



Subject: *Fire Fighting Ponds at the Waste Management Centre*
To: Executive Committee
Date Prepared: June 2026
Related Motions: C25(296)
Prepared by: Jesse Hulsman, Director of Infrastructure & Operations
Approved by: Kim Ramsay, Chief Administrative Officer

Summary

In September 2025, Council requested a report to explore the installation of firefighting ponds at the Waste Management Centre (WMC) in Georgefield. This followed a significant drought season (2025) that resulted in several regions across Nova Scotia experiencing water restrictions, and notable forest fire events.

As per discussion with the East Hants Fire Service, and a review of online benchmarks, if East Hants were to consider building a firefighting pond at the WMC, it should be built to hold in the range of 600,000 imperial gallons, and support fighting a fire for a 24-hour period, with the ability to supply a continuous flow rate. Also, best practice would be to incorporate a dry hydrant installation to support an efficient use of the water supply.

This report serves to facilitate Executive Committee's discussion as to whether the Firefighting Pond topic at the WMC should be continued, and if so, under what guiding principles should be established to ensure clarity on the level of service and how long-term outcomes are to be achieved.

Financial Impact Statement

Solid Waste Operating Reserve (G501), currently has a balance of \$317,700.

Recommendation

For Executive Committee to consider requesting a pond be added to the next fiscals budget review for consideration if this is a deemed a priority for the Municipality.

Recommended Motion

N/A

Background

Nova Scotia experienced drought conditions throughout the summer of 2025, which led to Council's request for a report through motion C25(296);

"Passed that staff bring back a report on the firefighting ponds or the equivalents for fire services in and around the Waste Management Centre."

Historically, there was a fire at the Waste Management Centre in 2018 which caused significant damage to the transfer station building. Several fire departments responded, including Shubenacadie, Stewiacke, Milford, Lantz, Enfield, Rawdon, Gore, Maitland, and a tanker truck from Halifax. The event took place on a Sunday, which closed the site to the public on Monday, but it was reopened to the public on the Tuesday. The firefighting lasted for 19 hours.

Discussion

Governance

Currently, the East Hants Fire Service installs, owns, and maintains all fire ponds and dry hydrants across East Hants. It would need to be clearly established whether the installation of a fire pond at the Waste Management Centre would be designed solely for potential firefighting use at that site, or for a broader regional service area, which may need more direct access from the main road.

Council may want to explore a policy on when and where the Municipality would install fire ponds and dry hydrants. With the Municipality and the East Hants Fire Service currently being separate entities, maintaining jurisdictional consistency should be a consideration, and if this is a new service to be provided, it should be setup to be consistent across the Municipality.

It is the intent of this report to consider a fire pond located at the Waste Management Centre be for the primary benefit of the protection of assets at the Waste Management Centre. This would link any future project funding applications to building climate resiliency to a Municipal operational site.

Sizing Consideration

Staff sought feedback from the East Hants Fire Service on what size and technical criteria should be considered for establishing a fire pond.

Feedback received;

- Hold a minimum of 100,000 imperial gallons, however 600,000 imperial gallons was the suggested as an ideal size
- Should have a dry hydrant installed, with further consideration on reducing the impact of ice in the winter
- There should be access for the various truck sizes that could respond, including consideration of a turn radius and ease of access

Staff reviewed different websites on water supply recommended to fight fires. "PLC Fire" suggested a range between 450 to 500 US GPM capability for supply. "Fire Fighting in Canada" suggested 1800 lpm which is equivalent to 475 US GPM (or 395 Imperial GPM).

Articles suggest that flow rate of 500 US GPM would deplete the average truck within 2 to 3 minutes of firefighting.

When looking at pond size, a 100,000 imperial gallon pond would only last 250 minutes if pulling 400 imperial GPM, while a 600,000 imperial gallon pond could last up to 1500 minutes (25 hours) which would have covered the duration of the 2018 fire at the WMC.

There is no standard in Nova Scotia for the design and installation of a dry hydrant. However, there are benchmarks from the United States that can be referenced;



☰ MENU NEWS WEEKLY BRIEF FEATURES PODCASTS WEBINARS EVENTS ▾ MAGAZINE ▾ BOOKSTORE ▾

Pumpers should be equipped with sufficient hose to reach from the dry hydrant to the protected structures. In locations where the dry hydrant or other water source is greater than the hose load on the pumper, a pumper relay should be pre-planned. It is far more efficient, reliable and safer to pump rather than to tank water. A two or three truck relay will provide more water to the scene than a tanker shuttle. Tanker shuttles should only be used when the water source is so far away that pumping is not possible.

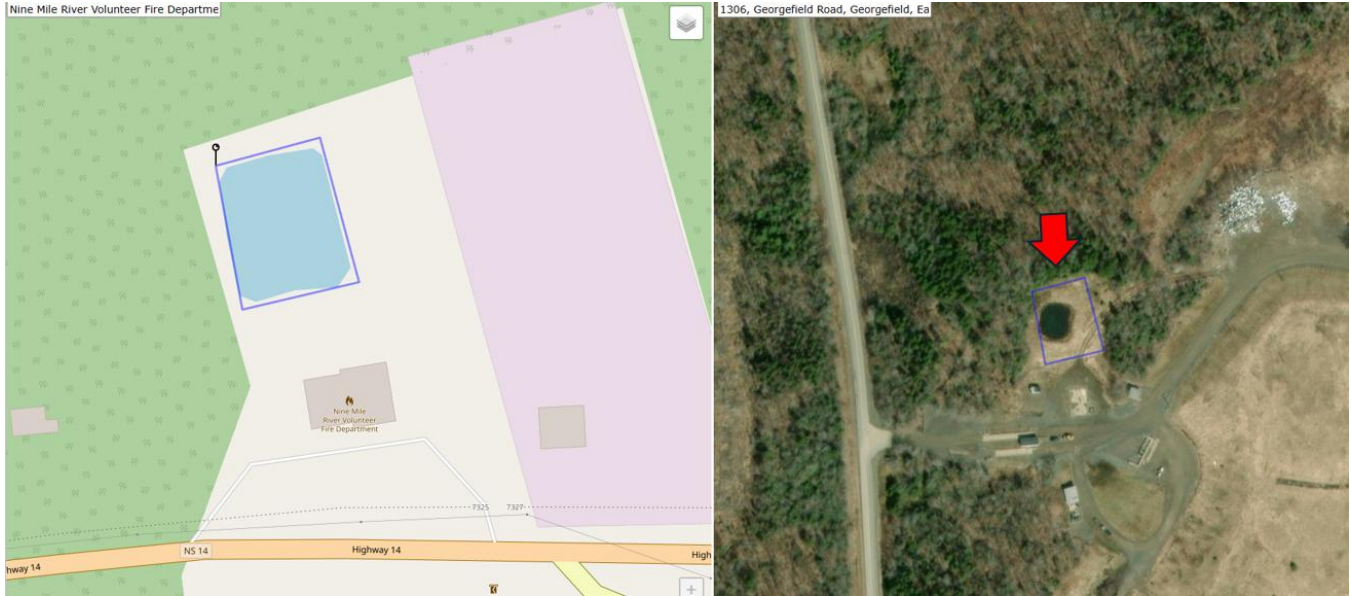
During my consulting work across Canada, I have seen numerous variations of dry hydrants, many of which were non-functioning or inadequate for the risk being protected. **In Canada there is no standard for the design and installation of dry hydrants. Guidance can be found in NFPA 1142.** Specifications can also be provided by a number of equipment suppliers who sell dry hydrants. Since each province is responsible for establishing fire service standards for their communities, it would be appropriate for the provincial fire marshals to set a single standard for dry hydrants.

Most jurisdictions use 150 mm piping for the dry hydrant suction pipe however, I have seen piping as small as 65 mm used for dry hydrants. Small suction piping will not provide sufficient water to supply more than a single hose stream. Small suction pipes are not very effective when you need large volumes of water for master stream or aerial operations. Where the suction pipe is unusually long the pipe size may have to be increased to 200 mm or larger.

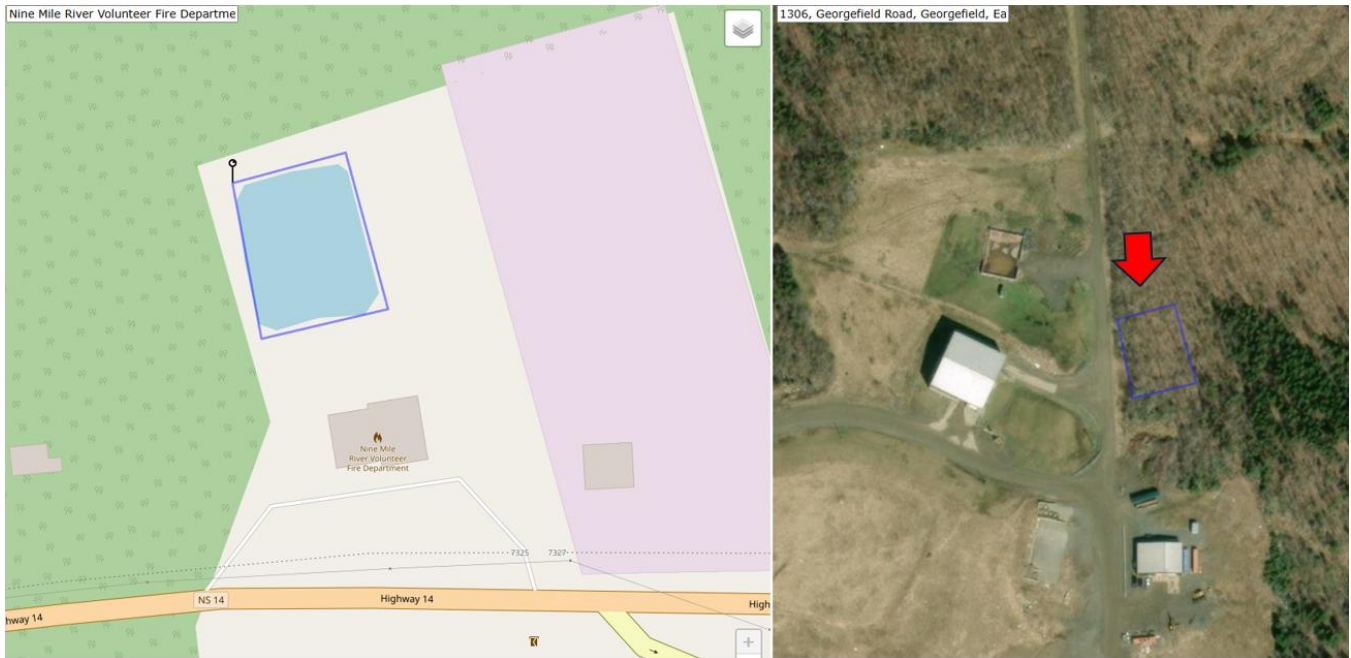
There also is nothing related to dry hydrants in the Municipal Engineering Standards for East Hants, which may be something to explore adding in the future, if it is intended to be regulated by the Municipality.

Visual concepts comparing the footprint of the Nine Mile River Fire Department Fire Pond

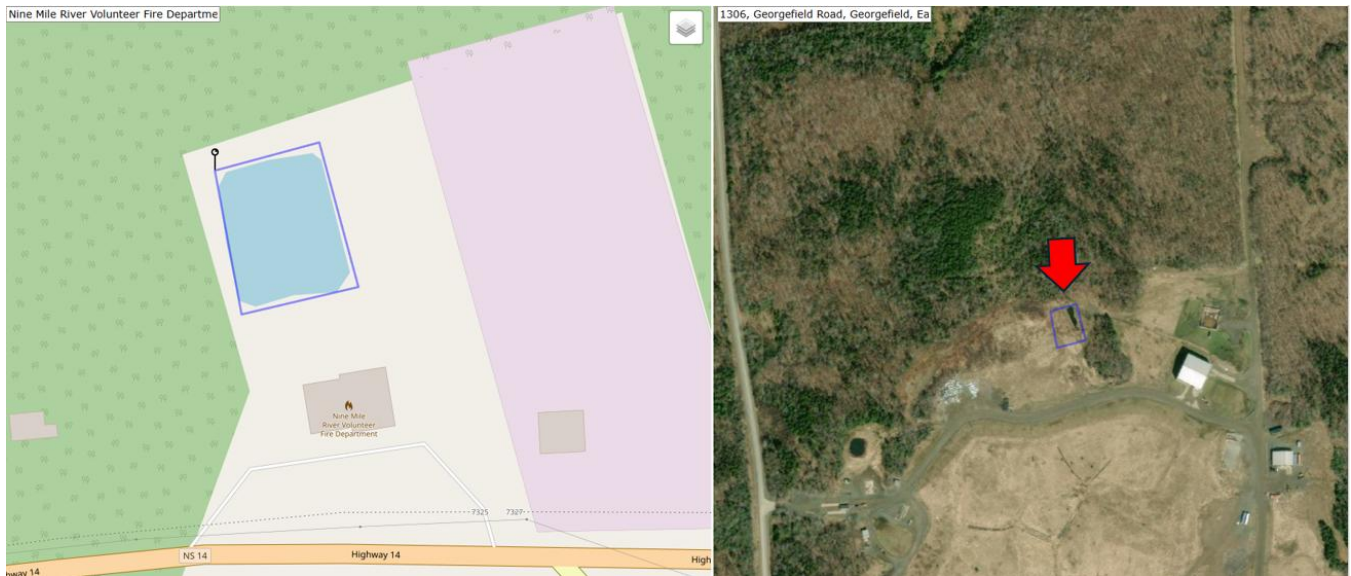
Expanding an existing pond near the scale house;



Locate closer to the transfer station building and near the bulk wood pile;



Expand existing small pond between the metal pile and the transfer building;



Operating Approvals

For any construction at the WMC, consideration would need to be given to operating approval requirements issued by the Nova Scotia Department of Environment and Climate Change. Currently, there are 33 ground water wells on the site that are tested, monitored and reported on under provincial environmental regulatory compliance. Thought should be given to any potential change in ground water that an expanded fire pond installation could have, and what additional design criteria may be needed, such as specialized liners or clay, in order to note changes to the environmental conditions of the site.

Operational Considerations

If there are drought conditions, it is unclear how the volume of a firefighting pond would hold up due to evaporation. The East Hants Fire Service maintains a condition list of fire ponds and fire hydrants to support situational awareness. If there was a pond at the Waste Management Centre, it would need to be determined as to what level and the frequency of updates on the pond's status are to be provided to the Fire Service.

In the Winter, freezing becomes an operational topic. This may include determining whether ice layers needed to be actioned, and if testing or heating procedures at a dry hydrant would need to take place to maintain operational awareness of access to the water source.

Options

Do Nothing

Where a fire has happened at the Waste Management Centre in 2018, it was demonstrated that the Fire Service was capable of responding to an event at the site without the access of a water supply on site.

That said, in speaking with a representative of the Fire Service the fire from 2018 would have been able to be “hit harder” for longer periods of time which would likely supported suppressing the fire sooner which would free up resourcing sooner if responses were needed elsewhere in the Municipality.

Design a pond with technical criteria and objectives

This would support a predictable outcome and leverage technical expertise, which would come at an increased cost. A starting point may be seeking a contract for a feasibility review of multiple locations, with cost estimates, and establishing the design criteria for construction, which is likely to be within a \$20,000 price range.

Build in the field based on a high-level vision

This could deliver a lower cost option, but would risk uncertainty of the end product. There could be unknown impacts to site operating approvals that would need to be explored further. Permits are only required in Nova Scotia to build ponds if they are near a water course or could impact a wetland. If a technical design were deemed to not be required and no permitting is required that may add scope, then cost could be in the range of \$15,000 to \$20,000 to dig out a standalone pond that could hold approximately 600,000 imperial gallons, with an additional \$5,000 for the addition of a dry hydrant.

Attachments

Transfer Station Fire Update - Executive Committee June 2018 FINAL

Dry Hydrants 2026

*NOTE: not showing on the map, its believed there is an access point to Lattie’s Brook, along Georgefield Road, that is 7.7km north of the site