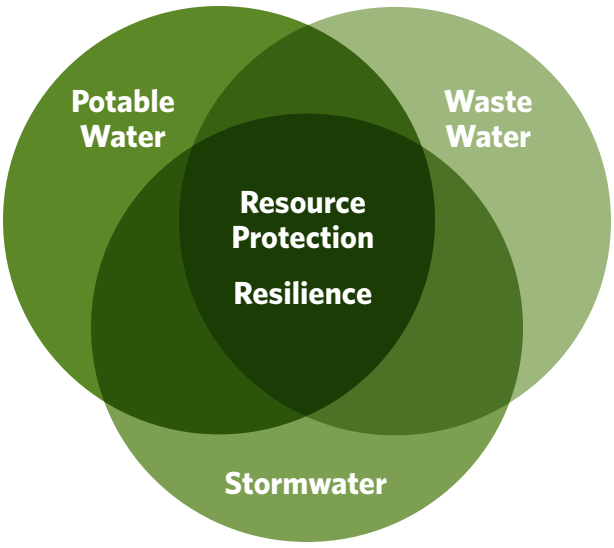
SUSTAINABLE WATER AND WASTE INFRASTRUCTURE AT-A-GLANCE

WHAT IS THE SUSTAINABLE WATER AND WASTE INFRASTRUCTURE DIRECTION STRATEGY?

The **Sustainable Water and Waste Direction Strategy** outlines initiatives that deliver services in a sustainable manner and protect the health and safety of Winnipeg's citizens and the quality of our environment without sacrificing the economic well being of the city.

The major themes of the Direction Strategy are:

- Protecting Public Health and Safety
- Preserving the Environment
- Ensuring Economic Stability



Source: AECOM

The five key elements of Sustainable Water and Waste Infrastructure are:

- Water Supply, Treatment and Distribution
- Wastewater Collection and Treatment
- Stormwater Management and Flood Protection
- Solid Waste Management
- Service Sharing with the Capital Region

DID YOU KNOW?

- We use roughly 225 million litres of water/day (down from 300 million in 1990).
- Current water system capacity is 385 million litres/day (with successful water conservation efforts, that could potentially accommodate 850,000 people)
- Approximately 30% of developed land in Winnipeg is served by combined sewer systems where runoff and domestic wastewater are collected in the same pipe
- Combined sewer overflows represent only 1 to 2% of the wastewater that is lost on an annual basis
- Residential recycling in Winnipeg has an 85% participation rate. This diverts 45,000 tonnes (17% of total waste) from landfills
- National statistics indicate that 4% of total greenhouse gas emissions are generated by landfills
- Organic/food waste is estimated to make up 33-50% of all residential solid waste in Winnipeg.

DIRECTIONS

The Sustainable Water and Waste Infrastructure Direction Strategy builds on a number of initiatives of the Water and Waste Department currently in progress and provides policy directions that reinforce the City's approaches to water conservation, wastewater management, stormwater management, solid waste minimization and sustainable asset management. These policies focus on:

- Water Conservation & Waste Reduction
- Providing cleaner, safer water to our citizens
- Protecting local water quality and reducing impacts on the natural environment
- Supporting long-term future growth and development
- Improving service reliability and reducing costs by aligning service rates with the actual costs of delivering services

There are several innovative initiatives in this Direction Strategy that will have long-term implications related to water and sewer infrastructure and solid waste management within the City and Capital Region. Here are four examples of these innovative initiatives:

1. Water Sensitive Urban Design (WSUD) — Exploring the application of technologies such as greenroofs or vegetated bio-retention swales to our climate and geography.
2. Water Reuse/Recycling (Greywater or Rainwater Harvesting) — Exploring how the safe reuse of water can increase the number of people our water and waste infrastructure can serve while reducing our water consumption.
3. Source Separated Organics (SSO) — Exploring a SSO program where organic waste, recyclables and garbage are separated for curb-side collection.
4. Sustainable Asset Management (SAM) — Sustainable Asset Management allows the City to efficiently maintain its infrastructure and plan for future infrastructure needs while protecting public health and maintaining the quality of our environment

OPPORTUNITIES

- Serving the water and waste needs of a city that is predicted to grow by 180,000 people by 2031.
- Careful planning and significant investment required to upgrade much of the existing physical water and wastewater infrastructure which is 75 to 100 years old.
- Applying innovative infrastructure technologies that are viable in our extreme winter climate, clay soil conditions and flat topography.