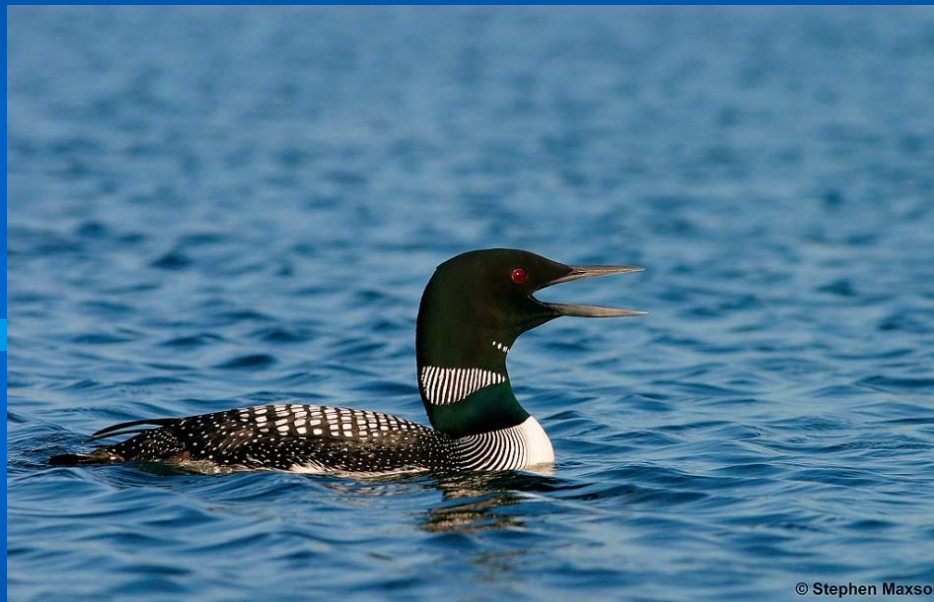


# Loon Monitoring and Other “Nongamey” things



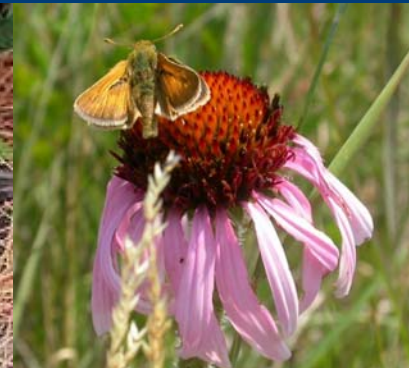
**Christine Herwig**  
**Regional Nongame Specialist**  
**NW Assistant Regional Manager**  
**Ecological and Water Resources**





# Nongame Wildlife Program

- Nongame = Not hunted, trapped, fished
  - Mammals, birds, fish, amphibians, reptiles, and invertebrate groups
- 80% of funding from donations!

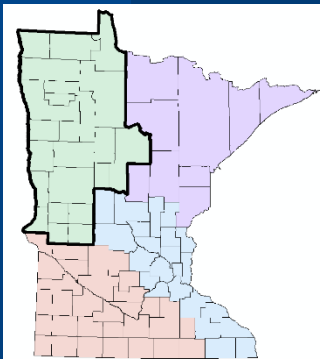




**Amy Westmark**  
**Regional Nongame Specialist**



**Bruce Lenning**  
**Regional Nongame Technician**



## **NW MN Nongame Staff**





 Loons and cardinals

Google Search

I'm Feeling Lucky

## Culture

## Bracket: What's The Best Bird-Named Sports Team? We Have a Winner

*In honor of March Madness, we're letting our readers decide which avian mascot is most loved (and most accurate).*



St. Louis Cardinals



Ball State U. Cardinals



Arizona Cardinals



Wesleyan Cardinals



Atlanta Falcons



Atlanta Hawks



Philadelphia Eagles



Seattle Seahawks



New Orleans Pelicans



Great Lakes Loons



Anaheim Ducks



Pittsburgh Penguins



Baltimore Orioles



Puebla Parakeets



Toronto Blue Jays



Baltimore Ravens

# Change

- Many sources of change
  - Climate, invasive species, land development
- Many impacts
  - Public safety, surface and ground water supplies, recreational opportunities, biological diversity



# Observations

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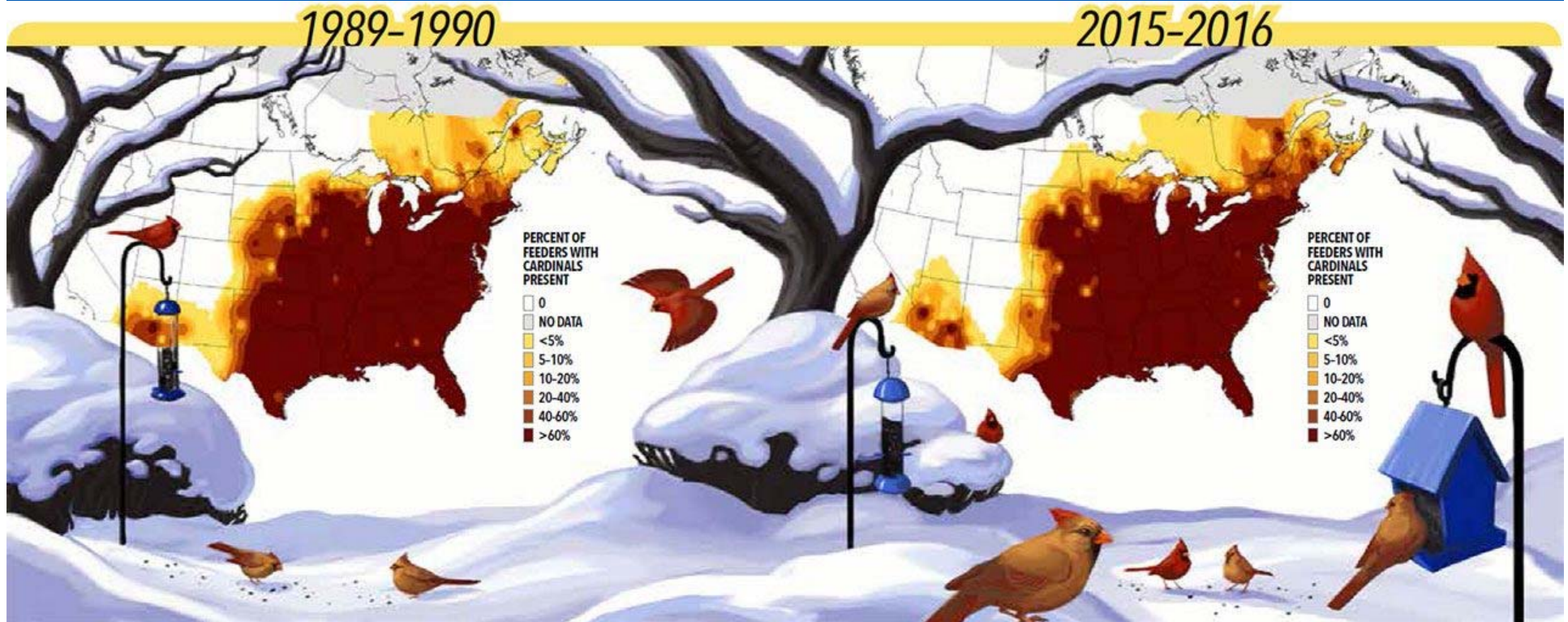


# Range Expansion

- Northern Cardinal



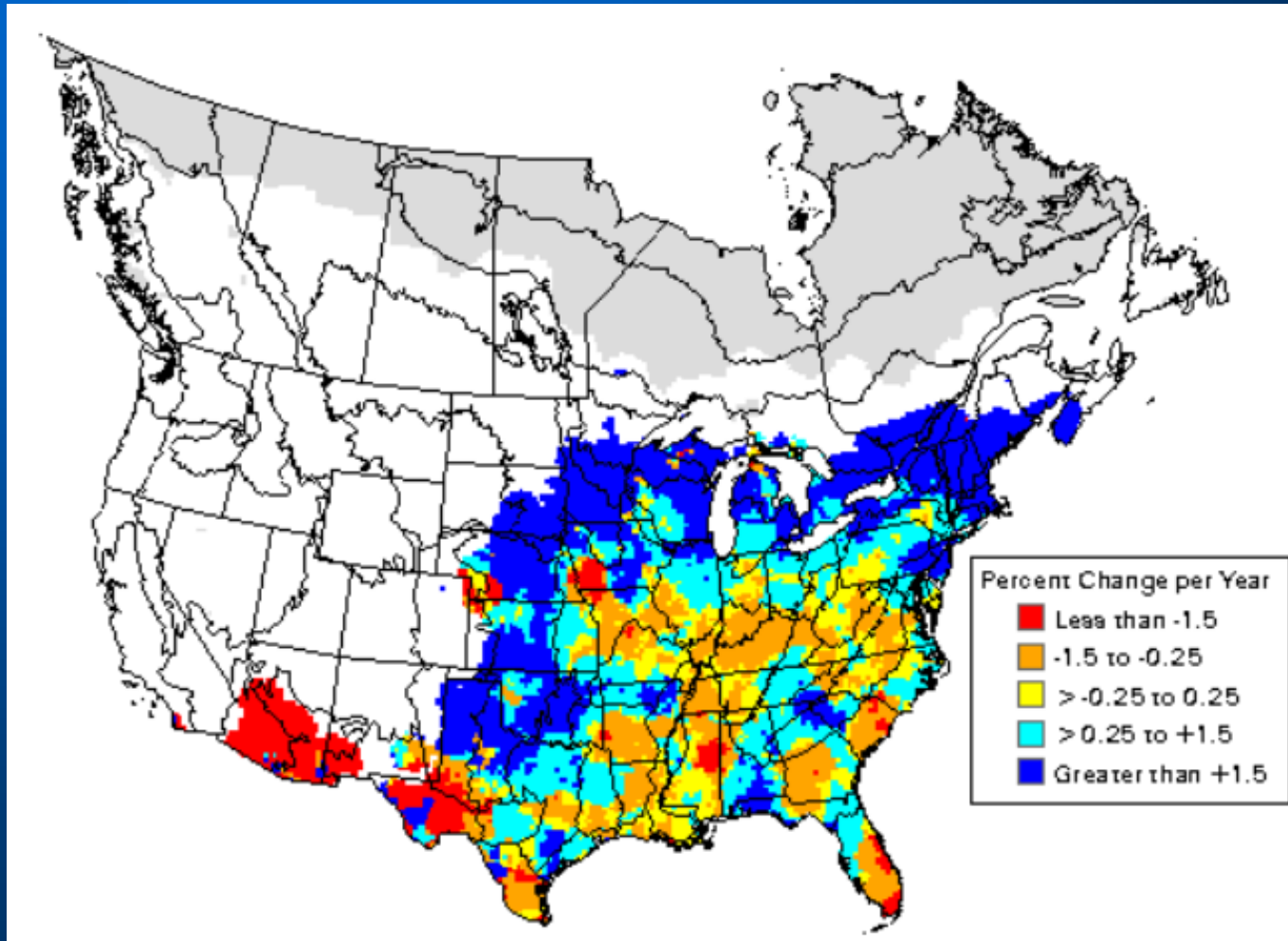
Source: National Audubon Society



Source: <https://www.allaboutbirds.org/news/30-years-of-project-feederwatch-yield-new-insights-about-backyard-birds/>



# Breeding Bird Survey

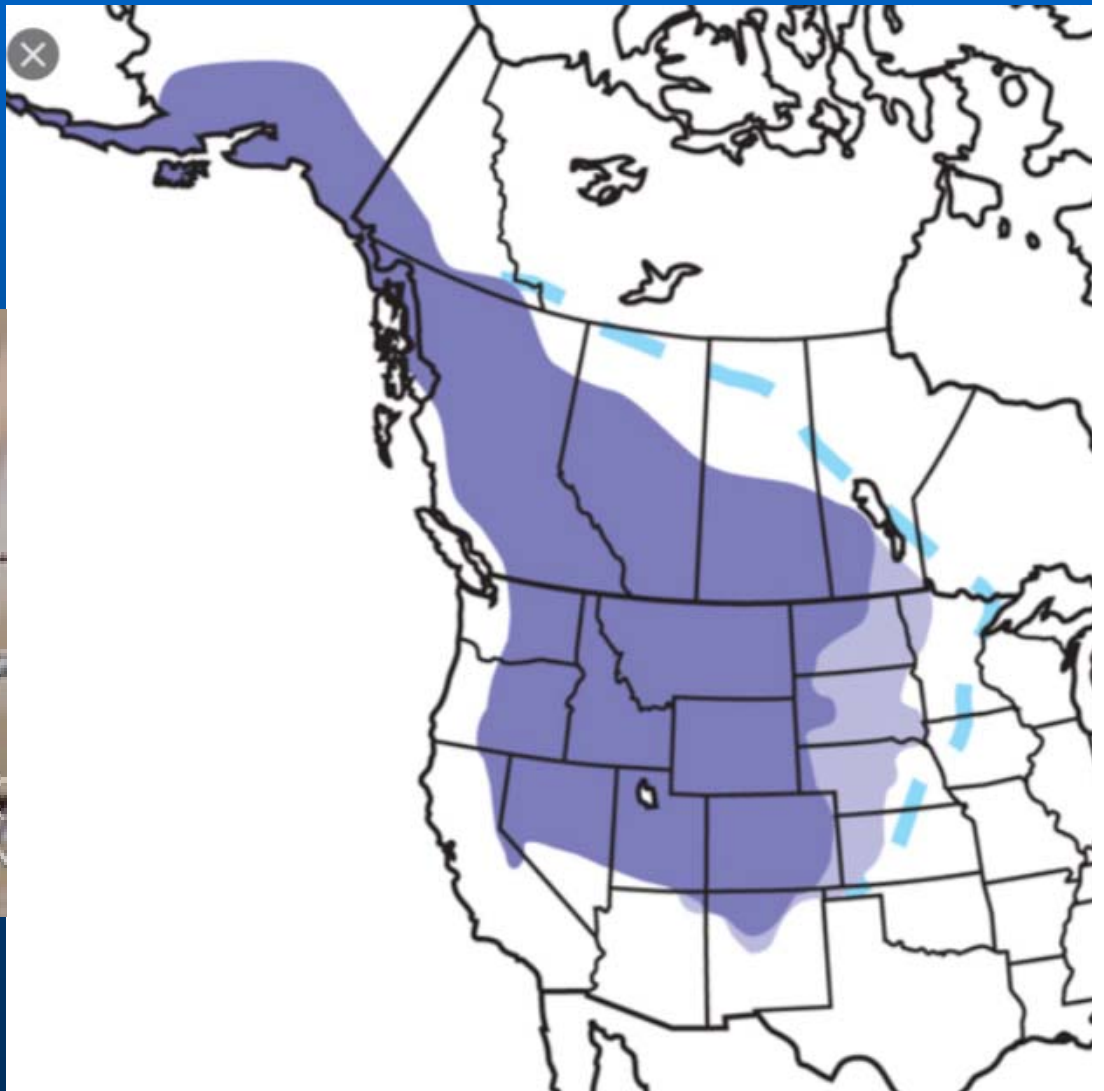


Northern Cardinal  
1966 to 2015

Source: [https://www.mbr-pwrc.usgs.gov/bbs/tr2015/trend2015\\_v3.shtml](https://www.mbr-pwrc.usgs.gov/bbs/tr2015/trend2015_v3.shtml)

# Black-billed Magpie

- Field guide range maps

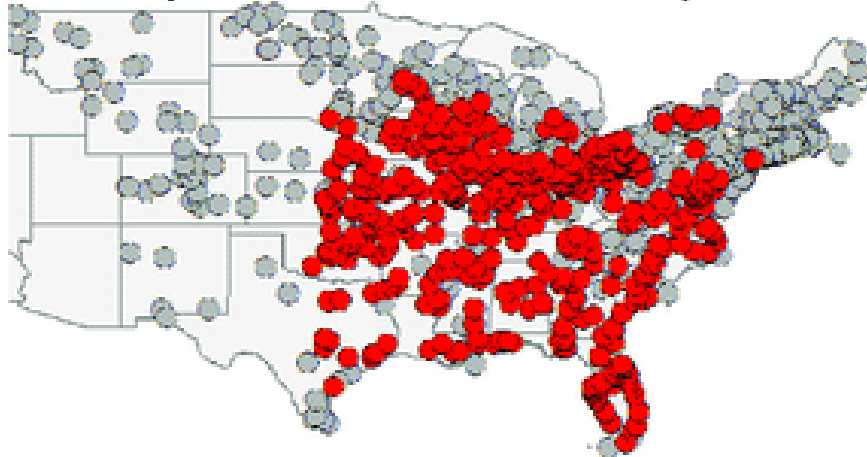


# Red-bellied Woodpecker

- Christmas Bird Count data

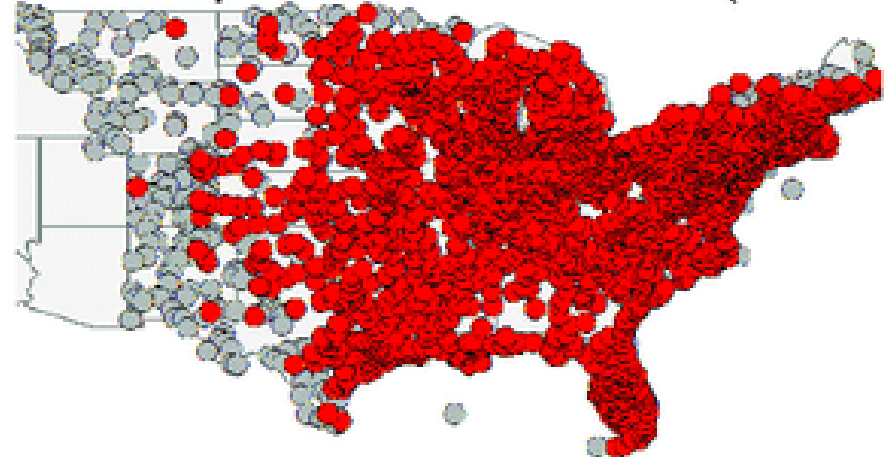


Pre-expansion occurrences ( $n = 299$ )



1910 to 1939

Post-expansion occurrences ( $n = 868$ )



1980 to 2009



# Species Recoveries



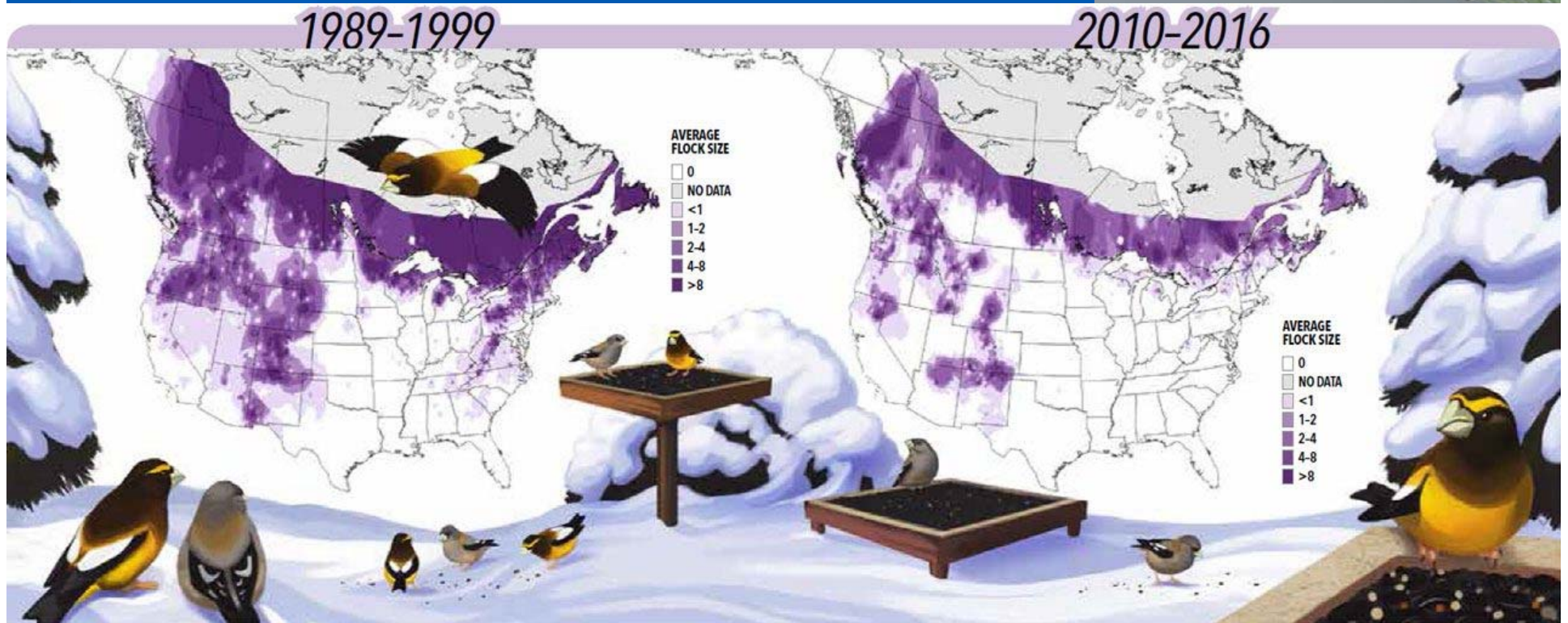
# Restoration and Expansion





# Range Contraction

- Evening Grosbeak



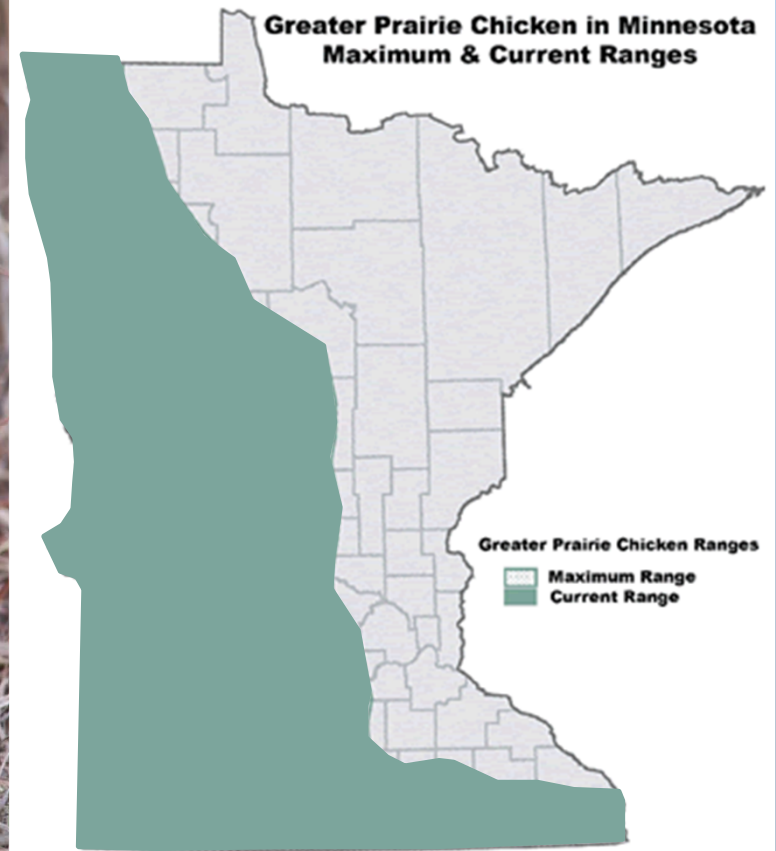
Source: <https://www.allaboutbirds.org/news/30-years-of-project-feederwatch-yield-new-insights-about-backyard-birds/>



# Range Contraction

- Greater Prairie-Chicken

Source: MN Prairie Chicken Society

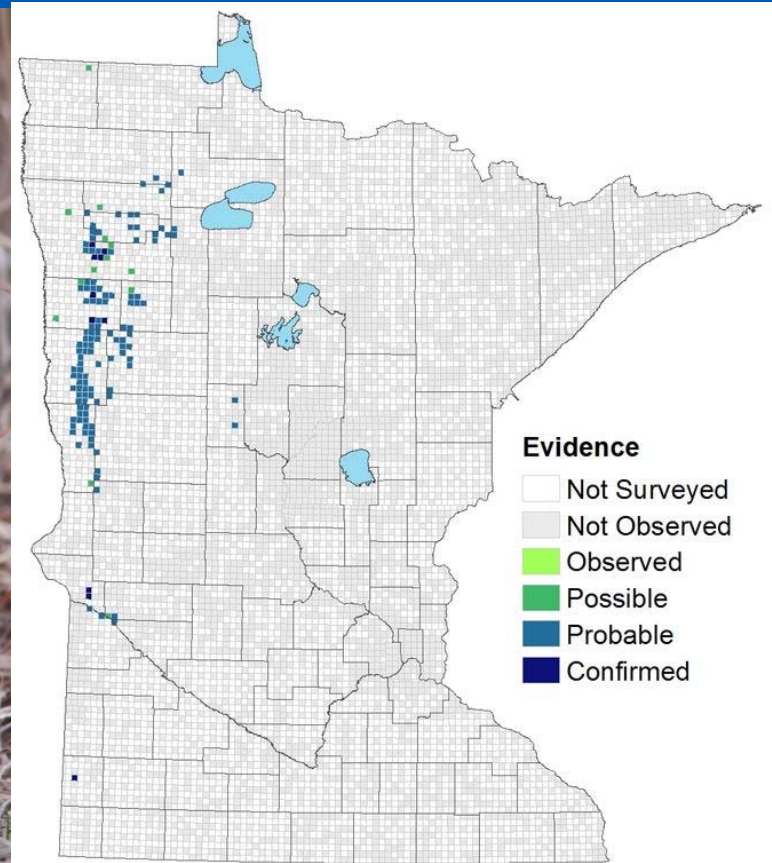


# Range Contraction

- Greater Prairie-Chicken

2009-2013

Source: MN Breeding Bird Atlas

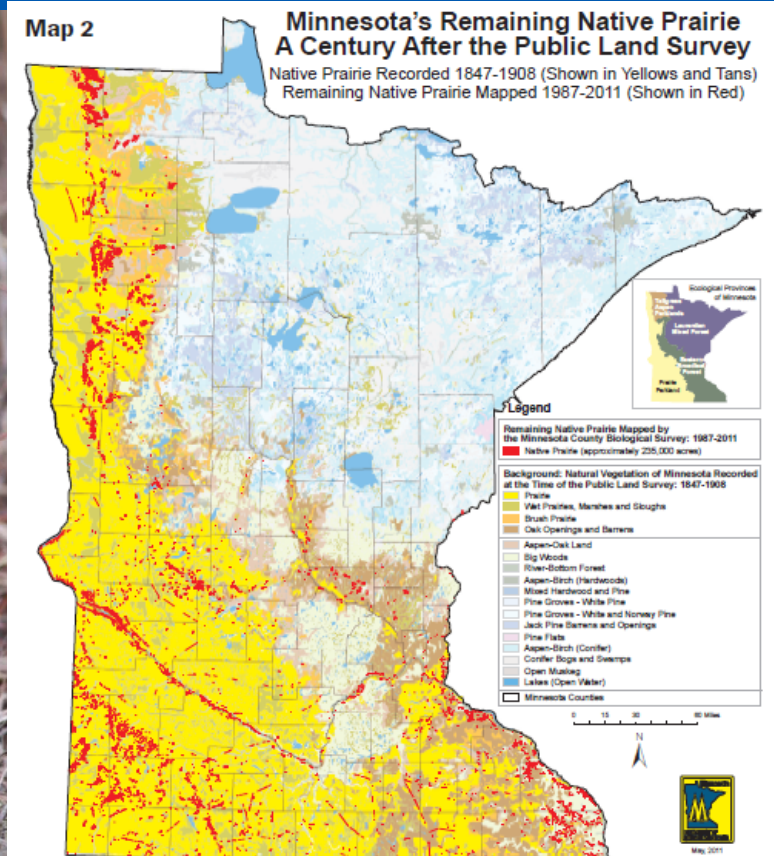




# Range Contraction

- Greater Prairie-Chicken

Source: MN DNR







# How Do We Know About These Changes?



# Monitoring





# Data Collection & Monitoring

- Who does data collection?
  - Agencies
  - Non-profit orgs.
  - YOU!





# Many Existing Opportunities



- **Birds**

- Project FeederWatch, NestWatch, Christmas Bird Count, Great Backyard Bird Count

- **Insects**

- Dragonfly Pondwatch
- Bumble Bee Watch

- **Amphibians/Reptiles**

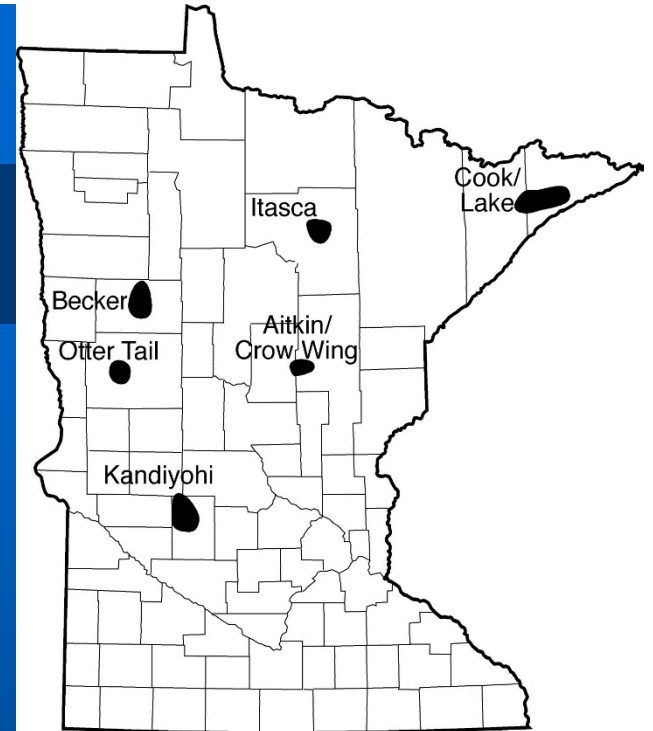
- Frog & Toad Surveys, Turtle Crossing Tally

- **MANY OTHERS!**



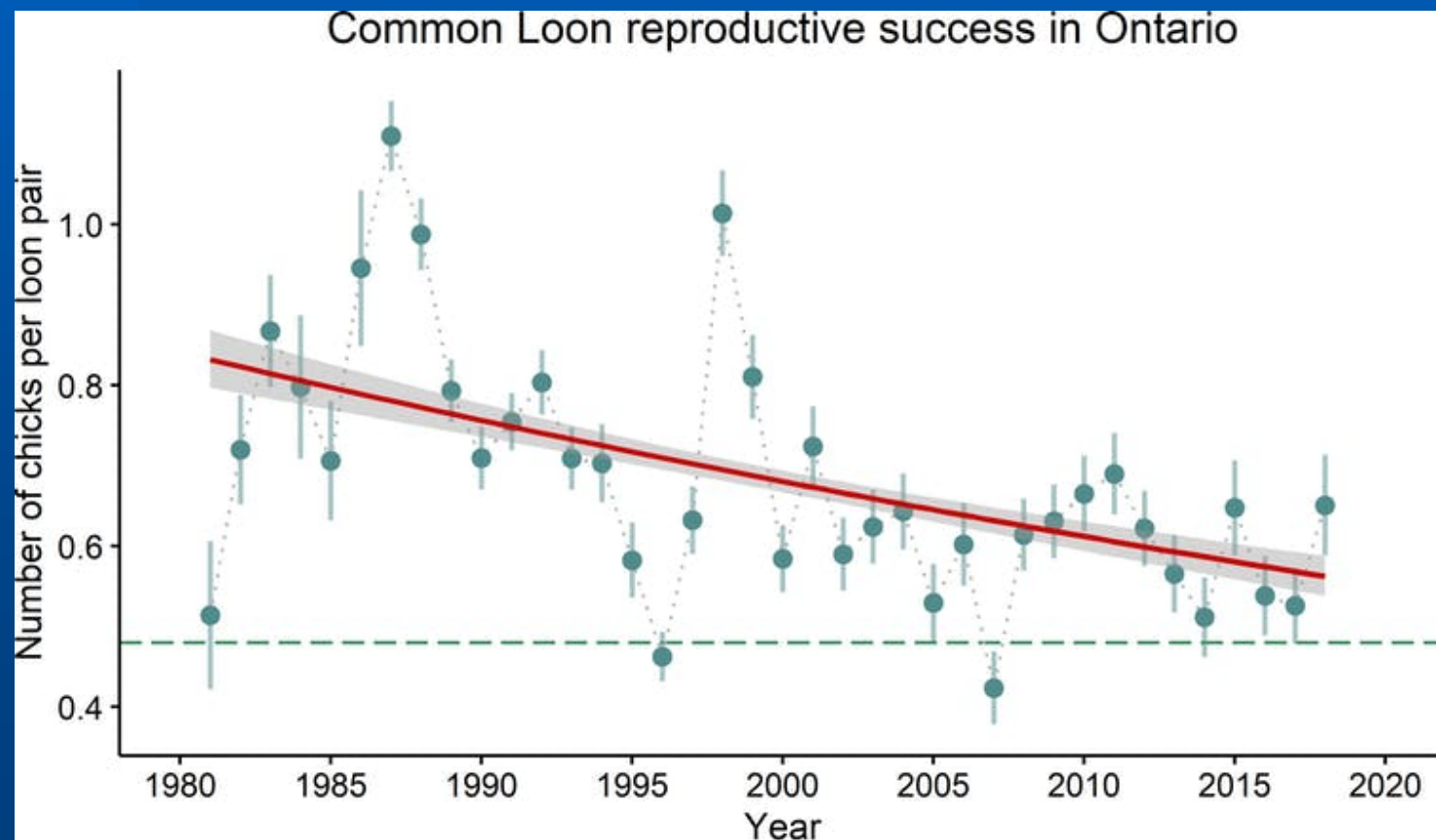
# Loon Monitoring

- MN Loon Monitoring Program
- LoonWatcher



# Loon Monitoring - Why

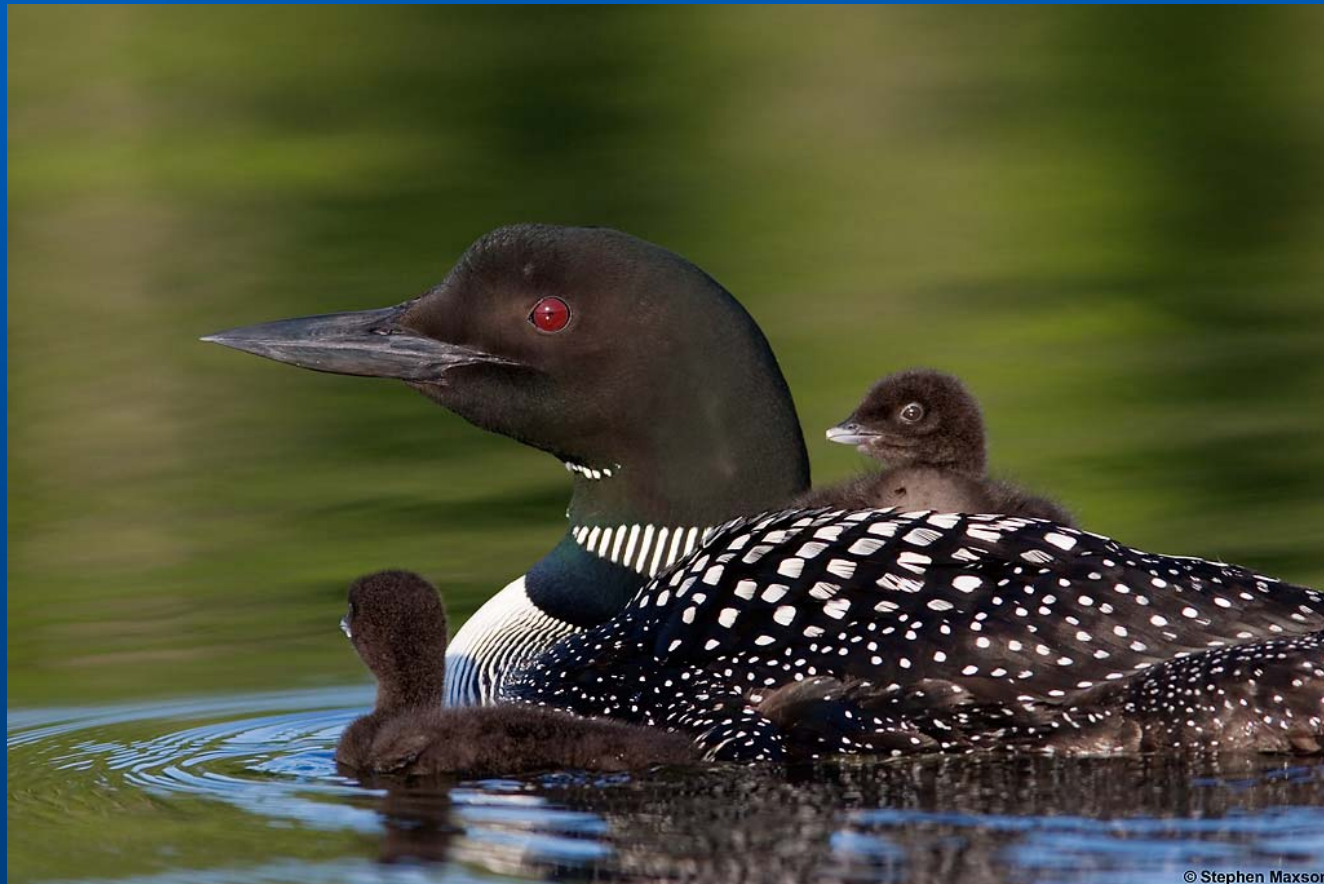
- Historical declines have occurred
- Some areas still experiencing declines





# Loon Monitoring - Why

- Minnesota contains over 50% of breeding adults in the lower 48 states



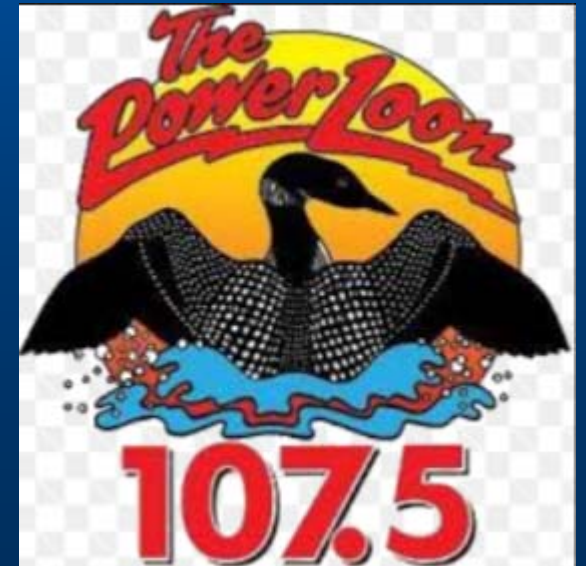
# Loon Monitoring - Why

- Good indicators of water quality



# Loon Monitoring - Why

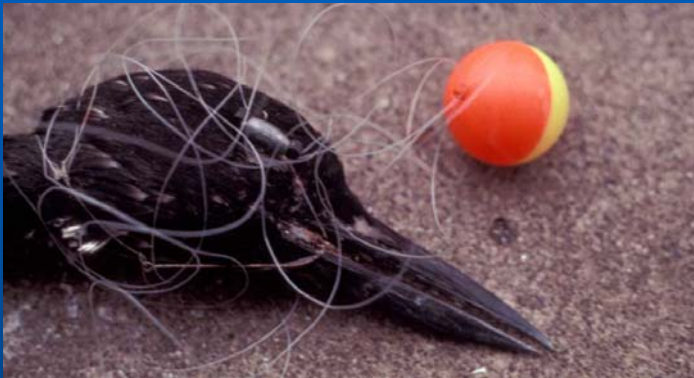
- People care about loons





# Loon Monitoring - Why

- Current anthropogenic threats exist



# Data Collection

- Consistency is key!
- To talk about trends, need long-term data



# TRWA Data

- Have loon numbers declined?

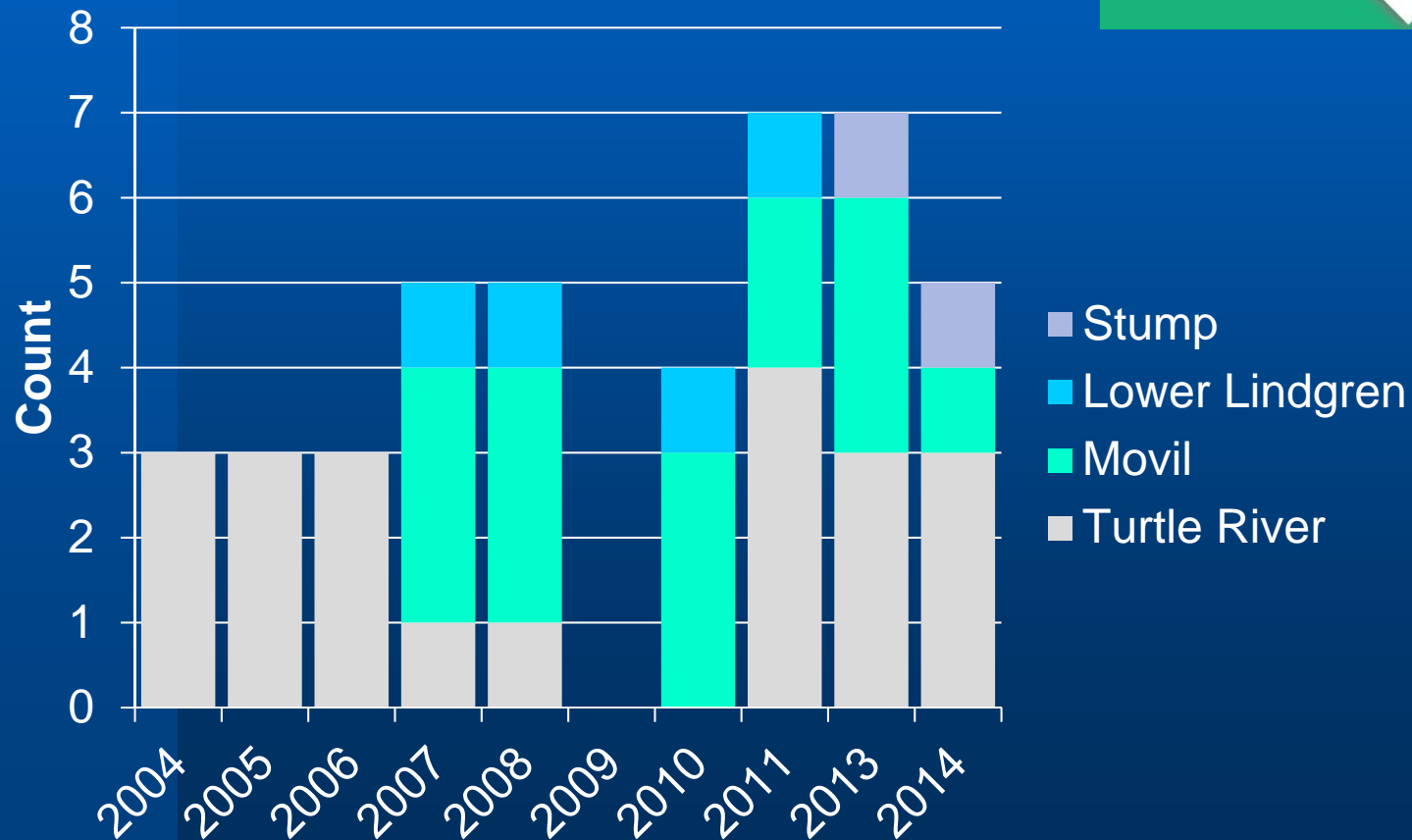




# TRWA Data



- Have loon numbers declined?



# TRWA Data

Lake	2004	2005	2006	2007	2008	2009	2010	2011	2013	2014	Sum	Count
Beltrami	3	3	3		2	0	2	2	3	2	23	9
Big Turtle		5		3	3	0	5	0	2	2	20	8
Big Turtle (N)		2									2	1
Big Turtle (S)		3	3								6	2
Big Turtle (W)		0									0	1
Black								2			2	1
Deer	0		0	1	1	0	0	1	2	1	6	9
Fox			1	0	0	0	0	1	1.5	0	5	7
Little Gnat												0
Little Turtle				1		0	1	0	1	1	5	6
Little Turtle River					0	0	0				0	3
Long			1	1	1	0	2	2			7	6
Long (NW)									2	0	4	2
Lindgren									1		1	1
Lower Lindgren				1	1	0	1	1			4	5
Movil			0	3	3	0	3	2	3	1	15	8
Stump									1	1	4	2
Three Island				4	4	0	3	6			17	5
Turtle River	3	3	3	1	1	0	0	4	3	3	24	10
Sum	6	16	11	15	16	0	17	21	31	12	145	
Count	3	6	7	9	10	0	11	11	10	9		

# Recommendations

- Need annual numbers to make comparisons
- Best if same person/group surveys the lake every year
  - Mentoring and working together



Source: Maine Audubon



# Want to Get Involved?



[Home](#) >

## Volunteering

[Main page](#)

[Volunteer Opportunities](#)

[Meet our Volunteers](#)

### Volunteering - citizen science

[Bear Sightings](#)

[Lake Level Minnesota](#)

[Minnesota loon monitoring program](#)

[Minnesota Forest Pest First Detector Program](#)

[Volunteer LoonWatcher survey](#)

[Zebra mussel monitoring](#)

## Volunteer with DNR



**Get involved!**

# Questions?



Source: Linda Grenzer; KARE11; YouTube Boyd Huppert





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[Christine.Herwig@state.mn.us](mailto:Christine.Herwig@state.mn.us)