



City of Saskatoon Water Conservation Strategy: List of Recommended Programs

Background

The City of Saskatoon (City) is developing a Water Conservation Strategy (Strategy) that will provide a plan for reducing water throughout Saskatoon. This will include water reduction within our homes, businesses, institutions, industries, and the City of Saskatoon itself.

Water reduction programs will be recommended to City Council based on proven successes in other cities, the amount of water the program or project could save, how much it costs, how easy it would be to apply or carry out, and what we hear from our community.

Indoor Residential Programs

You might be surprised to learn that over half of the water used in Saskatoon is used by residents and of that, nearly three-quarters is used indoors. Treating and pumping water requires a lot of energy that creates greenhouse gas emissions. High demand for water can strain the capacity of the water system which means increased spending to expand this capacity. Moreover, heating water for showers, sinks, dishwashers, and washing machines is responsible for an even larger amount of water-related emissions.

The following programs address most of these main indoor uses, targeting around 77% of the total indoor residential water use, and are currently being considered for inclusion in the Water Conservation Strategy:

Residential toilet rebate:

- A \$75 rebate for replacing traditional toilets with more efficient, low-flow toilets is an incentive for residents and, if funded for 10 years, could install up to 20,000 toilets and thus cutting total water use in Saskatoon by 1.2%

Residential showerhead rebate and give-away:

- Rebates (up to \$30) or give-aways of low-flow showerheads and faucet aerators, if funded for 10 years, could install up to 22,000 showerheads and cut total water use in Saskatoon by 0.2%

Residential water-use education program:

- Working with trusted community partners to deliver education and advertising programs that aim to reduce total water use in Saskatoon by 1.5%

Affordable Housing Pilot:

- Work with an affordable housing provider to improve water efficiencies
- The program would conduct audits and provide education to property managers and renters to increase water reduction practices and make water use more efficient
- Water conservation should benefit both building owners and those who live in the building





Affordable and multi-unit housing efficiencies:

- Based on results from the Affordable Housing Pilot, expand the program above to target affordable and multi-unit housing across Saskatoon

Residential water audit and coaching program:

- Through in-home audits, residents are coached about potential water saving opportunities such as recommended retrofits, repairs (ex. toilet/showerhead replacements, identifying leaks, etc.), and behaviour changes
- The program may include give-aways for faucet aerators/showerheads and connecting residents to other rebate or incentive programs





Outdoor Residential Programs

In Saskatoon 17% of our water is used for irrigation, with most of that being used in residential yards. Outdoor watering can double during summer dry periods, driving the need for the City to make costly upgrades to water-supply infrastructure for treating and pumping more water. More efficient watering and outdoor conservation can help avoid such situations.

The following programs address the majority of outdoor residential water use, and are currently being considered for inclusion in the Water Conservation Strategy:

Residential irrigation system upgrade rebates program:

- A \$200 rebate to purchase best-available controllers and/or rain sensors for sprinkler systems, if funded for 10 years, could reduce peak day use by ~0.7%

Residential low-water landscaping program:

- An education program combining custom yard plans, educational/training workshops, advertising campaigns, policies/guidelines, and incentives that promote water efficient landscaping methods, could reduce peak day use by ~0.5%





Industrial, Commercial, and Institutional Programs

The industrial, commercial, and institutional (ICI) sector consumes approximately 23% of the total amount of water used in Saskatoon (excluding sales to SaskWater). While most ICI sector water is used indoors (over 8 billion litres per year), there is still a large amount used outdoors, most often through irrigation systems. Unfortunately, many of these systems have substandard or ill-adjusted controllers.

The following programs address ICI sector water use, and are currently being considered for inclusion in the Water Conservation Strategy:

Audit and fixture incentive program:

- Walk-through audits to measure water use, identify potential savings, and provide toilet or plumbing fixture upgrade incentives
- This program could then reduce water demand by ~0.1%

Capacity buyback program:

- An audit and incentive program that provides information on water conservation related costs, savings, and payback times
- Organizations that use recommended water-saving measures then receive a rebate
- This program could reduce overall water demand by ~5%

Irrigation system upgrade rebate program:

- Provide incentives to replace old irrigation-control systems with WaterSense-labelled, weather-based controllers along with other needed upgrades (e.g. rain sensors)
- This would allow participants to reduce their outdoor water consumption by as much as 20% and could reduce the City of Saskatoon's peak day use by ~0.3%

Irrigation system assessments, training, and accreditation:

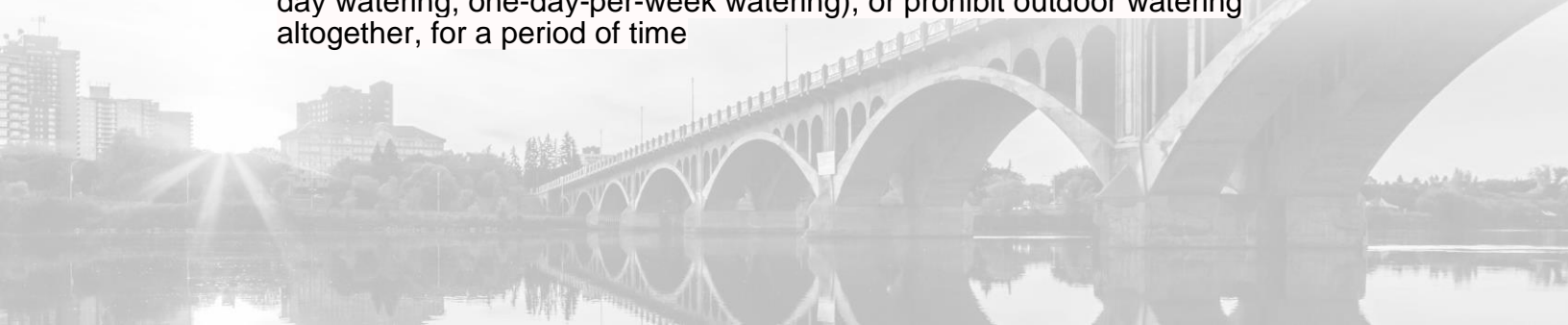
- An irrigation company training and certification program for irrigation-system assessments, tune-ups, and equipment upgrades that improve water efficiency.
- This program could reduce peak day use by ~0.2%

Once-through cooling replacement incentive program:

- This program would locate once-through cooling equipment in Saskatoon and offer incentives to replace these systems replacement incentives which could reduce overall water demand by ~0.03%

Outdoor watering restrictions:

- Restrictions that would be used during periods of high-water demand that strain our water treatment site
- The restrictions could include scheduled watering periods (e.g., odd and even-day watering, one-day-per-week watering), or prohibit outdoor watering altogether, for a period of time





ENGAGE

City of Saskatoon Corporate Practices

We heard from you that it is important that the City of Saskatoon is also committed to improving our water efficiency and we are looking to continue to support our efforts to save water, money, and reduce City-wide emissions. 70% of City water is used outdoors annually.

The following programs address City of Saskatoon practises and are currently being considered for inclusion in the Water Conservation Strategy:

Maximize watering efficiency in parks:

- Watering City parks, vegetation, and trees consumes the most amount of water (~800,000 cubic meters/year) and accounting for 54% of the total water use by the City
- Upgrading irrigation equipment to optimize watering while maintaining healthy turf and vegetation, could reduce water use in City parks by 10 to 20% and reduce peak day use by ~0.6%

Increase naturalized areas in parks:

- Naturalized parks require little or no supplemental water once planted and settled. Transitioning 5% of current irrigated park area to a naturalized state could reduce peak day use by ~0.2%

Advanced Metering Infrastructure (AMI):

- Explore using the new smart water meter technology for residents and businesses to better understand their water use, increase conservation and reduce leaks

Using raw water in parks:

- Substitute river water, storm water, rainwater or other un-treated sources for irrigation to reduce peak demand on our water system

Maximize water efficiency of spray pads, paddling pools and pools:

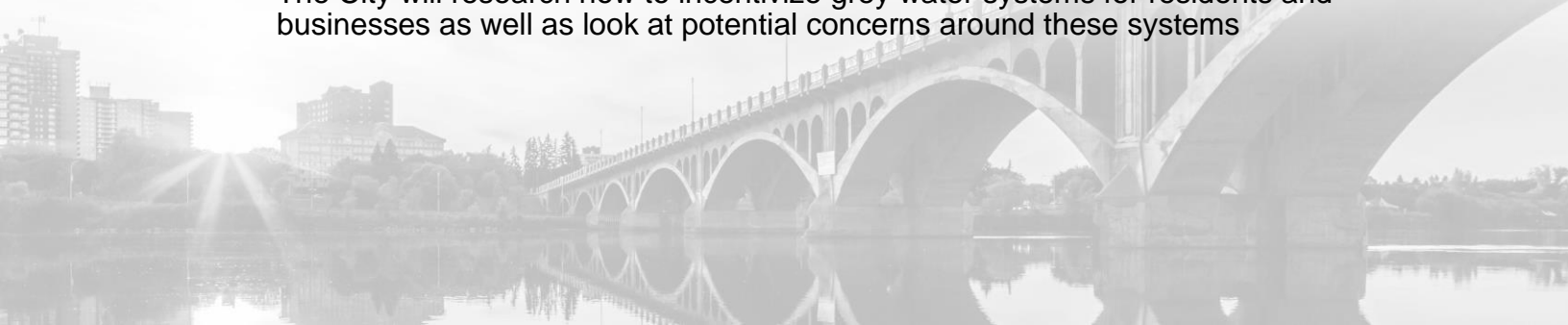
- Installing and making changes to timers and nozzle settings could reduce water use at these facilities, which account for ~9% of total City water use, by 50% while still offering safe and fun play experiences

Maximize efficiency of facilities and operations:

- By upgrading fixtures and equipment, recycling water (i.e., for vehicle washing), and finding and fixing leaks in the underground distribution systems could reduce the City's water use by ~10%

Develop a grey-water strategy:

- Grey water that has gone through the household but does not contain sewage
- The City will research how to incentivize grey water systems for residents and businesses as well as look at potential concerns around these systems





Water rates and pricing:

- Review the way the City charges for water and explore pricing and rates that lead to the maximum affordability and conservation

