COMMUNICATION UPDATE

TO:	Mayor and Members City Council
DATE:	December 19, 2025
SUBJECT:	Asbestos Management - Hamilton Water Facilities (HW2507) (City Wide)
WARD(S) AFFECTED:	City Wide
SUBMITTED BY: **SIGNATURE:**	Shane McCauley Director - Water & Wastewater Operations Hamilton Water, Public Works Department 

EXECUTIVE SUMMARY

This update is to inform Council of findings regarding asbestos containing materials identified at Hamilton Water facilities and the measures and procedures the City has initiated. Currently, two items are being addressed:

- Findings from the general Asbestos Management Program at various facilities, and
- A specific incident at the Garner Road Pumping Station involving asbestos-containing vermiculite discovered within concrete block walls during capital upgrades.

In all cases, there is no risk to Hamilton's drinking water or to water, wastewater, or stormwater operations.

Ensuring the safety of our employees remains the City's primary focus. The City continues to operate with precautionary measures in place to protect staff, seek expert guidance, and ensure compliance with Ontario health and safety legislation. Updates will be provided as this work progresses. Additional information regarding asbestos is contained in Appendix A - Occupational Health and Safety Bulletin - Asbestos.

Asbestos Management Program

The City routinely completes asbestos surveys, at all Hamilton Water facilities where the possibility of asbestos containing materials may be present and is developing a comprehensive Asbestos Management Program to comply with Ontario Regulation 278/05 of the Occupational Health and Safety Act. Asbestos surveys identify locations of suspected or confirmed asbestos-containing materials and make recommendations for appropriate measures to protect employees. Surveys were completed at 150 facilities between November 2024 and August 2025. A summary of findings is as follows:

- No locations were identified as requiring immediate abatement.
- Five sites had recommendations for abatement due to the condition of the identified asbestos-containing materials. All recommended abatement was completed in early October 2025.
- At 122 locations, confirmed or suspected asbestos-containing materials (ACMs) were found in safe condition, meaning that the asbestos is not in a condition that presents an active risk. Annual condition inspection is recommended.
- The remaining sites had no confirmed or suspected asbestos-containing materials identified.

For the five sites which identified asbestos containing materials that were recommended for abatement, the City implemented precautionary controls, including restricting access, undertaking additional air sampling and material testing, applying temporary encapsulation, and completing non-urgent abatement, as appropriate.

The City continues to work with qualified third-party experts to finalize the Asbestos Management Program, including an inventory of materials, risk ranking, and inspection protocols. The plan is currently under management review and will guide ongoing monitoring across all Hamilton Water facilities.

Garner Road Pumping Station - Discovery of Vermiculite

A separate issue occurred at the Garner Road Drinking Water Pumping Station (1131 Garner Road) on August 13, 2025, where a contractor drilling into a wall cavity in the electrical room during facility upgrades released loose-fill vermiculite insulation, which

was not identified in any of the previous asbestos or Designated Substance Surveys completed for the station.

Vermiculite is a silver-gold to grey-brown mineral that is flat and shiny in its natural state. When heated to around 1,000°C, it pops (or puffs up) which creates pockets of air. This expanded form, and the fact that vermiculite does not burn, made the material suitable for use as insulation within buildings. Vermiculite insulation is typically found within ceiling, wall or floor cavities and generally is not exposed until active disturbance within these areas is performed. Vermiculite itself has not been shown to be a health concern; however, some vermiculite insulation was contaminated with regulated/commercial and non-regulated/commercial asbestos fibres.

The material and debris resulting from the disturbance in August 2025 was immediately contained (bagged and labelled) by the contractor until testing could be performed to confirm the presence/absence of asbestos within the vermiculite.

Third-party analysis conducted in October 2025 confirmed that the vermiculite contains asbestos and therefore is considered asbestos-containing material. The City immediately stopped all work upon receipt of the analytical results, restricted access and implemented administrative controls to ensure that essential operations could continue with appropriate personal protective equipment in place to protect employees.

Air sampling conducted in the electrical room during the sample collection in October 2025 confirmed that fibre levels within the areas where vermiculite was exposed were well below occupational exposure limits as outlined in Ontario Regulation 833. Given the friable nature of vermiculite, the City is addressing the situation with caution by completing a detailed investigation to understand the source and if any employees may have been impacted during or after the disturbance. The Garner Road pumping station is remotely operated and typically unstaffed except for inspections and maintenance. Staff will only enter if essential to operations and will do so with appropriate personal protective equipment.

Hamilton Water’s Capital Delivery team is undertaking asbestos abatement before construction activities resume.

Next Steps

While abatement efforts at the Garner Road pumping station continue, the City is reviewing records to determine if any staff and contractors accessed the site during or after the disturbance of this material, so the risk to those employees can be evaluated. As part of the City’s commitment to transparency and employee safety, information will

continue to be shared with staff, the Joint Health and Safety Committee, and Council. An update is expected to be provided to Council in the first quarter of 2026.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Communication Update HW2507 - Asbestos Management - Hamilton Water Facilities - Occupational Health and Safety Bulletin - Asbestos.

Asbestos

Occupational health and safety bulletin

What is asbestos?

Asbestos is the general term for a group of naturally occurring, fibrous silicate minerals known for their strength, heat resistance, and insulating properties. Asbestos is defined as a group of six different types of commercially used asbestiforms (Chrysotile, Amosite, Anthophyllite, Tremolite, Crocidolite, and Actinolite) amongst two classes (Serpentine and Amphibole).

In Ontario, a material is considered asbestos-containing when it contains 0.5 per cent or more asbestos by dry weight.

What is the difference between friable vs. non-friable asbestos?

Friable asbestos can be easily crumbled or powdered by hand when dry, releasing fibres into the air. Examples: Sprayed-on insulation, pipe insulation, or ceiling coatings.

Non-friable asbestos is bound tightly in a solid material and unlikely to release fibres unless damaged or disturbed. Examples: Vinyl floor tiles, cement pipes, shingles, or siding.

Where was asbestos used?

Asbestos was widely used in building materials and other applications for much of the 20th century. Asbestos use peaked in the 1960s and early 1970s when there were more than 3,000 industrial applications or asbestos-containing products. From the mid-1970s to early 1980s, manufacturing of friable asbestos-containing products was banned in Canada. The use of asbestos in non-friable asbestos-containing products was generally restricted and phased out in the 1980s.

Before 1990, asbestos used for its heat-resistant and insulating properties. It was common in building materials and industrial products such as:

- Roofing shingles, sealants, ceiling and floor tiles, plaster, and cement products
- Brake linings, clutch pads, and other automotive parts
- Fireproof clothing and insulation for hot and cold areas
- Industrial furnaces and heating systems
- Gaskets, coatings, and packing materials
- Reinforced plastics and caulking materials

Vermiculite

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buildings. Vermiculite insulation is typically found within ceiling, wall or floor cavities and generally is not exposed until active disturbance within these areas is performed.

Vermiculite itself has not been shown to be a health concern; however, some vermiculite insulation was contaminated with regulated/commercial and non-regulated/commercial asbestos fibres. Vermiculite insulation installed in Canadian buildings between 1920s and 1990s typically was mined and produced in Libby, Montana, by W.R. Grace and Company. This mine had a natural deposit of amphibole asbestos minerals which resulted in some of the vermiculite being contaminated with asbestos. As such, the majority of the vermiculite supplied by W.R. Grace and Company (known by the brand name Zonolite) was found to contain traces of commercial asbestiforms and non-commercial asbestiform fibres at varying concentrations collectively known as Libby Amphiboles.

Libby amphibole is defined as its own type of asbestiform mineral outside the six listed above; however, it is most similar to Actinolite/Tremolite. Although the overall percentage of asbestos in Libby vermiculite can be low, the airborne fibre concentration can become high, depending on the type of disturbance. Asbestos in vermiculite is very often not distributed homogeneously and asbestos fibres generally migrate to the bottom of the insulated cavity overtime. The concentration of asbestos varies from bag to bag, within a building, and can even vary depending on the method used to collect a sample. Since the amphibole asbestos is not bound within a material like it is with virtually every other type of asbestos-containing building material, it can become airborne very easily if disturbed. (Environmental Abatement Council of Canada (EACC), Vermiculite Guideline, 2015).

What is the concern?

In many cases, asbestos is present in a bound form, meaning the product does not have the tendency to release fibres unless disturbed. Deterioration, accidental damage, or general maintenance activities such as cutting, sawing, or breaking ACM, can expose friable asbestos fibres, which can then become airborne and a potential respirable hazard to building occupants.

When asbestos-containing materials are disturbed, microscopic fibres can become airborne and inhaled. These fibres can become lodged in the lungs and remain there for years.

If asbestos-containing materials are in good condition, sealed behind walls or floors, isolated or left undisturbed, they generally do not pose a health risk. Once damaged, even non-friable materials can become friable and hazardous to human health.

Asbestos is only a risk when disturbed. If in doubt — don’t disturb it! Report it.

What are the health effects of exposure to asbestos?

The presence of asbestos in a building does not necessarily constitute a hazard or unacceptable risk to health. Asbestos fibres are a concern when they become airborne as a result of disturbance or deterioration. ACM that is maintained in good condition, undisturbed and well managed does not pose of risk of exposure to building occupants.

Exposure to asbestos fibres has been linked to

- Asbestosis (scarring of lung tissue)
- Lung cancer

- Mesothelioma (a rare cancer of the lung or abdominal lining)

There are no immediate symptoms from exposure — effects often appear years later, which is why prevention is critical.

What should I do if I encounter suspected asbestos-containing material?

- Do not touch, move, or disturb the material
- Stop work immediately in the area
- If safe, secure the area to prevent access
- Report it to your people leader

***Only qualified professionals may test or remove asbestos in compliance with Ontario Regulation 278/05**

What legislation governs how asbestos is handled in the workplace?

In Ontario, Regulation 278/05 Designated Substance – Asbestos on Construction Projects and In Buildings and Repair Operations specifies requirements for classification and identification of asbestos, management, notification and implementation of safe removal or disturbance procedures to minimize asbestos exposure.