

In March 2022, Loyalist Township reduced the water pressure in the distribution system serving the east end of Bath. This brings the pressures down to the recommended operational water pressures. On May 26, Township staff held a virtual Open House session on May 26, 2022, to discuss the results with water customers in the affected areas of Sir John Johnson Drive, Pruyn Crescent, and Purdy Road.

At the meeting, Township staff presented a [PowerPoint presentation](#) to outline the reasons for the pressure reduction, and then held a question and answer session to allow the residents in attendance to voice their concerns.

The following is a summary of questions we have heard from residents about the changes to the water pressure.

Was the distribution pressure reduced to accommodate the new development?

No, the pressure at the east end of Bath (Sir John Johnson Drive, Purdy Road, and Pruyn Crescent) was higher than recommended for many years. The Township planned to reconfigure the watermain network in the area to remedy the high-pressure conditions. We took advantage of the economy of scale and partnered with the developer to complete this work concurrently with the new development.

What is the current pressure in the local watermain at the east end of Bath? The pressure is dependent on the elevation difference between the building relative to the height of the water tower and the location of the watermain. Utilities staff checked pressures. Pressures are within the recommended operational range. This is a permanent and noticeable pressure reduction for the east end of Bath. It brings pressures in-line with other areas of the Bath water distribution system. The accompanying diagram illustrates pressures throughout the Bath distribution system.

Will the pressure drop again with the new builds at Windermere (Aura by the Lake)? No. More homes do not mean loss of pressure. The watermain size will accommodate growth. Before a developer installs a watermain they must bring proof that the development meets the Ministry of Environment, Conservation & Parks' (MECP) rigorous drinking water design guidelines. The development will not adversely impact the current drinking water system.

Are there other areas in Bath with similar pressures in the distribution system?

Yes, the permanent pressure reduction of the east end of the village brings the area in-line with other sections of Bath and with the MECP's recommended pressure ranges. The distribution pressure is similar, for example, at Somerset Drive and Britannia Crescent, as illustrated on the attached map.

What are the benefits of optimized pressure in the distribution system? Water conservation, energy savings, and fewer costs for repairs of pipes.

How is water pressure maintained in the distribution system? Pumps at the water treatment plant and maintaining an adequate level of water in the water tower ensure satisfactory pressure throughout the drinking water system. The continuous monitoring

of the system confirms steady pressure in the entire system. Distribution system maintenance activities such as hydrant flushing or operation of hydrants for fire fighting purposes could cause pressure drops, but these are rare and temporary.

What is the operational water pressure in the distribution system recommended by the MECP? 275 kPa to 485 kPa (50 to 70 psi)

What is the minimum water pressure in the distribution system? 140kPa (20 psi). Lower pressure can provide a potential for backflow and entry of non-potable water into potable water distribution pipelines.

What is the minimum water pressure recommended for private buildings?

According to the Ontario Building Code, the minimum pressure at building entry is 200 kPa (29 psi); anything below 200 kPa (29 psi) is too low, and the maximum pressure should not exceed 550 kPa (80 psi).

Why is my pressure so low? The water pressure in your home is determined by many factors. These could include:

- The elevation difference between the building relative to the height of the water tower and the location of the watermain.
- Pipes: the pipes in your home may be clogged with mineral deposits from long time use. Replacing your pipes will resolve this.
- Installed filters, clogged aerators, tankless water heaters, high demand (simultaneous usage of the dishwasher, laundry, shower, or other fixtures).

Can my water filter or the aerator be the cause of lower water pressure? Yes.

Remove them and assess the pressure from the taps without them. Build up or clogged filters can cause lower flow. Follow the manufactures instructions for maintenance/cleaning tips.

What could be the reason for hot water problems? The flow of water can be compromised by a build-up of sediment or rust going in and/or flowing out of the water tank. Certain appliances and systems are sensitive to pressures, low or high. If you are experiencing issues with internal plumbing appliances, please consult your plumber.

Can the pressure be put back the way it was? This area of the system was previously connected to the high pressure watermain between the treatment plant and the water tower since this was the only connection available. The area experienced distribution system pressures outside of the MECP's recommended range as a result of being connected to the high pressure main. It was the only area connected to the high pressure watermain and this was never meant to be a permanent condition as it is not desirable from an operations perspective. When a local main was brought to the area as a result of development activity, this portion of the distribution system was connected to the local main. There is no plan to reconnect this area to the high pressure watermain

since the local main provides pressures in the distribution system that align with the MECP's recommended pressure range.

Why not install an additional pressure-reducing valve (PRV) to adjust the pressure in the affected area? PRVs are meant to reduce pressure from a watermain with higher pressure and maintain a desired pressure in the watermain with lower pressure. They are strategically located in a distribution system to have a desired impact for the right places. With the distribution system now looped to provide redundancy, there is only one PRV in the system, located on Mott Street. Adjustment to that PRV would either increase pressure everywhere or reduce pressure everywhere. In order to make adjustments in specific areas of the system, the pressure would have to be increased in the entire system and multiple PRVs would have to be installed. The complexity of this arrangement and the significant increase in physical infrastructure are not feasible options.

What regulations are involved? The water distribution system pressure is governed by the Ministry of the Environment, Conservation, and Parks (MECP) to the curbstop (valve) at the property line. From the curbstop at the property line to the house, the pressure is governed by the Ontario Building Code, as this section is considered plumbing.

Can we have a copy of the report from the consultant? A meeting will be scheduled in the near future with the hydraulic model consultant to explain the report with the opportunity to ask questions and get clarification. If you are interested in attending the meeting, please contact our admin assistant at 613-386-7351 ext. 103, kamey@loyalist.ca. We ask that you submit questions ahead of the meeting so the consultant can prepare a response. The report can be viewed at the Township office by appointment.

What about installing a booster pump for the affected residents in the east end? Staff suggested this may be better answered by the hydraulic modelling consultant at a meeting to be scheduled in the near future. The question will be forwarded to them.

Will the hydraulic modelling consultant come with plans to remediate the issue? The consultant is a specialist in water system pressure modeling. If you have specific questions for the consultant, please email them to staff ahead of time at 613-386-7351 ext. 103, kamey@loyalist.ca so that we can provide those questions to the consultant and they can address them specifically.