• As land is developed, the natural water cycle is disrupted. Rain infiltrates less, resulting in larger amounts of runoff

• This increased runoff is collected by drainage systems (catchbasins and sewers) which discharge to Stormwater Management Facilities (SWMFs, or Stormwater Ponds)

• Stormwater ponds prevent flooding of roads and basements by storing water at a low elevation until sewers can carry the water away

• Stormwater ponds also enhance water quality of storm runoff by slowing water down and settling out particles

• Stormwater ponds are often naturalized and landscaped to be aesthetically pleasing, and can become amenities to the community

• While stormwater ponds can provide common space for outdoor activities, their primary function is still for flood protection
The City of Edmonton operates 236 stormwater ponds.

Beaumaris Lake is one of the oldest and largest ponds in the City.
Facility Type | Description
--- | ---
Wet Facility | Wet facilities have a permanent standing water level. During rainstorms, the water level will rise. Wet facilities usually have a control structure that regulates their discharge. Beaumaris Lake is a wet facility.
Dry Facility | Dry facilities only contain water during rain storms. For most of the year they are dry and may appear to be just park space. They are often landscaped with grass and appear to be in a depressed area or in a “bowl”.
Constructed Wetland | Constructed Wetlands are similar to wet facilities, however the plantings and landscaping are more naturalized and create more usable habitat for native species. Water levels still rise during rain events.
Why are an Assessment Program and Prioritization Tool Needed?

• Utility Services has committed to a significant long-term growth in investment for the maintenance and replacement of aging infrastructure and to support flood mitigation strategies.

• To achieve the goal of sustainable infrastructure, Utility Services is establishing a proactive, optimized and integrated asset management approach. This approach ensures the continued integrity of our assets and reduces the need for emergency repairs.

• Monitoring, inspection, condition assessment and prioritization are the foundation for the development of capital programs that positively impact the communities in the most optimal way.

• Risk based prioritization methods provide a standardized framework for municipalities to identify their priorities in capital and maintenance projects to meet long-term needs in a sustainable way.
STORMWATER POND ASSESSMENT PROGRAM

Beaumaris Lake Open House

• Ranking of stormwater ponds by age and storage capacity

Screening

Condition Assessment

• Detailed assessment of the stormwater ponds components:
  1. Pretreatment
  2. Inlet Conveyance
  3. Inlet Structure
  4. Sediment Forebay
  5. Storage Pool
  6. Outlet Structure
  7. Outlet Conveyance
  8. Other Structures
  9. Maintenance Access
  10. Security
  11. Landscaping and Community Amenities
  12. Water Quality

• Ranking and prioritization of stormwater ponds based on likelihood and consequences of failure such as public safety, system overflow, property flooding, damage to the facility, environmental consequences, and nuisance

Risk based Prioritization
Beaumaris Lake was the first constructed stormwater pond in the City of Edmonton. It was constructed in 1977 and is the largest stormwater pond, with a 14 ha open water surface and over 250,000 m³ of storage capacity.

The lake has five inlets and one outlet. Depths are about 3m on average, with some spots reaching 4m.

While the lake is a community amenity, its primary role is flood protection for thousands of nearby homes.
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STORM PONDS CAPITAL PROJECTS PROCESS

Beaumaris Lake Open House

We are here!

STORM PONDS CAPITAL PROJECTS PROCESS

We are here!

STRATEGY → CONCEPT → DESIGN → BUILD → OPERATE

Budget Cycle 2015-2018

Strategy Development

Budget Cycle 2019-2022

Capital Spending
The City of Edmonton provide the following maintenance activities on a regular basis to the entire stock of stormwater ponds:

**Aesthetics**
1. General spring cleaning (once per year)
2. Turf mowing, trimming and repair (12 times per year and as required)
3. Shrub bed maintenance (5 times per year)
4. Tree pruning and dead tree removal (every 8 years and as required)
5. Litter barrel emptying (1-2 times per week)
6. Weed control
7. Garbage collection
8. Removal of debris and litter from water areas
9. Furniture maintenance (benches, tables, waste receptacles, railings, view points, plazas, decks, shelters and gazebos)
10. Maintenance of artwork, statues, and monuments
11. Maintenance of fountains, water features, and pump stations

**Functionality**
1. Snow removal
2. Inspection and maintenance of signs and safety measures
3. Correction of surface grading
4. Maintenance of walkways
5. Maintenance of minor traffic control devices (fencing, gates, posts)
6. Inspection and maintenance of water quality
7. Inspection and clean up of hydraulic structures (once per year)
8. Repair of eroded areas
9. Maintenance of utility devices (retaining walls, rip-rap)
10. Maintenance of walkway lighting
11. Maintenance of boat ramps
Please add a sticker on areas you use frequently.
AREAS OF CONCERN

Beaumaris Lake Open House

Please add a sticker on areas of concern for you.