Fact Sheet on Stormwater and Watersheds in Brampton

This document has been prepared to support artists submitting to the City of Brampton's *From Streets to Streams* Catchbasin Art Project in understanding the broader context of the initiative. It includes information on the natural environment in a local context and excerpts of the City of Brampton's messaging related to stormwater pollution prevention. Design proposals are encouraged to raise awareness on:

- Preventing pollution from entering stormwater catchbasins; and/or
- Protecting local aquatic ecosystems in nearby wetlands, rivers, creeks and lakes.

Links to more information are included throughout. Artists are encouraged to conduct their own research in addition to reviewing this document.

Watersheds & Aquatic Ecosystems

- There are four watersheds in Brampton: Credit River, Mimico Creek, Humber River, and Etobicoke Creek.
- There are 27 species of frogs, turtles and snakes in Brampton.[1]
- There are 41 species of fish in Brampton.
- Redside dace[2] is an Endangered Species
    - The Redside Dace is a member of the Minnow family and reaches up to 12 cm long.
    - Adults are colourful with a red stripe along the front half of the body and a bright yellow stripe above that extends almost to the tail fin.
    - The colours intensify during the spring spawning season (May to early June), especially in males. Redside dace have a large mouth and protruding lower jaw that is well suited to feeding on insects hanging on vegetation over water.
    - The Redside dace is found in pools and slow-moving areas of small streams and headwaters with a gravel bottom.
    - They are generally found in areas with overhanging grasses and shrubs and can leap up to 10 cm out of the water to catch insects.
    - During spawning, they can be found in shallow parts of streams, which are also popular spawning areas for other minnow species.
    - Their habitat largely overlaps with GTA where urban land use is expanding.
    - They are susceptible to changes in stream flow and pollution in stream, which are common results of urban and agricultural land uses. For example, sediment (dirt, grit, etc.) from these developed areas is released into the environment and can smother spawning areas and clog the gills of Redside Dace (i.e., making it difficult for the fish to breathe).

[1] https://trca.ca/conservation/environmental-monitoring/aquatic-habitat-and-species/
[2] https://www.ontario.ca/page/redside-dace



(Image source: Government of Canada[3])

- Other fish, frogs, snakes and turtles found in Brampton include[4]:
  - Snapping turtle
  - Midland painted turtle
  - Spring peeper
  - American toad
  - Northern watersnake
  - Red-bellied snake
  - Ring-necked snake
  - White Perch, Yellow Perch
  - Smallmouth Bass
  - Northern Pike
  - Atlantic salmon
  - American Eel

Stormwater

- When it rains or when snow melts, stormwater does not go to a wastewater treatment plant, instead it goes into stormwater ponds via catchbasins or directly into nearby creeks or rivers.
- There are over 40,000 catchbasins in Brampton.
- There are 180 stormwater ponds in Brampton. When it rains, Stormwater ponds collect rain, snowmelt and runoff to settle the sediments and pollutants which help improve water quality before the water goes into local rivers and creeks. However, there are parts of Brampton where runoff goes directly into local rivers and creeks.
- The City of Brampton prevents pollution by sweeping streets and cleaning out catchbasins. In addition, the City periodically cleans out stormwater ponds and other stormwater management facilities to restore their capacity to capture pollutants. These programs are funded by the Stormwater Charge.
- Common sources of stormwater pollution include:
  - Dirt/soil
  - Fertilizers
  - Pesticides and herbicides
  - Motor oil, fuel and grease
  - Soaps

[3] https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports/redside-dace-2017.html
[4] https://trca.ca/conservation/environmental-monitoring/aquatic-habitat-and-species/

- Yard waste
- Pet waste
- Paints and solvents
- Litter
- Chemical spills

Everyone can help prevent stormwater pollution. Here's how:

- Winter safety:
  - Shovel first. Shovel all the snow you can before using salt or sand. You may find you won't need that much salt or sand at all.
  - Be mindful of the amount of salt and sand you use.
  - Follow the product instructions when applying ice control chemicals. Salt works best between 0 and -10 Celsius. When it's colder, switch to sand for traction or an ice melter that works at colder temperatures.
  - Use salt or sand only on iced-over areas.
  - Sweep up spilled and excess road salt to save for another time. Salt does not expire.
  - Do not let salt be washed away by rain or snowmelt.

- In your yard:
  - Minimize the use of fertilizer to the extent possible.
  - Choose native plants, shrubs, and trees for your yard and garden because native plants need less fertilizer.
  - Apply lawn and garden chemicals only if needed and according to the product's instructions and regulations.
  - Do not apply fertilizer before, during or immediately after it rains.

- Waste disposal:
  - Dispose of food in the Green Bin for curbside pick-up and beverages as liquid waste into household drains connected to the sanitary sewer system.
  - Dispose of cigarette butts in the garbage, not on the ground.
  - Pick up pet waste and dispose of it in the garbage.
  - Dispose of household hazardous materials such as motor oil, antifreeze, and paints at Region of Peel's Community Recycling Centres

- Cleaning activities:
  - Clean contaminants from your driveway and walkways by vacuuming, sweeping, and using rags or dry absorbents.
  - Avoid cleaning paved areas with water because this will wash contaminants onto the road and ultimately into rivers and creeks.
  - Wash carpets, outdoor furniture, and other items on lawns or gravel surfaces, not on the driveway or road.
  - Choose non-hazardous cleaning products.
  - Shovel snow first