# HUMBER RIVER WATERSHED PLAN

## Characterization FACTSHEET

### WHAT IS A WATERSHED?

A watershed is the area of land that catches rain and snow that drains or seeps into a marsh, stream, river, lake, or groundwater. Healthy watersheds provide numerous ecosystem services such as supporting biodiversity, providing clean drinking water, reducing flood and erosion hazards, protecting the quality and quantity of water, and improving climate resiliency.

### WHAT IS WATERSHED PLANNING?

Watershed planning involves assessing current and potential future watershed conditions and identifying measures to protect, enhance, and restore watershed health and build resiliency to land use and climate changes. Watershed planning does not make land use and infrastructure planning decisions but is intended to help municipalities make informed decisions on where and how to grow in a way that minimizes and/or mitigates impacts to watershed health. Watershed plans also help inform other initiatives including ecosystem restoration and management, land management and acquisition, best practices for rural land uses, low impact development/green infrastructure implementation, and climate adaptation.

### NEW HUMBER RIVER WATERSHED PLAN

The development of the new Humber River Watershed Plan (HRWP) is a multi-year, collaborative effort between TRCA, Mississaugas of the Credit First Nation, and our municipal partners. Engagement with First Nations and Indigenous communities as well as with watershed stakeholders, residents, and the public will occur throughout the watershed planning process to increase awareness of watershed planning and obtain input on watershed plan components.

To learn more about the development of the HRWP and the results of watershed characterization, and to subscribe to stay informed, scan the QR code or visit **trca.ca/humber**

### WATERSHED CHARACTERIZATION STAGE KEY FINDINGS

**(i.e., Existing Conditions) (2022-2023)**

#### NATURAL HAZARDS

*(including flooding and erosion)*

- There are seven Flood Vulnerable Clusters in the watershed (~ 1.2% of the watershed area).
- Most of the watershed can be categorized as having moderate or high erosion sensitivity, and moderate stability.

#### NATURAL HERITAGE SYSTEM AND URBAN FOREST

*(including terrestrial habitat quantity/quality, sensitive species, urban forest/tree canopy cover, etc.)*

- Natural cover (such as forests and meadows) continues to decrease (31.4% natural cover as of 2020, not including water).
- There is higher quality habitat in the Main and East Humber subwatersheds in the northern part of the watershed but generally poorer quality habitat in the West Humber, Lower Humber, and Black Creek subwatersheds due to smaller amounts of natural cover and urban influences.
- The watershed supports many sensitive plants and animals including species at risk.
- Many of the natural areas are important for habitat connectivity and wildlife movements.
- The terrestrial ecosystem is highly vulnerable to climate impacts within the more urbanized areas (middle to lower reaches of the watershed).
- Urban forest canopy cover remained stable (at 29.1%) from 2009 to 2021.

## WATER RESOURCE SYSTEM

*(including aquatic habitat, in-stream barriers, groundwater conditions, streamflow, etc.)*

Boyd Conservation Park

- The aquatic ecosystem is sensitive and aquatic habitat conditions vary across the subwatersheds (poorest in Black Creek and Lower Humber subwatersheds and best in the Main and East Humber subwatersheds).
- The fish community is in relatively good health at the watershed scale but there are large differences at the subwatershed scale between the northern rural areas and the southern urbanized areas.
- There are 91 documented in-stream aquatic barriers preventing the movement of fish species.
- There is potentially occupied and contributing habitat for Redside Dace and Rapids Clubtail in the Humber River (both endangered and sensitive indicator species).
- Streamflow/discharge has increased by approximately 20.3% from historical conditions.

Redside Dace

Jefferson Salamander

## WATER QUALITY

- Surface water quality is variable throughout the watershed with poorest conditions often in the lower watershed.
- Contaminants of particular concern include chlorides, Phosphorus, metals, and *E. coli* bacteria.

## CLIMATE TRENDS

Climate trends based on an analysis of climate parameters for two historical climate periods (1961-1990 and 1981-2010) include:

- Air temperature is increasing (by 0.7°C on average between the two time periods).
- Very hot days above 30°C and 35°C have increased.
- Very cold days below -10°C and -20°C have decreased.
- Total annual precipitation has generally increased in the watershed (by 3.3%).
- The growing season is increasing (by 6.4 days).

## CULTURAL HERITAGE

- The Humber River has a rich human history as a home for Indigenous peoples along its banks, as an ancient transportation route known as the Carrying Place Trail, and as a site of many of Toronto's post-European settlement homes and industries.

- The Humber River was designated as a Canadian Heritage River in 1999 based on its outstanding human heritage and recreational values and was officially included in the Canadian Heritage River System (CHRS), Canada's national river conservation program.

## NEXT STEPS

During the **Future Management Scenarios Stage (2023-2024)**, we will assess potential future management scenarios to determine how watershed conditions may change. This includes assessing the impacts of different potential future land uses, varying levels of watershed enhancements (like stormwater management improvements and increased natural and urban forest cover), and, where possible, the implications of climate change.

During the **Implementation Planning Stage (2024-2025)**, we will develop a realistic management framework with priority actions to protect, enhance, and restore watershed health. The management framework will be informed by both watershed characterization and future management scenarios analysis and will integrate input obtained through engagement. This stage will also involve drafting the watershed plan document.

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