



INC.

23 N. Lake Ave.
Third Lake, Illinois 60030
ilmbland@comcast.net

Fish Survey Data Form

Lake/pond	Sanctuary Pond			
Size	2.6 acres			
Date/time	June 28,2023			
Sample Team	P. Willink, J.K.Bland, Nick Huber, James Fitzgerald, Will Kopecky			
Sample length/time	1.5 hrs.			
Sample methods	10 ft. seine, 20 ft. seine, dip nets			
Coordinates				
Weather	Partly sunny/ Canadian haze	H2O temp 21.4	Air Temp	pH=7.42 Cond.0.835 DO=3.32
Notes:	Riparian vegetation Willows, elderberry, box elder, equisetum, elm, hickory, cattails, reed canary grass Heavily vegetated understory Village garden to the south of pond separated by road and vegetation. Algae/aquatic weeds White water lily forms dense perimeter; beneath the water lily and in center is substantial mass of <i>Ceratophyllum demersum</i> (Coontail).			
	Species/common name	Number captured	Voucher Specimen	
1	Iowa darter <i>Etheostoma exile</i>	60 est.	Multiple yr classes	
2	Banded killifish <i>Fundulus diaphanus</i>	7	Multiple yr classes	
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Notes:

- Water lilies put down extensive rhizomes which makes footing difficult. Seining underneath the water lilies is possible, however.
- *Ceratophyllum* exists as a substantial understory across the whole pond.
- Low DO (i.e. 3.2 mg/l) implies zero DO at night, low DO during day....how do these fish survive?
- The shiner species are absent ; both blackchin shiner and blacknose shiner are absent from pond for this monitoring session.
- Note the low pH 7.42; too little oxygen and too much carbon dioxide lowers the pH of ponds; while 7.4 is acceptable it suggests that metabolism of pond is in direction of generating carbonates and carbonic acid
- Canadian haze was active during sampling session.
- Conductivity of the pond (0.835) is similar to the County 2000 to 2022 average (0.8313). Conductivity is an indirect measure of dissolved ions in the water column including salt. The county monitors conductivity as one measure of salt influence.
- Sanctuary conductivity translates to 147 mg/L Cl. County average = 163 mg/L. USEPA guidelines not to be exceeded = 230 mg/L
- In December of 2021 there was a leak in the sewage line which is directly to the west of the pond; it is suggested that thousands of gallons of high nutrient raw sewage made its way to the pond. The single event will have significant influence on how the pond ages and its metabolic profile in the future.
- Water temperatures influence the amount of oxygen that can be dissolved in the water column; the higher the temperature the smaller the DO. High water temperatures may influence fish survival in the Prairie Crossing ponds and lakes.



Sanctuary Pond

E/T fish collection

Legend

 Fish sample

Fish sample 2  Fish sample 2

 Fish sample

Google Earth

100 ft

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Fish Survey Data Form

Lake/pond	Lake Leopold			
Size	28 acres/ 19 ft. deepest point / 6 ft. avg depth (estimate)			
Date/time	June 28,2023 11:30 AM			
Sample Team	P. Willink, J.K.Bland, Nick Huber, James Fitzgerald, Will Kopecky			
Sample length/time	1.5 hrs.			
Sample methods	20 ft. and 10 ft seines, dip nets			
Coordinates	Lat. 42.327316,Long -88.010175 at the beach			
Weather	Partly sunny; Canadian haze	H2O temp 23.9	DO= 11.42 pH=8.4 Cond.=0.853	
Notes:	Riparian vegetation White water lilies, Pickerel weed clusters, grass openings, cattail stands, arrowhead. Variable shoreline construction : beach, limestone shore bulkhead, and water lily stands. Algae/aquatic weeds Sago pondweed, Chara, Ceratophyllum			
	Common name/species	Number captured	Voucher Specimen	
1	Channel catfish; <i>Ictalurus punctatus</i>	1 large single dead fish		
2	Largemouth bass <i>Micropterus salmoides</i>	Multiple yr. classes (MYC)		
3	Bluegill <i>Lepomis macrochirus</i>	Multiple yr classes		
4	Banded killifish <i>Fundulus diaphanus</i>	MYC		
5	Iowa darter <i>Etheostoma exile</i>	MYC		
6	Blackchin shiner <i>Notropis heterodon</i>	8 adult shiners Multiple yr. classes; single large adult		
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Notes:

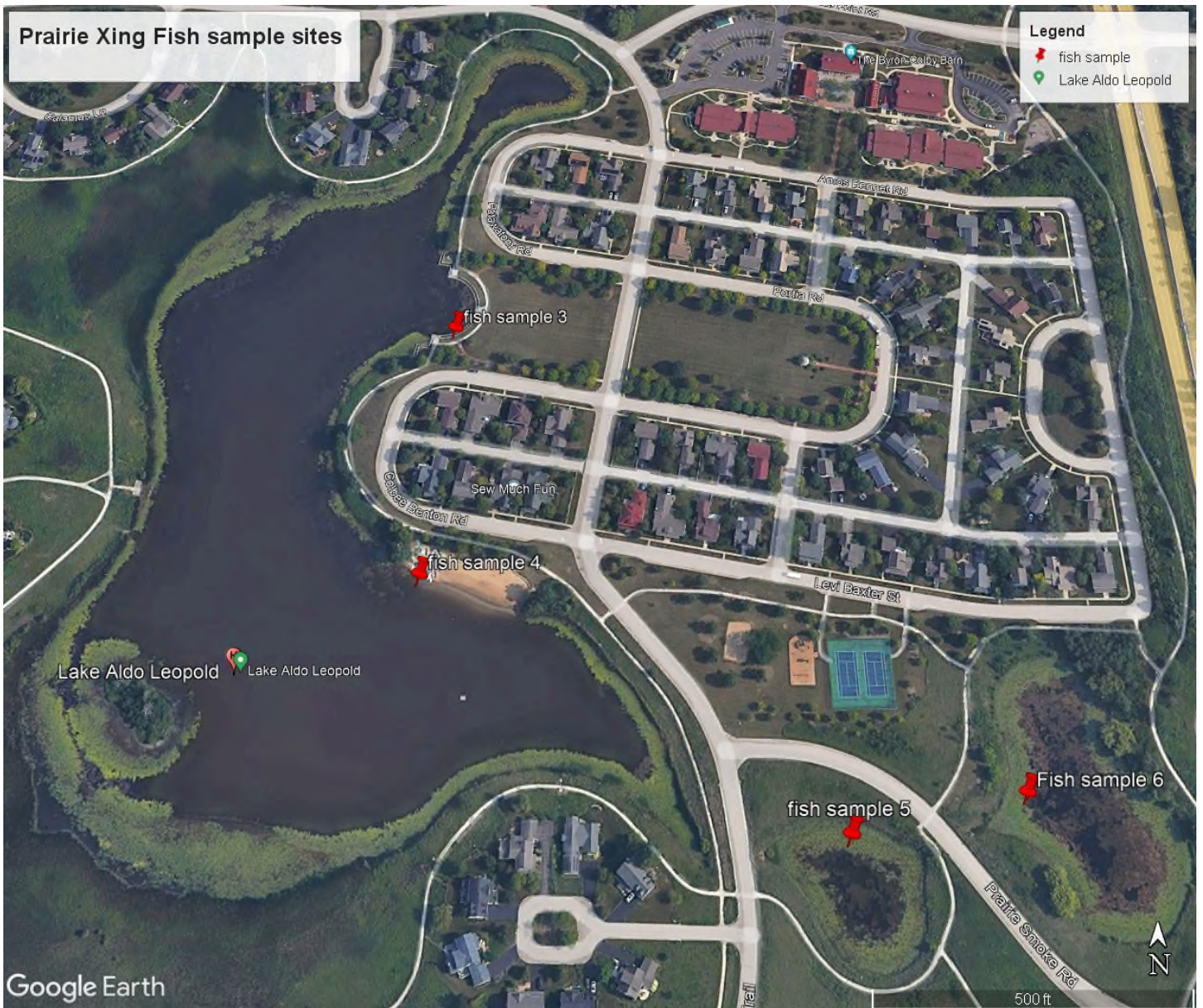
- Fish found at beach and off of limestone bulkhead (sample site 3 and 4)..
- All six species were found at beach.
- Multiple yoy shiners ; 8 adults
- Absence of blacknose shiners
- Productive seining off of Chara stands at the beach, less so for other areas.
- The North channel of Lake has been dredged.
- Stormwater for lake goes through biological “treatment train.”
- Deepest part of lake = 19 ft. just W. of beach
- Both blackchin shiners and blacknose shiners were translocated from Lake Leopold to other Lake County Forest Preserve properties/lakes; blackchins have been sustained but blacknose have not been found.
- While blacknose shiners have not been found “ we can’t accurately say something is permanently absent, only that we have not found it for this sampling cycle”.
- Do not know the cause of mortality for channel cat; no abscesses noted; DO is good.
- DO is very good, conductivity similar to County average (.8313), note pH is full unit above Sanctuary Pond value.
- Conductivity translates to Cl concentration of 152mg/L; County average 163 mg/L; USEPA recommended limit 230 mg/L.
- Assemblage included large number of larval fish (unidentified)



Prairie Xing Fish sample sites

Legend

- fish sample
- Lake Aldo Leopold





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Fish Survey Data Form..

Lake/pond	Unnamed Pond No. 1			
Size				
Date/time	June 28,2023 1:00 PM			
Sample Team	P. Willink, J.K.Bland,			
Sample length/time	1 hr			
Sample methods	10 ft. seine net, dip net			
Coordinates	42.326109, -88.007463			
Weather	Partly sunny, Canadian haze	H2O temp	Air Temp	
Notes:	Riparian vegetation Native plantings Algae/aquatic weeds Sago pondweed, Chara, Ceratophyllum, Eurasian water milfoil			
	Species/common name	Number captured	Voucher Specimen	
1	Largemouth bass <i>Micropterus salmoides</i>			
2	Bluegill <i>Lepomis macrochirus</i>			
3	Banded killifish <i>Fundulus diaphanus</i>			
4	Iowa darter <i>Etheostoma exile</i>			
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NOTES:

- This pond discharges to Lake Leopold
- Shiners are absent from the collection.
- Perimeter has been planted to native vegetation.
- No physical parameters taken.
- Iowas and killis here but no shiners



Banded killifish *Fundulus diaphanus*



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Fish Survey Data Form

Lake/pond	Unnamed Pond No. 2			
Size	Similar to an acre			
Date/time	June 29,2023 1:00 pm			
Sample Team	Nick Huber, James Fitzgerald, Will Kopecky			
Sample length/time	Similar to an hour			
Sample methods	20 ft. seine and dip nets			
Coordinates	42.326290, -88.006364 fish sample 6 site			
Weather	Partly sunny; Canadian haze	H2O temp 24.5 C	Air Temp	DO= 3.66 pH=7.45 Cond. 0.924 Salt : 174 mg/L
Notes:	Riparian vegetation Algae/aquatic weeds			
	Species/common name	Number captured	Voucher Specimen	
1	Largemouth bass <i>Micropterus salmoides</i>			
2	Bluegill <i>Lepomis macrochirus</i>			
3	Iowa darter <i>Etheostoma exile</i>			
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NOTES:

- Pond discharges out of Prairie Xing complex
- 10 ft. drop structure past pond discharges to Bull Creek and then to DesPlaines River
- Chlorides are higher here than other ponds/lakes.
- Note low DO even in early afternoon.