



# KAWARTHA CONSERVATION

Discover • Protect • Restore



# Lake Dalrymple Working Group Meeting #8

November 16, 2023



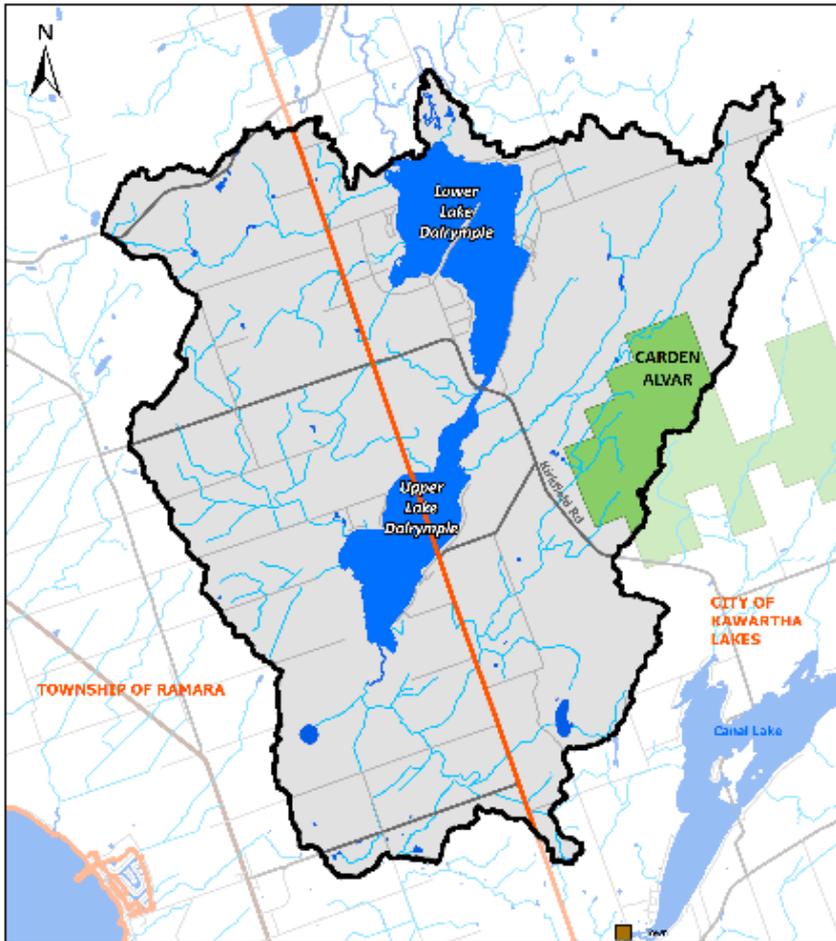
# AGENDA

1. Welcome
2. Roundtable Introductions
3. Project update
4. Monitoring Data Dashboard updates
  1. Key Water Quality and Quantity findings from 2023
5. Shoreline Statistics
6. Fisheries Information Update
7. Social Media Analytics
8. State of the Lake Report and Plan – examples from other lakes
9. Draft Solutions to Key Issues – **SEE ATTACHMENT**
10. Other business?
11. Closing – next meeting

# Project Overview

## Lake Dalrymple Management Plan

4 year project  
(2021-2024)

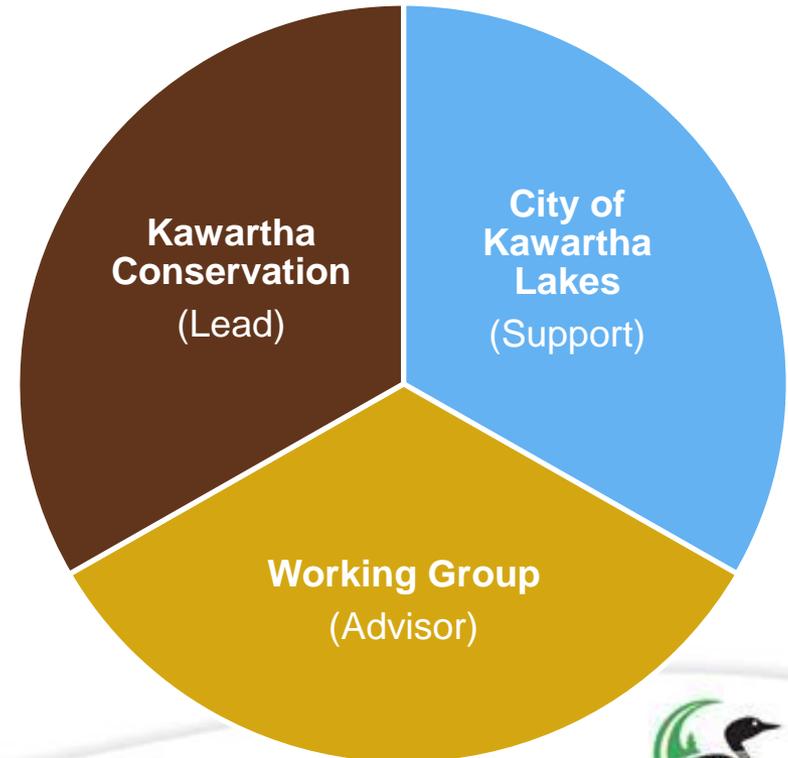
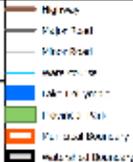


Lake Dalrymple Overview Map

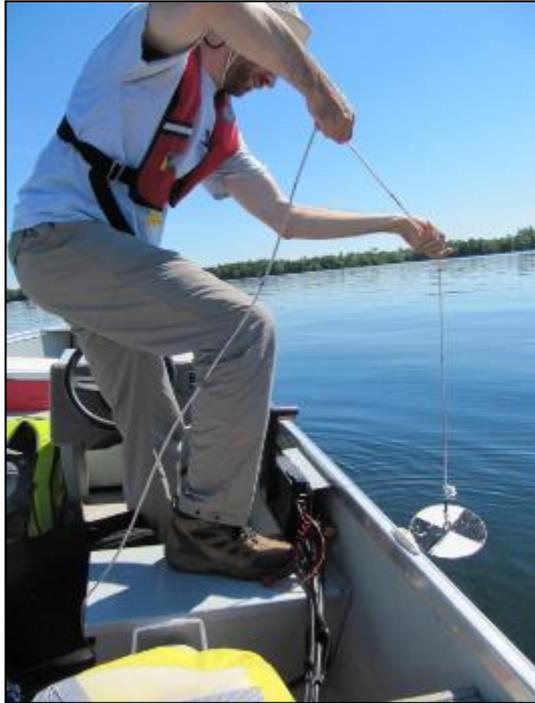


PRODUCED BY Kawartha Conservation  
with data supplied under license by (c)  
Queen's Printer for Ontario, 2021.

Scale: 1:95,000



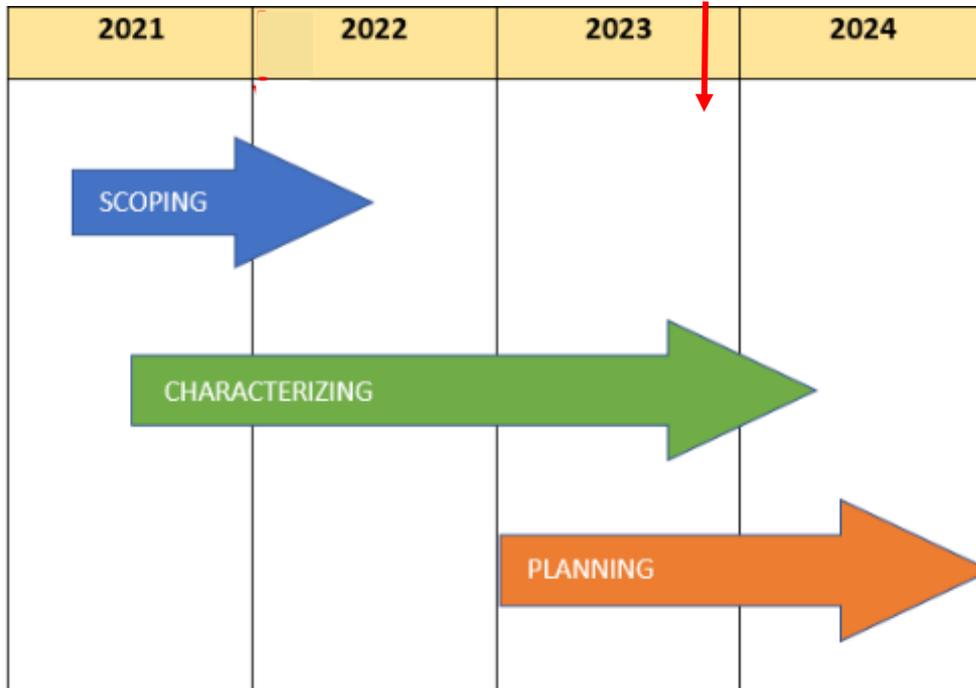
# Project Overview - requirements



Science + Community Input = Lake Plan

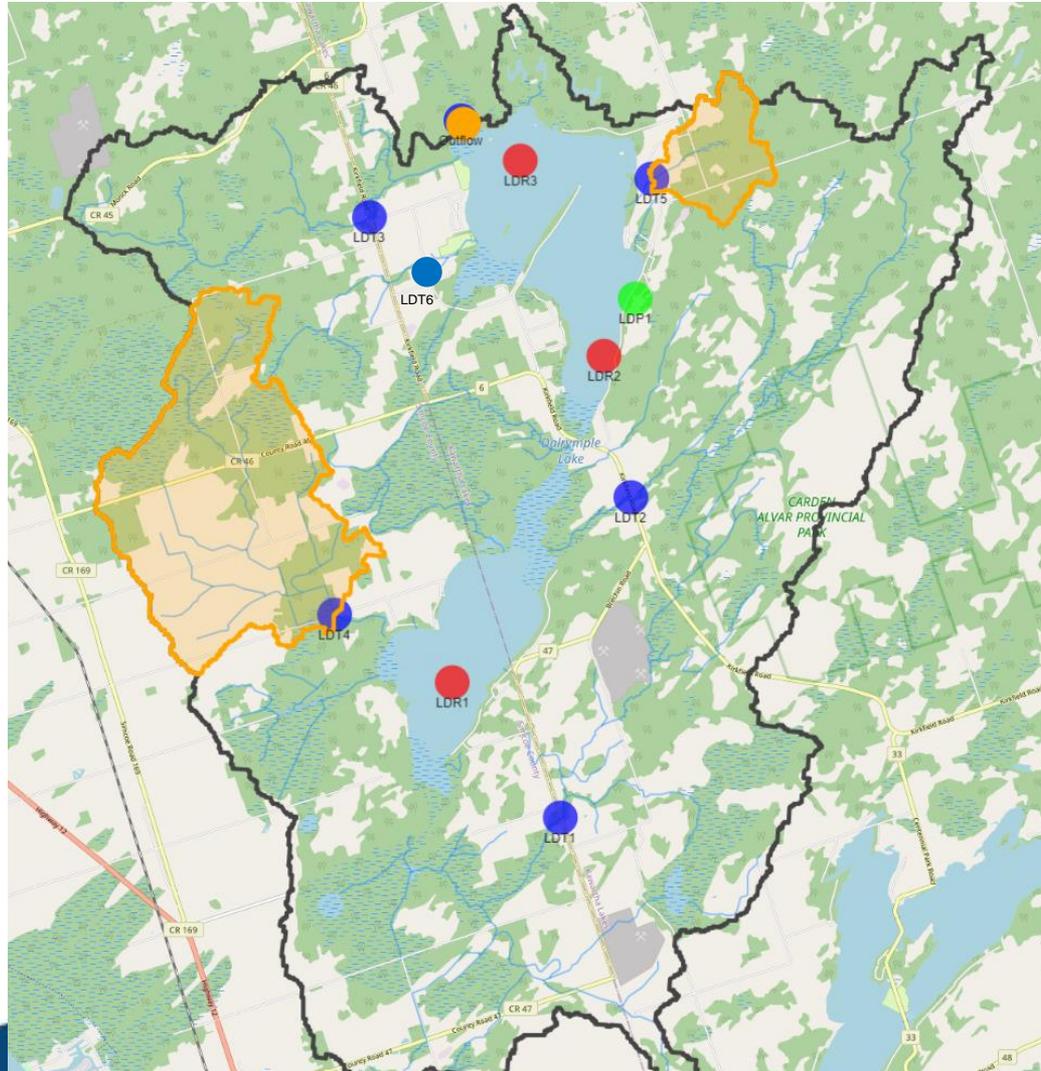


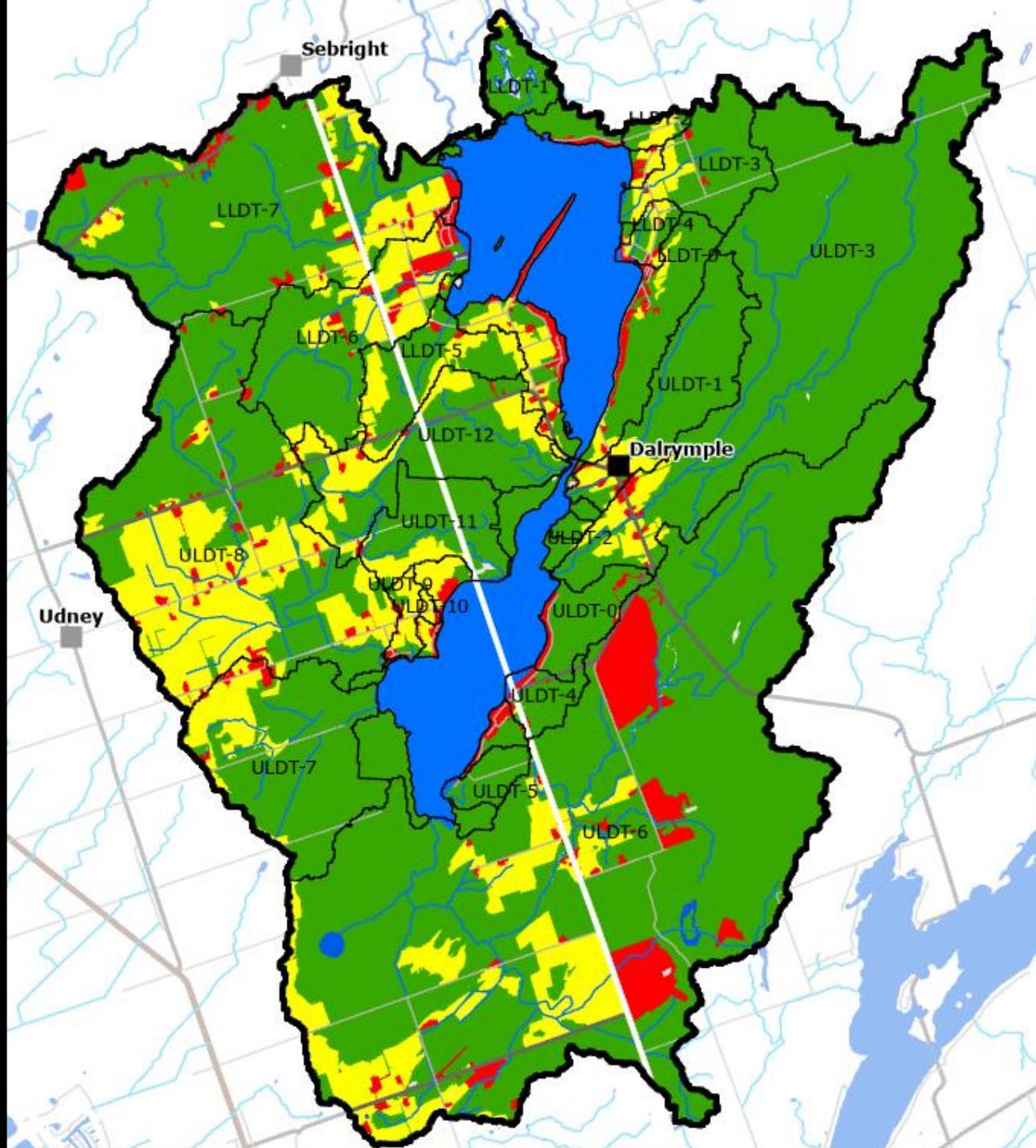
# Workplan Update



KEY PLANNING COMPONENTS	
<-- Staff / Stakeholder / Working Group input -->	<b>Scoping</b> a. Who are the key stakeholders? b. What are stakeholder's key values/issues/goals? c. What information is available?
	<b>Characterizing</b> a. What are the key lake resources? b. What are the functions (benefits/values) and linkages? c. What are the key management issues? d. What are the information gaps?
	<b>Planning</b> a. What are the outcomes, goals, objectives? b. What are draft management targets? c. What are the proposed management strategies/actions? d. Evaluate alternatives against response/feasibility criteria? e. What are the preferred management actions? f. How will success, change, efforts be tracked?

# Core Monitoring Network





Natural  
vs  
Agriculture  
vs  
Developed

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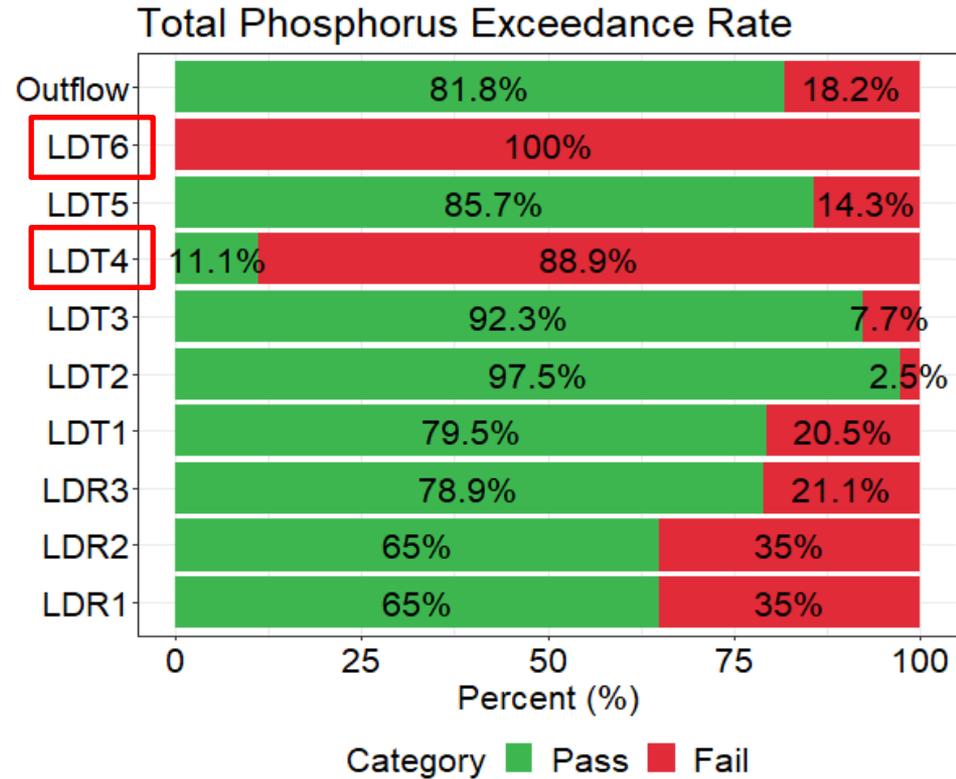
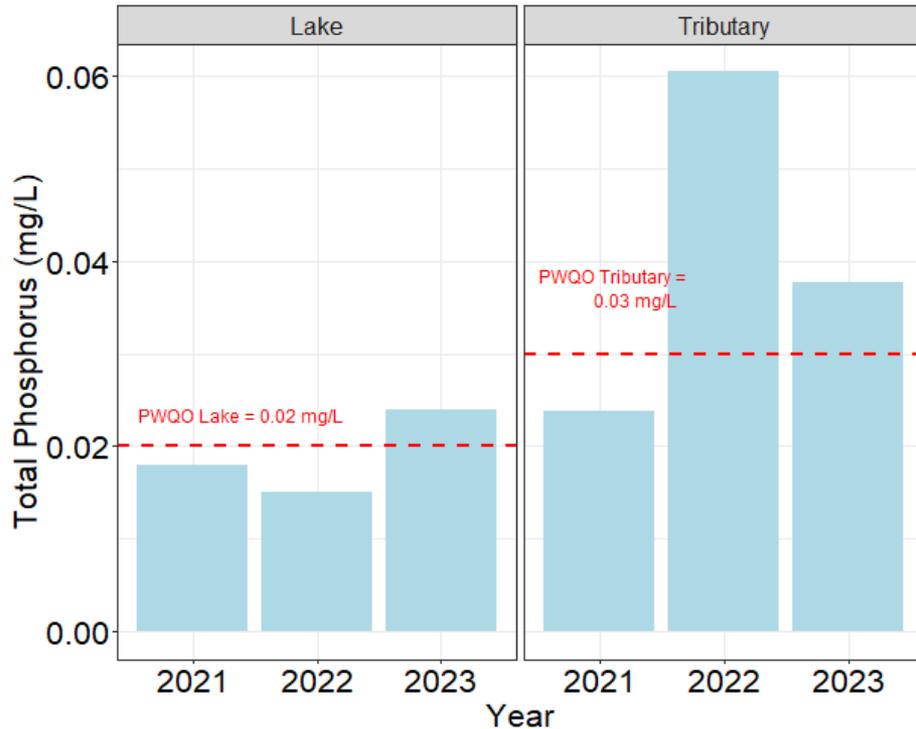
# Monitoring Data Dashboard updates

Key Water Quality and Quantity findings from 2023

[https://kawarthaconservationwaterquality.shinyapps.io/DalrympleApp\\_v3-1/](https://kawarthaconservationwaterquality.shinyapps.io/DalrympleApp_v3-1/)

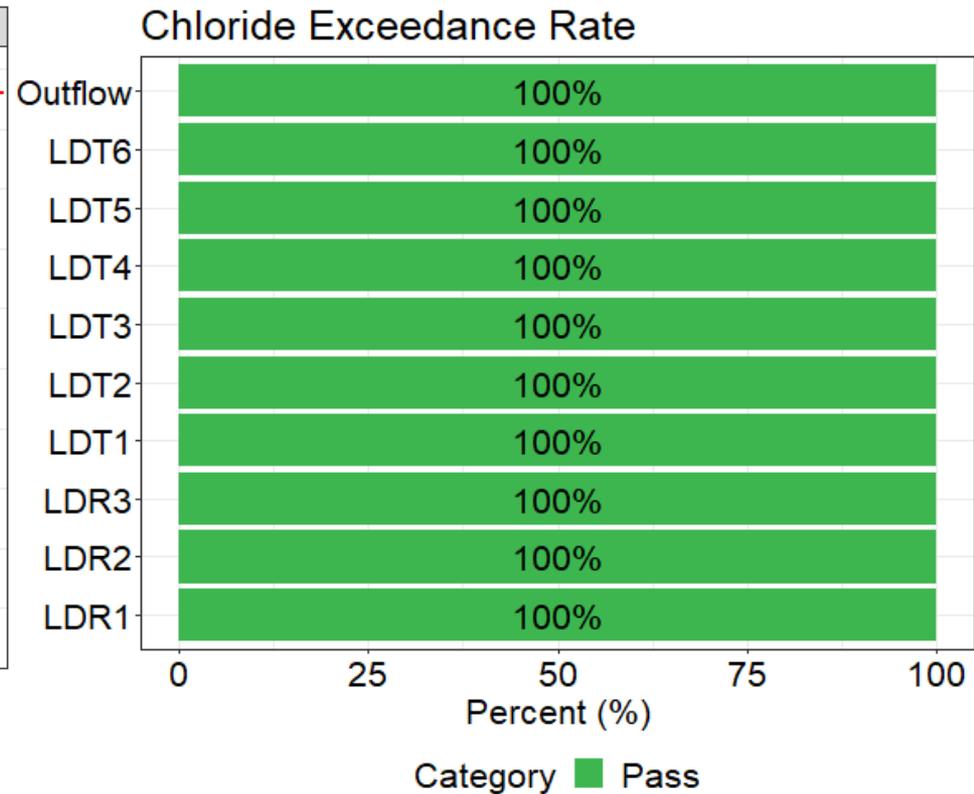
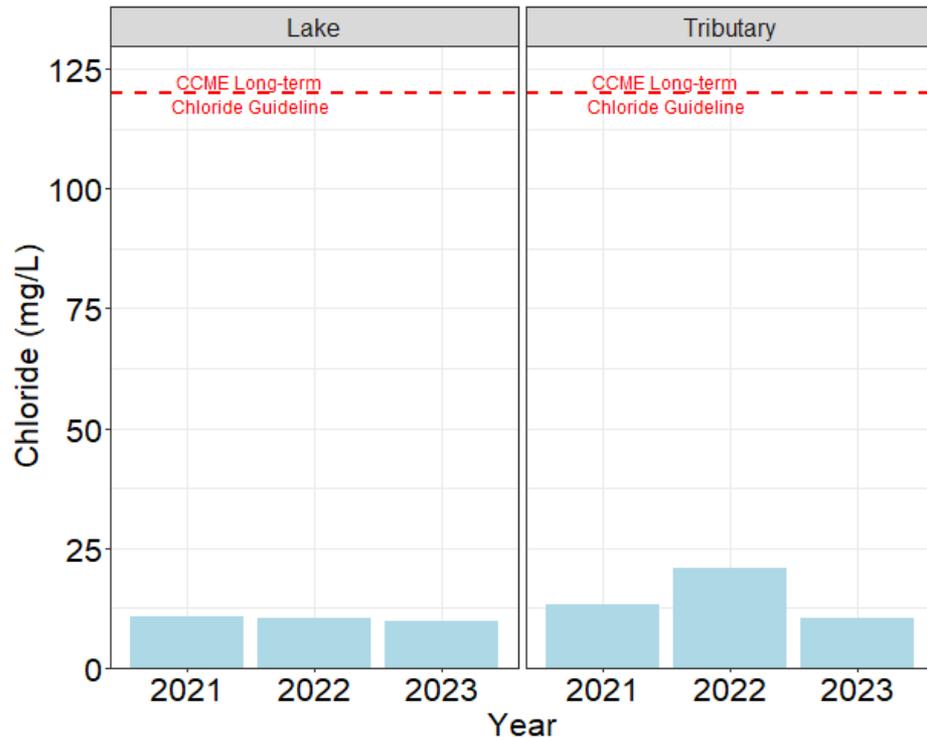


# Water Quality - Nutrients



Compared to previous years, 2023 had higher levels of TP, possible driven by more precipitation (more runoff) early in the year. We see that there are two streams of concern, LDT4 and LDT6.

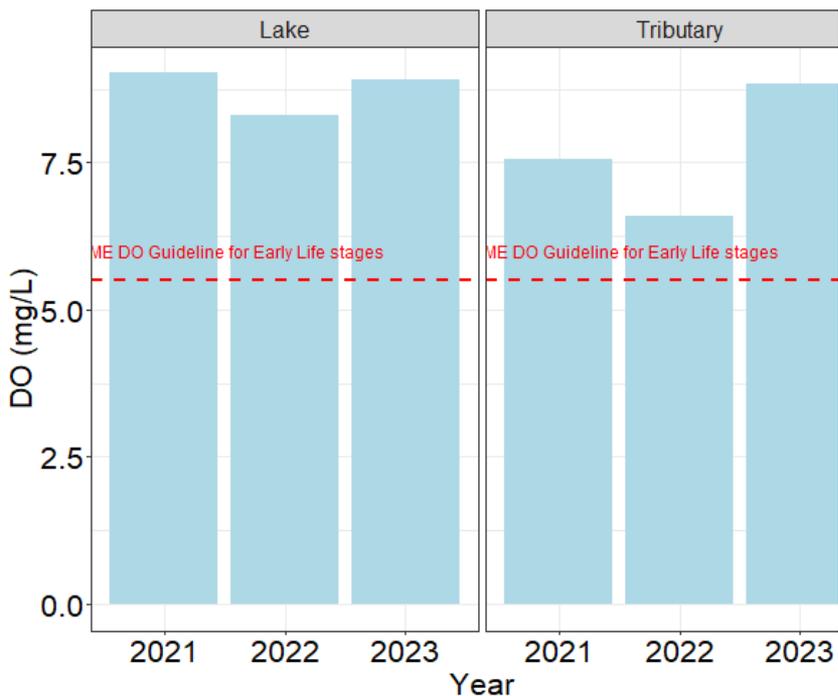
# Water Quality - Chloride



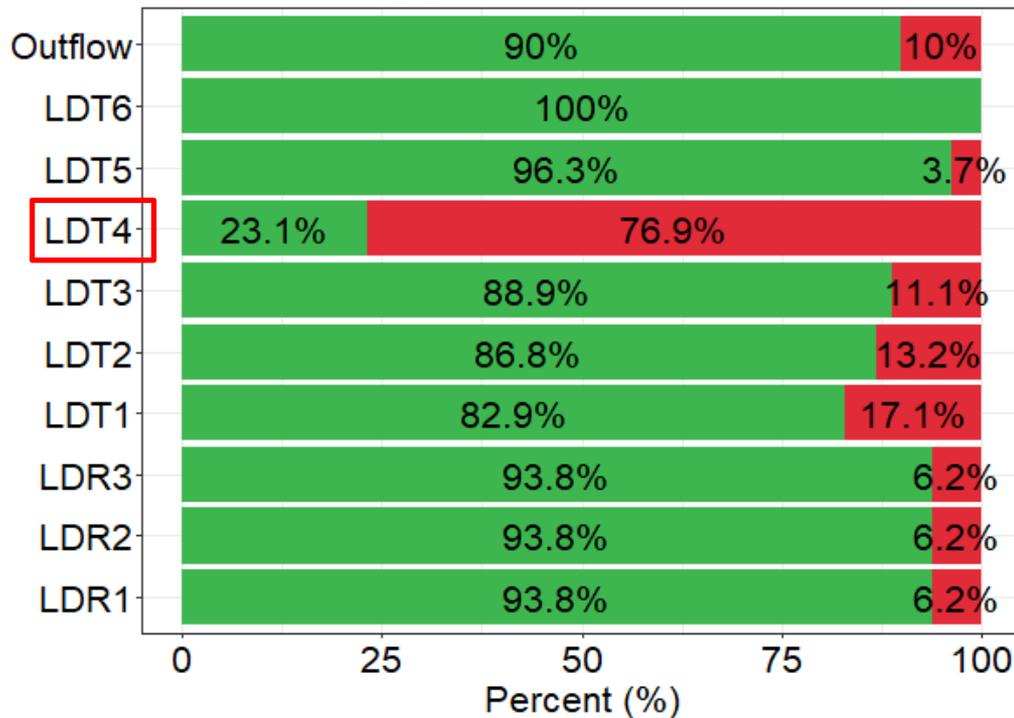
The lake and rivers continue to show good chloride levels. No significant chloride concerns.



# Water Quality – Dissolved Oxygen



Dissolved Oxygen Exceedance Rate

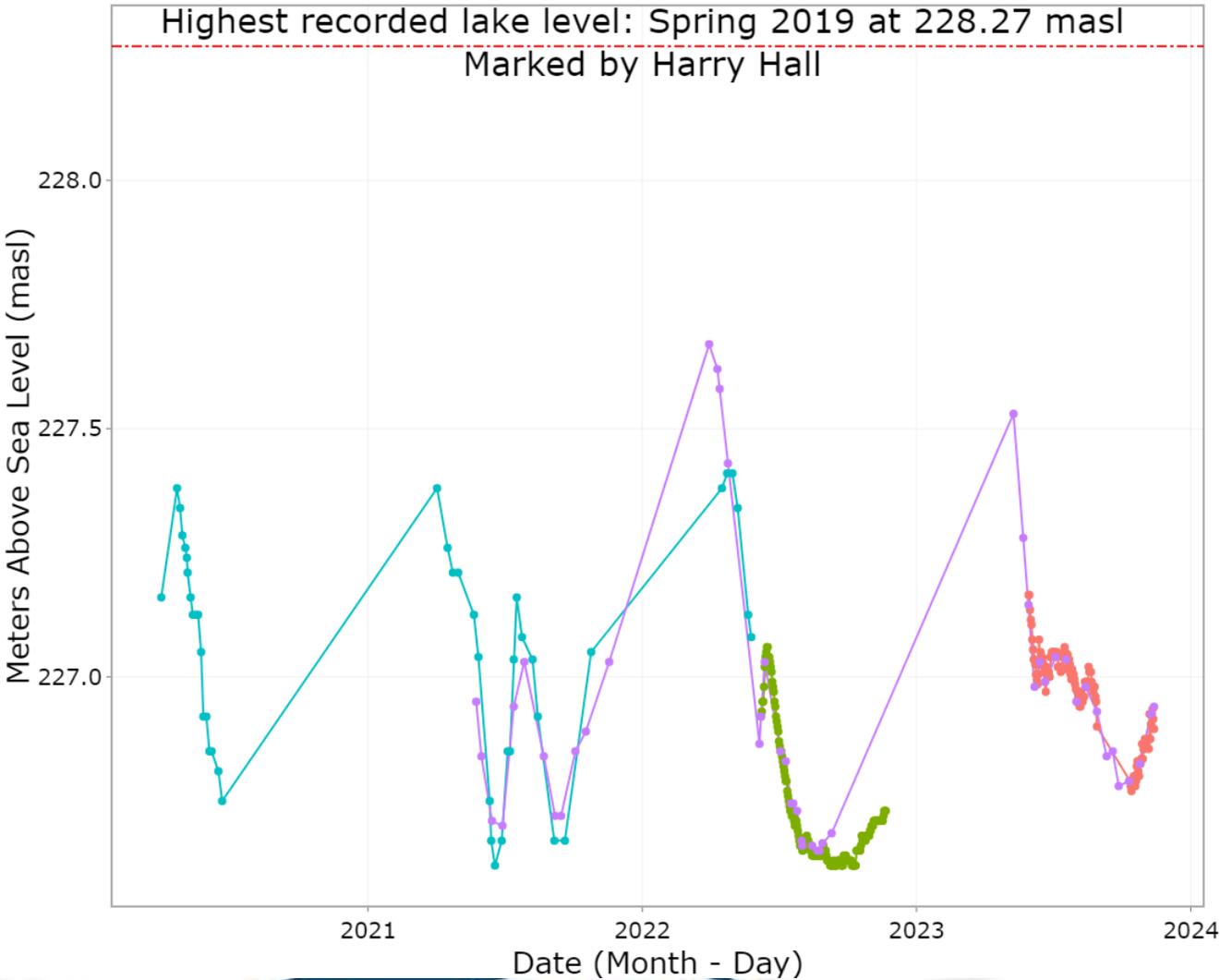


Category ■ Pass ■ Fail

The lake and river continues to indicate good oxygenation for fish and other life. We see that there are a streams of concern, LDT4.



# Water Levels - Lake



Data Source

— HOB0

— ISCO

— KF

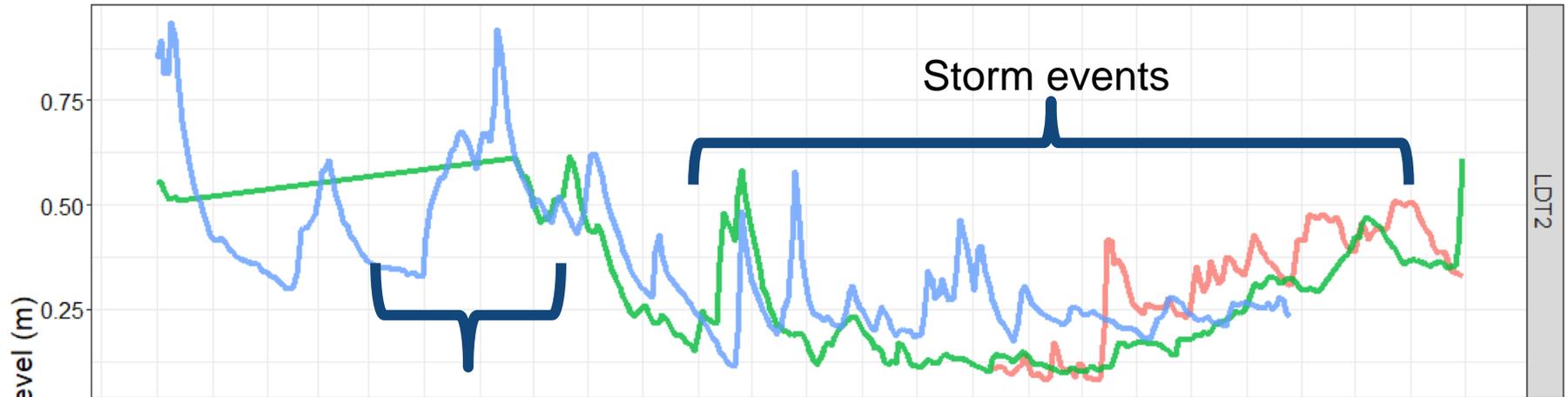
— Staff-Gauge

Thanks  
Kevin  
Flow!!



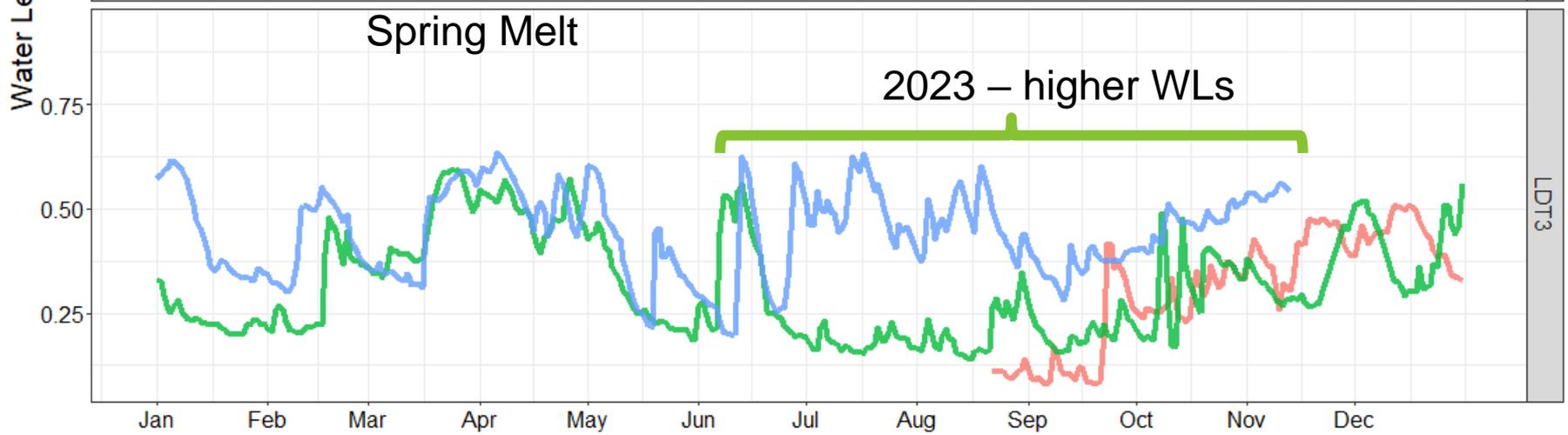
# Water Levels – Streams

Average Daily Water Levels



LDT2

Spring Melt

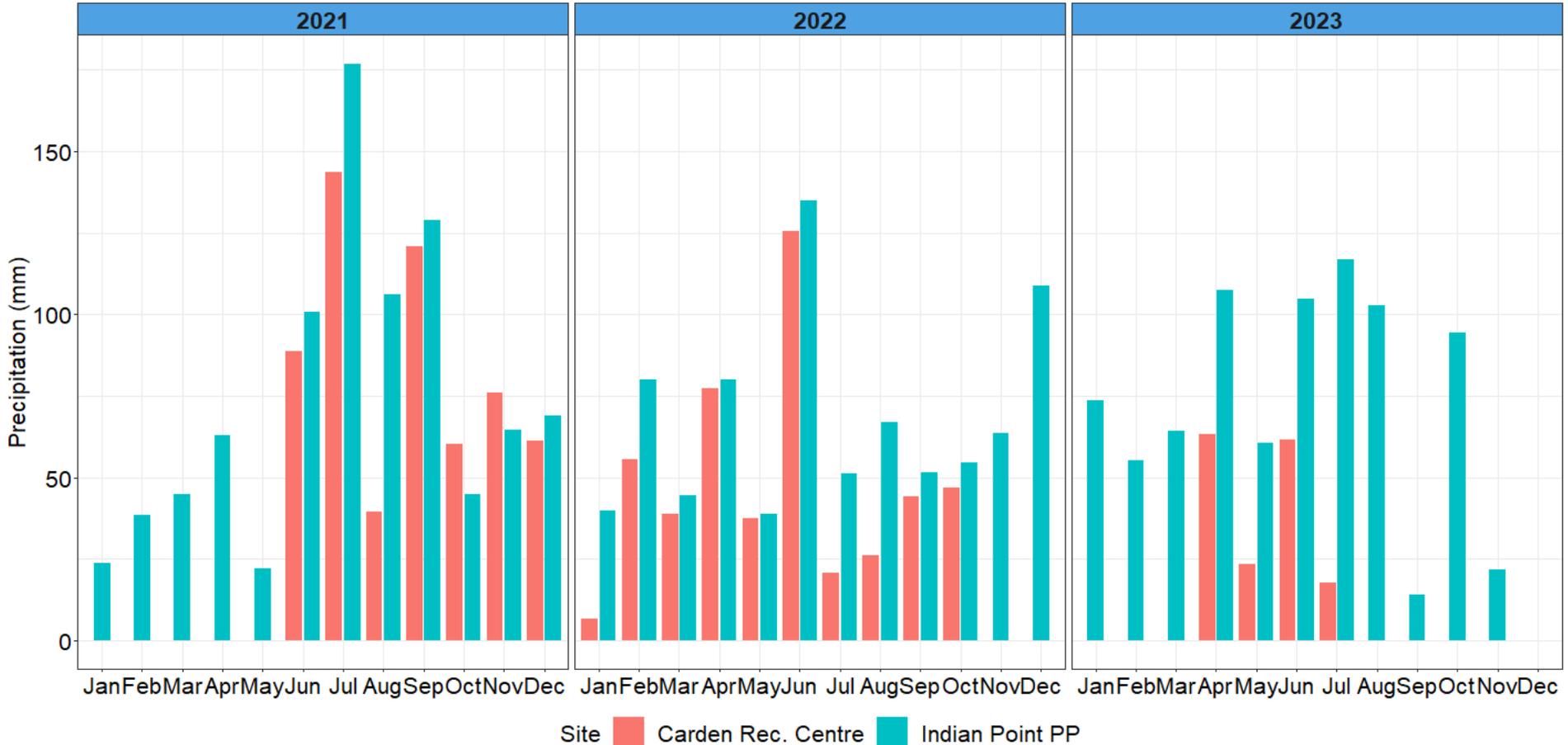


LDT3

Year — 2021 — 2022 — 2023

# Rain and Snow

Precipitation (Snow and Rain) Within and Outside of the Dalrymple Watershed



Compared to our precipitation station at Indian Point PP, the LD watershed has its own weather pattern.



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# Shoreline Development



# Lake Dalrymple compared to 12 other lakes in City of Kawartha Lakes

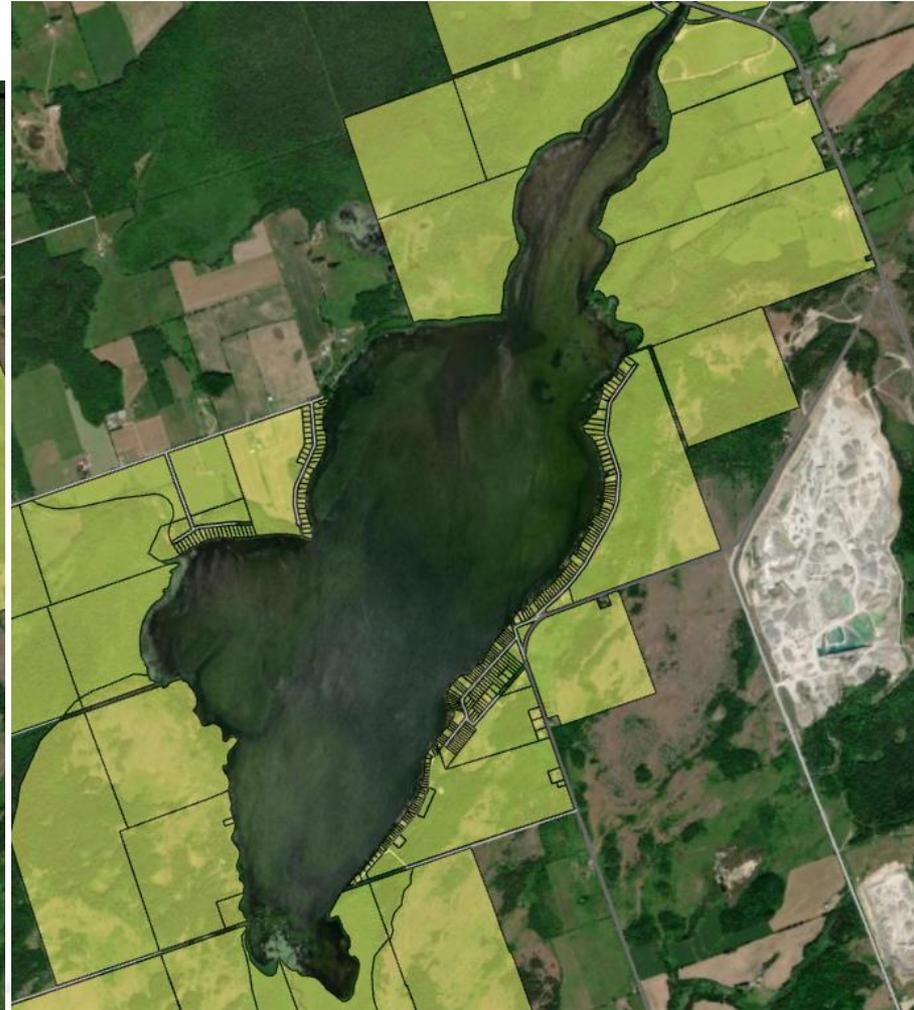
**Table 8. Building Densities on Shorelines of Study Lakes**

Lake	Building Count	Lake Area (ha)	Shoreline (km)	Density (Bldgs/km)	Average Frontage (m)	Average Frontage (ft)	Density (Bldgs/ha)
Balsam	1730	4665	78.7	22.0	45.5	149	0.37
Cameron	1077	1304	23.2	46.4	21.5	71	0.83
Canal	682	1085	39	17.5	57.2	188	0.63
Dalrymple	481 <b>9th</b>	1323 <b>5th</b>	33.6 <b>8th</b>	14.3 <b>10th</b>	69.9 <b>3rd</b>	229 <b>3rd</b>	0.36 <b>7th</b>
Four Mile	415	773	21.3	19.5	51.3	168	0.54
Head	389	919	19.3	20.2	49.6	163	0.42
Mitchell	292	852	42.2	6.9	144.5	474	0.34
Pigeon	1270	5349	145.2	8.7	114.3	375	0.24
Scugog	2609	8262	112.6	23.2	43.2	142	0.32
Scugog River	1894	n/a	38.5	49.2	20.3	67	
Shadow/Silver	485	320.2	22	22.0	45.4	149	1.51
Sturgeon	4436	4499	96.9	45.8	21.8	72	0.99

Gartner Lee and French Planning, 2002. Shoreline studies in support of Official Plan policies.



# Shoreline – lot development



# Shoreline – lot development

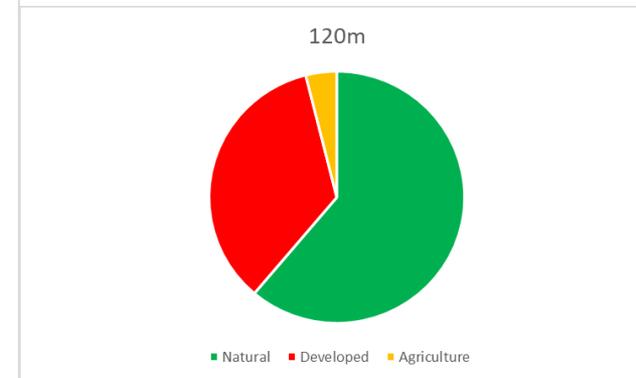
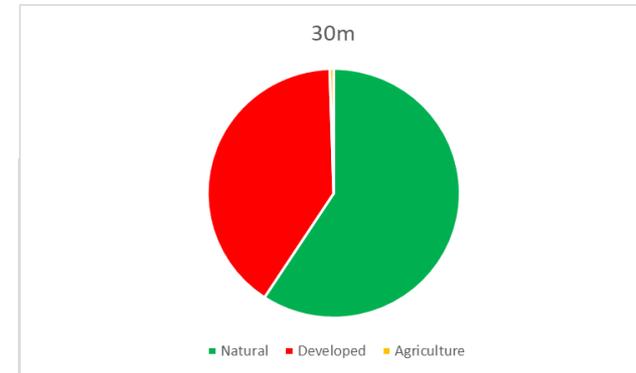
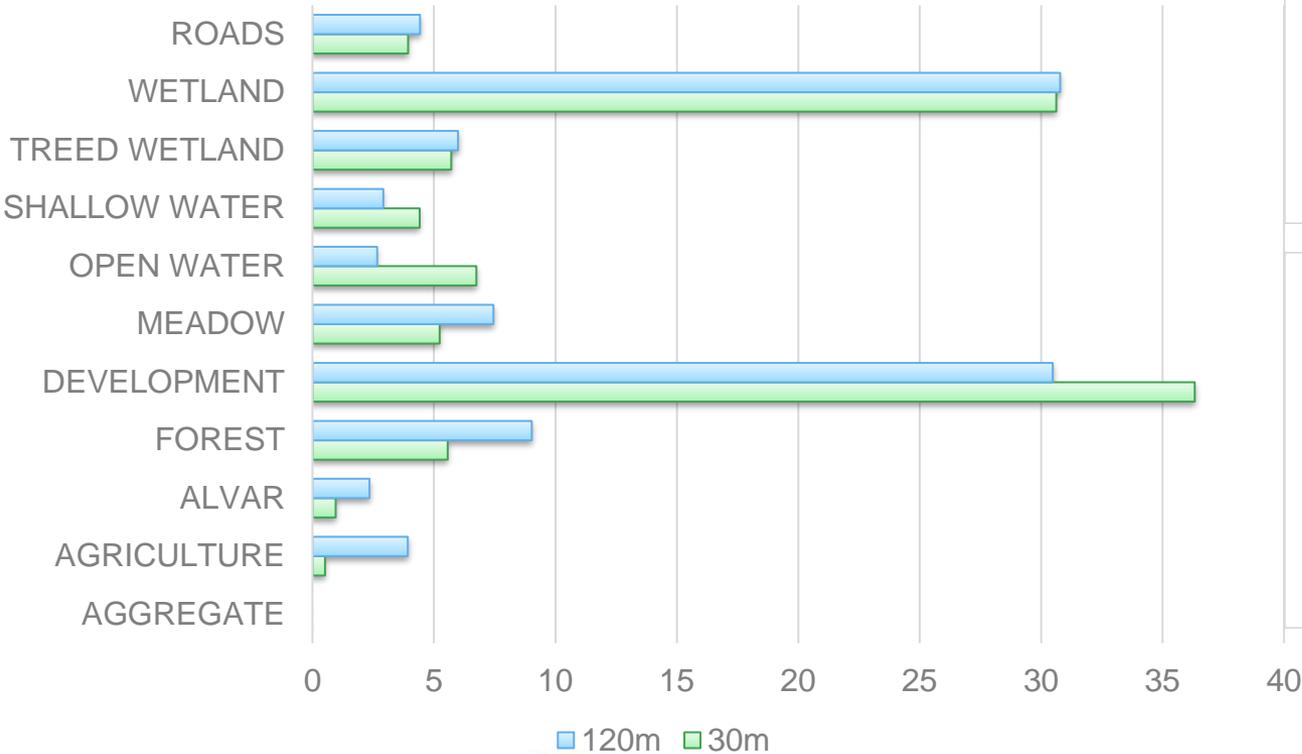
- 585 parcels touching the lake
- 771 parcels within 300m of lake examined:
  - Permanent homes: 307
  - Extended seasonal homes: 350
  - Seasonal homes: 0
  - Resorts: 1 Resort (w/ 7 cabins)
  - Trailer parks: 2 Trailer Parks (100 and 181 trailers)
  - Youth camps: 0
  - Campgrounds/RV parks: 0
  - Vacant lots of record: 120
    - (these are # of parcels that are within 300m of lake and have 0 dwellings/septics within 300m of lake)

Table 3. Standard usage rates for lakeshore residences

Type of shoreline residence	Usage rate (capita years per year)
Seasonal	0.69
Extended seasonal	1.27
Permanent	2.56

# Shoreline – aerial imagery

Ecological Land Classification  
(% of shoreline)

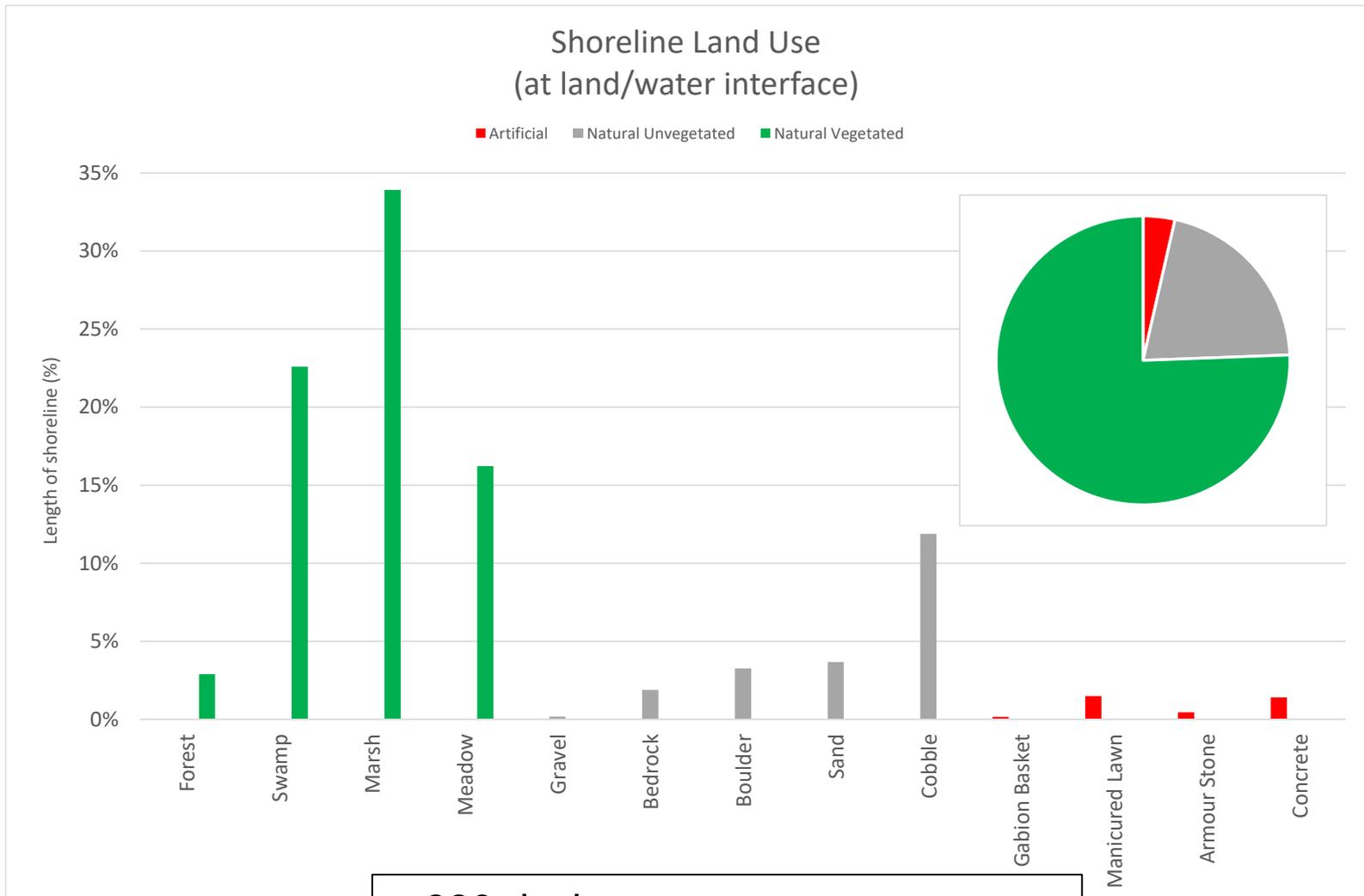




## 2018 Aerial Imagery (ELC 120m)

Symbol	Value	Label
▼	LANDUSE	10 symbol classes ●●●
■	▼ Agriculture	Agriculture
■	▼ Alvar	Alvar
■	▼ Development	Development
■	▼ Forest	Forest
■	▼ Meadow	Meadow
■	▼ Open Water	Open Water
■	▼ Roads	Roads
■	▼ Shallow Water	Shallow Water
■	▼ Treed Wetland	Treed Wetland
■	▼ Wetland	Wetland

# Shoreline – land/water interface

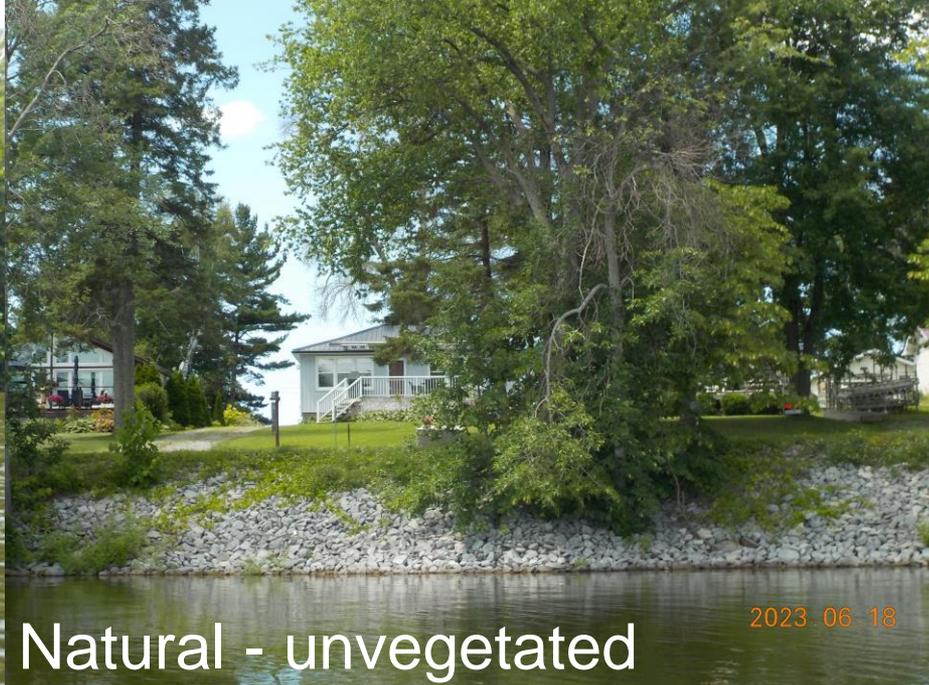


+ 380 docks  
+ 11 areas for erosion rehabilitation



Natural - vegetated

2023.06.14



Natural - unvegetated

2023.06.18



Artificial

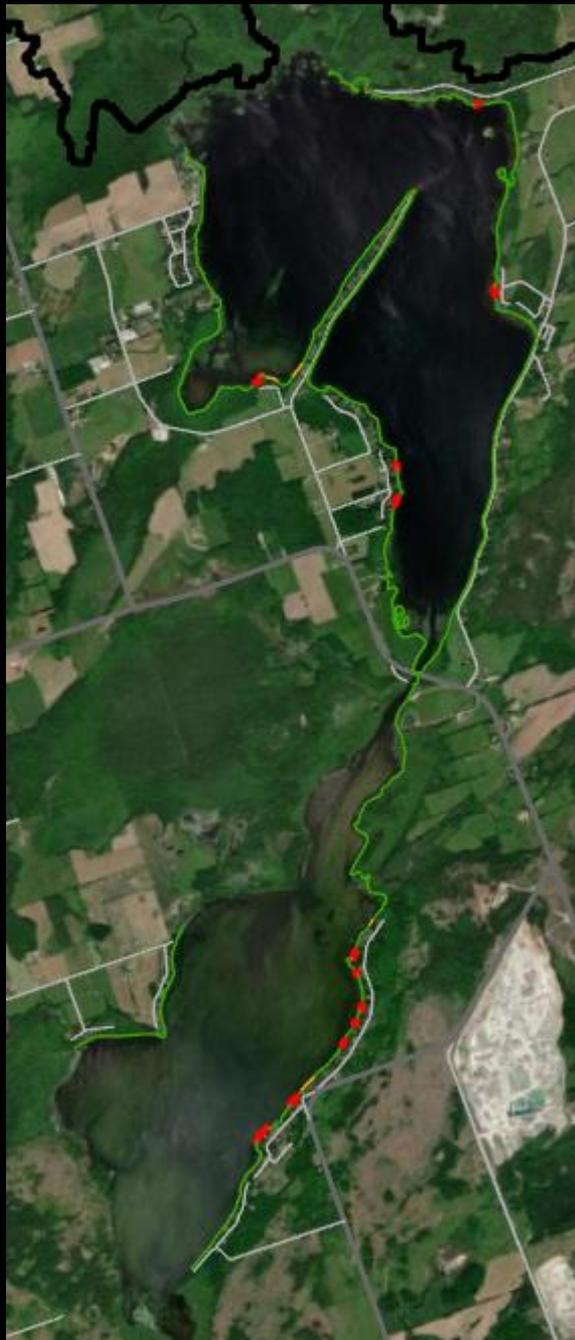
2023.06.14



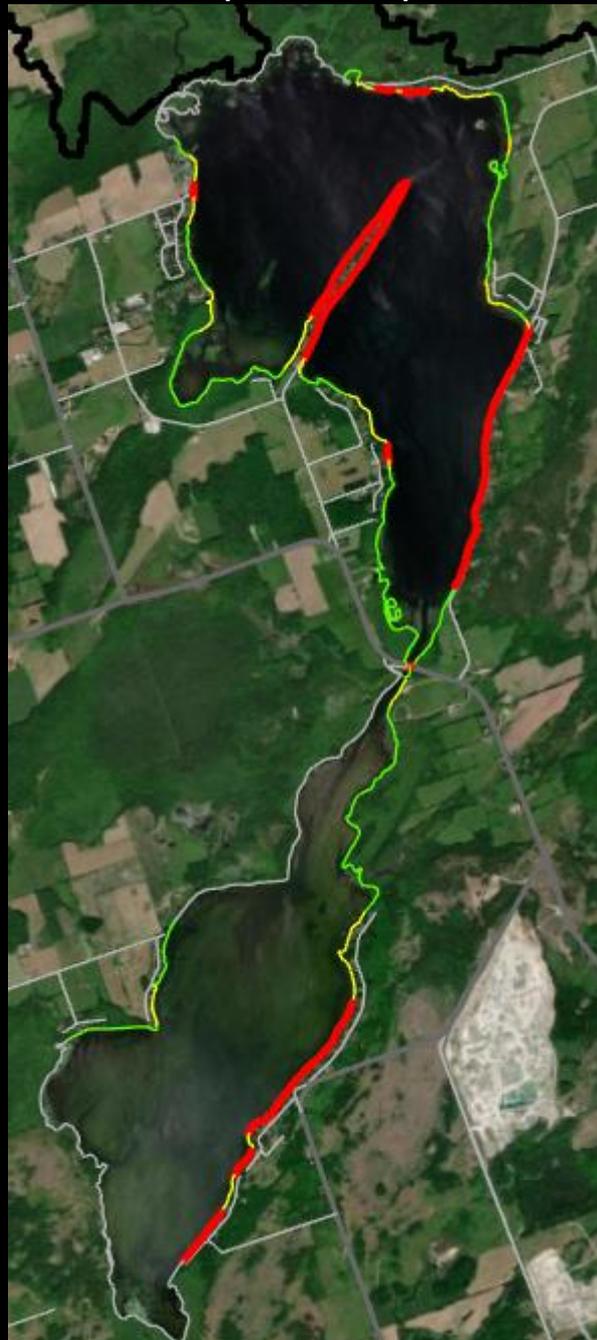
GOOD BALANCE?

2023.06.14

Artificial = >50%



Slope = steep



Manicured Lawn



# Summary

- Shoreline management is a high priority
  - Concentrated development
  - Several 'high risk' areas
  - Lots of manicured lawn
  - Some potential 'rehabilitation project' sites identified
  - Agriculture lower priority, but still present

## NEXT STEPS

- Run Lake Capacity model
- Quantify septic system phosphorus inputs
- Identify sensitive shoreline areas



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# Fisheries Information Update

## Is it being overfished? Is it sustainable?

- This is often difficult to answer for any lake at the best of times.
- Overall nothing atypical or major alarm bells about Dalrymple – right in the pack with FMZ 17.
- While angling effort has been relatively high the fish community indicators don't raise any urgent alarm bells, suggesting no additional waterbody-scale management actions be taken at this time on Dalrymple.
- Overall, FMZ 17 (and other FMZs) are due for reflection on the management plan at the end of cycle 3 (ends next summer) and the intent is that FMZ 17 will be included in that review.



# Fisheries Information Update

## Research needs:

- Overall, the netting program has some known gaps that are relevant to Dalrymple:
- Muskellunge are not captured effectively, so the Muskies Canada Angler Diary program is relied upon across Ontario. **The working group could reach out to Muskies Canada Kawartha lakes chapter to promote some targeted angling** from their chapter members and record that data in the angler diary database they maintain and share with MNRF. Would come in handy at FMZ review stage.
- Any discussion within the working group on **a mobile boatwash station being purchased and used to help prevent further aquatic invasive introductions?** Seems like a good candidate lake given the limited public access points.
- We are just beginning to consider angler apps such as Mycatch to help gather angler feedback metrics on our recreational fisheries in Ontario. There is no imminent plan to rollout a tournament on Mycatch within FMZ 17. However, if the **working group has specific questions that are consistently arising around angler activity or angler behavior, it would be good for me to receive these questions** as we continue to explore this new potential information source.

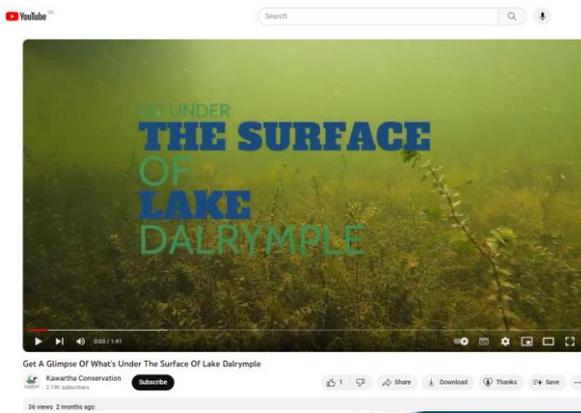
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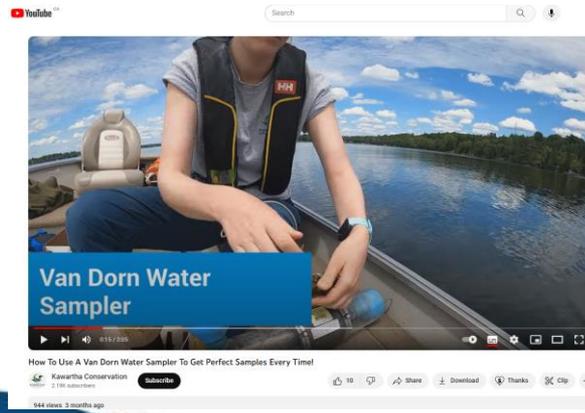
# Social Media Analytics

January 1, 2023 to November 5, 2023

- 6,217 Impressions
- 381 Engagements (Likes Comments Shares)
- 267 Clicks to the website
- 540 Video Views



<https://www.youtube.com/watch?v=lFalkwb7o7k>



[https://www.youtube.com/watch?v=eGaRXA14\\_JY](https://www.youtube.com/watch?v=eGaRXA14_JY)



<https://youtu.be/GzyoUWi4aqE?si=gKoUVzUg8WBfY11x>



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# State of the Lake Report and Plan – examples

## Lake plans

Our lakes are directly connected to the Trent-Severn Waterway National Historic Site and are highly valued for providing significant economic, social and ecological benefits to those who live, work and enjoy recreation in the Kawartha Lakes region.

Kawartha Conservation has developed the following lake management plans.

+ Balsam and Cameron Lakes

+ Canal and Mitchell Lakes

+ Four Mile Lake

+ Head Lake

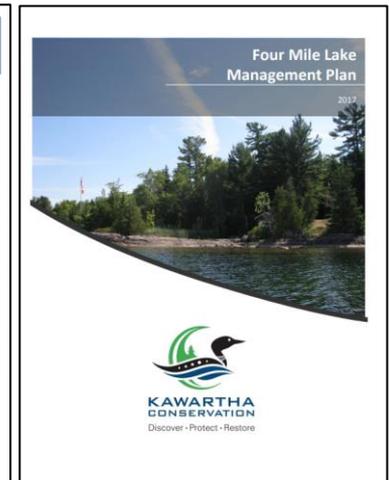
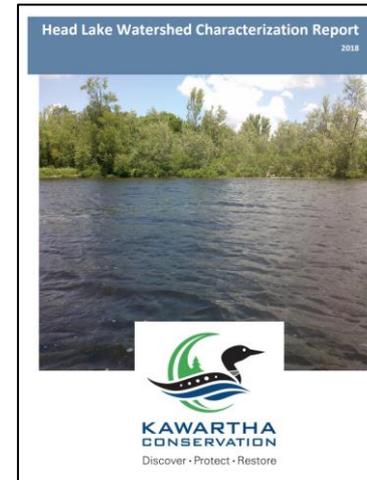
+ Lake Dalrymple

+ Lake Scugog

+ Pigeon Lake

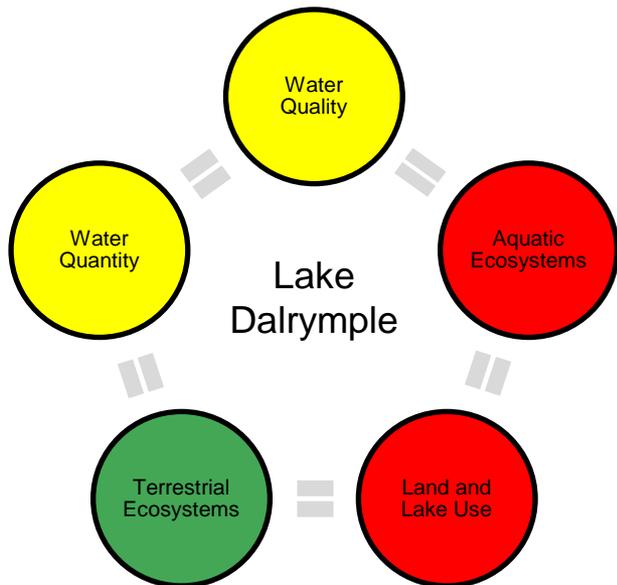
+ Shadow Lake

+ Sturgeon Lake



# State of the Lake Report and Plan – examples

## State of the lake summaries



## Management recommendations summaries



Land securement



Regulations and Enforcement



Stewardship Projects



Communications and Outreach



Research and Monitoring

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# Closing

**Thank you!**

## **Lake Dalrymple Management Plan Webpage**

<https://www.kawarthaconservation.com/en/environmental-sciences/lake-dalrymple-management-plan.aspx>

## **Examples of Lake Management Plans**

<https://www.kawarthaconservation.com/en/environmental-sciences/lake-and-environmental-management-plans.aspx>

## **Contact Us!**

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705.328.2271 ext. 222

