



INFRASTRUCTURE & ENVIRONMENTAL SERVICES

COMMITTEE ADDENDUM

Thursday, May 23, 2024 at 9:00 am

W & M Edelbrock Centre, Dufferin Room, 30 Centre Street, Orangeville ON

The meeting will be live streamed on YouTube at the following link:

<http://www.youtube.com/@DufferinOne>

PRESENTATIONS

2. **INFRASTRUCTURE & ENVIRONMENTAL SERVICES – May 23, 2024 – ITEM #2**
Grand River Watershed-Based Management Strategy

Not Listed
on Agenda

A presentation from Janet Ivey, Manager, Water Resources, Grand River Conservation Authority, regarding the Grand River Conservation Authority's watershed-based management strategy.

The GRCA's Watershed-based Resource Management Strategy

Dufferin County Infrastructure and
Environmental Services Committee
May 23, 2024
Janet Ivey, Manager of Water Resources



Outline

- About the Grand River watershed
- Guiding principles
- Objectives
- Programs and services
- Looking forward
- Sharing your feedback



History of the watershed

In the 19th and 20th centuries, **clearing the land and urban growth** took a high toll on the natural system.



20th Century Issues - Floods



Photo: Galt (Cambridge), March/April, 1929.

20th Century Issues - Drought



Photo: View looking down an almost dry river bed in Elora Gorge, 1910. Wellington County Museum and Archives A1978.223

20th Century Issues – Poor Water Quality

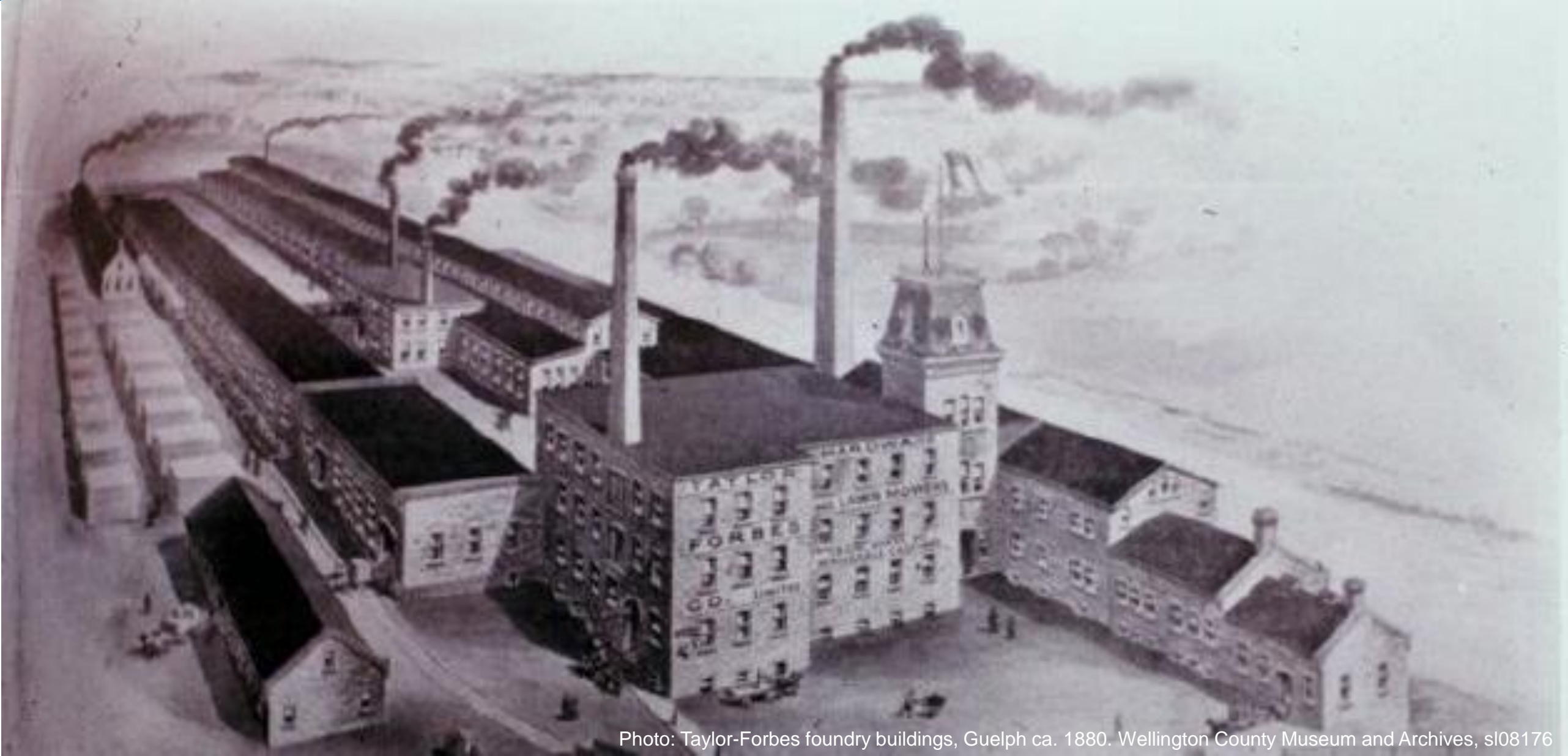


Photo: Taylor-Forbes foundry buildings, Guelph ca. 1880. Wellington County Museum and Archives, sl08176

History of the GRCA

Business leaders pushed for watershed agency - they understood the link between a **healthy environment and a healthy economy.**



Why are we developing a new Strategy?



Two new Strategies are required by regulation under the Conservation Authorities Act:

- **Watershed-based Resource Management Strategy**
- Conservation Area Strategy

Ensures the GRCA's programs reflect legislated mandate, municipal commitments, and watershed issues.

Our Vision



A healthy watershed where we live, work, play, and prosper in balance with the natural environment.

Our Mission

We will work with local communities to reduce flood damage, provide access to outdoor spaces, share information about the natural environment, and make the watershed more resilient to climate change.



The Grand River watershed today

- Largest watershed in southern Ontario, about 6,800 square km
- River flows from Dundalk to Port Maitland on Lake Erie
- 38 municipalities
- 2 First Nations
- Population of about 1 million
- Canadian Heritage River



Watershed stressors and issues

- Watershed population projected to grow from 1 million to 1.5 million by 2051
- Water quality - assimilation of treated effluent from 30 sewage plants and agricultural runoff
- Shifting climate and hydrologic patterns
- Flooding and drought
- Habitat loss and fragmentation

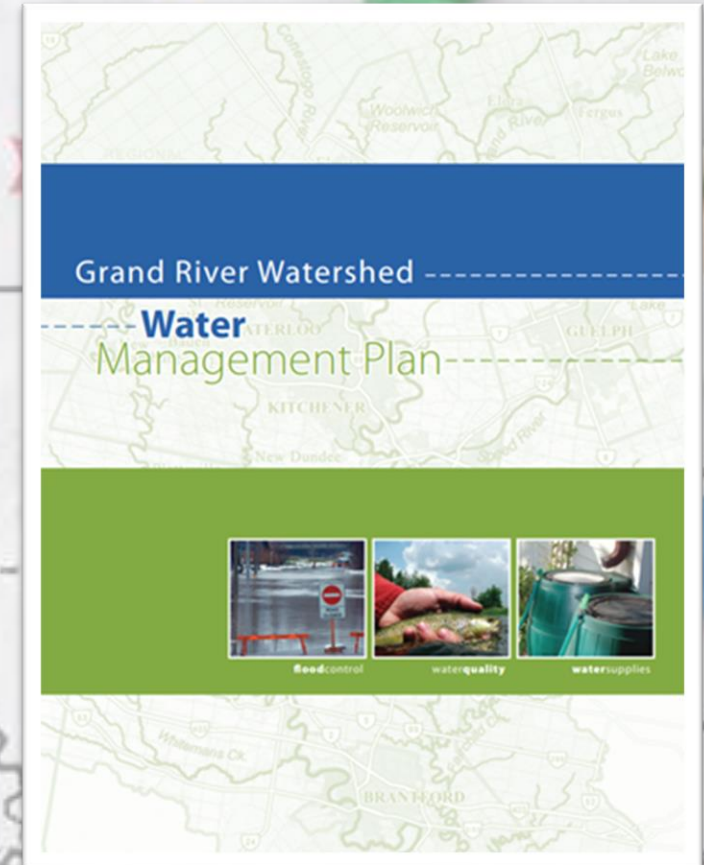


Watershed sciences and collaborative planning

90 years of watershed-scale planning

Grand River Water Management Plan – a voluntary, collaborative plan

Water Managers Working Group – GRCA, municipal, First Nations, provincial, federal water leaders implementing the Plan



Guiding principles

- The **watershed is the appropriate** scale for managing water and the linkages between water and other natural resources.
- A **well-managed river system is crucial for a healthy watershed**, sustaining prosperity, growth, well-being, and climate change resiliency.
- **Collaboration is essential**, as the management of water and land is a shared responsibility among the conservation authority, municipalities, First Nations, government agencies, landowners, residents, and other interest holders.
- When making decisions, the **GRCA considers the broad range of water uses** and values, and the needs of natural and human communities.
- The **GRCA's programs adapt and respond** to changing conditions, priorities, vulnerabilities, and pressures.

Objectives

- 1. Protect life and minimize property damage from natural hazards,** including drought, flooding, erosion, dynamic beaches, and hazardous lands and sites.
- 2. Manage water to ensure sustainable water supplies** for communities, economies and ecosystems.
- 3. Improve water quality** to enhance river health and reduce the river's impact on Lake Erie.
- 4. Protect, enhance, and restore natural areas** to improve ecosystem health and resilience.
- 5. Protect drinking water sources** from contamination and overuse.
- 6. Connect people to the environment** through outdoor experiences.
- 7. Manage the GRCA's landholdings** in a responsible and sustainable way.

1. Protect life and minimize property damage

Monitoring watershed conditions

- Climate
- Stream, reservoir, Lake Erie levels and river ice conditions

Managing the risk of natural hazards

- Maintaining and operating water and erosion control structures (dams, dikes)
- Flood forecasting and warning
- Natural hazard mapping
- Planning and regulation of development in floodplains and other hazard lands
- Subwatershed planning



2. Manage water to ensure sustainable supplies

Monitoring watershed conditions

Maintaining and operating water and erosion control structures (dams, dikes)

- 7 multi-purpose dams and reservoirs
- Reduce flood damages
- Augment river flows to support water supply and improve river's capacity to receive treated wastewater

Coordinating response to low water levels

- Low Water Response Team



3. Improve water quality

Monitoring watershed conditions

- Surface water and groundwater quality, temperature
- Analysis and reporting

Improving municipal wastewater effluents

- Watershed-wide Wastewater Optimization Program

Improving rural water quality

- Providing technical and financial support to landowners for water quality projects

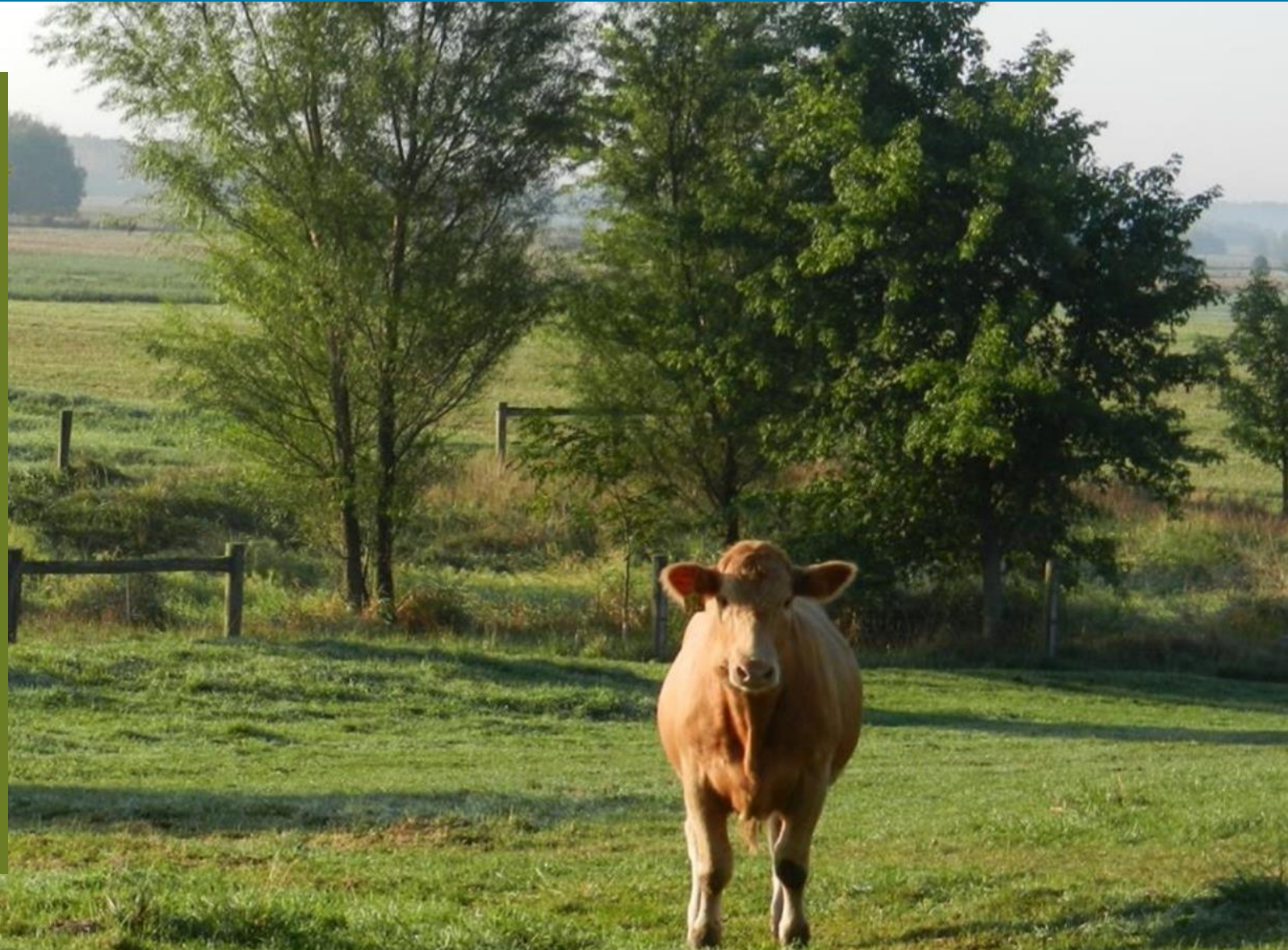


Photo: A fenced buffer alongside a creek. GRCA

5. Protect drinking water sources

Conserving and managing lands

- About 11% of the wetlands and 7% of the forests in the watershed are on GRCA lands

Providing conservation services to landowners and residents

- Private land tree planting programs and naturalization projects



5. Protect drinking water sources



Drinking water source protection

- Source Protection Authority under the Clean Water Act
- Ensuring municipal and Six Nations drinking water systems are protected from contamination and overuse
- Updating the Grand River Source Protection Plan to reflect changes and new information
- Supporting implementation by municipalities and others

6. Connect people to the environment

Outdoor environmental education

- Experiential learning for students from preschool to grade 12
- 30,000 students engaged each year through field trips to nature centres, at-school visits and some virtual programs
- Children's Water Festivals

Providing outdoor recreation opportunities

- 11 Conservation Areas - camping, hiking, swimming, fishing, picnicking, and other activities
- Passive recreation on some conservation lands



7. Manage landholdings responsibly

Conserving and managing lands

- GRCA owns more than 19,000 ha of land
- Lands support water management, recreation, education, protection of natural areas
- Some lands under leases and maintenance agreements
- Cottages at Belwood and Conestogo Lakes

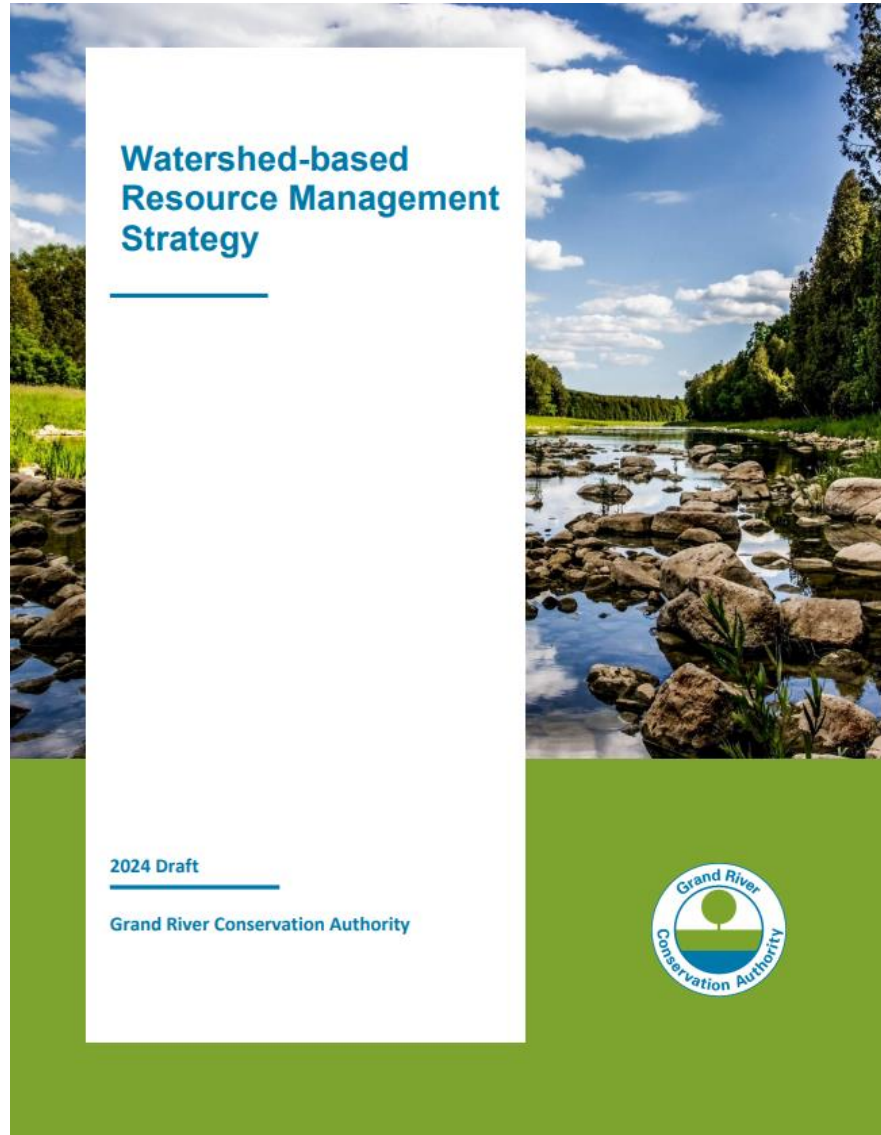


Looking forward

- Relationship building and collaboration
- Adaptive management
 - Continue to respond to population growth, land use change, resource use, climate change
- Update the GRCA's Strategic Plan and the Grand River Water Management Plan as needed



Would you like to read or comment on the Strategy?



Survey open until June 7th

www.grandriver.ca/resourcestrategy