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Discover · Protect · Restore

Lake Dalrymple Working Group Meeting #6

March 7, 2023

AGENDA

1. Welcome
2. Roundtable Introductions
3. Project update
4. Lake Sediment Quality Sampling Results, from 2022
5. Monitoring Summary Dashboard Update
6. Discussion on Potential Solutions to Key Issues
7. Other business?
8. Closing – next meeting

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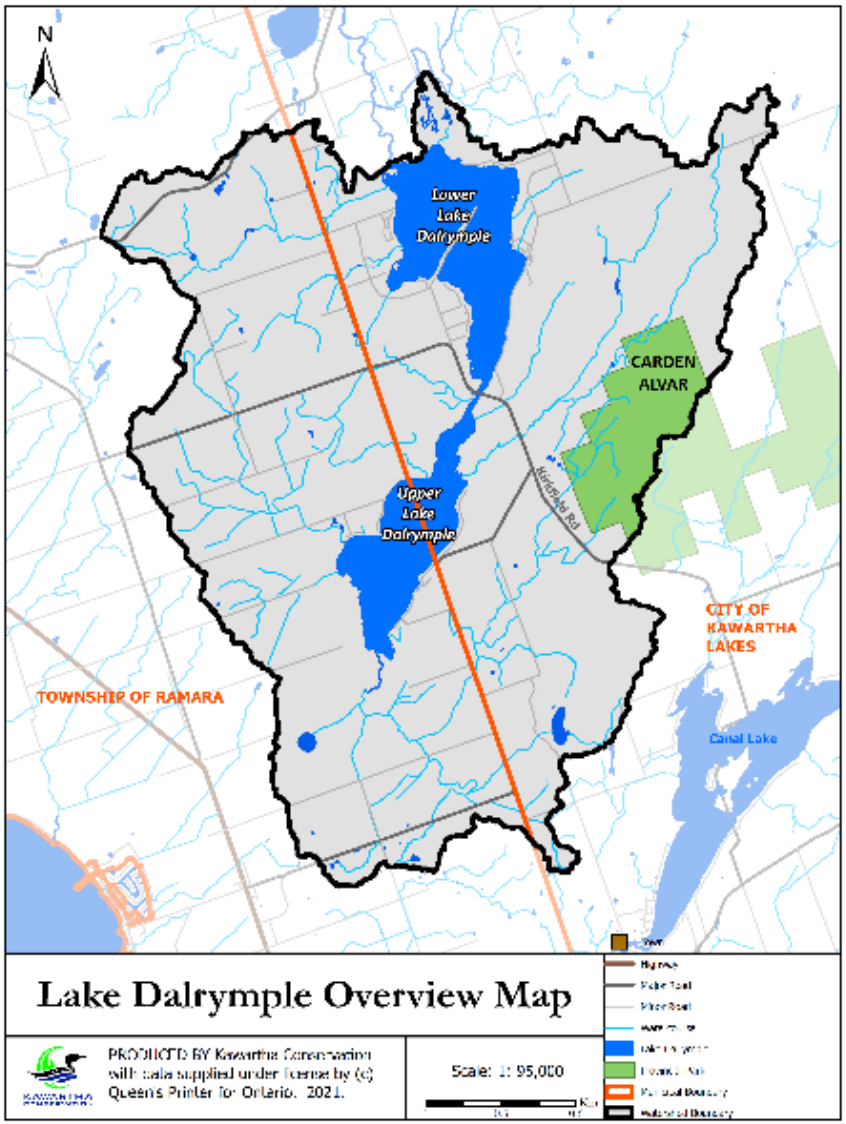
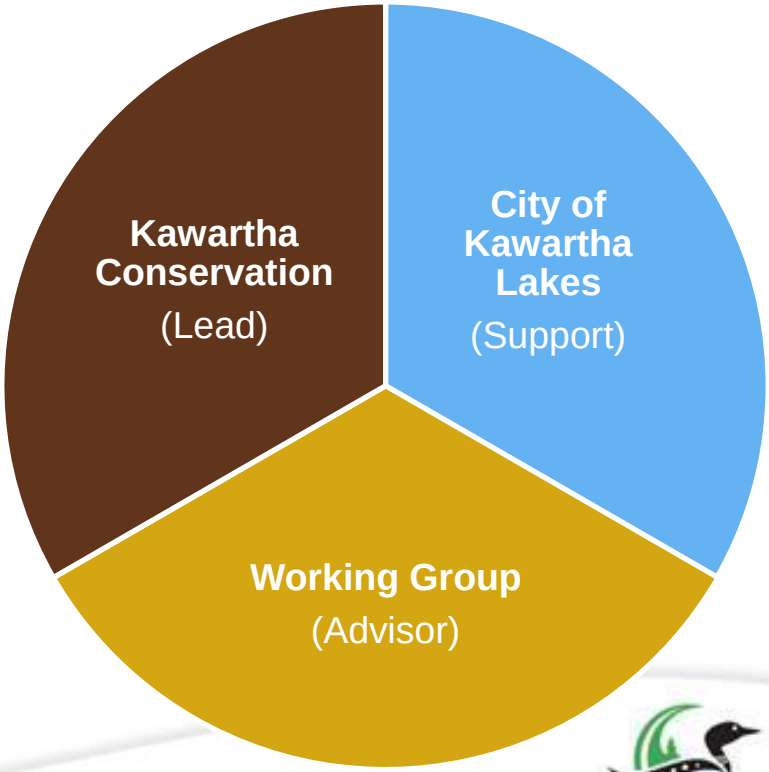
Project Overview



Lake Dalrymple Management Plan

4 year project
(2021-2024)



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Project Overview - requirements

Science + Community Input = Lake Plan

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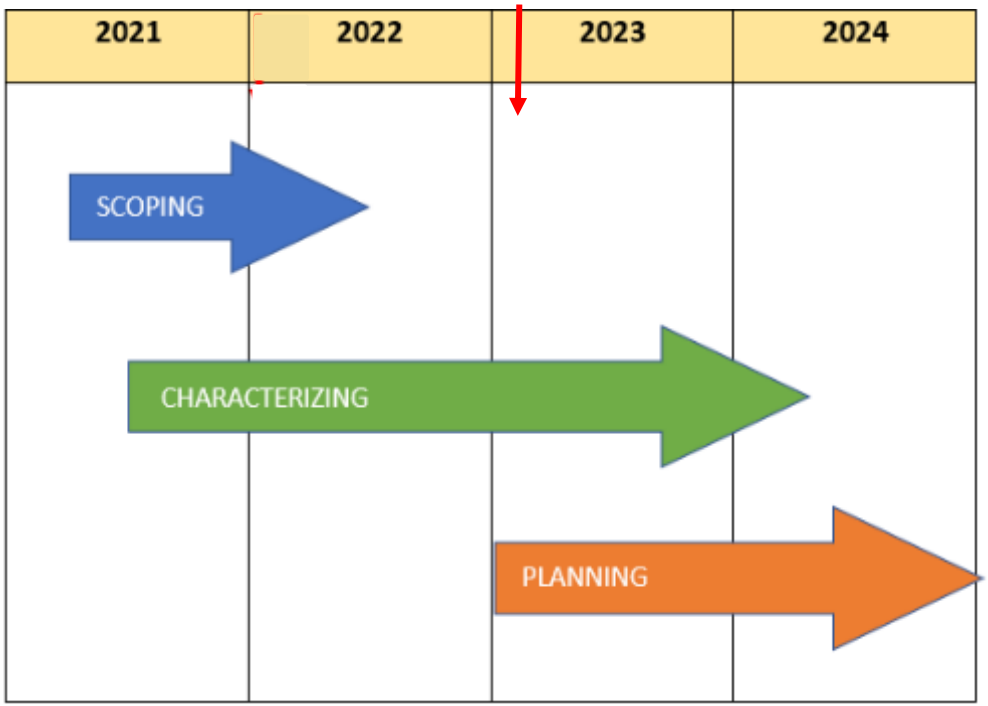
Workplan Update



<-- Staff / Stakeholder / Working Group input -->

KEY PLANNING COMPONENTS
Scoping
a. Who are the key stakeholders?
b. What are stakeholder's key values/issues/goals?
c. What information is available?
Characterizing
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?
Planning
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?

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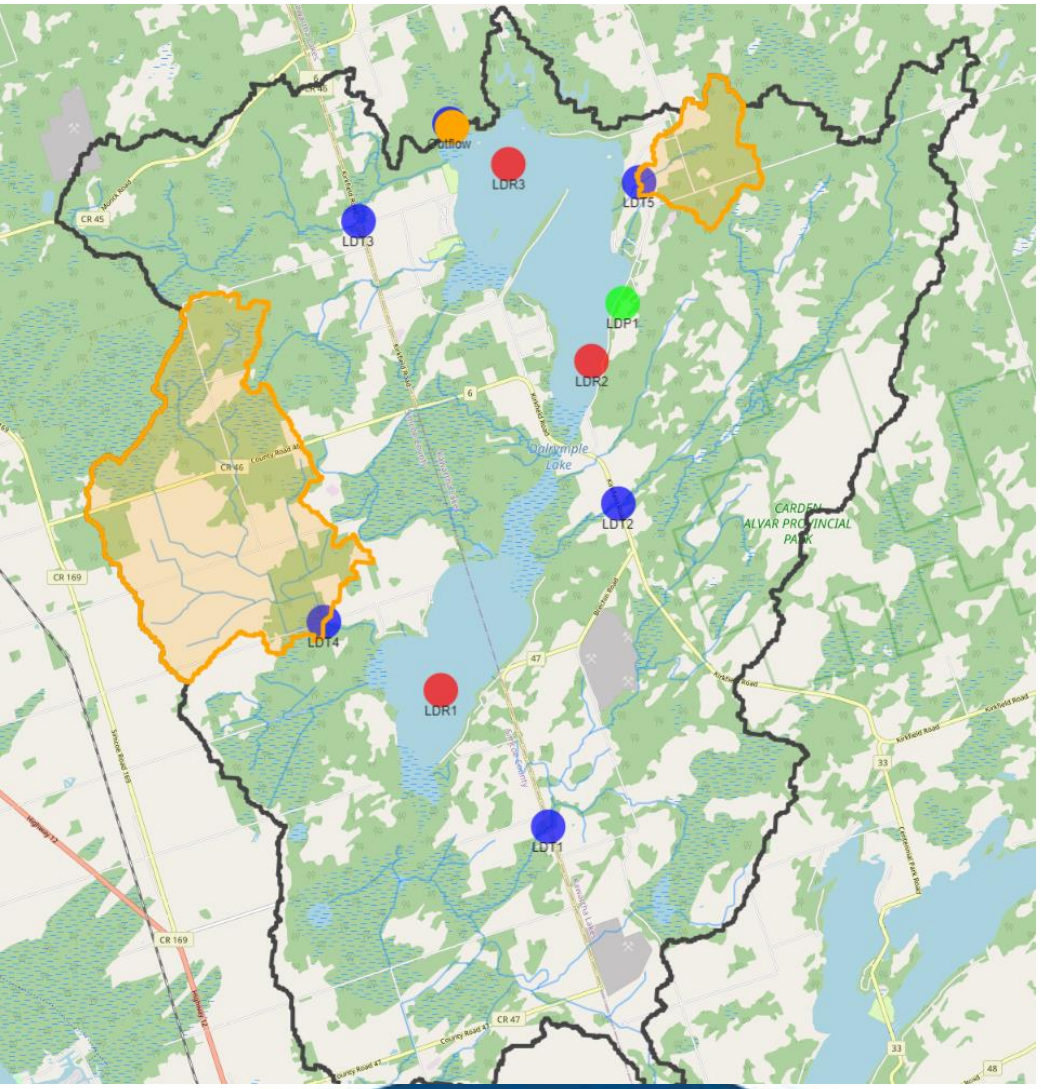
Core Monitoring Network



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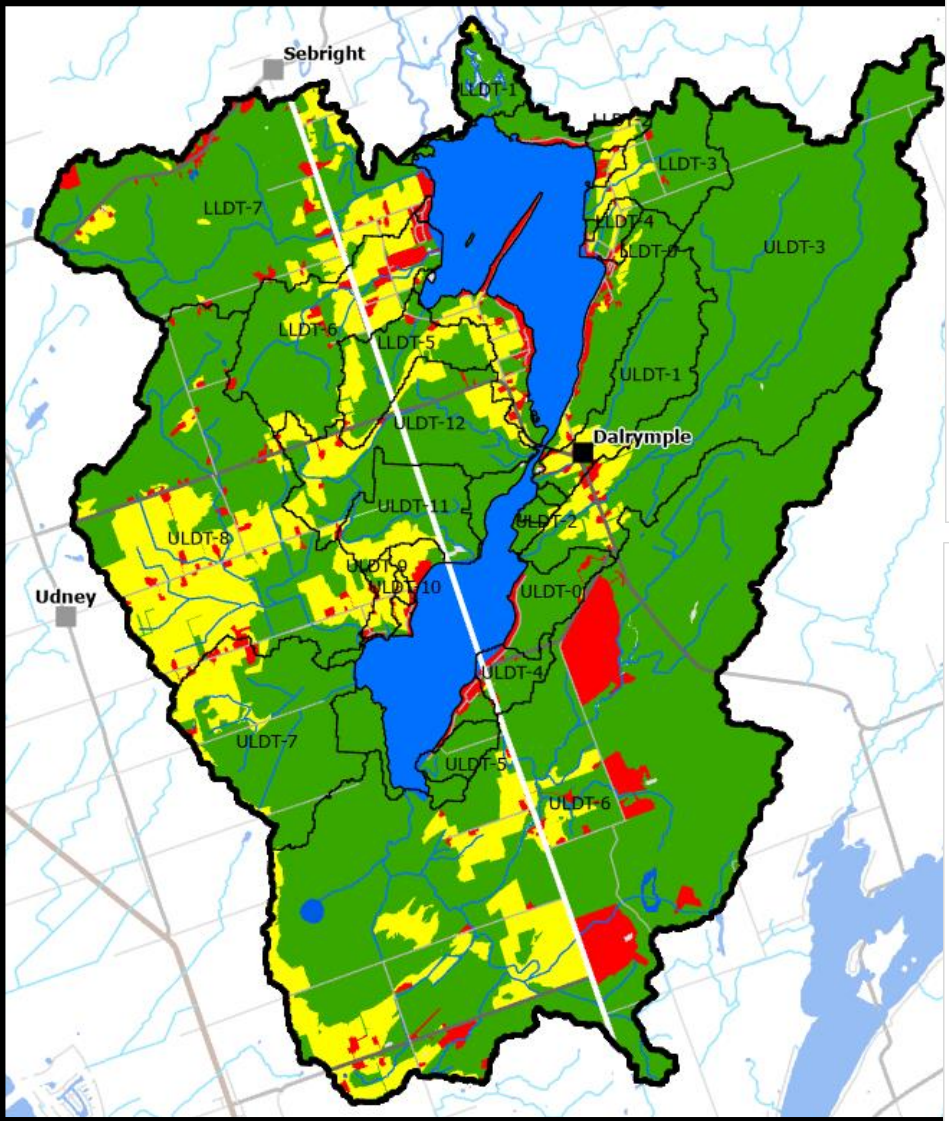
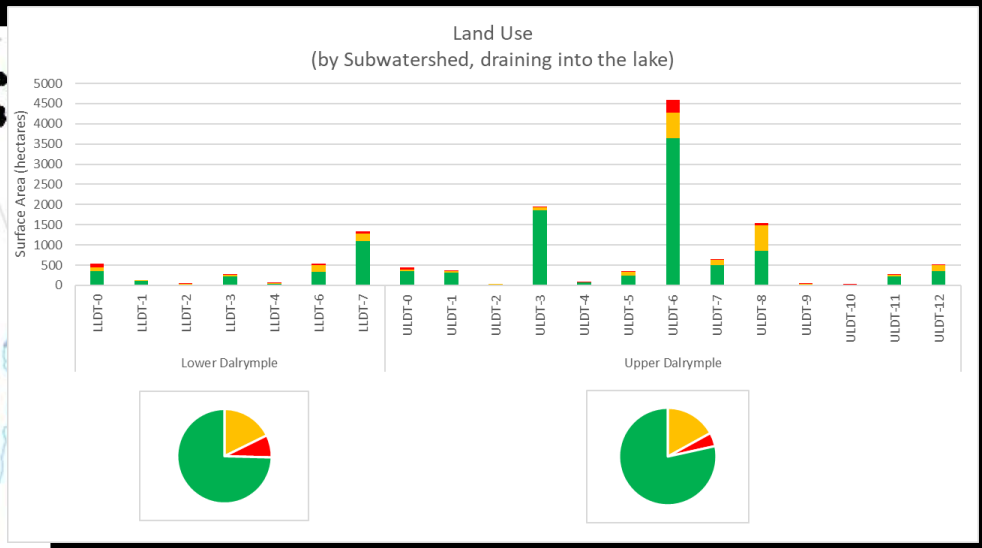
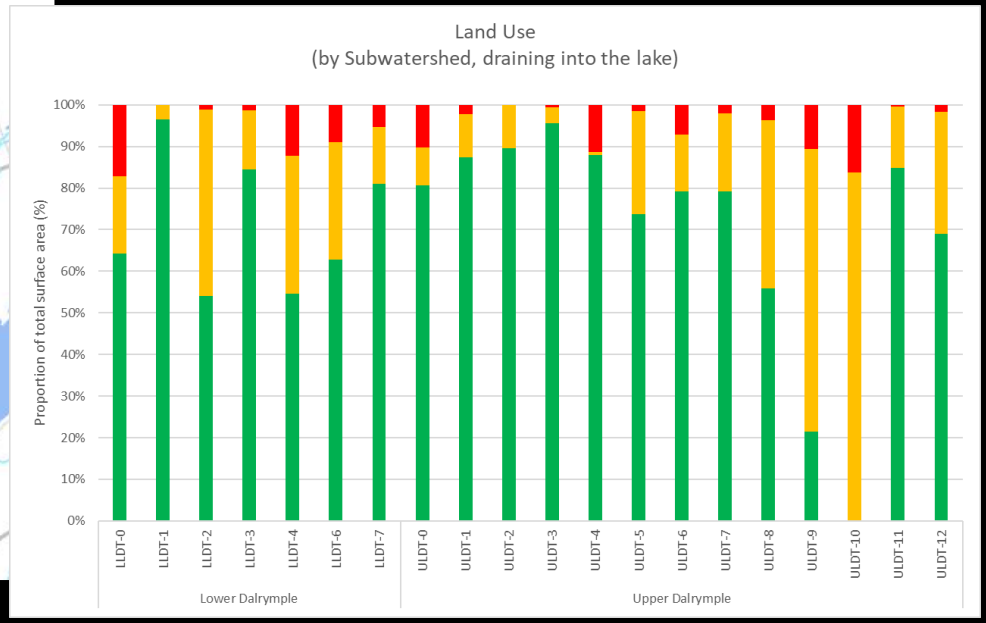
Land Use 2018 Imagery







Natural vs Agriculture vs Developed

Sediment Sampling

- 10 sites were used to collect sediment samples.
- Look at the following characteristics:
  - **3 types of nutrients** (carbon, phosphorus, and nitrogen).
  - **11 types of heavy metals** (lead, arsenic, cadmium, etc).
  - **15 types of organic contaminants** (Gasoline, garbage, asphalt, etc).

Compared against the Provincial Sediment Quality Guideline and Canadian Sediment Quality Guidelines

•To protect the aquatic environment by setting safe levels for metals, nutrients (substances which promote the growth of algae) and organic compounds.

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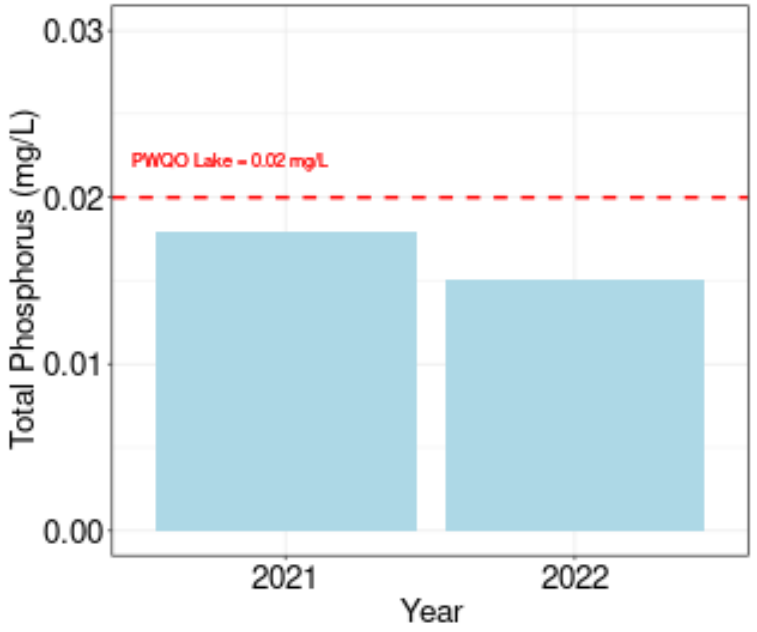
Sediment Sampling Results – Nutrients

- Sediment samples indicate enriched nutrients throughout the lake (except the boat launch).
- Which results in a healthy ecosystems (as indicated by our current water quality results) with lush vegetation. Without vegetation, excess nutrients would be taken up by algae, leading to poor water quality.



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Sediment Sampling Results – Heavy Metals

- No site had levels at or above the Severe Effect Level for metals.
- However, there were some higher levels at the site level. These sites should be are considered clean to marginally polluted.
  - LDS1 – Nickel
  - LDS2 – Iron
  - LDS4 – Cadmium and Copper
  - LDS6 – Copper and Lead
  - LDS7 – Manganese
  - LDS10 – Cadmium, Copper, Lead, Nickel, and Zinc.

Note that LDS1, LDS6 & LDS10 are the deepest basins in Lower Dalrymple.

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Sediment Sampling Results - Organic Contaminants

- No site had levels at or above the Severe Effect Level for PAHs.
- More were found below detection limits.
- However, there were some higher levels at the site level. These sites should be are considered clean to marginally polluted.
  - LDS5
  - LDS6
  - LDS10

Note that LDS6 & LDS10 are the deepest basins in Lower Dalrymple.

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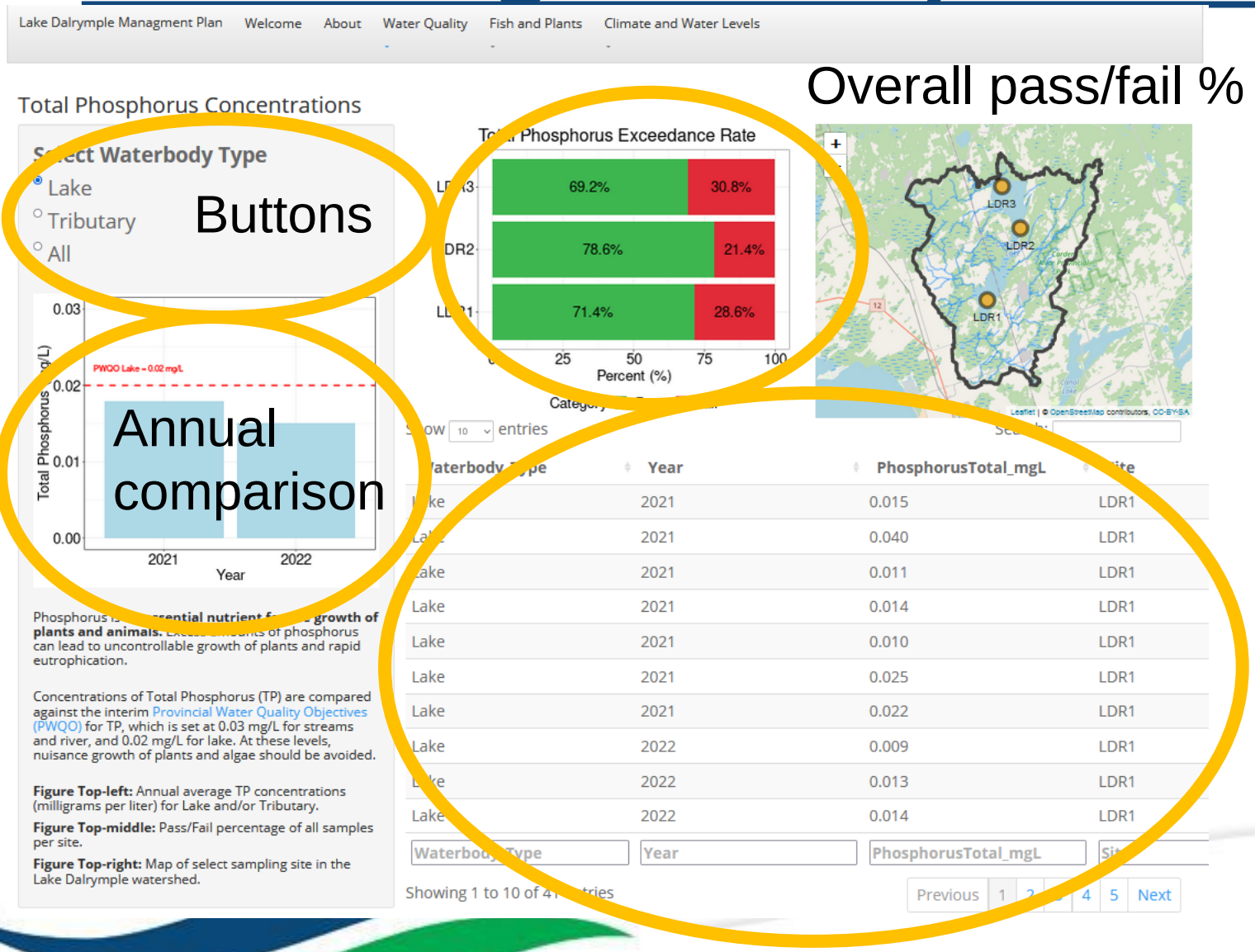
Monitoring Summary Dashboard



Open Data

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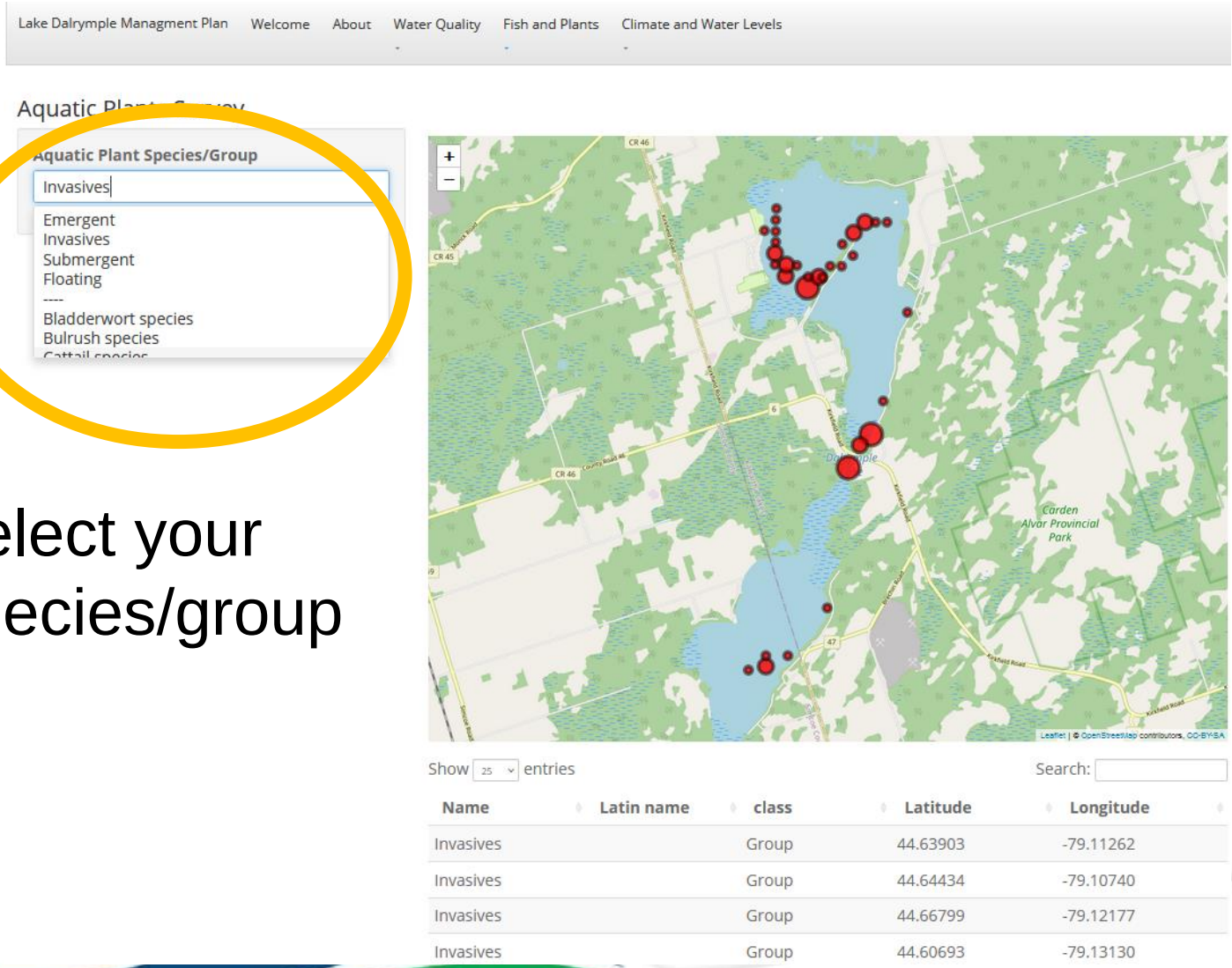
Monitoring Summary Dashboard



Select your species/group

Map will change with your selection

Open data

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Values

Concerns

Changes

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!

Brett Tregunno, Aquatic Biologist, Kawartha Conservation
btregunno@kawarthaconservation.com
705.328.2271 ext. 222

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