

Workshop

Ecosystem Functions and Services of Urban Ponds in Southern Ontario

September 29-30, 2022 (9-5)

University of Toronto Mississauga

Stormwater management ponds have been used extensively in North America to manage runoff in urban areas by mitigating the effects of precipitation events to urban streams. Such ponds are now mandated in new residential developments in Ontario, with over 1,000 in operation in the Greater Toronto Area (GTA) alone. In addition to their hydrological function, stormwater ponds may also have additional ecosystem functions (e.g. as novel ecosystems) and services (e.g. pollinator habitat, recreation). Managers of stormwater water ponds are challenged to maintain hydrological function, while considering ecosystem functions and services. However, there is currently insufficient information to make informed decisions that optimize these often seemingly antagonistic goals. Therefore, there is a need to undertake a review of the current state of stormwater pond research and management to identify knowledge gaps that can be addressed with subsequent research.

The objectives of this workshop are: 1) to facilitate communication and collaboration among urban pond managers and researchers; 2) to conduct a review of the current state of needs and knowledge related to the ecosystem functions and services of urban ponds; and, 3) using a knowledge co-production approach, identify knowledge gaps and develop a conceptual research framework for urban stormwater ponds.

Agenda

September 29, 2022

09:00 – Welcome and Introduction (Mandrak)

09:20 – What are stormwater management ponds (SWMP)? How do they function? How are they managed? (management agency engineer?)*

- Introduction to the characteristics of SWMP ecosystem (Hydrological and nutrient dynamics, contaminants))

10:00 – Introduction to ecosystem functions and services of SWMP (academic)*

10:30 – Break (refreshments provided)

10:45 – Managing SWMP for ecosystem functions and services (management agency biologist)*

- Introduction to the characteristics of SWMP ecosystem (ecological perspective)*

11:15 – Breakout#1 – SWMP Ecosystem Functions (What do we know?)

12:00 – Lunch (provided)

13:00 – Breakout#1 Report Back

13:30 – Breakout#2 – SWMP Ecosystem Services (What do we know?)

14:15 – Breakout#2 Report Back

14:45 – Break (refreshments provided)

15:00 – Researcher presentations (What is being done?) (10-15 min each depending on number)

17:00 – End of Day 1

* Speakers should be instructed to summarize the field by focussing their talk on current evidence from literature/practices (state of the art) and avoid speculating about future directions (we will do this at the end of the workshop).

September 30, 2022

09:00 – Welcome and Recap (Mandrak)

09:15 – Breakout#3 – Mapping existing research to management needs to identify knowledge gaps

10:00 – Breakout#3 Report back

10:30 – Break (refreshments provided)

10:45 – Breakout#4 – Prioritizing knowledge gaps

11:30 – Breakout#5 Report Back

12:00 – Lunch (provided)

13:00 – Breakout#5 – Brainstorming to address knowledge gaps (Where to go from here?)

13:45 – Breakout#5 Report Back

14:15 – Break (refreshments provided)

15:00 – Development of primary publication(s) (attendance optional)

17:00 – End of Workshop