



Town of Antigonish
274 Main Street
Antigonish NS B2G 2C4
Phone: (902) 863-2351 Fax: (902) 863-0460
www.townofantigonish.ca



CONSERVATION TIPS and GENERAL WATER USAGE

Residential

On average, a family of four on a water meter uses approximately 200 gallons of water per day. Of that usage, approximately 31% is outdoor use while the remaining 69% is indoor use. For indoor use, toilets comprise 18%, showers 19%, and faucets 11% (total of 48%) and the remaining 21% broken down between laundry, dishwashers, etc.

In years when we experience lower than normal water levels at the James River Dam, steps need to be taken to conserve water until there is applicable rainfall. Since water is not a renewable resource, it is always recommended that we use water only when we need it.

Here are some tips on how we can all use water wisely:

Indoor Water Use

- Take a 5-minute shower which uses half as much hot water as a bath or a 10-minute shower.
- When showering, turn the water off while you soap up. Purchasing low flow and/or a showerhead with a quick shut-off valve allows you to restart the water at the same temperature with the flip of a lever.
- Minimize water used per flush in your toilets. Many new models use considerable less water per flush than traditional toilets. Older models can be adapted by adjusting the float and/or putting a brick in the tank. Also, avoid flushing the toilet unnecessarily—dispose of tissues, insects, and other such waste in the trash or compost.
- Don't let the water run while shaving or washing your face. Brush your teeth first while waiting for water to get hot then wash or shave after filling a basin.
- Turn the water off while brushing your teeth or soaping your hands.
- Keep a pitcher of water in the refrigerator; you won't have to run tap water to cool it.
- Never put water down a drain where there may be another use for it such as watering a plant or garden or cleaning.
- Operate dishwashers and clothes washers only when they are fully loaded or properly set the water level for the size of load you are using.
- When washing dishes by hand, fill one sink or basin with soapy water. Quickly rinse under a slow moving stream from the faucet.

Outdoor Water Use

- Activities such as watering lawns, trees, shrubs, flowerbeds or washing automobiles are banned during low water conditions.
- Hosing down driveways or sidewalks is prohibited during low water conditions.
- Collection rain barrels are encouraged for watering of lawns, gardens, vehicle cleaning, and outdoor home cleaning. Check with local hardware stores to locate barrels with a proper covering system to prevent small animals and debris from contaminating your water.

Where the Town's Water Comes From

- The James River is the principal source of water supply for the Town's Water Utility and has been a provincially-designated municipal water supply since 1980. It is also now included in the James River-Eigg Mountain Wilderness Protection Area.
- The James River, a tributary of the West River, has a watershed encompassing approximately 9500 acres. The ownership is 59% Crown, 39% Town, and 2% private.
- The James River Dam acts as the system's reservoir. The estimated volume of water in James River Dam, based on the elevation of the new concrete spillway (El 333.39 ft) and the outlet pipe at the base of the dam (el 310.00ft) with net storage volume in the Dam of 25,700,00 igal.
- Raw water leaves the Dam by one outflow called a transmission main. It changes in size from 20" to 16" diameter as it reaches Brierly Brook Water Treatment Plant (BBWTP).
- There is approximate 6% loss water during the purification process, as raw water enters the Water Treatment Plant (WTP). The process is referred to as backwashing as various impurities are removed and the backwash water and sludge are concentrated in two (2) settling ponds. The amount of backwashing will vary seasonally with fluctuations in raw water quality to the (WTP).
- Treated water is stored at the BBWTP, in the clearwell (160,000 igallons), a concrete tank below the filter areas of the Plant. The treated water is released to the distribution system by either gravity or pumps, based on demand and stored at the two (2) larger water storages tanks at Brierly (0.8 Migallon) and/or Bethany (1.2 Migallon). These provide a balancing requirement for fire flow and/or any peak system loads.

(please turn over)



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- Annual average daily system consumption is just less than 1.1 Migpd but Summer peaks of 1.3 Migpd can often occur. In comparison, the design capacity of the BBWTP is 1.8 Migpd and the approved withdrawal from the James River watershed is 2.0 Migpd.
 - The Water Utility is now a fully water metered system with meter sizes ranging in size from 5/8" to 6" and having some 1600 meters in the overall system.

Water Testing

- Water testing is undertaken by certified staff in accordance with Nova Scotia Environment's (NSE) operating permit requirements.
- A schedule of items to be routinely tested, their frequency and location has been established under permit conditions.
- The Town's Water Utility undertakes sampling two (2) days at four (4) locations weekly for bacteriology (PA). In addition, quarterly samples for general chemical analysis, including THMS/HAA5, for WTP raw and distribution water are undertaken. The samples are all forwarded to a fully accredited lab for analysis and reporting to NSE.
- Water treatment complaints and/or interruptions in water service, such as a water main break, involves additional sampling as required.
- In total, the Water Utility performs some 1,040 routine tests and 344 regulatory tests as part of its regulatory permitting requirements. This is 2-3 times more than the normal standard for the Water Utility in order to assure its customer's water quality requirements are being met.

Monitoring and Adapting to Conditions

- The BBWTP and storage facilities (Dam and tanks) have continuous monitoring equipment in place (SCADA). This allows for ongoing assessment of recorded draw down level checks, plant production, and process review.
- Should the rate for consumption dramatically increase against the available and remaining storage and prolonged dry weather patterns persist, conservation measures can be called upon.
- If the Town is entering into a hot, dry Summer season and water drops are occurring at the Dam, and based on a drop of 6-8" /day over 1-2 week period, this would make it necessary for restrictions to be put in place for lawn sprinklering, car washing, and recreational activities.
- With the recent completion of the residential metering program, increased vigilance is now available to ensure water consumption is more closely monitored for appropriate and fair use.
- Further enforcement by operating policy and/or rules and regulations given to the Water Utility by the Nova Scotia Utility and Review Board allows water to be turned off for non-compliance.

If Extra Water is Required

- A supplement to the James River water supply is the Wrights River Aquifer Wells. These wells are owned by the County of Antigonish, a separate Water Utility, and do not operate continuously.
- If called upon to operate, instructions are issued from the Engineering Office at the Town of Antigonish for the wells to be readied for use (takes 24 hours for clearance on BAC test).
- Situations where this resource has been used in the past are in instances where Summer conservation measures are put in place or for emergency conditions. (The last significant occurrence of this was in August of 2006 when there was no rainfall for roughly 60 days and conservation measures were enacted.)
- The Municipality's Aquifer Wells have a present supply (treated) capacity to the system of 100 igpm against the WTP present treatment production of 715 igpm.

Who Uses Town Water

- The Town's WTP is responsible to meet the needs of the citizens and businesses of the Town of Antigonish in addition to approximately 24 locations at St. FX University and 14 locations in the County of Antigonish. This represents approximately 10,000-12,000 people.
- Recently, the Town switched to a water meter system which will provide a more equitable and defensible method of charging consumers for their water usage.
- Consumers will now be able to identify their consumption habits which can lead to adjustments of their water usage habits that can promote water conservation and save consumers money on their water bill.

For More Information

- Please call our HOTLINE at 863-4949.