



SOUTH BAY WELLFIELD: SERVICE ADJUSTMENT QUESTIONS & ANSWERS JULY 8 2019

What's happening to the water level in the South Bay Wellfield and what does it mean?

Saint John Water constantly monitors the water level and quality of water coming from the three wells at the South Bay Wellfield.

When measuring the water level within the wells, results should show a stable state at one-metre above sea level or greater. However, water levels within the wellfield are measuring closer to one-metre below sea level, which is lower than what the consultant engineer firm who studied and recommended the wellfield required in 2014/2015. This change in the water level affects the sustainability of the wellfield and could impact the quality of the water.

While the water level does not have an immediate impact to water quality or quantity, it is prudent of the City to take proactive steps now to reduce demand on the wellfield and protect the ground water supply for the long term.

Why is there a difference between the expected and actual water levels?

It will be some time before it is known why the water levels are lower than what the consultant engineer firm had required. The engineering firm worked with test wells that were pumped and monitored far longer than industry standards require, and the data was reviewed by two additional third-party consultants before the City decided to proceed with a wellfield on the west side.

Saint John Water is now working with a nationally recognized and leading hydrogeologist to understand why the water elevations are lower than projected.

Is there any immediate impact on the current water quality or supply?

No. There is no immediate impact to the quantity available to serve residents on the west side and there has not been a change to the quality of the drinking water. While it remains an excellent source of safe, high-quality drinking water, the City will be taking action to reduce the long-term demand on the wellfield.



What could happen in the long term if no action is taken?

The South Bay Wellfield, like most other areas across Saint John, is not far from the ocean. If demand on the wellfield is not reduced, and water levels within the three wells do not have the chance to replenish above sea level, salt water from the Bay of Fundy or brackish water from the South Bay may move towards the wellfield as water continues to be drawn.

The City is not willing to take that risk. If salt water were to enter the drinking water source, the change in water quality would be irreversible and the water would no longer be drinkable without additional treatment.

The drinking water quality has improved dramatically since the switch to the wellfield in 2017, and proactive steps are being taken so that it remains an excellent water source for years to come.

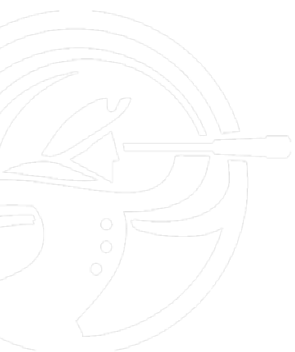
What can be done now to address the water level?

The City has been working with the engineers who were contracted to design the wellfield, as well as expert hydrogeologists, to understand why the wellfield is not performing as the design engineers had stated. Without delay, the City is taking the responsible approach to reduce and stabilize the demand on the wellfield and ensure that it continues to deliver safe, clean drinking water for years to come.

With two excellent water sources now available to the City, engineers have determined that the best course of action at this time is to switch some areas of the west side to water from the new Loch Lomond Drinking Water Treatment Facility. By doing this, the City can continue, without service interruption, to provide customers with safe, high-quality water, and begin to reduce the demand on the wellfield in 2019.

Which areas on the west side will be switched to water from the Loch Lomond Drinking Water Treatment Facility?

Areas that will be served with water from the Loch Lomond Drinking Water Treatment Facility include the lower west side, Milford, Randolph, Fundy Heights, Duck Cove and Sand Cove neighbourhoods. For a map of exact locations, searchable by civic addresses, visit the City's [website](#).





When will the switch for customers occur? Will impacted residents be notified in advance?

The City is preparing over the coming months and at this point is planning to make the switch during the fall of 2019. The City will work to minimize any impacts to customers. Water service is not expected to be impacted by the change.

The City will notify homeowners and businesses through direct mail to highlight areas where the water supply is changing.

Is there a lot of work or time required to serve some west side homes and businesses with water from the Loch Lomond Drinking Water Treatment Facility?

Very little new infrastructure or construction is required to make the switch as most of the water mains are already in place from previous years. The City will need to complete the design and construction of a water pumping station to help move the water west. This work is already underway and is scheduled to be complete in the fall of 2019.

After the switch occurs, the City may need to look at constructing some additional infrastructure to ensure the long-term reliability of the transmission system as water will now need to travel west through a large water main under the Reversing Falls Bridge.

Both sources provide high-quality drinking water that exceeds the New Brunswick and Canadian Drinking Water Quality Guidelines. If you are interested in the changes in water quality parameters, please click on the following [link](#) to see a comparison between the two water qualities.

Given the previous switch in water source, what is the impact of switching from well water to fully treated lake water from the Loch Lomond Drinking Water Treatment Facility?

The City has been working with a number of experts, including CBCL Engineering Limited and researchers at Dalhousie University, to understand potential impacts of switching to fully-treated lake water. This includes any impacts to infrastructure and plumbing systems. Based on these results and industry best practice, before making the switch, the City will take reasonable steps to reduce the impact, if any, associated with the switch from ground water to surface water.

The change in water supply will result in moving from a hard, unfiltered groundwater source to softer, filtered lake water. Both water sources are treated with chlorine and orthophosphate (see additional information regarding orthophosphate below). Both sources meet all Guidelines for Canadian Drinking Water Quality.



Will people who installed a water softener need it if their water source is changing from the South Bay Wellfield to the Loch Lomond Drinking Water Treatment Facility?

We know that some people on the west side chose to have a water softener installed after the switch to hard water from the South Bay Wellfield. With the upcoming change for some west side residents to the Loch Lomond drinking water supply, water hardness will likely not be a concern as the water contains a lower mineral content (hardness).

The decision to keep or uninstall a water softener is a personal choice, and there are a few things to consider while making it.

There is a chance that the water source could change again, either temporarily or for a longer period of time, once the City determines the long-term solution for managing demand on the wellfield. If the transmission system for getting water from east to west was ever compromised, the City has the option to put customers back on the west system temporarily to ensure a continuous supply of water which would mean a transition back to the higher hardness groundwater.

For those who wish to keep it for these reasons, they will not need to use it while on the Loch Lomond drinking water supply. Decommissioning it from use will reduce ongoing operating costs, including electricity and salt purchases. Those on a rental program with a local company may also want to consider these reoccurring costs in their decision.

However, without the immediate need for the softener, some residents may choose to uninstall and remove it from their property altogether and if doing so we encourage owners to contact a plumber. Unfortunately, there is little the City can do to facilitate this decision for residents as Saint John Water is not in the water softener business, this is instead a personal choice that will need to be made by each person who owns one. There are local businesses that sell softeners, and demand for the equipment exists in the greater Saint John Region. There may be an opportunity to sell the water softeners privately should an owner decide to remove it completely.

Local businesses that sell water softeners may also have advice on available options.



Is the water from the new Loch Lomond Drinking Water Treatment Facility treated with orthophosphate?

Yes, water from the Loch Lomond Drinking Water Treatment Facility is treated with orthophosphate. Orthophosphate is commonly used in water treatment for corrosion and scale stabilization control. Its use is well established and applied to surface drinking water treatment in other local municipalities like Moncton and Halifax. Phosphates are part of our normal daily diet as they are found in many common foods such as cheese and baking products.

Can the Loch Lomond Drinking Water Treatment Facility handle new demand? Could it serve all west side customers?

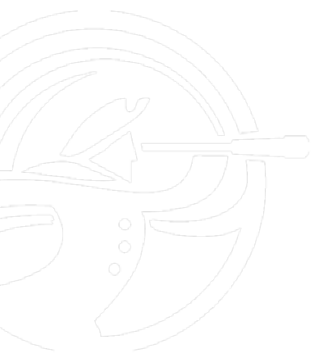
Using existing water mains and a new water pumping station, the Loch Lomond Drinking Water Treatment Facility can serve a number of areas in West Saint John. Some additional water infrastructure may be needed in the future to ensure reliable water transmission.

Serving all west side customers with water from the Loch Lomond Drinking Water Treatment Facility isn't feasible without extensive new water infrastructure.

The Loch Lomond Drinking Water Treatment Facility was designed to provide an average day demand of 50 megalitres per day (MLD) and a maximum day demand of 75 MLD. Since commissioning the new treatment facility, it has been delivering approximately 35 MLD. Once the areas of Lower West, Milford, Randolph, Fundy Heights, Duck Cove and Sand Cove are switched, the demand on the treatment facility will increase to approximately 43 MLD.

What is the cost? Knowing what we know today, would the wellfield still have been a viable option for the City?

Full costs are still being determined. The City is taking steps to seek compensation from the engineering firm for its wrong advice that the wellfield could serve west Saint John.





Given the wells are not performing as they were designed in 2014/2015 by the consultant engineers, how will the City be holding the consulting engineers accountable?

The City is working with leading experts to review why the wellfield is not performing as expected. Once the City determines the reason for the discrepancy between the design and the performance, the City will take the necessary steps to seek compensation from any responsible party.

How can customers get more information about the switch?

The City will continue to provide Saint John Water customers with information and updates through the [website](#), direct mail, the customer service phone line and other forums.

Find out more about water quality parameters online at www.saintjohn.ca/westsidewater.

