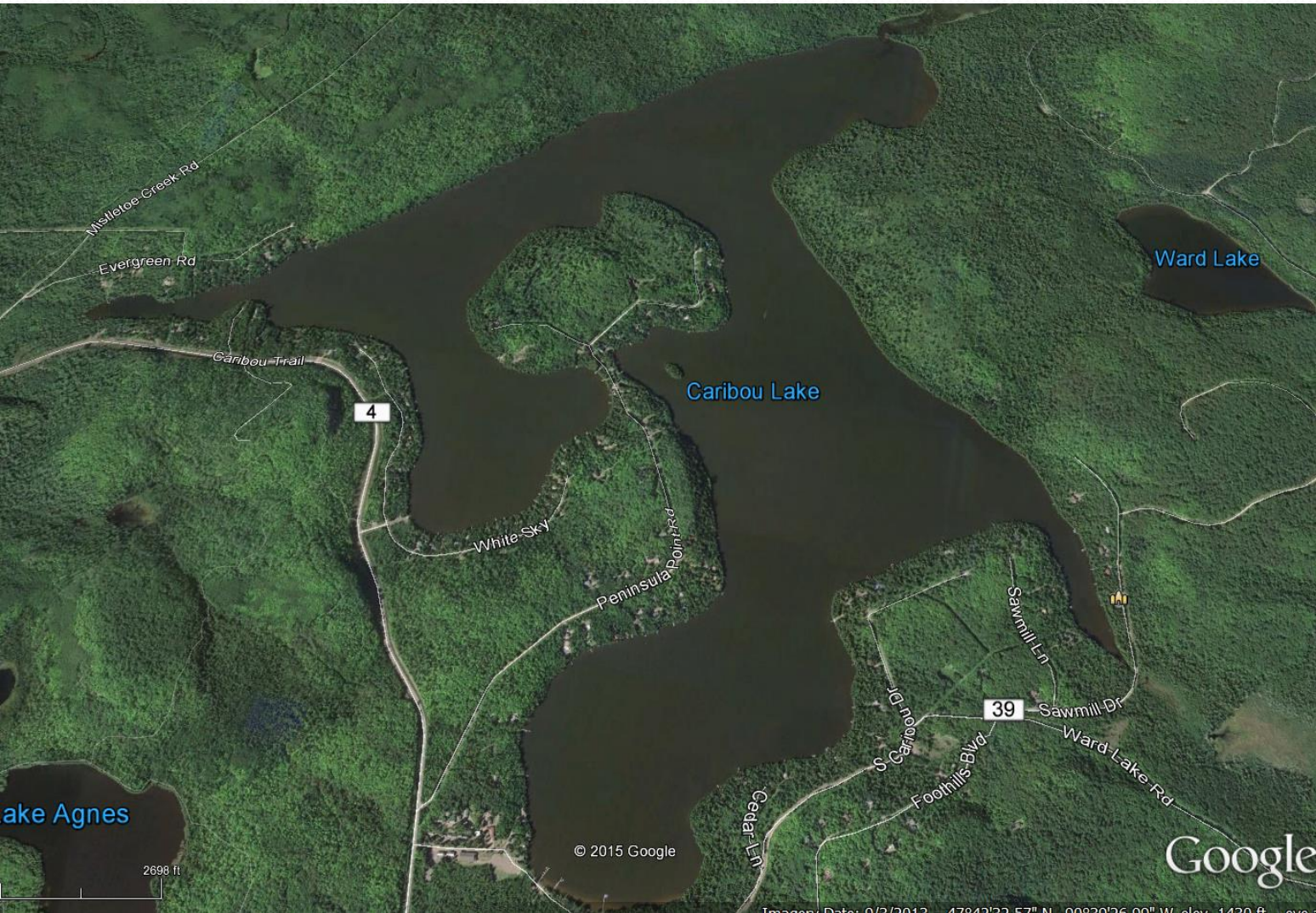


Caribou Lake Property Owners' Association



AGENDA

Introduction of Board Members, attendees, and guests

I. Reports and official business

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IV. Adjourn

CCCoLA Report

Cook County Coalition of Lake Associations

CCCoLA Activities

- Work with Soil and Water with water monitoring and educational activities – county is paying for 2 calcium tests for county lakes – including Caribou
- Give feedback regarding county AIS plan
- Share information between lakes/watersheds
- Disseminate info from County, State and Fed to lakes
- Disseminate info from MN Lakes and Rivers & UMN Aquatic Research Center
- Provide information to public regarding CCCoLA activities

Did you know?

- 11 county lakes are doing water monitoring through Cook Cty SW

Volunteer hours: 240 Value of \$6,048

- 5 lake associations doing water monitoring
- Volunteer hours: 150 Value of \$3,780

Additional lakes and streams are monitored through MPCA

- July – Matt Weberg – DNR Fisheries
- August – Hosted Lake Stewardship/Management Planning workshop with Karen Evens, MPCA, Ilena Hansel, Cook Cty SW, Steve Persons, DNR Fisheries, Amy Wilfahrt, USFS, as resources. Mid- Trail Community Center, 10 lakes represented.
- September – 25by25 – Community Water Meeting. Feedback to determine regional 25⁰% goals and the top 10 proposed ideas for action.

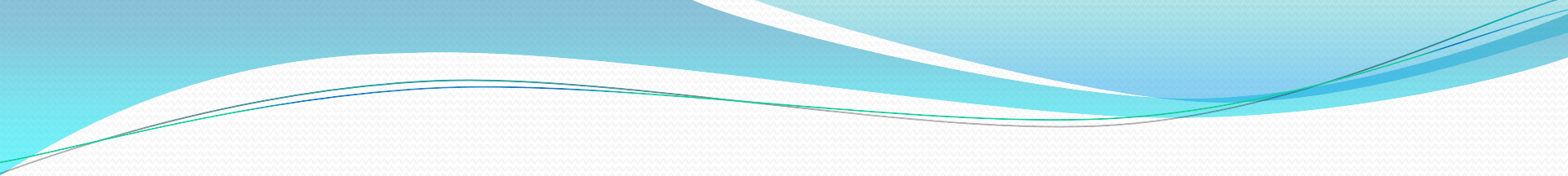
CCCoLA Lake Stewardship Workshop



Lake Superior North Watershed Overall Condition

Generally GOOD

Consistently meets state standards

- 
- Why – Lightly developed, heavily-forested landscape
 - Many – Exceptional streams and Outstanding water in a number of lakes
 - 40% of the streams monitored support “exceptional” biological communities. Includes species that are rarely found outside of Lake Superior-North

Concerns

- Aquatic life use impairments – high levels of suspended sediment (Poplar River/Flute Reed River)
- Declining water transparency on four lakes (Poplar, Deer Yard, Devil Track, Tom)
- Protection strategies to encourage development design and related Best Management Practices that promote good water quality and aquatic habitat

Specific Issues/Stressors

- **General Forestry/logging/associated development**
 - well managed forests provide both economic and ecological benefits.
 - roads and culverts can contribute to degraded water resources.
- **Aggregate Mining –**
 - may alter local groundwater and surface-water levels.



- **Road Network/Stream Crossings**

- More than 300 locations
- Addition intersections between streams/trails and railroads
- Reduces movement of water, material and organisms
- increased water temps

Climate/Land Use Changes

- Higher temps, reduced dissolved oxygen, increased erosion
- Aquatic systems will likely experience negative effects

- 
- **Groundwater/Surface Water Withdrawals**
 - Increasing, nearly 30% over the last 20 years: private consumption, recreational water related needs, development pressure

Water Quality Report

Phosphorus
Chlorophyll-a
Secchi Disk
Oxygen
Calcium



Lake Agnes

2698 ft

© 2015 Google

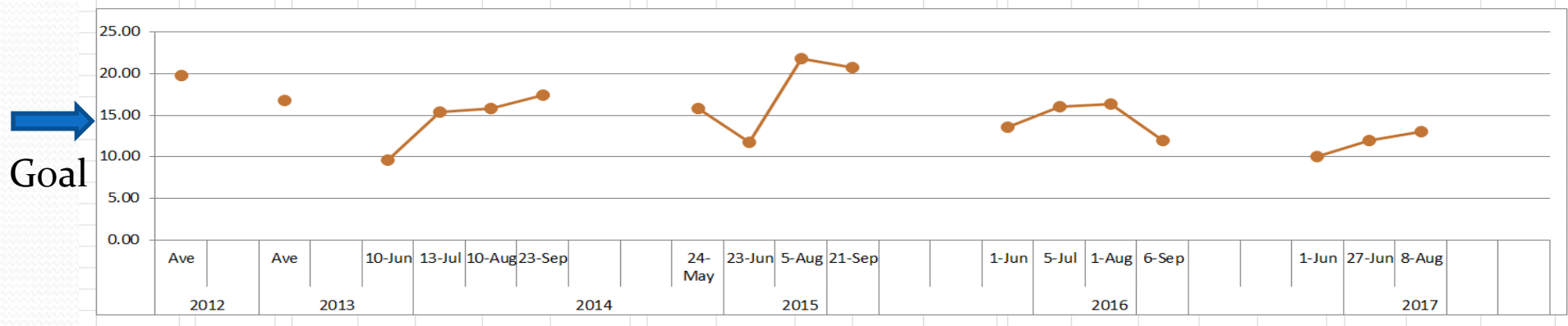
203

Google

Image Date: 0/3/2013 - 47942'32.57" N, 00930'26.00" W, elev. 1430 ft. ave

Caribou Lake Sample Results - Phosphorous (Goal = 15 PPB or less)

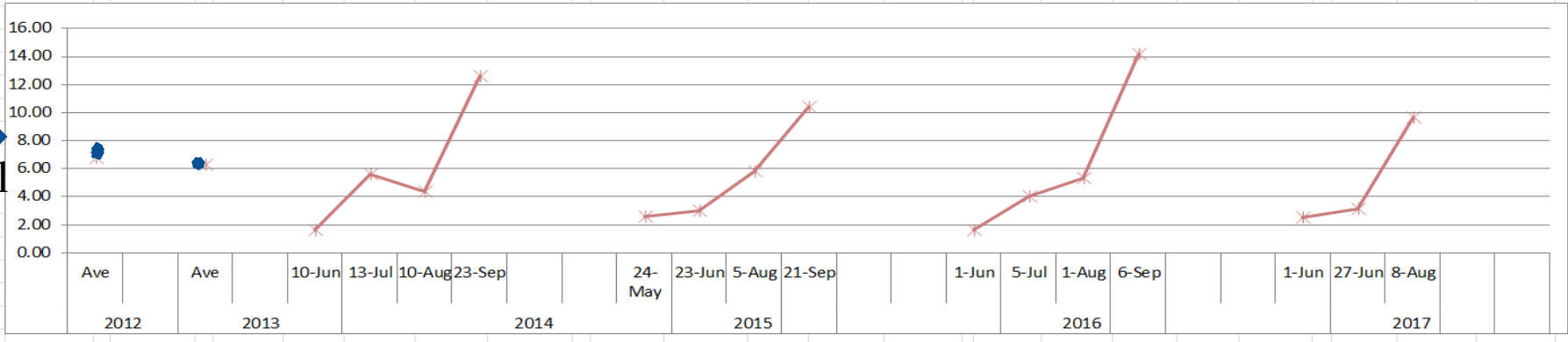
Site	2012	2013	2014					2015					2016					2017				
	Ave	Ave	10-Jun	13-Jul	10-Aug	23-Sep	Ave	24-May	23-Jun	5-Aug	21-Sep	Ave	1-Jun	5-Jul	1-Aug	6-Sep	Ave	1-Jun	27-Jun	8-Aug	Sept	Ave
203 (Camp)	20.50	16.25	9	12	21	17	14.75	12	12	25	16	16.25	12	17	15	11	13.75	10.0	13.0	9.0		10.67
100 (Island)	22.50	23.25	10	24	14	16	16.00	12	11	21	22	16.50	11	18	17	8	13.50	9.0	13.0	14.0		12.00
205 (Fosters)	20.50	16.25	10	14	14	18	14.00	16	11	24	31	20.50	12	15	18	24	17.25	11.0	10.0	16.0		12.33
103 (Landing)	18.25	13.75	9	14	16	16	13.75	18	12	17	18	16.25	13	16	17	9	13.75	10.0	12.0	18.0		13.33
201 (Isthmus)	17.00	14.25	10	13	14	20	14.25	21	13	22	17	18.25	20	14	15	8	14.25	10.0	12.0	8.0		10.00
Average	19.75	16.75	9.6	15	15.8	17.4	14.55	15.8	11.8	22	20.8	17.55	13.6	16	16.4	12	14.50	10.0	12.0	13.0	0.0	11.67



Caribou Lake Sample Results - Chlorophyll-a (Goal 8 PPB or less)

Site	2012		2013		2014				2015				2016				2017					
	Ave	Ave	10-Jun	13-Jul	10-Aug	23-Sep	Ave	24-May	23-Jun	5-Aug	21-Sep	Ave	1-Jun	5-Jul	1-Aug	6-Sep	Ave	1-Jun	27-Jun	8-Aug	Sept	Ave
203 (Camp)	6.00	7.00	1	4	5	9	4.75	3	4	5	10	5.50	1.78	2.22	4	14.2	5.55	3.6	1.0	12.5		5.69
100 (Island)	7.50	6.25	3	5	5	12	6.25	4	2	7	11	6.00	1	4.9	6.68	16	7.15	1.0	3.6	9.3		4.63
205 (Fosters)	7.75	5.50	1	5	3	16	6.25	2	4	7	10	5.75	1.34	5.34	7.12	14.2	7.00	3.6	3.6	9.8		5.64
103 (Landing)	6.25	6.50	1	8	4	12	6.25	2	2	6	12	5.50	2.22	2.67	4.9	12.9	5.67	3.6	3.6	7.1		4.75
201 (Isthmus)	6.50	6.25	2	6	5	14	6.75	2	3	4	9	4.50	1.78	4.9	4	13.4	6.02	1.0	4.0	9.3		4.78
Average	6.80	6.30	1.6	5.6	4.4	12.6	6.05	2.6	3	5.8	10.4	5.45	1.62	4.01	5.34	14.1	6.28	2.5	3.1	9.6	0.0	5.10

Goal

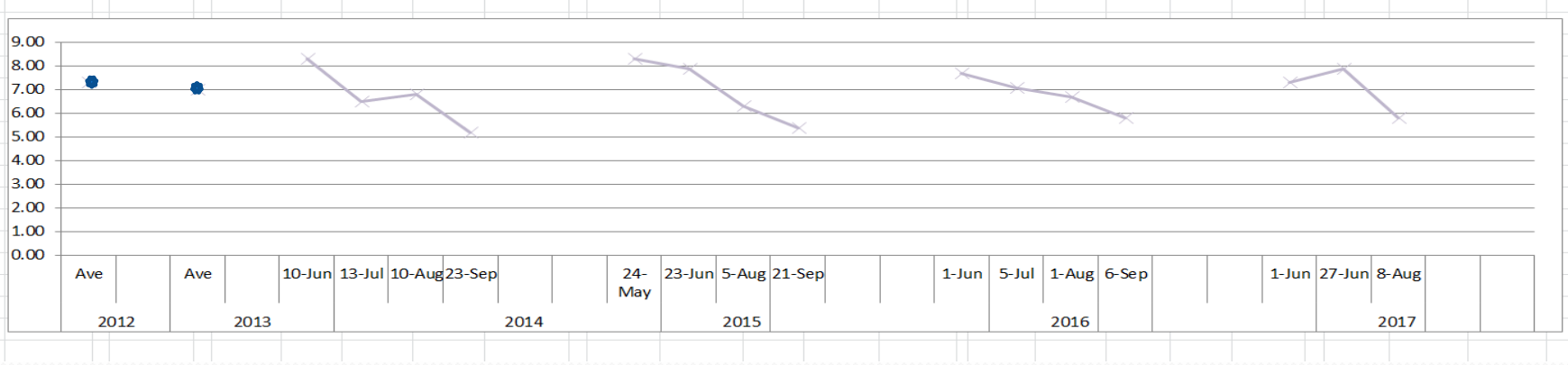


Caribou Lake Sample Results - Secchi (Goal is 6 feet or more)

Site	2012		2013		2014				2015					2016					2017				
	Ave	Ave	10-Jun	13-Jul	10-Aug	23-Sep	Ave	24-May	23-Jun	5-Aug	21-Sep	Ave	1-Jun	5-Jul	1-Aug	6-Sep	Ave	1-Jun	27-Jun	8-Aug	Sept	Ave	
Secchi (Feet) Goal is 6 or more																							
203 (Camp)	7.71	7.25	8.5	7	7	5	6.88	10	9	6.5	5.5	7.75	8	7	7	5.5	6.88	7.5	8.5	6.0		7.33	
100 (Island)	8.40	7.50	8	6.5	6.5	5.5	6.63	6.5	7	5.5	5.5	6.13	8.5	6.5	7	6.5	7.13	8.0	8.5	6.0		7.50	
205 (Fosters)	8.04	7.13	8.5	7	7.5	5.5	7.13	10.5	9	6.5	6	8.00	7.5	7.5	7.5	5.5	7.00	8.0	9.0	6.0		7.67	
103 (Landing)	6.02	6.63	8.5	6	6.5	5	6.50	6.5	7	6.5	5	6.25	7.5	7	6	5.5	6.50	6.0	6.5	5.5		6.00	
201 (Isthmus)	6.46	6.63	8	6	6.5	5	6.38	8	7.5	6.5	5	6.75	7	7.5	6	6	6.63	7.0	7.0	5.5		6.50	
Average	7.32	7.03	8.3	6.5	6.8	5.2	6.70	8.3	7.9	6.3	5.4	6.98	7.7	7.1	6.7	5.8	6.83	7.3	7.9	5.8	0.0	7.00	



Goal



Calcium Sample

- Summer of 2017 7.6 mg/L
- Summer of 2016 8.2 mg/L

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AIS

Aquatic Invasive Species

Inspections

Detection

Cook County Infested Inland Lakes

- 16 have Spiny Waterflea
- 6 have Purple Loosestrife
- 7 have Rusty Crayfish
- 1 has Chinese Mystery Snail

Boat Inspections

- 5 paid inspectors (by county) plus deputy sheriff
- 7 volunteers from CLPOA membership
 - Consider Volunteering next year – Will have DNR training again early next summer.

CLPOA Volunteer Boat Inspectors

(Attended DNR Training)



Sharon Hexum Platzer, Jill DeWitt, Jon Westby,
Larry & Irene Mullen, and Carol & Philip Westbrook

Inspections on Caribou (thru 8/31)

196 total hours of with 58 being volunteer hours

103 inspections

1.6 inspections per hour

97% of watercraft are from MN - 1 AZ, 2 WI

99% AIS state law compliance - 1 drain plug was in on arrival

39% spoke with an inspector within the last 30 days

14% of watercraft were not from Cook County

8% of fishing boats were not from Cook County

45% fishing boats

42% *canoes/kayaks/paddleboards*

13% other - pontoon, jet ski, runabout

Detections

- 2 Citizens reported possible AIS which turned out to be native species.
 - Inquiries to DNR or Amanda Weberg Cook Co. AIS Co-coordinator
 - DNR Certified Detectors investigate.
- Continue to monitor for spiny waterflea
- Lake survey to be conducted this fall

DNR Fish Survey Preliminary Results

7/05/2017 to 7/13/2017					
Species	Gill Net		3/4 in Mesh		
	Total	Mean Weight	Total	Mean Weight	
Bluegill	2	0.07	12	0.41	
Northern Pike	6	2.4	7	2.82	
Pumpkinseed	1	0.06	1	0.04	
Smallmouth Bass	6	0.94	5	1.18	
Walleye	51	1.01	6	0.91	
White Sucker	50	1.56	1	0.87	
Yellow Perch	20	0.1	0	0	
Black Crapie	0	0	1	0.78	

Walleye

Gill Net		<u># per set</u>	<u>Weight</u>
2017		5.67	1.01
2014		6.67	0.77
2011		7.44	0.54
2008		8.5	0.84
2005		13.56	0.69
1995		7.11	0.75
1984		13	0.65
1971		30.67	0.99
1951		69.2	0.74

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