

Crooked Lake Management Plan 2017 Update

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Plan History

2008

- Original plan developed

2013

- Public input workshop

2014

- CLMP updated (2014-2019)

Lake Management Priorities

1. Aquatic Invasive Species

2. Lake Levels

3. Nonpoint Source Pollution

4. Aquatic Vegetation



4. Aquatic Vegetation

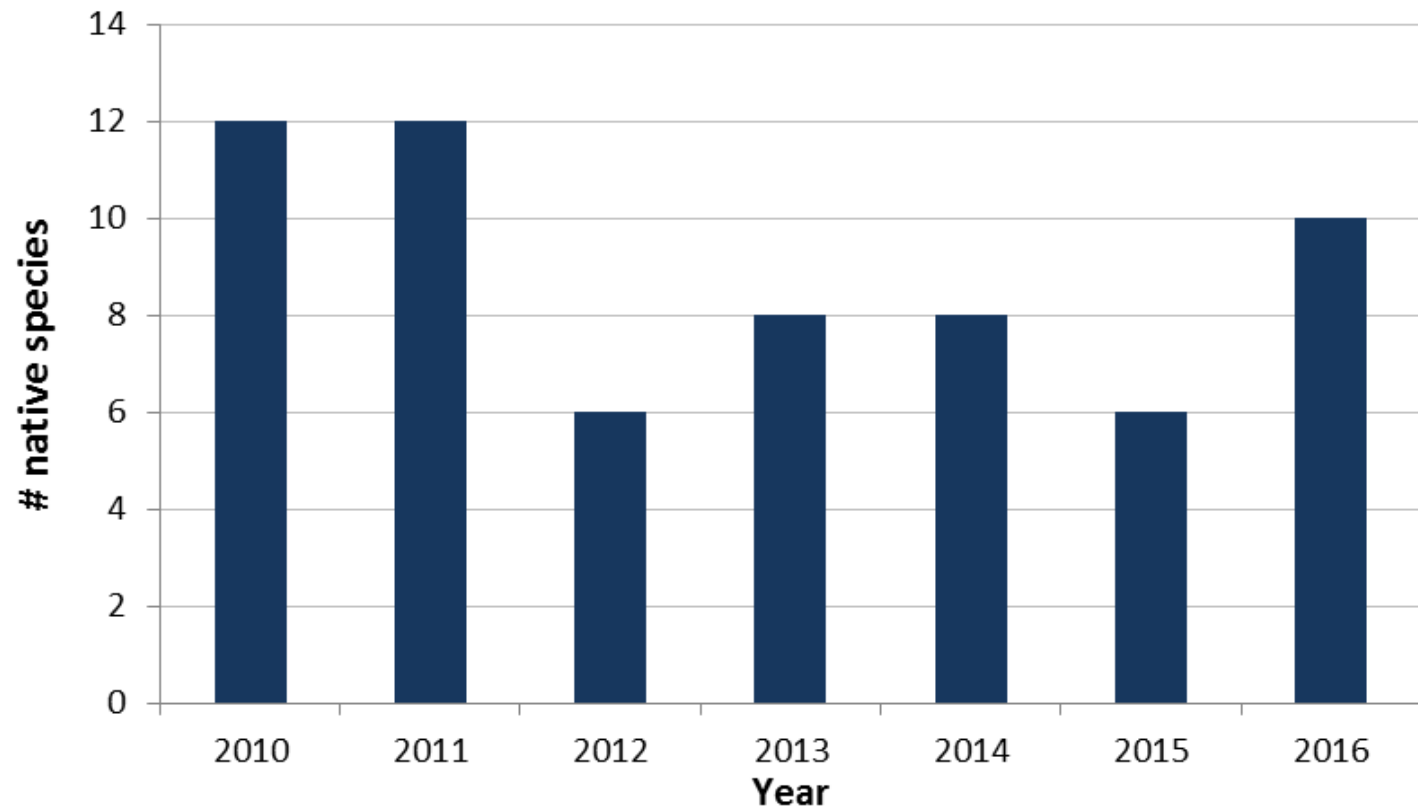
Goal: Protect the native plant community



Photo Credit: James Johnson

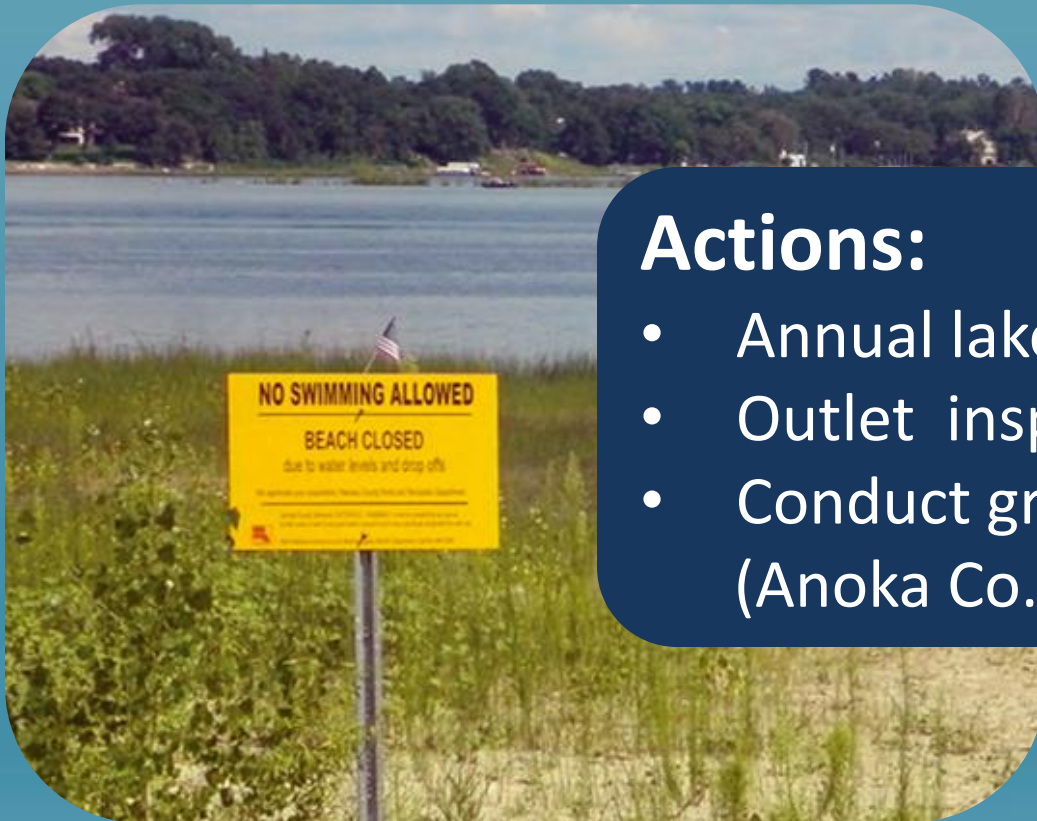
Actions:
Annual plant surveys

Submersed Aquatic Plants in Crooked Lake



3. Lake Levels

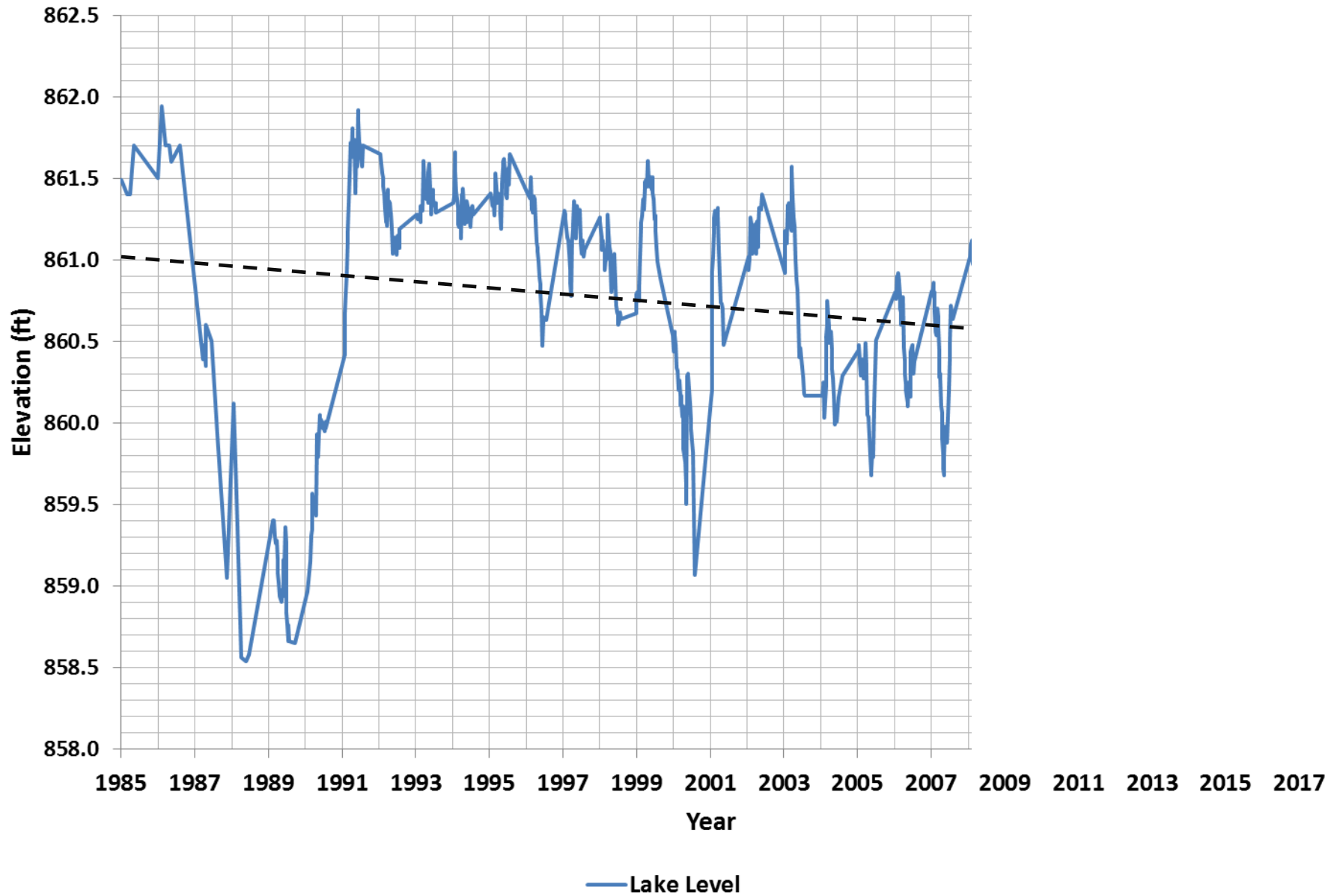
Goal: Gain a better understanding of lake hydrology



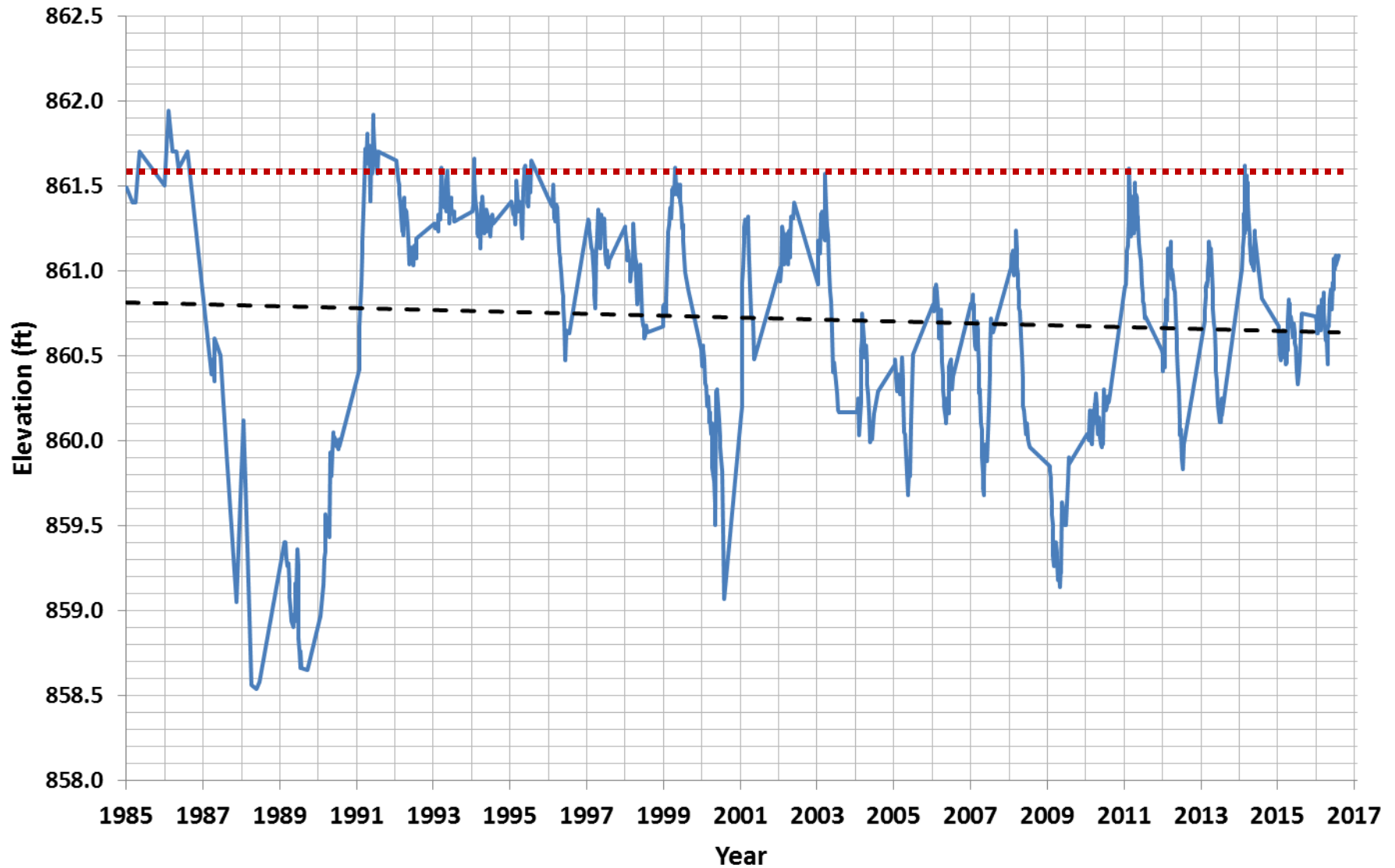
Actions:

- Annual lake level monitoring
- Outlet inspection
- Conduct ground/surface water study (Anoka Co. Hydrogeologic Atlas, DNR)

Crooked Lake Water Levels (1985-2008)



Crooked Lake Water Levels (1985-Present)



— Lake Level - - Trend No Wake

Crooked Lake Outlet Inspection



Concrete weir



Concrete weir

2. Nonpoint Source Pollution

Goal: To ensure that water is protected from contamination; non-degradation of water quality

Actions:

- **Water quality monitoring**
- **Inspect stormwater infrastructure**
- **Educational outreach (shoreline practices, rain gardens, etc.)**

Crooked Lake Water Quality Report Card

	2008	2009	2011	2012	2014	2015
Total Phosphorus	B	C	B	A-	A	B
Chlorophyll-a	A	A	A	A	A	A
Clarity	B	B	B	B	B	B
Overall	B	B	B	A-	A	B

Source: Anoka Conservation District Water Almanac

1. Aquatic Invasive Species

Goal: Minimize ecological, economic, and human health impacts



Actions:

- Invasive plant delineation surveys
- Herbicide treatments for established invaders
- Watercraft inspections (Anoka County)
- AIS early detection surveys (CCWD/ACD)

Watercraft Inspection Results

2016: 519 hours → 956 inspections

**~7%
violation
rate**

**12% of incoming boats
came from lakes &
rivers infested with
zebra mussels**

Mille Lacs

Rum
River

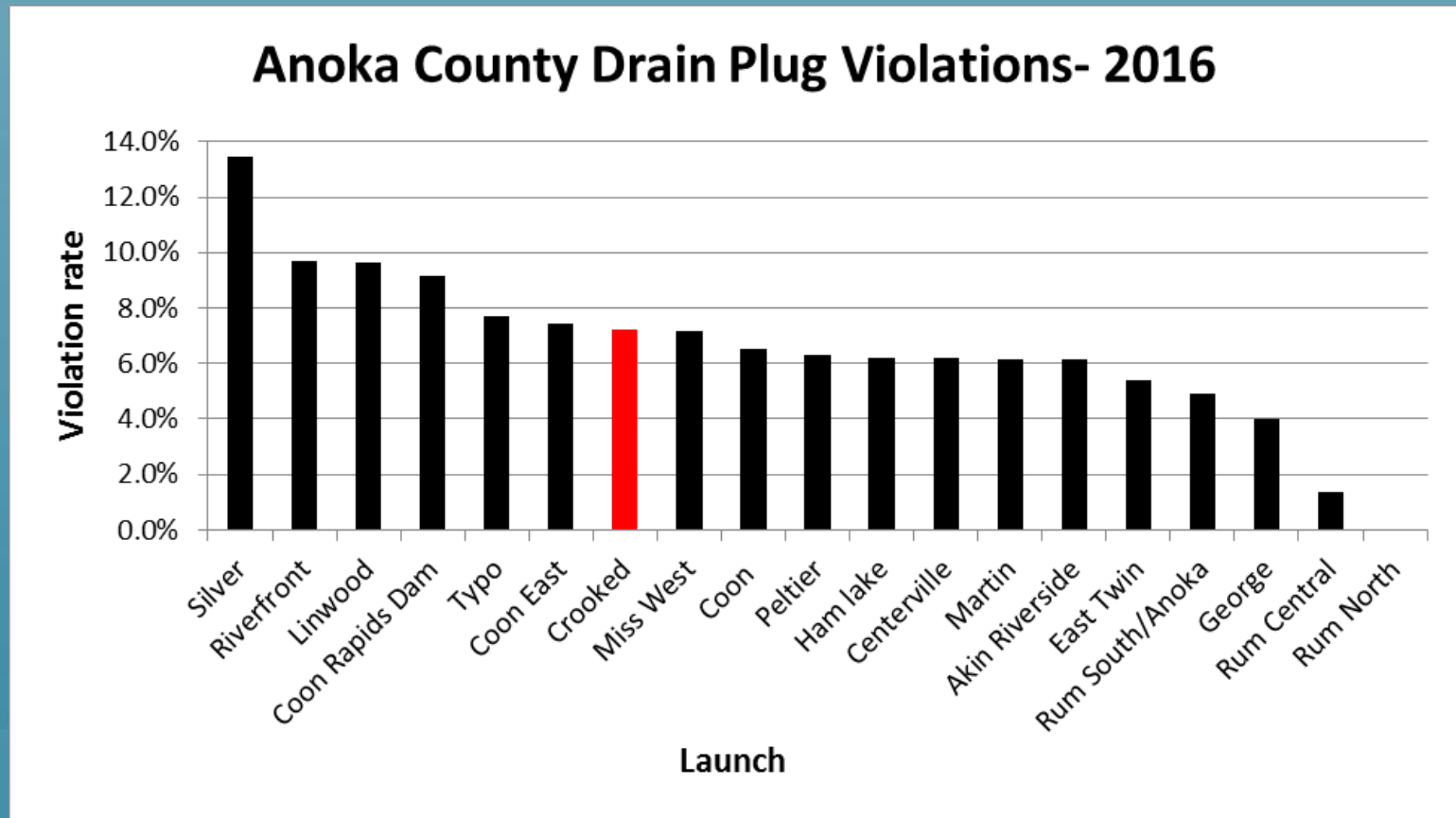
Forest

Minnetonka

Miss.
River

Watercraft Inspection Results

7.2% boat plug violation rate, down from 12% last year

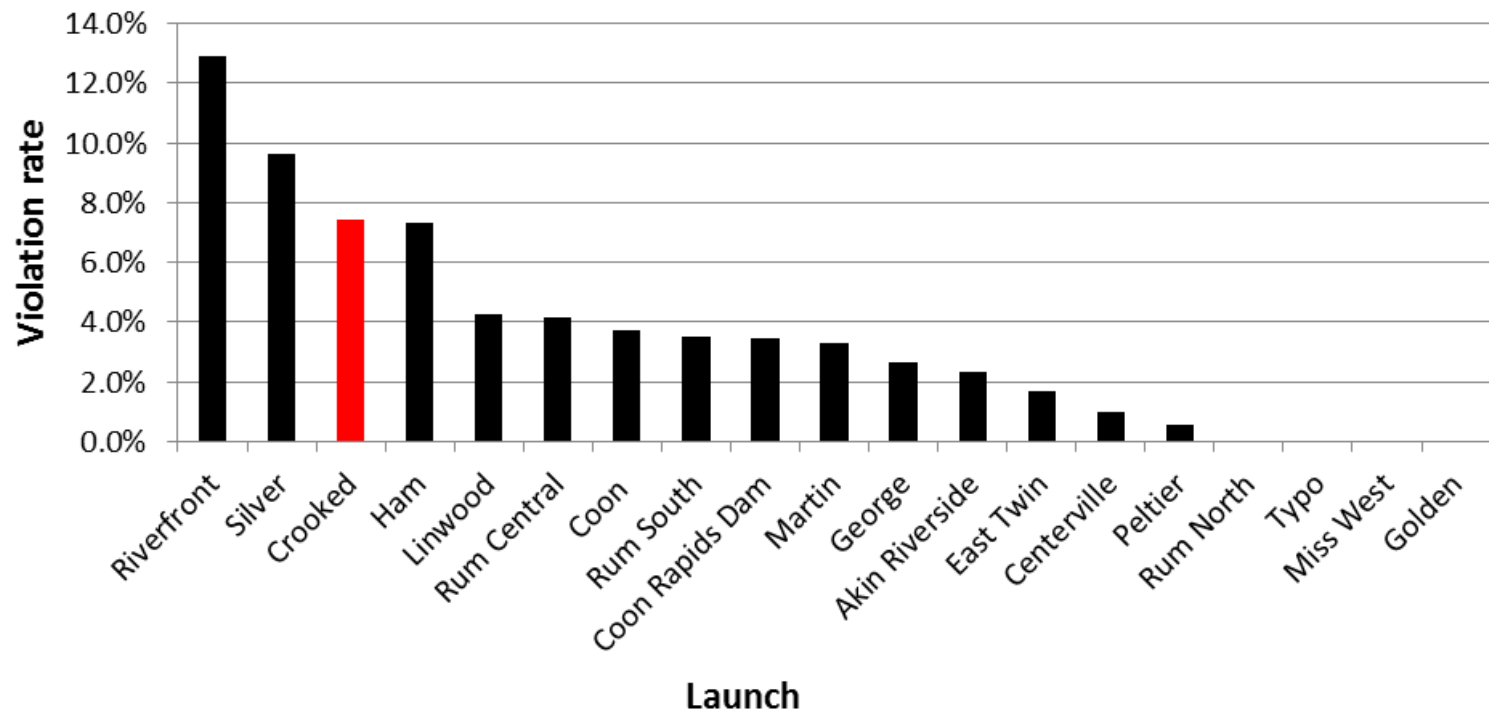


Source: Jessica Leverty, Anoka County

Watercraft Inspection Results

7.4% plant violation rate, similar to 6.6% last year

Anoka County Plant Violations- 2016



Source: Jessica Leverty, Anoka County

AIS Early Detection Efforts

**CCWD contracts ACD to survey twice per year:
No new infestations**

**Anoka County launched a citizen
monitoring program in 2016**

**New for 2017:
Zebra Mussel samplers**

Zebra Mussel Samplers

**Seeking 10-12
volunteers evenly
distributed around
the lake**

- 1) Hang from dock
- 2) Check monthly
- 3) Report findings



Zebra Mussel Training Workshop

Tuesday, April 25th @ 6:30pm

Bunker Hills Activity Center (Maple Room)



Juvenile ZM from Christmas Lake (MCWD)


Zebra Mussel Sampling Volunteers

**Thank you to first 5
volunteers!**

**Still in need of 4-6
more volunteers!**

Eastern shoreline...?





Thank you!
Questions?

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