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Menu

Water Stewardship

Despite covering about 70% of the Earth's surface, water is not as plentiful as one may think: only 3% of it is fresh water, supplying water for drinking, growing crops, manufacturing, and energy.

While many of us see access to clean and safe drinking water as being a human right, communities across the world, and even within Canada, do not not share that privilege. According to the United Nations, as climate change continues to cause rising sea levels and droughts in areas around the world, and the global population increases, the stress on the world's water resources will continue to increase exponentially.

When reflecting on water scarcity - defined as the scarcity in availability of water due to physical shortage, or scarcity in access due to the failure of institutions to ensure a regular supply or due to lack of adequate infrastructure - third-world countries located in poor nations may come to mind. However, according to a 2018 article by the BBC, the top 10 countries facing water scarcity may come as a surprise: Cape Town (South Africa), Beijing (China), Istanbul (Turkey), and London (England), and Miami (United States) are all expected to face issues related to scarce water supply.

As Canadian Muslims, our responsibility to be water stewards is two fold: first, we rely on access to clean water to perform ablution five times a day, and second, we live in a country considered fresh-water rich, meaning that Canadian rivers discharge close to 9% of the world's renewable water supply (<https://www.nrcan.gc.ca/maps-tools-publications/tools/geodetic-reference-systems/water/16888>), while being home to less than 1% of the world's population.

The act of ablution may be the most encouraging way to introduce congregation members to reducing their water usage, which can in turn be used as the first step to introduce the Muslim community to the larger commitment of being stewards of the environment. The Prophet Mohammed (Peace and Blessings be Upon Him) exemplified the conservation of water through the act in which he performed ablution, for which he stated:

"Do not waste even if performing ablution on the bank of a fast flowing large river" (Al Thirmidhi)

As well, it has been recorded that the Prophet (Peace and Blessings be Upon Him) would use approximately 1.25 litres of water when performing ablution. These are clear indications that the act of water conservation is a duty of all Muslims to practice.

Water conservation and stewardship also tie closely to the areas of energy efficiency and waste management, as can be explored below.

Water conservation and energy

Taking action to conserve water within your facility can also result in energy savings. Electricity or gas is used to heat water, so the less hot water that is used, the less energy is needed. Water companies also use energy to purify and pump water to your facility as well as in the treatment of sewage, meaning that saving water reduces both water and energy bills.

Additional Resources:

- Natural Resources Canada, Financial Incentives by Province (<https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-homes/financial-incentive-province/4947>)

More information on how your Mosque can manage your energy usage can be found in the Energy Conservation section of this toolkit.

[Energy Conservation \(/energy_conservation\)](/energy_conservation)

Water stewardship and waste management

Similar to the nexus between water and energy conservation, there is also a connection between waste management practices and the health of local bodies of water, including the health of local communities and wildlife. As more waste is entering into aquatic ecosystems, we are seeing an increase in debris and microplastics found in aquatic animals, and even in human organs. (<https://www.theguardian.com/environment/2020/aug/17/microplastic-particles-discovered-in-human-organs>)

In addition to this, there is also a clear connection between access to clean drinking water, human rights, and waste management. Many Indigenous communities in Canada lack access to safe drinking water (<https://www.canada.ca/en/indigenous-services-canada/news/2020/12/government-of-canada-announces-15-billion-in-new-investments-for-clean-drinking-water-in-first-nations-communities.html>), which has only increased due to the COVID-19 pandemic. For those of us who are lucky enough to be able to drink tap water directly (<https://tappwater.co/us/tap-and-bottled-water-in-canada/#:~:text=Tap%20water%20in%20Canada%20is,clean%20and%20high%2Dquality%20water.&text=Every%20year%20an%20averi>), we must refrain from further polluting our watersheds and increasing the waste we generate by eliminating the use of plastic water bottles. It is our responsibility to recognize our privilege in being able to access safe and clean drinking water, refrain from polluting the very source this water comes from, and advocating for our Indigenous communities to have the same access to clean and safe water.

More information on best practices for waste management can be found in the Waste Management section of this toolkit.

[Waste Management \(/waste_management\)](/waste_management)

Additional Resources:

- Toronto and Region Conservation Authority - Microplastics (<https://www.youtube.com/watch?v=Z3hiOSqpyE>)
- WWF - Watershed Reports (<https://watershedreports.wwf.ca/#intro>)
- Environmental Defence (<https://environmentaldefence.ca/campaign/water/>)

Suggested Actions

For this specific section of the toolkit, we will be exploring how to use water efficiently to reduce unnecessary water usage (conserve), as well as how to responsibly manage the resource (stewardship) in three key areas: within the facility, outside of the facility, and through engaging with local community members.

Identifying Water Conservation and Stewardship Efforts Within the Facility

No-Cost Actions

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- Display signage and posters in kitchens and washrooms: Putting up posters across your facility is a great way to remind congregation members to take action to reduce their water consumption by turning off the taps when not in use. There are posters in this toolkit (/communications_resources) you can use to encourage congregation members to conserve water.
- Fill your dishwasher: For facilities that may have an onsite dishwasher, encourage those who are in charge of managing the washing of dishes to fill the machine before running the cycle.
- Monitor your water bill to check for pipe or faucet leaks: Tracking fluctuations in your water bill may provide an indication of any leaks in your facility. There will be times throughout the year where you may have a higher bill due to a higher number of congregation members using the facility (i.e. during Ramadan), any large monetary increase in your bill or water usage otherwise may be an indication that there is a leak within the facility.
- Seek a community volunteer to check for water leaks: According to the Saskatchewan Watershed Authority, a tap that drips six drops a minute will lose 1,200 liters of water annually, which is equivalent to seven bathtubs. Seek out volunteers from your congregation (the Green Team or a professional plumber who is a member of the congregation) and ask them to complete an audit of the facility every few months to ensure there are no leaks in toilets, sinks, or any appliances. Similar to when conducting a home water audit, they may need access to your water meter and request to turn off all the water values to examine if there is a water leak in the facility.

Low-Cost Actions

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High-Cost Actions

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Identifying Water Conservation and Stewardship Efforts Outside of the Facility

No-Cost Actions

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- Keep your eavestroughs clear of debris: For smaller facilities that may have accessible eavestroughs, it is important to keep them clear of debris. Many foundational issues are found to be caused by poor drainage, caused by rainwater entering the foundation of facilities.
 - **Resource:** Wet Basements - Eavestrough Maintenance (<https://www.wetbasements.com/eavestrough-maintenance/>)
- Keep storm sewer grates around your facility clear of debris: Keep the sewer grates around your facility clear of any debris to reduce the chance of flooding.
- Ensure all rainwater downspouts are pointed away from the facility: Reduce the chance of flooding and structural damage around the foundation of your facility by ensuring that the downspouts are facing away from the facility.

Low-Cost Actions

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- Install a rainwater harvesting system (for smaller facilities): Rain barrels capture and store the water that lands on a home's roof. This stored water is excellent for watering your facility's lawn and garden. To install a rain barrel, you will need to remove the existing downspout and connect rubber hosing to the opening of the gutter. The other end of the hose is inserted in an opening in the lid of the collection device.
 - **Resource:** Toronto and Region Conservation Authority: Learn How to Set Up a Rain Barrel (<https://trca.ca/news/set-up-rain-barrels-harvest-rainwater/>)
- Reduce the use of road salts on your property: The safety of congregation members is always a top priority for Mosque management teams. Research shows that chloride pollution from road salt is a threat to freshwater ecosystems. One solution is to reduce the amount of salt used, or explore sustainable alternatives.
 - **Resource:** Water Canada - Study Shows Winter Road Salt Poses Year-Round Threat to Aquatic Life (<https://www.watercanada.net/study-shows-winter-road-salt-poses-year-round-threat-to-aquatic-life/>)
 - **Resource:** Toronto and Region Conservation Authority - Road Salt Management (<https://sustainabletechnologies.ca/home/urban-runoff-green-infrastructure/pollution-prevention/road-salt-management/>)
 - **Resource:** Environmental Defence - "Salt-ernatives": Options to keep our roads clear and freshwater clean this winter (<https://environmentaldefence.ca/2019/02/06/salt-ernatives-options-keep-roads-clear-freshwater-clean-winter/>)
- Consider landscaping elements that do not require abundant amounts of water: When considering landscaping options for your facility, take into consideration the amount of water needed. Xeriscaping refers to the process of landscaping or gardening that utilizes water-conserving techniques. This includes the addition of rocks, benches, specific types of plants (drought-resistant), and mulch to the garden.
 - **Resource:** Rockethomes: Xeriscape Resource (<https://www.rockethomes.com/blog/homeowner-tips/xeriscape>)
 - **Resource:** CBC - 7 Drought Resistant Plants You Can Grow (<https://www.cbc.ca/news/canada/british-columbia/gardening-7-drought-resistant-plants-you-can-grow-1.3176932>) (<https://www.cbc.ca/news/canada/british-columbia/gardening-7-drought-resistant-plants-you-can-grow-1.3176932>)

High-Cost Actions

- **Install smart-sprinklers:** In larger facilities where a sprinkler system is installed, it is important to consider how often the sprinkler system is turned on, and its direction. There are times where sprinklers at facilities are pointed towards sidewalks and are automated to turn on on certain days (even when it is raining). It is important to inspect the direction your sprinklers face (i.e. are they directed at parking lots or sidewalks?), the time of day they are turned on, and how frequently they are turned on. Depending on the size of your facility, a smart sprinkler system may not be as expensive as one may think, and there may be rebates available through your local utility company or municipality.
 - **Resource:** Region of Peel Water Smart Irrigation Professionals (<https://www.peelregion.ca/watersmartpeel/WSIP/>)
 - **Resource:** 6 Reasons you need a smart sprinkler (<https://www.cnet.com/home/smart-home/6-reasons-you-need-a-smart-sprinkler/>)
- **Install a rainwater collection system:** Depending on the size of your facility, a rain barrel may not suffice (or you may need multiple). Rainwater harvesting systems, also called rainwater collection systems, or rainwater catchment systems, are technologies that collect and store rainwater for other use. Rainwater harvesting systems range from simple rain barrels to more elaborate structures with pumps, tanks, and purification systems. Contact your local municipality to see if a rebate is available for this installation. You may also want to contact your local Conservation Authority to see what types of support are available.
 - **Resource:** Innovation Water Solutions (U.S- based) - Rainwater Harvesting 101 (<https://www.watercache.com/education/rainwater-harvesting-101>)
- **Install a blue roof:** Blue roofs are designed to help reduce the flooding effects of big storms. During a storm, rainwater can overwhelm urban sewer systems and send contaminated and untreated water into local water

bodies. A blue roof helps to solve this problem by collecting stormwater through a pond system, temporarily storing it, and gradually releasing it over time. You may also consider installing a green roof, or a blue-green roof combination. Contact your local municipality to see if a rebate is available for this installation. You may also want to contact your local Conservation Authority to see what types of support are available.

- **Resource:** Sustainable Technologies Evaluation Program - Blue Roofs

(<https://sustainabletechnologies.ca/home/urban-runoff-green-infrastructure/low-impact-development/blue-roofs/>)

- **Install a green roof:** A green roof is a layer of vegetation planted over a waterproofing system that is installed on top of a flat roof or a roof that is slightly sloped. Green roofs serve as a method to reduce stormwater runoff and use that same stormwater to water vegetation. Another benefit of installing a green roof is related to lower energy costs, as green roofs absorb heat and act as insulation for buildings, reducing the energy needed to provide cooling and heating. Contact your local municipality to see if a rebate is available for this installation. You may also want to contact your local Conservation Authority to see what types of support are available.

- **Resource:** The blue green roof – helping cities cope with stormwater (<https://livingroofs.org/introduction-types-green-roof/blue-green-roof-cities-stormwater/>)

- **Resource:** City of Toronto's Eco-Roof Incentive Program (<https://www.toronto.ca/services-payments/water-environment/environmental-grants-incentives/green-your-roof/#tab-how-to-apply>)

- **Build a rain garden:** Rain gardens are not just for homes, and can have many benefits when built on a Mosque's property. A rain garden collects rainwater that runs off your grass, roof, parking lots or driveways, and helps to reduce pollutants that would otherwise end up in our waterways. They attract birds, butterflies and other insects, and can be home to many native plants. Contact your local municipality to see if a rebate is available for this installation. You may also want to contact your local Conservation Authority to see what types of support are available.

- **Resource:** Ontario Native Plants - Rain Garden Information (<https://onplants.ca/rain-garden-information/>)

- **Resource:** Toronto and Region Conservation Authority - A Complete Guide to Building and Maintaining a Rain Garden (<https://trca.ca/news/complete-guide-building-maintaining-rain-garden/>)

Other resources: Partners in Project Green - The Business Case for Natural Infrastructure

(<https://partnersinprojectgreen.com/app/uploads/2020/05/Natural-Infrastructure-and-the-Business-Case-Final-2020.pdf>)

Identifying Community Engagement Opportunities

No-Cost Actions

- Familiarize yourself with your municipal/regional long-term water management plans and participate in community forums and discussions: Become familiar with your municipality's water conservation plan and become engaged in the long-term management of water in your community. Various levels of government routinely consult with the public on the future direction of water use and its value to society. Visit your local government's website to learn more.

- Participate in and/or organize a Shoreline Cleanup event: The Great Canadian Shoreline Cleanup allows volunteers to organize community events, or participate in ones that are already scheduled to take place in their area. You may also contact your local conservation authority or municipality to learn if community events are planned for the public. Regardless of who you decide to partner with, be sure to ask them to provide you with the results of your cleanup and celebrate the impact with the volunteers

- **Resource:** www.shorelinecleanup.ca (<https://www.shorelinecleanup.ca/>)