



# Background Briefing

## Water Management Plan

December 2014

The vitality of the people and communities of the Grand River watershed is linked to the health of the river and the natural environment.

Much has been done in the past 100 years to protect and improve the natural environment. Many of those improvements came about through the implementation of water management plans.

The Grand River watershed faces new challenges brought on by high population growth, extensive agriculture and climate change.

This new Grand River Watershed Water Management Plan addresses those issues. It is built on the foundation of earlier plans, especially the 1982 Grand River Basin Water Management Study.

This new plan will guide future actions to ensure the environment remains healthy and sustainable as the population grows.

It is a joint plan by municipalities, First Nations, the GRCA, provincial ministries and federal departments to align their efforts and identify practical actions that will make the biggest difference.

It is a voluntary plan so a spirit of cooperation and shared responsibility is critical to its success.

The plan has been endorsed by all of the partner agencies, as well as most municipalities in the watershed.

### The goals of the plan

The plan is an integrated water management plan with goals to:

- Ensure sustainable water supplies for communities, economies and ecosystems;
- Improve water quality to improve river health and reduce the river's impact on Lake Erie;
- Reduce flood damage potential; and
- Increase resiliency to deal with climate change.



### The Issues

#### Population growth

The Grand River watershed has a population of about 985,000 which is expected to reach 1.53 million by 2051.

Municipal drinking water comes from more than 100 municipal wells and four river intakes. That same river also receives the treated effluent from 30 sewage treatment plants. More people means more demand on water resources for drinking water, stormwater management and sewage treatment.

#### Climate change

Warmer air and water, bigger rainstorms, longer periods of drought — the possible consequences of climate change could pose new challenges in managing floods, improving water quality and securing water supplies for municipalities, farmers, industry and the natural environment.

#### Extensive agriculture

The Grand River watershed is one of the richest agricultural regions in Canada. Fertilizers, farm chemicals and animal waste must be properly stored, handled and used to minimize impact on rivers, streams and groundwater. Erosion needs to be addressed to protect farmland and water quality.

### Key recommendations

#### Ensuring water supplies

- There is enough water in our river and groundwater systems but we need to be diligent in planning for future water needs.

- The GRCA's reservoir network can continue to provide enough water during dry months to meet our environmental, municipal and wastewater treatment needs.
- Our water use is sustainable, but all sectors should be more efficient in the way they use water.
- We need to protect those areas of the watershed where water enters the ground to recharge aquifers.
- In some areas, it's important to develop drought contingency plans to ease constraints on water use during dry spells.



grams, will make a difference.

- Consideration should be given to removing old dams or modifying their operation to improve water quality.

## Improving water quality

- Investment in wastewater treatment plants, and more effective operation of the plants, will lead to improvements in water quality.
- Non-point sources of pollution – runoff from farm fields and urban areas – will continue to be a challenge. Expansion of water quality programs for rural lands, and investments in urban stormwater pro-

## Reducing flood damages

- Dams and dikes have done much to reduce flood damages. It is critical that this infrastructure be properly managed and maintained.
- Improved floodplain mapping, flood forecasting capabilities and flood warning systems will become even more important.

## The Partnership

The plan is a voluntary, collaborative process that brings various agencies together as partners.

The plan promotes the adoption of best practices and the implementation of projects and programs that provide the greatest benefits relative to the investment.

The partner agencies have set out a strategy, based on agreed-upon local objectives and targets, to meet the needs of the ecosystem and watershed communities. The strategy will assist each partner to fulfill its role and support each other.

Many groups and organizations also provided input including members of municipal councils, the agricultural community, aggregate producers, urban development organizations, environmental non-government organizations and the interested public.

### Plan Partners

These agencies took part in the plan development and had members on the Project Team and/or Steering Committee.

### Municipalities represented by:

- Regional Municipality of Waterloo
- County of Brant
- County of Haldimand
- City of Guelph
- City of Brantford
- City of Kitchener
- City of Waterloo
- City of Cambridge
- Township of Centre Wellington

### Six Nations of the Grand River

### Ontario Ministry of the Environment and Climate Change

### Ontario Ministry of Natural Resources and Forestry

### Ontario Ministry of Agriculture Food and Rural Affairs

### Environment Canada

### Grand River Conservation Authority