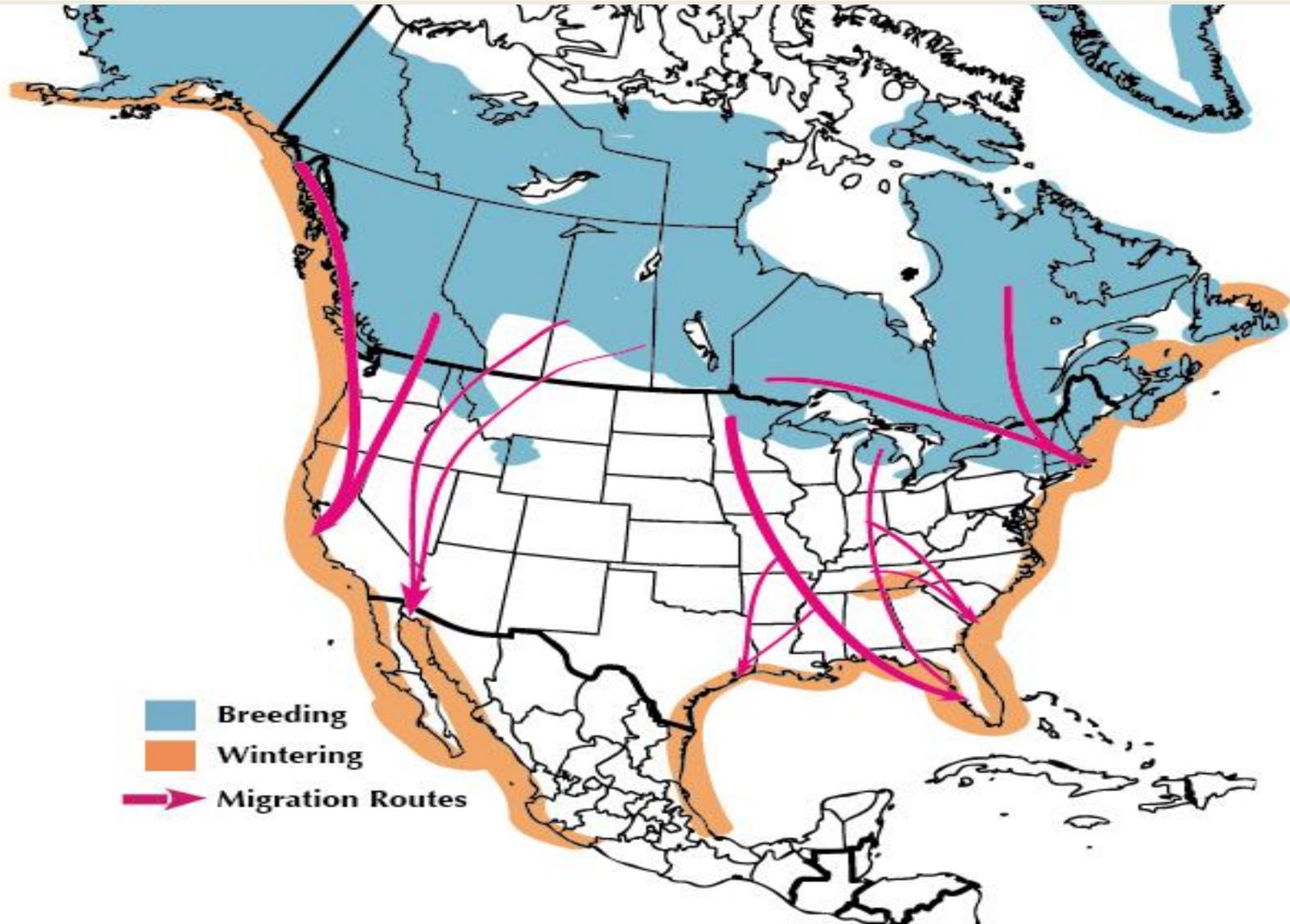


Common Loon Range Map



From Evers (2007)

Common Loon Range and Migration in North America





Spring Migration Stopover Lakes



Al Schwoegler



Yodel



Gregory Nelson



Wail



Ginger Gumm / Daniel Poleschook



Tremolo



Gregory Nelson



In-flight Tremolo



Ginger Gumm / Daniel Poleschook



Hoot



Loon Calls *courtesy of Jay Mager*

David Rippon



Nesting Habitat





Nesting Habitat



Linda Grenzer



Artificial Nesting Platforms



Sandy Gillum



Predators





Predators





Loon Eggs





Nesting Behavior





Defensive Postures





Defensive Postures





Chick Rearing



Loon Identification



Recently Hatched

Linda Grenzer

Loon Identification



7 Day Old Chicks

Linda Grenzer



Loon Identification



Two Week Old Chick

Linda Grenzer



Loon Identification



6 Week Old Chick

Linda Grenzer



Loon Identification



Juvenile Chick

Linda Grenzer

Threats



Loss of Habitat

Past and Present Common Loon Breeding Range in North America



Current Range

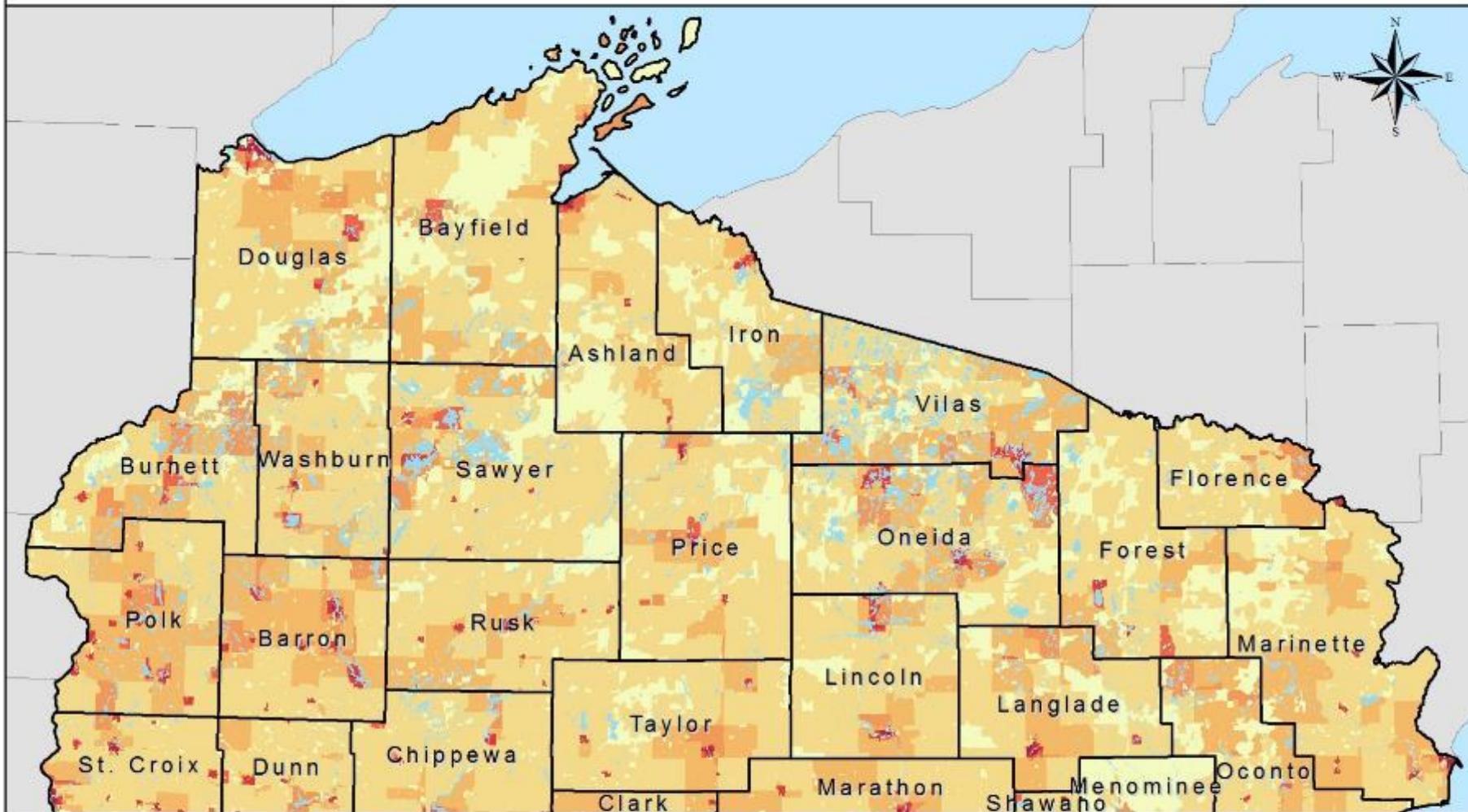


Historical
Southern Limit

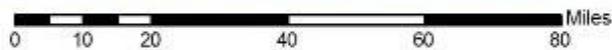


McIntyre 1988

Census 1940 Housing Density Northern Wisconsin



Housing Units Per Square Mile

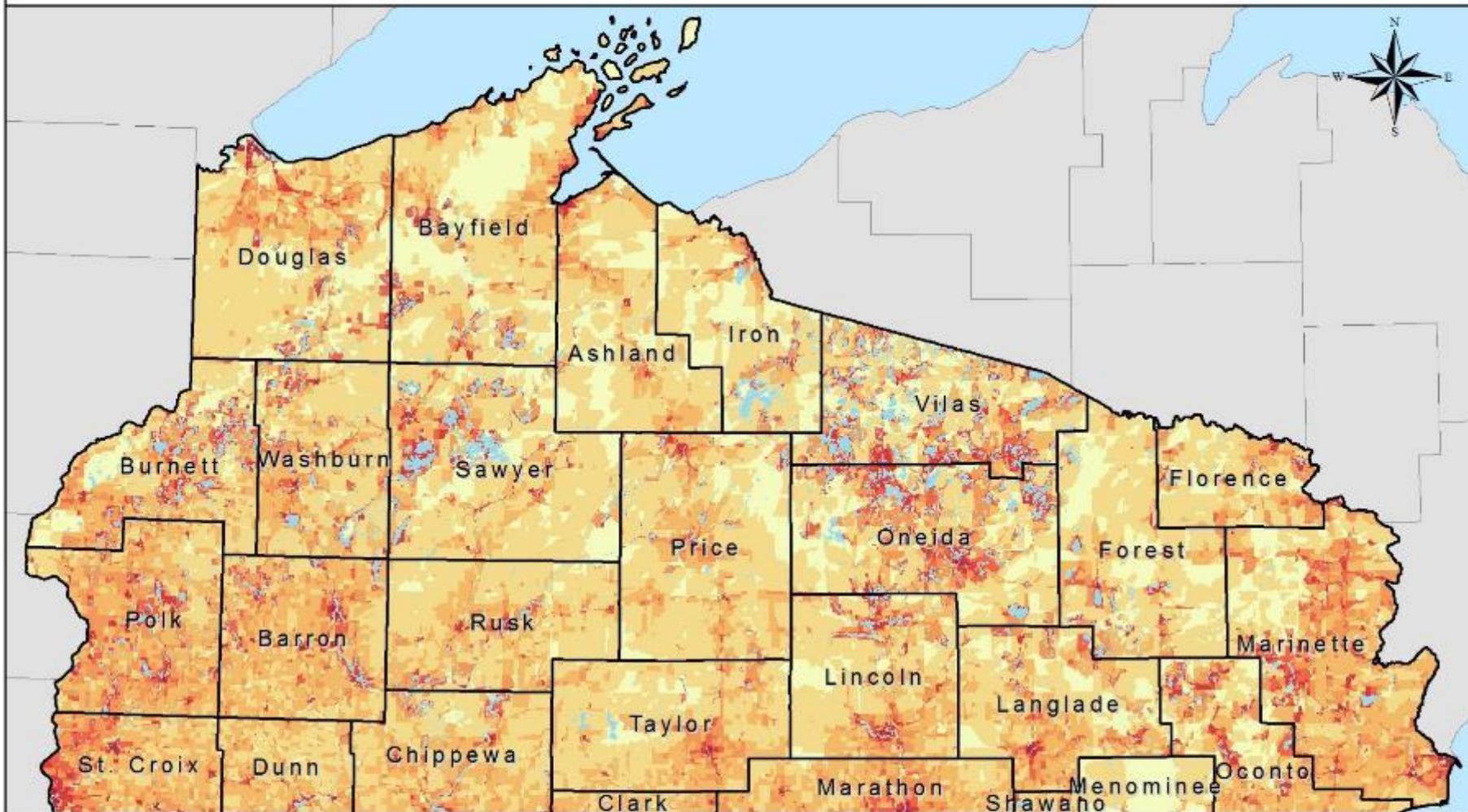


Sources:
 Roads: ArcGIS Streetmap USA, 2010
 1940 - 1980 Housing Density: US Census Partial Block Group Data
 Hammer, R. B. S. I. Stewart, R. Winkler, V. C. Radeloff,
 and P. R. Voss. 2004. Characterizing spatial and temporal
 residential density patterns across the U.S. Midwest, 1940-1990.
 Landscape and Urban Planning 69: 183-199.
<http://silvis.forest.wisc.edu/old/Library/HousingData.php>

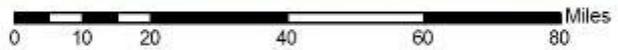
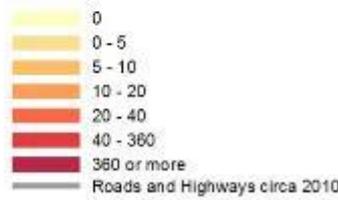


Applied Population Laboratory
 UW Madison
<http://www.apl.wisc.edu/>

Census 1990 Housing Density Northern Wisconsin



Housing Units Per Square Mile

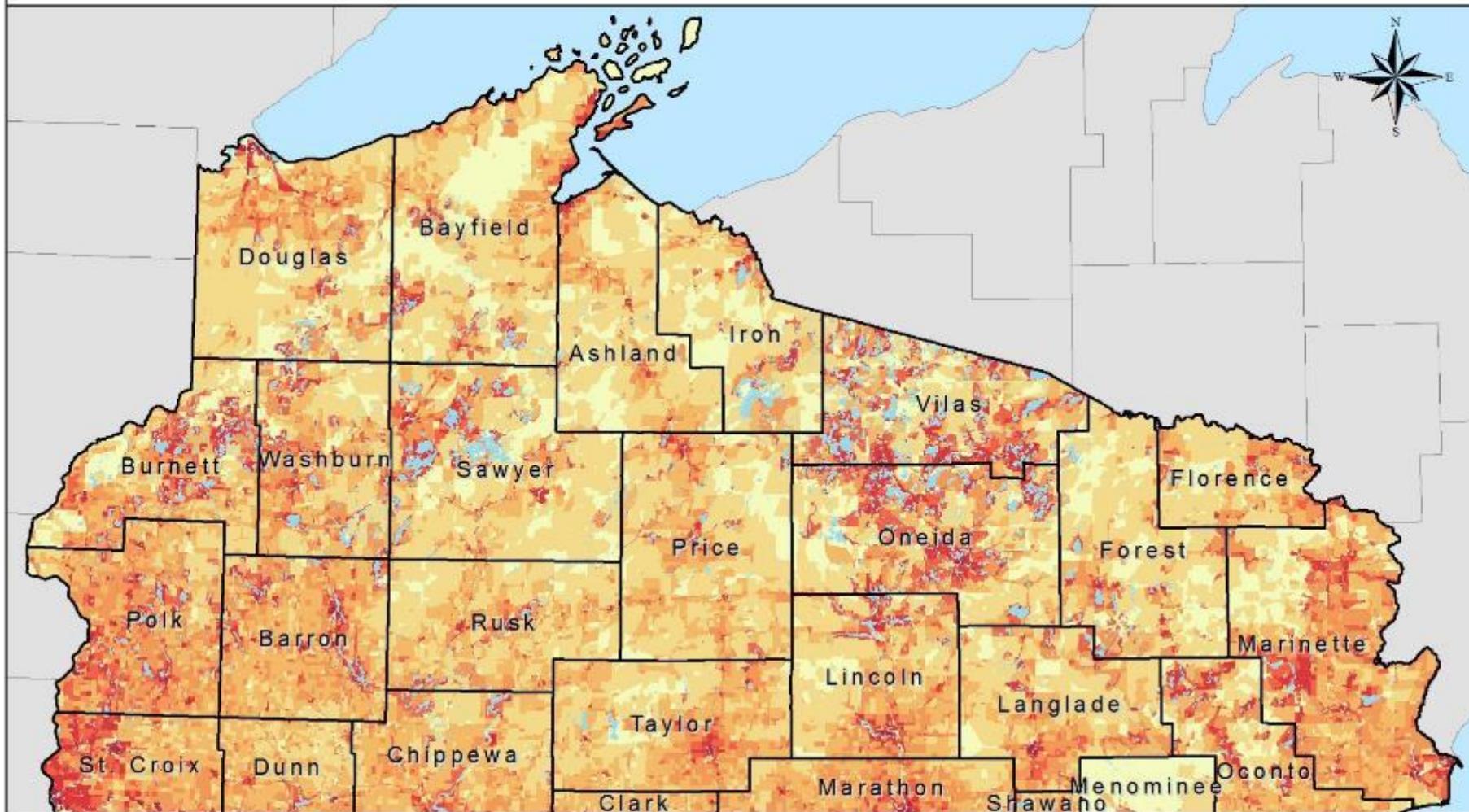


Sources:
 Roads: ArcGIS Streetmap USA, 2010
 1990 Housing Density: US Census Bureau (census blocks)

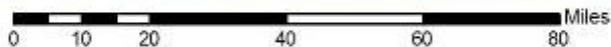


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Census 2010 Housing Density Northern Wisconsin



Housing Units Per Square Mile



Sources:
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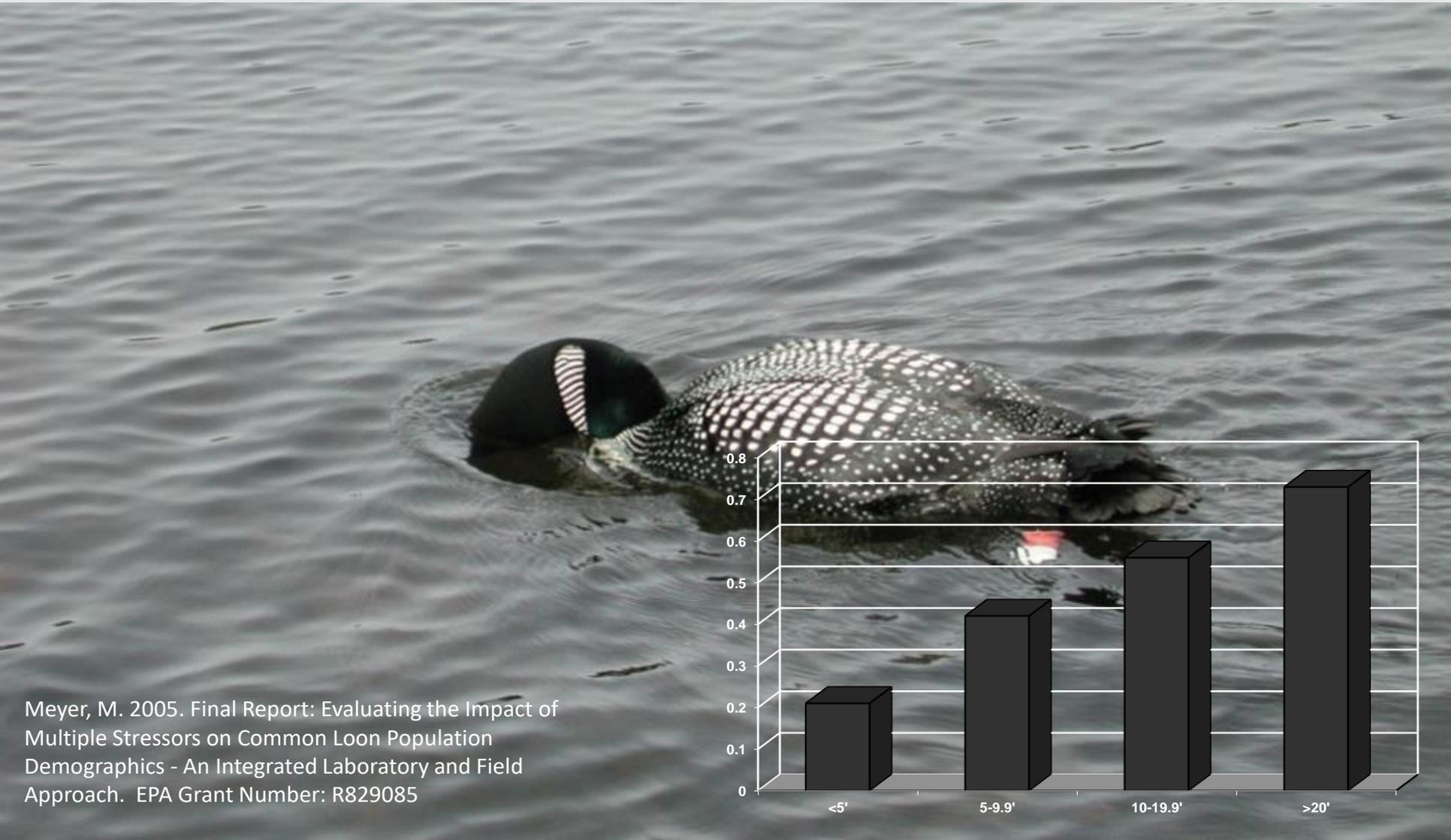


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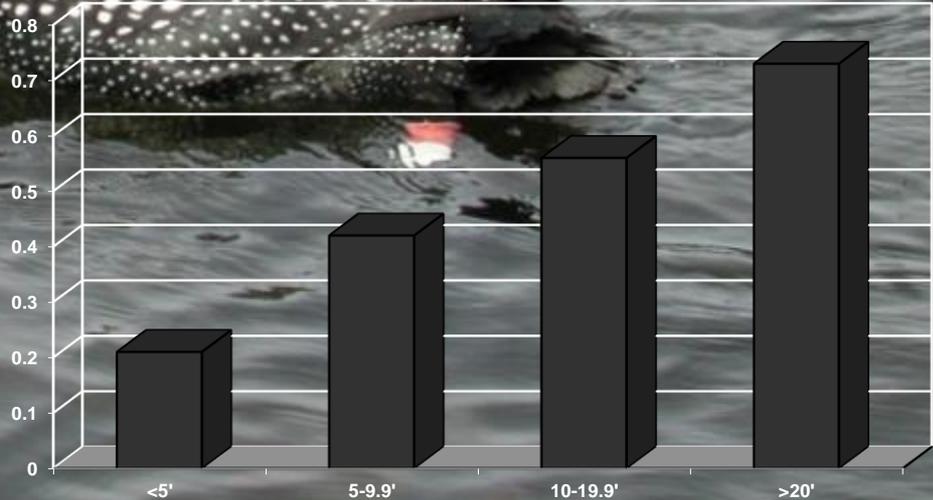


Threats

Poor Water Quality



Meyer, M. 2005. Final Report: Evaluating the Impact of Multiple Stressors on Common Loon Population Demographics - An Integrated Laboratory and Field Approach. EPA Grant Number: R829085

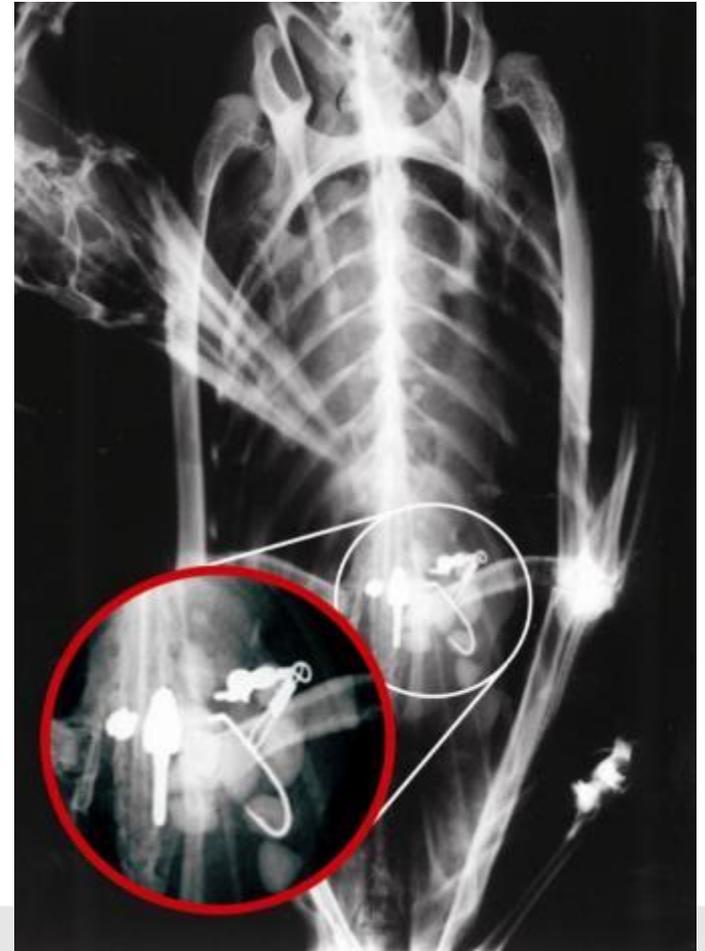


Threats



Fishing Tackle

Approximately 20% of necropsied loons succumbed to lead poisoning.



Threats



Human Disturbance



Emerging Threats



Help this map take flight



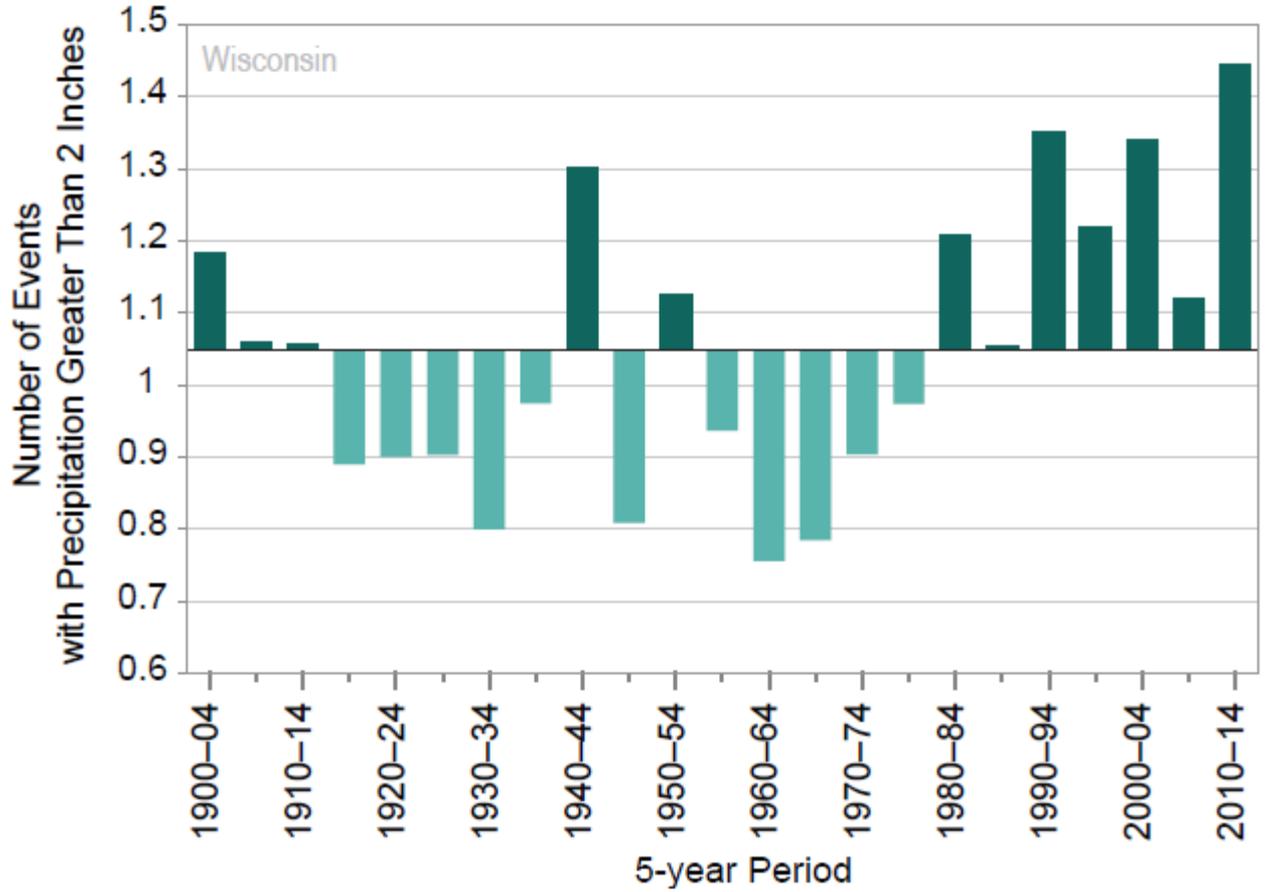
The darker the color, the more favorable the climate conditions are for survival. The outlined areas represent approximate current range for each season. [More on reading these maps.](#)

-  Winter
-  Summer
-  Winter Range
-  Summer Range
-  Both Seasons

 2000 2020 2050 2080

 Zoom In

Observed Number of Extreme Precipitation Events



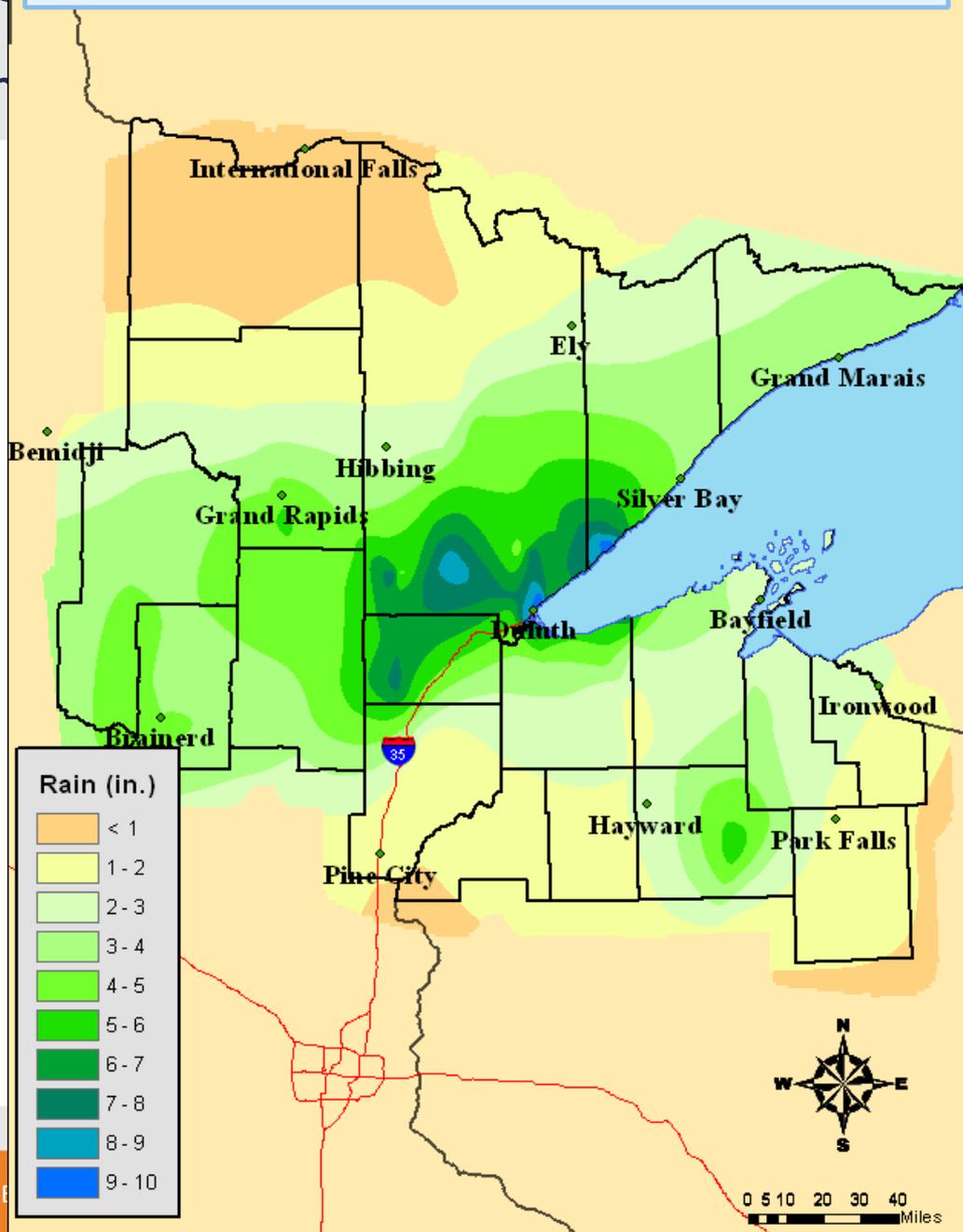
NOAA National Centers for Environmental Information State Climate Summaries: Wisconsin

Figure 6: The observed number of days with extreme precipitation events (annual number of days with precipitation above 2 inches) for 1900–2014, averaged over 5-year periods; these values are averages from 28 long-term reporting stations. A typical station experiences 1 day annually with 2 inches or more of precipitation. Since 1990, Wisconsin has experienced an increasing number of extreme rain events. Source: CICS-NC and NOAA NCEI.

Emergency June 19-20, 2012 Flooding Rains



Climate



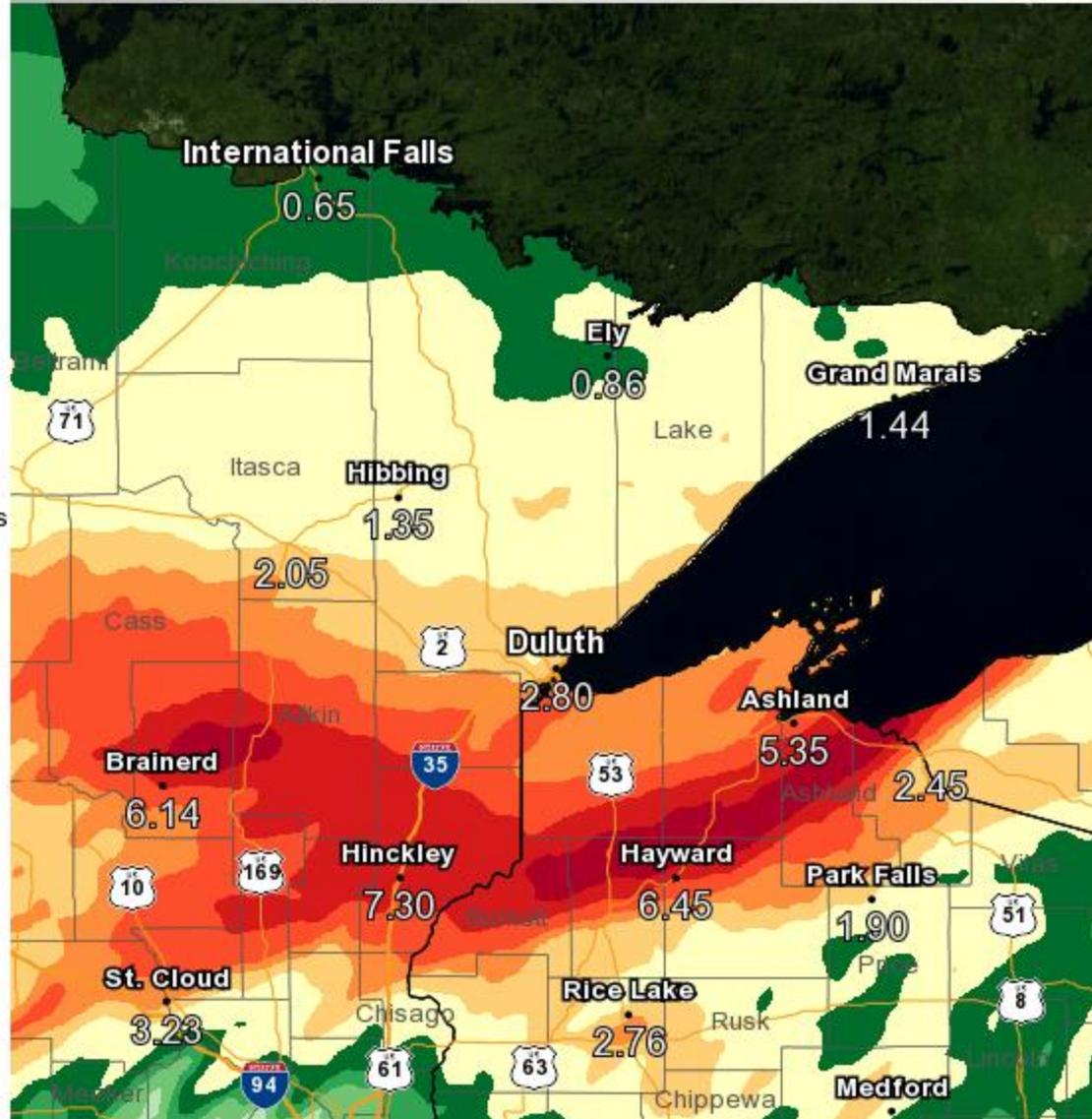
Emerging Threats

Observed Precipitation



Valid Ending Thursday July 14th, 2016 at 8 AM CDT

- Up to 0.1 inch
- 0.1 to 0.25 inches
- 0.25 to 0.5 inches
- 0.5 to 1.0 inches
- 1.0 to 2.0 inches
- 2.0 to 3.0 inches
- 3.0 to 4.0 inches
- 4.0 to 6.0 inches
- 6.0 to 8.0 inches
- 8.0 to 10.0 inches
- 10.0 to 15.0 inches
- Greater than 15 inches



Graphic Created
July 14th, 2016
9:22 AM CDT

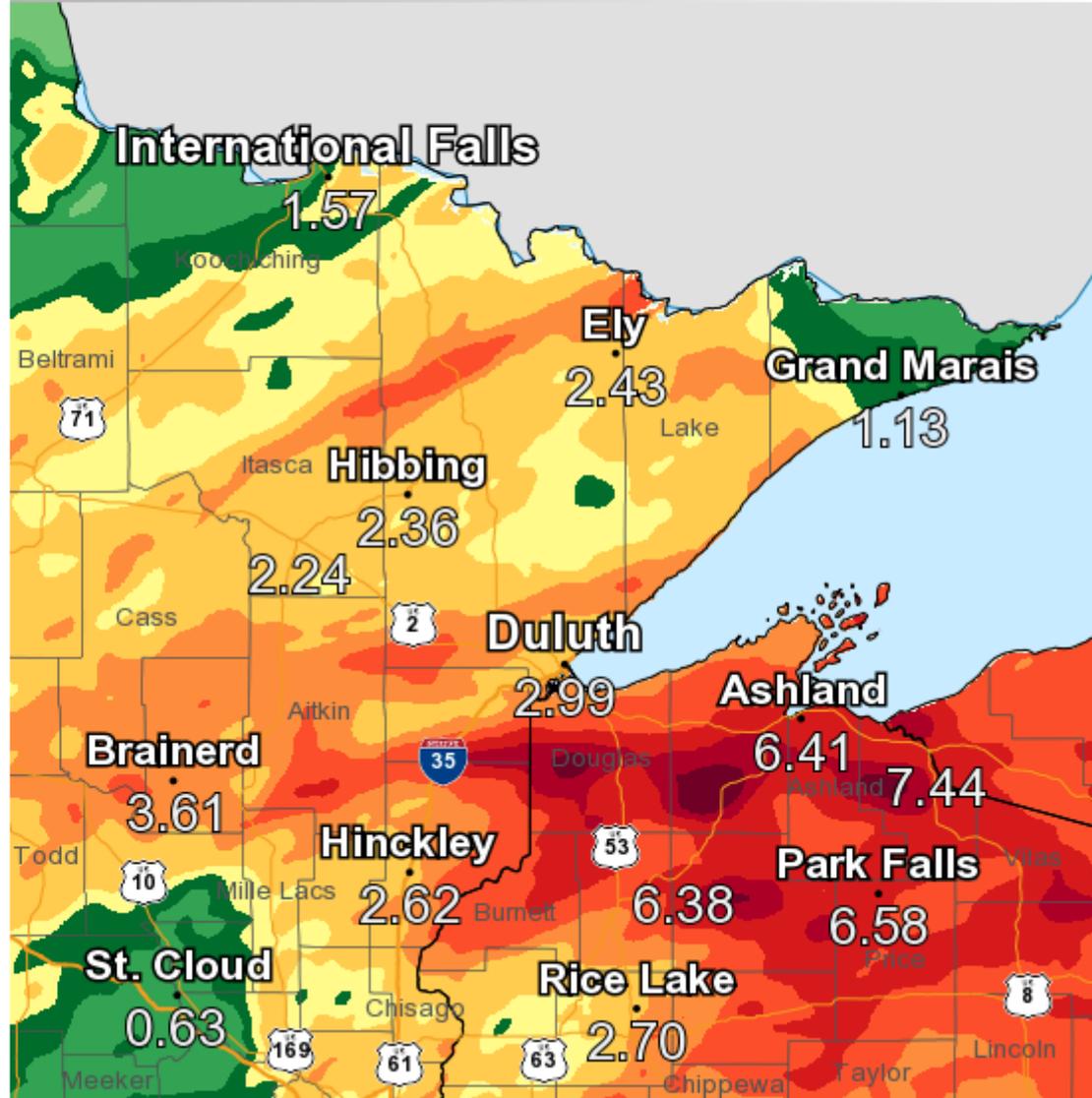
Emerging Threats

Observed Precipitation



Valid Ending Monday June 18th, 2018 at 12 PM CDT

- Up to 0.1 inch
- 0.1 to 0.25 inches
- 0.25 to 0.5 inches
- 0.5 to 1.0 inches
- 1.0 to 1.5 inches
- 1.5 to 2.0 inches
- 2.0 to 3.0 inches
- 3.0 to 4.0 inches
- 4.0 to 6.0 inches
- 6.0 to 8.0 inches
- 8.0 to 10.0 inches
- 10.0 to 15.0 inches
- 15.0 to 20.0 inches
- 20.0 to 30.0 inches
- 30.0 to 50.0 inches



Graphic Created
June 18th, 2018
12:28 PM CDT

Emerging Threats



The Loon Project

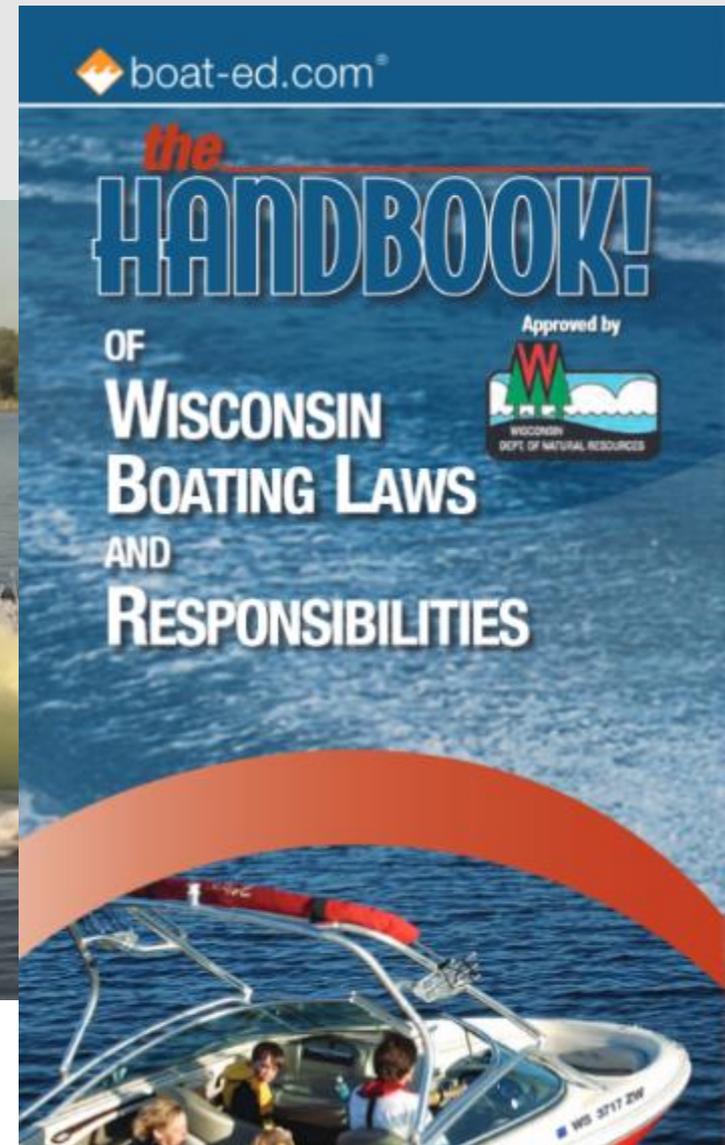


- From 1993 to 2019 the incidence of chicks reaching 5 weeks of age has fallen 1.1% annually.
- In 2019, 5-week old chicks weighed 10.5% less than those in 1993.
- There are fewer two-chick broods.
- From 1993 to 1998, 53% of broods were single broods. From 2014 to 2019, it jumped to 73%.
- Decreasing floater population is leading to fewer territorial evictions.
- The threat of being evicted (from territory) is only 20% to 25% chance of what it was 2 decades ago

Emerging Threats



Big Wake Boats

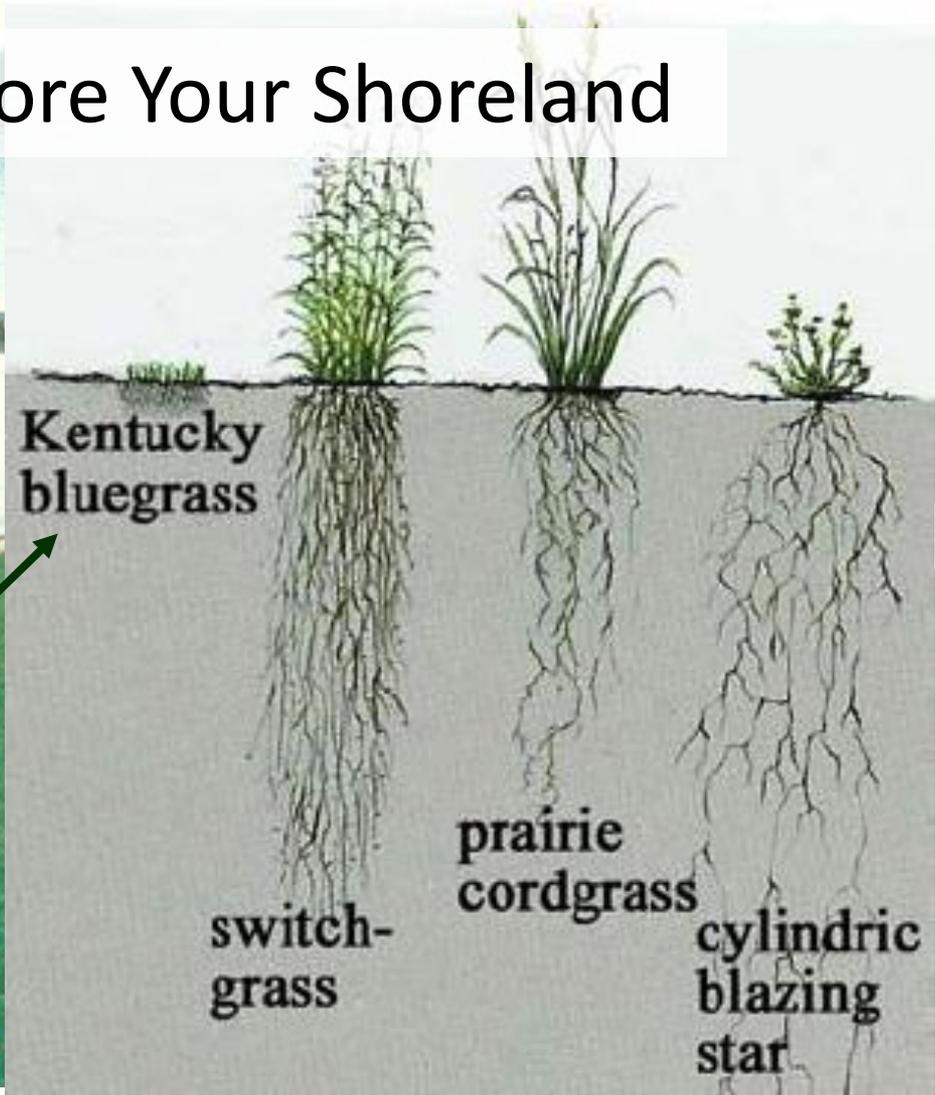


In WI it is unlawful to:

- Chase, harass or disturb wildlife with your vessel.
- Operate a vessel within 100 feet of the shoreline, any dock, raft, pier or restricted area on any lake at greater than “slow, no wake speed”.

What Can Be Done to Protect Loons?

Restore Your Shoreland



What Can Be Done to Protect Loons?



<https://healthylakeswi.com/>



What Can Be Done to Protect Loons?



Build a Rain Garden and Utilize Rain Barrels



Project Location:
River Falls, WI



A rain barrel used to collect
rooftop runoff using a gutter /
downspout system





Get the Lead Out and Properly Dispose of Fishing Line





Reduce Your Energy Consumption

- 
- An aerial photograph of a loon colony on a rocky island. The loons are scattered across the terrain, which is a mix of reddish-brown and yellowish-brown rocks. The background shows a body of water and a cloudy sky.
- Walk or bike to work, store, errands
 - Carpool
 - Use public transportation
 - Drive the posted speed limit
 - Make sure your tires are properly inflated
 - Purchase locally produced products
 - Support alternative energy

What Can Be Done to Protect Loons?



Educate Your Fellow Lake Users

LEAD ALERT

Lead fishing tackle kills loons, eagles, swans, and other wildlife due to lead poisoning. Please use non-lead tackle when fishing this lake!



Prevent wildlife death and entanglement. Discard unwanted fishing line in a trash receptacle and lead tackle at a local hazardous waste collection site.

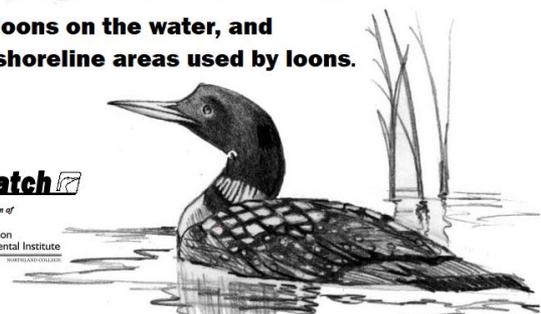
LoonWatch *Get the Lead Out!* **FREGI**

For more information, visit LoonWatch at www.northland.edu/loonwatch or the Rippler Education Group, Inc. at 715-423-8015

LOON ALERT

Help keep this lake safe for loons by staying **200** feet from:

-  loons on the water, and
-  shoreline areas used by loons.



LoonWatch 

a program of

Sigurd Olson Environmental Institute

www.northland.edu

Wildlife harassment is illegal. Please report violations to the local Department of Natural Resources office or call toll free 1-800-TIP-WDNR. For loon information write: LoonWatch, Sigurd Olson Environmental Institute, Northland College, Ashland, WI 54806 or visit our website: www.northland.edu/soei or email us at loonwatch@northland.edu.

What Can Be Done to Protect Loons?

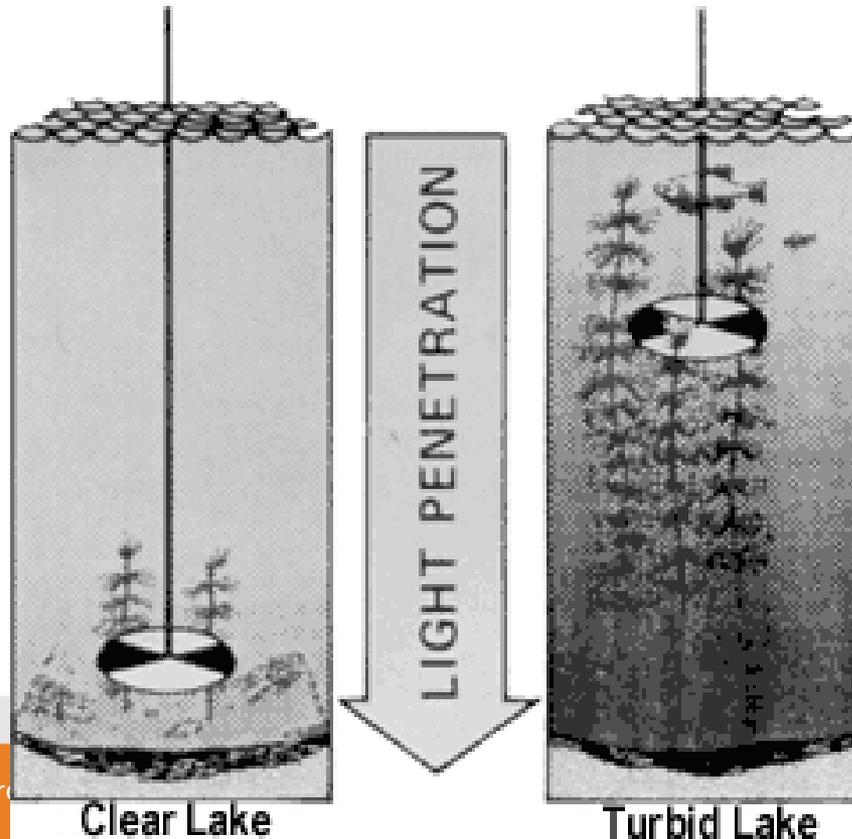


Monitor the Water Quality on Your Lake

Join the Citizen Lake Monitoring Network

<https://dnr.wi.gov/lakes/clmn/>

Measuring Water Clarity with a Secchi Disk





Join a LoonWatch Program

Annual Lakes Monitoring Program

- An annual monitoring program. Ideally, volunteers **monitor once a week from ice-out to migration**.
- Volunteers collect **productivity and phenology data**: arrival date, floaters, territorial pairs, nesting pairs, # of nesting attempts, # chicks, # chicks surviving to 8 weeks.
- **Volunteers can select the lake(s)** they want to monitor.

www.northland.edu/loonwatch



Join a LoonWatch Program

Wisconsin Loon Population Survey

- Once every FIVE years.
- One day survey. Saturday **July 18th**, between **5:00a.m. and 10:00a.m.**
- Counting **adult loons and loon chicks**. NOT counting territorial pairs, floaters, etc.
- Survey occurs only on **258 pre-selected lakes**. These lakes were randomly chosen based on all size classes, # of lakes per county, and northern breeding location. They are representative of all lakes in the loon's breeding area.

www.northland.edu/loonwatch



What Can Be Done to Protect Loons?

Be a Loon Ambassador!

Help protect loons
by sharing what you
learned today.



Kittie Wilson

BECOME A LOON RANGER

Contact Erica LeMoine

loonwatch@northland.edu

715-682-1220

The intensive nurturing, observation and protection provided to loons by volunteers across the continent is unprecedented...

What Loon Rangers are protecting is not just loons but a whole aesthetic: the loon, the forested shores, the clear cold water...

Terry Daulton

LoonWatch Coordinator 1990-1999