

## Bill Foster

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**From:** projectteam@bradfordbypass.ca  
**Sent:** July 7, 2023 11:27 AM  
**To:** 'Bill Foster'  
**Subject:** RE: Comments re Bradford Bypass Draft Groundwater Protection and Well Monitoring Plan

Hello Bill,

Thank you for your comments on the Bradford Bypass Draft Groundwater Protection and Well Monitoring Plan, undertaken in accordance with Ontario Regulation 697/21.

Please see below the responses to your questions from April 13, 2023.

- 1. From this writer's perspective, these reports should be mandatory, details "Plan". The use of the word "should" and "reports" in the Draft Plan provides no comfort to anyone relying on O.Reg. 697/21 that groundwater in the vicinity of the Bradford Bypass will actually receive any form of effective protection.**

As part of the Preliminary Design and in accordance with O. Reg. 697/21, the Ministry is still required to follow all relevant provincial and federal legislative requirements, standards, and practices as they apply to the design, construction, and operation of the project for environmental protection. This includes but is not limited to the Permits to Take Water (PTTW)/Environmental Activity and Sector Registry (EASR) Registration for Groundwater. Further details will be confirmed during subsequent Detail Design and Construction phases.

In addition to surface water considerations, the ministry is evaluating potential impacts and will implement mitigation measures to avoid and minimize potential impacts to groundwater sources. The Project Team continues to actively consult with key agencies such as the LSRCA and NVCA as the study progresses.

As the project falls within the jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA), pertaining to Ontario Regulation 179/06, the ministry will continue to assess impacts with respect to the *Lake Simcoe Protection Act* and the Lake Simcoe Protection Plan through consideration of water quality and quantity, stormwater management, groundwater management, landscaping and ecological restoration measures; as well as fluvial geomorphological designs for watercourses, erosion and sediment control and spills prevention and protection measures.

- 2. My question to AECOM and MTO with respect to this very important issue is: what steps will you take to ensure that dewatering material (potentially contaminated water) will be disposed of properly rather than simply being dumped into a roadside ditch when presumably no-one is looking?**

Permits and approvals will be sought during subsequent Detail Design and Construction phases if required. Where construction dewatering volumes between 50,000 and 400,000 L/day are expected, filing of the project on Ministry of the Environment, Conservation and Parks (MECP's) Environmental Activity and Sector Registry (EASR) system is required in accordance with Ontario Regulation 63/16 (as amended). Where expected construction dewatering volumes that exceed 400,000 L/day, a PTTW (Category 3) will be required from MECP in accordance with Section 34 of the Ontario Water Resources Act (RSO, 1990). Permitting requirements will be determined during the subsequent Detail Design phase once the overall design is advanced to a level of detail that makes it appropriate to complete dewatering calculations for excavated areas.

During Detail Design, a pre-construction groundwater sampling program shall be conducted for the groundwater monitoring wells located in the vicinity of the proposed dewatering locations (at least one well at one dewatering location) to confirm the groundwater quality in the areas. The collected groundwater samples have to be analyzed for general inorganic parameters (including total suspended solids (TSS) and turbidity), metals, hydrocarbons (F1 to F4 petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylene) and VOCs. Based on the pre-construction groundwater analytical results, there will be two anticipated options:

Option 1:

If the concentrations of the analyzed parameters in dewatering groundwater have been confirmed to be above the applicable standards (i.e., sewer by-law or Provincial Water Quality Objectives (PWQO)), the groundwater needs to be pre-treated prior to being re-used or discharged to the municipal sewer system (if one exists) or nearby drainage ditch. Onsite groundwater treatment may require operating a mobile groundwater treatment unit. The mobile groundwater treatment unit usually consists of a series of containers/tanks containing different types of treatment media, which are customized to remove specific contaminants identified in the groundwater.

If the desired groundwater quality could not be met through the treatment processes, the collected water must be disposed properly off-site at an MECP approved facility by the Contractor.

Option 2:

If the treated groundwater meets the PWQO, the groundwater is recommended to be re-used on site for construction purposes (i.e., dust control etc.) as a water conservation measure. The excess groundwater may be discharged to the municipal sewer system (if one exists) or nearby drainage ditch. During Detail Design and Construction, erosion and sediment control measures and a groundwater monitoring program will be developed and implemented to maintain the environmental quality of the water discharged, both chemical parameters and physical parameters, meet the municipal sewer by-law (if discharged to the sewer), or the PWQO (if discharged to the natural environment), and the requirements provided in Ontario Regulation 387/04 and Ontario Regulation 63/16.

- 3. Please explain, given the nature of the surrounding ground, how berms will mitigate the effects of this salt runoff., While the issue of stormwater salt runoff will be addressed in your Preliminary Design Stormwater Management Plan, having not seen this plan and given the extreme permeability of the ground along the Bradford Bypass route, please explain in this plan how you intended to prevent the absorption of further salt into the ground water along either side of the highway once it is in operation. As this is the Lake Simcoe Basin, my understanding is that this alienated groundwater will eventually find its way into Lake Simcoe. This a deleterious substance that will, over tie, severely impact the health of fish and other wildlife in Lake Simcoe.**

Salt mitigation strategies are applied throughout the entire Bradford Bypass corridor. There are various ways to mitigate salt runoff impacts onto the Bradford Bypass. The first mitigation method is to prevent the source of the issue, which is snow or ice, entering into the corridor. This can be achieved through preventative measures such as landscaping and snowdrift mitigation techniques and practices (i.e., positioning plantings and features). This method promotes sustainable initiatives and requires consideration and input with respect to the development of landscaping plans used in conjunction with snowdrift technical input to identify and implement measures throughout the corridor for areas that are more prone to hazards such as snow. However, the preventative technique would not eliminate all snow entering the corridor and as a result, treatment would be necessary, as appropriate. The second mitigation method is to sustainably confine and treat stormwater runoff through the implementation of effective stormwater management plans. There are several measures that are proposed to be implemented to contain and treat any stormwater runoff into the highway. Measures such as enhanced grass swales, rock flow check dams, flat bottom swales, stormwater management ponds, impermeable materials/ liners to name a few features that would be implemented for quantity and quality control.

Appropriate mitigation measures to prevent salt and treated sand from entering watercourses and salt-sensitive areas will be proposed based on various factors including the use of MTO's Salt Management Plan and the Ministry of Environment, Conservation and Parks (MECP) Guidelines on Snow Disposal and De-icing Operations in Ontario. The MTO Salt Management Plan outlines salt management operational practices and strategies and Best Management Practices (BMP) in terms of equipment, best practices, materials, storage, testing, storm response, application rules, snow and ice control trainings, snow removal and disposal, and technology review. This includes implementing a balanced approach to the highway salt application based on the amount of snow precipitation and highway conditions.

In areas that are particularly sensitive, salt management measures may be necessary to mitigate environmental effects of road salt in accordance with the study objectives utilizing the Code of Practice for Environmental Management of Road Salts released by Environment Canada. The Code of Practice for Environmental Management of Road Salts can be viewed here: <https://www.canada.ca/en/environment-climate-change/services/pollutants/road-salts/code-practice-environmental-management.html>.

**4. Please provide me with a copy of your Preliminary Design Stormwater Management Plan (AECOM, 2022C) or better yet, tell me where I can find it on the Bradford Bypass website.**

Please refer to the link below to access the Draft Stormwater Management Plan which was provided to its O. Reg. 697/21 distribution list on March 22, 2023.

<https://we.tl/t-ulVwtxo2Tj>

**5. Are there any wells close to the early works project currently being monitored, and if yes, do the resultant test reports indicate any negative impacts?**

Groundwater monitoring wells have been installed as part of the Early Works. The wells were installed with dataloggers prior to the construction initiating along with select residential water wells within the predicted zone of influence related to dewatering for Early Works at County Road 4. At the time of this response, there has been no negative impacts on the groundwater quality and quantity due to Early Works construction activities that the Project Team is aware of.

As your contact information is already on the Project Contact List, you will continue to be notified through email of future milestone events including filing of the Final Environmental Impact Assessment Report and other updates for this study.

We encourage you to visit the Project Website ([www.bradfordbypass.ca](http://www.bradfordbypass.ca)) to review information on the project as it becomes available.

If you have any other questions, please feel free to reach out to the Project Team at your earliest convenience. You can reach the Project Team via email at [projectteam@bradfordbypass.ca](mailto:projectteam@bradfordbypass.ca), toll free at 1-877-247-6036, or by visiting the Project Website at [www.bradfordbypass.ca](http://www.bradfordbypass.ca).

Sincerely,

**The Bradford Bypass Project Team**

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You are receiving this email because you have contacted the Bradford Bypass Project Team and/or are on the contact list for the Bradford Bypass Preliminary Design Study. At any time, you may unsubscribe or update your contact information by emailing [projectteam@bradfordbypass.ca](mailto:projectteam@bradfordbypass.ca).

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**From:** Bill Foster <bfoste4@gmail.com>

**Sent:** Thursday, April 13, 2023 5:53 PM

**To:** ProjectTeam@BradfordBypass.ca

**Subject:** Comments re Bradford Bypass Draft Groundwater Protection and Well Monitoring Plan

Good evening Project Team.

Please forward the attached comments to Tim Sorochinsky, P.Eng., AECOM Project Manager for the Bradford Bypass Project.

Thank you.

Bill Foster

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