

Begin forwarded message:

**From:** Matthew Kocian <[MKocian@ricecreek.org](mailto:MKocian@ricecreek.org)>  
**Subject:** RE: Milfoil Survey on Johanna?  
**Date:** February 28, 2020 at 3:47:05 PM CST  
**To:** Joel Kennedy <[kennedyj@yahoo.com](mailto:kennedyj@yahoo.com)>  
**Cc:** "Lund, Keegan (DNR)" <[Keegan.Lund@state.mn.us](mailto:Keegan.Lund@state.mn.us)>

Hello Joel,

I can provide a summary of the findings from last summer's plant survey.

A point-intercept plant survey was conducted by the Mn DNR and the Rice Creek Watershed District. The attached maps and the tables below were provided by the DNR. A full report is nearing completion. The purpose of the survey is to quantify the distribution and density of all lake plants – native and invasive. Eurasian watermilfoil was found at 20% of the sampling locations. 13 native plant species were identified. Overall, Eurasian watermilfoil was sparsely distributed, and at low densities. While last summer's survey is not a perfect predictor of future conditions, it suggests that milfoil management is probably not warranted at this time.

**Table 3- Point Intercept Metrics.** Summary of point intercepts metrics for Lake Johanna, Ramsey, Minnesota (DOW# 62007800) Shaded values were calculated from littoral depth range.

	<b>JUL 2019</b>
Treated (Y/N)	N
Surveyor	MN DNR
Total # Points Sampled	144
Max Depth of Growth (95%) in feet	11
# Point in Max Depth Range	53
# Points in Littoral (0-15 feet)	79
% Points w/ Submersed Native Taxa	70
Mean Submersed Native Taxa/ Point	2
# Submersed Native Taxa	13
# Submersed Non-Native Taxa	2

**Table 4- Plant Frequency Occurrence.** Historic percent frequency of occurrence for submersed vegetation within the littoral zone (0-15 feet) in Lake Johanna, Ramsey, Minnesota (DOW# 62007800).

<b>Taxonomic Name</b>	<b>Common Name</b>	<b>AUG 2019</b>
<b>SUBMERSED PLANTS</b>		
<i>Myriophyllum spicatum</i> *	Eurasian watermilfoil*	20

<i>Potamogeton crispus</i> *	Curly-leaf pondweed*	13
<i>Ceratophyllum demersum</i>	Coontail	43
<i>Macroalgae</i>	Muskgrass and Stonewort	16
<i>Elodea canadensis</i>	Canadian waterweed	5
<i>Heteranthera dubia</i>	Water stargrass	9
<i>Myriophyllum sibiricum</i>	Northern watermilfoil	13
<i>Najas spp.</i>	Naiad	16
<i>Potamogeton foliosus</i>	Leafy pondweed	5
<i>Potamogeton gramineus</i>	Variable-leaf pondweed	8
<i>Potamogeton richardsonii</i>	Clasping-leaf pondweed	8
<i>Potamogeton zosteriformis</i>	Flat-stem pondweed	37
<i>Stuckenia pectinata</i>	Sago pondweed	1
<i>Vallisneria americana</i>	Water celery	43

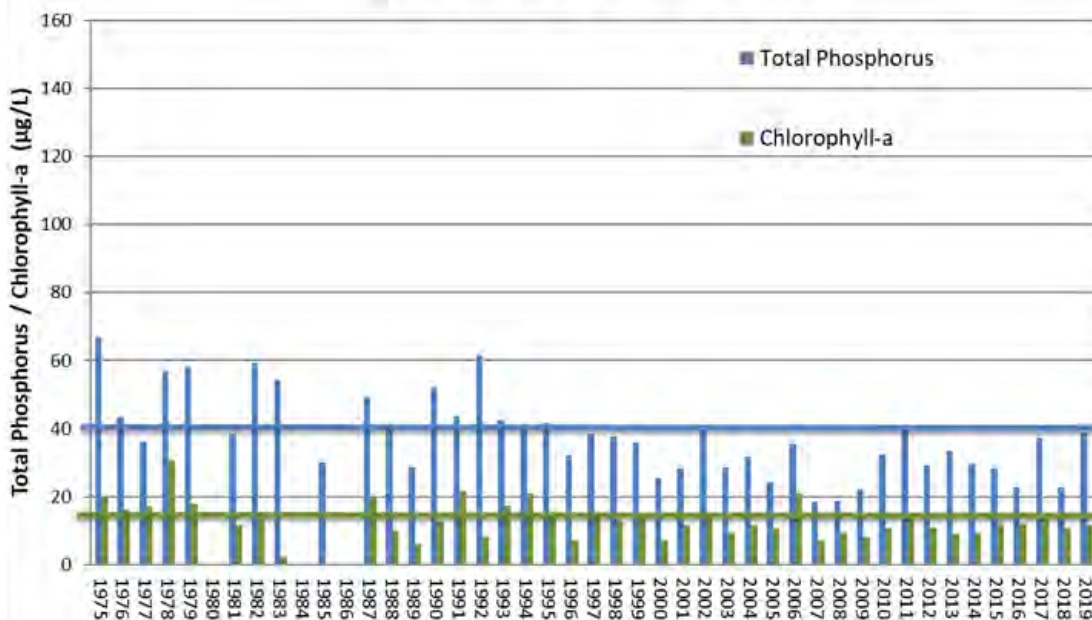
Floating, Free-floating & Emergent plants observed: *Nuphar variegata* (Bullhead pond lily), *Lemna trisulca* (Forked duckweed), *Nymphaea odorata* (White water lily)

Less common (< 5% frequency) submersed vegetation observed: *Stuckenia pectinata* (Sago pondweed) in 2019

\* denotes invasive aquatic plant

Separately (although, connected), here is a summary of water quality in Johanna: Both phosphorus and algae remain fairly low, and meeting state standards. Phosphorus was up slightly from 2018, but within the variability that we see in the long-term record. Also, phosphorus concentrations were up around our entire watershed, so Johanna was not unusual. Despite the increase in phosphorus, we did not see a corresponding increase in algae in 2019. Johanna does support a decent population of healthy native plants, which can act as a buffer against algae blooms.

Lake Johanna, TP and Chl-a



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I hope this is helpful. Let me know if you have further questions.

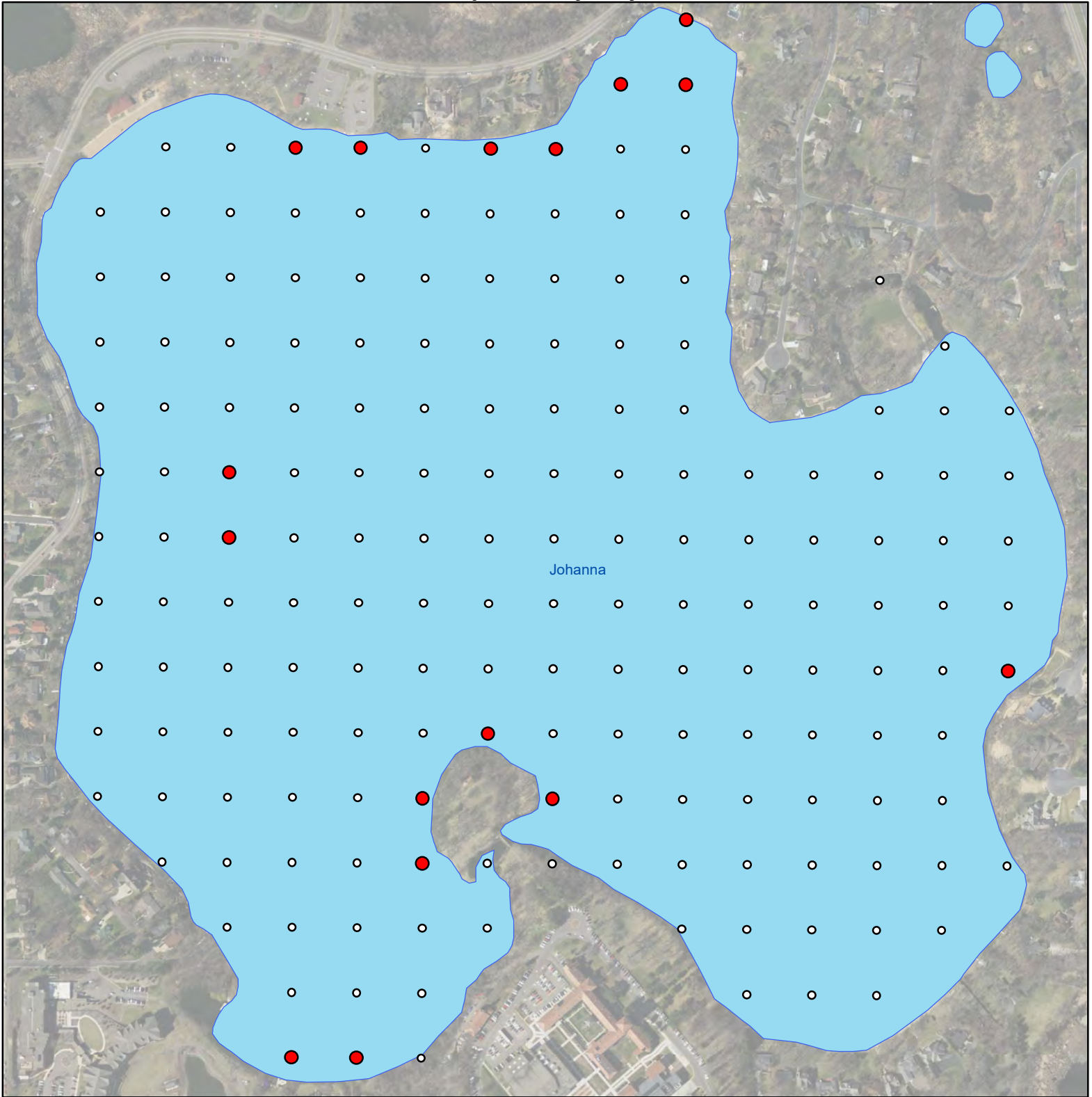
**Matt Kocian**

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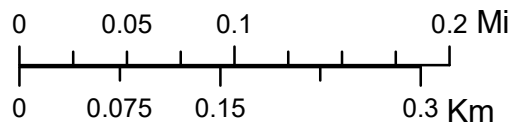
# Lake Johanna, Ramsey County

## Point Intercept Survey July 16, 2019



### 2019JahannaEWM 0-3 EWM Plant Density

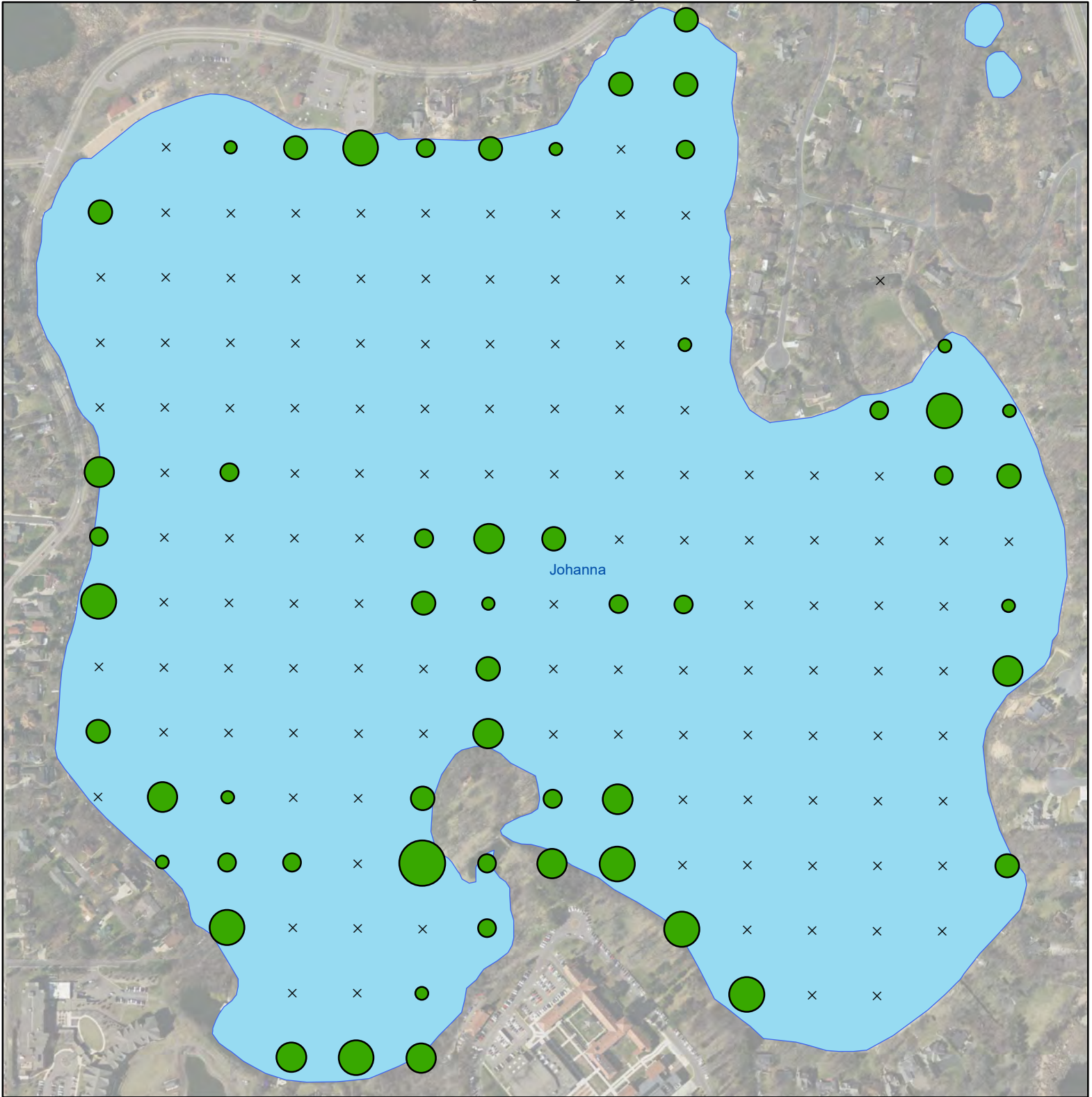
- 0-Absent
- 1-Sparse/Scattered
- 2-Common
- 3-Abundant



Zoomed to Data Extent  
 Surveyors: MNDNR and Rice  
 Creek Watershed District

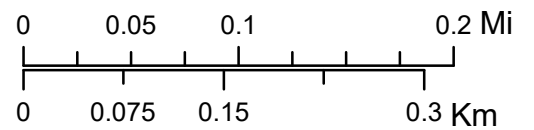


# Lake Johanna, Ramsey County Point Intercept Survey July 16, 2019



## Legend

### Native Submersed Taxa Count



Surveyors: MNDNR and Rice  
Creek Watershed District  
Zoomed to Data Extent

2/28/2020 AL