



Hamilton

# INFORMATION REPORT

**CITY WIDE  
IMPLICATIONS**

<b>To:</b>	Mayor and Members Board of Health		
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<b>Date:</b>	March 28, 2006		
<b>Re:</b>	<b>Potable Water Haulage Vehicle Inspection Program (PH06012) (City Wide)</b>		

**Council Direction:**

N/A

**Information:**

There are 11 potable water haulage businesses in the City of Hamilton that use tanker vehicles to deliver potable water to City of Hamilton residences and businesses that are not connected to a municipal or private drinking water supply. Additionally, some private water systems lack water of sufficient quality or quantity, making it necessary for deliveries of potable water to augment water supplies.

Presently, it is estimated that there are approximately 30 vehicles used to haul drinking water. The recipients of this potable water typically depend on regular deliveries to a reservoir or cistern that serves as an alternative water supply. The actual number of recipients of a hauled potable water supply is not known at this time.

Some of these water haulage businesses have been involved in the past with providing potable water during drinking advisory situations, or have provided an alternate source of potable water when drinking water systems need to be upgraded or repaired. All of these businesses have the potential to be called or directed into service if there is a large municipal drinking water emergency.

At this point in time there are no regulations or standards in the Province of Ontario that apply to potable water haulage vehicles. Draft Ministry of Health and Long Term Care (MOHLTC) Guidelines do exist for potable water haulage vehicles. These Guidelines describe and explain what Public Health Units should look for when inspecting potable water haulage vehicles. It is anticipated that these Guidelines will not be finalized in the short term, as the MOHLTC is presently contemplating the development of a regulation at the Provincial level. The development of regulations usually takes quite some time.

**SUBJECT: Drinking Water Hauler Inspection Program (PH06012) (City Wide)**  
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Due to the expected time lag to develop and implement regulations for potable water haulage vehicles, Public Health Services has developed an inspection program for potable water haulage vehicles as the lack of an inspection program is viewed as a significant gap in critical quality assurance checks for potable water supplies that depend on water haulage vehicles as a source of safe water.

Public Health Services intends to deliver this inspection program with existing resources. At this point in time, there is no need for the City of Hamilton to collect fees for inspections.

**The Inspection Program**

Water Haulers will be provided an information package consisting of;

1. The Water Haulage Guideline (**Appendix A to Report PH06012**).
2. A checklist that operators may use as compliance tool (**Appendix B to Report PH06012**).
3. An example of a log sheet for record keeping (**Appendix C to Report PH06012**).
4. A list of laboratories that provide water testing services.

Public Health Inspectors will provide the information package to operators and address any compliance concerns brought forward by drinking water haulers. Water Haulage vehicles will be inspected by a Health Inspector twice annually after May 2006 to ensure compliance with the Water Haulage Guideline.

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March 02/06

## Potable Water Haulage Guidelines

### A. Introduction

Water haulage vehicles are tanker trucks used by individuals or companies that deliver and supply water for a fee. All water systems that supply the water for the purposes of filling the water haulage vehicle shall be potable and meet the microbiological standards as outlined in Ontario Regulation 169/03 *Ontario Drinking-Water Quality Standards*.

### B. Guidelines for Owners and Operators

1. All water supplied in bulk form must originate from a regulated drinking water system, registered with the Ministry of the Environment, in accordance with *Ontario Regulation 170/03 Drinking-Water Systems Regulation*.
2. At the time of filling, all water sources are currently potable (i.e., not under a boil water/drinking water advisory) and meet the *Ontario Drinking-Water Quality Standards*.
3. Appropriate measures must be taken to protect the water, the water tank, and any equipment and connections, from contamination during filling, storage, transportation, and delivery.
4. The water tank and any equipment used to supply water shall not have been previously used to transport a noxious, hazardous, or toxic substance or liquid. If the water tank was previously used to transport liquids for human consumption (i.e., milk, juice, etc.), it must be cleaned and sanitized (see **Section C** for procedure) before being used for haulage of drinking water.
5. The interior surface of water tanks used to supply potable water shall be constructed with a food-grade material that is non-corrosive (i.e., stainless steel, fiberglass, plastic) and shall not be used for any other purposes.
6. The inlet or opening of any container used for water haulage shall be constructed and maintained in a manner that will prevent the entry of insects, rodents, or any foreign material that may contaminate the water supply. With the exception of cleaning, emptying or filling of the tank, the inlet or opening must be covered and sealed at all times.
7. Hoses and nozzles used for water intake or discharge must be protected from possible contamination. They must be covered when not in use and disinfected before each use. (See **Section D**)
8. Food-grade lubricants shall be used for the operation of water pumps if the pumps are used for the transmission of drinking water to or from the water haulage vehicle.
9. Ensure the water tank and any removable equipment (i.e., hoses) are permanently labeled with the words "Drinking Water" or "Potable Water" in letters at least 15cm (6") high on the water tank and in an appropriate size that can be easily read on the equipment.
10. The water tank shall be cleaned and disinfected in accordance with the Guidelines for Disinfecting a Water Haulage Tank (**Section C**)

## **C. Guidelines for Disinfection a Water Haulage Tank**

1. Disinfection of the water tank must be conducted on a monthly basis.
2. The following procedure requires the use of unscented household bleach (5.25% sodium hypochlorite, i.e., Javex)
  - a) Shut off valve to water tank distribution lines. Drain all water from the bulk tank.
  - b) Wash and remove dirt from the inside surfaces of the tank by using a high pressure hose.
  - c) Remove wash water and sediments from bottom of tank. These can be vacuumed out.
  - d) Rinse inside surfaces of tank with clean potable water. Remove wash water.
  - e) Disinfect the inside surfaces of the tank and distribution lines as follows:
    - i) Use 1 litre of household bleach for every 1000 litres of water. This provides 50 milligrams per litre chlorine solution. For example: a 3,500 gallon truck will have about 16,000 litres of water.
    - ii) Add bleach while refilling the vehicle with water from the drinking water system. This will ensure thorough mixing of the bleach solution.
    - iii) Ensure the tank is completely filled to allow interior surfaces to come in contact with the bleach solution.
    - iv) Open valve to water tank distribution lines.
- 3) Run water out of water taps in the distribution lines until the smell of bleach is detected.
- 4) Shut off water faucets and valves to distribution lines. Ensure the tank is kept completely filled to allow a contact time of at least 12 hours
- 5) After 12 hours, drain all the water from the bulk tank into a municipal sanitary sewer or, if not available, a storm sewer. The tank can now be filled with fresh potable water.
- 6) Flush water tank by opening valves of distribution lines and running water until no smell of bleach is detected.

## **D. Disinfection of hose-end prior to each use**

Hose end connections must be disinfected before each use.

A bleach solution for dipping hose ends can be made with unscented household bleach (5.25% sodium hypochlorite, i.e., Javex) as follows:

- 100 ml. of bleach per 10 liters of water or
- 1/2 cup of bleach per 3 gallons of water.

## E. Sampling and Record Keeping

The owner or operator of a water haulage vehicle used to supply water for human consumption shall:

- 1) Sample the hauled water tanker supply four (4) times per year at the point of delivery and ensure it complies with the microbiological parameters for **Total coliforms** and **E. coli**. The *Ontario Drinking-Water Quality Standards* expresses the standard for both **Total coliform** and **E. coli** as **not detectable**. A list of licensed laboratories that test drinking water is enclosed as **Appendix 1** for your assistance.
- 2) Keep a daily activity logbook in the water haulage vehicle and shall have it available for examination by a Public Health Inspector, upon request. The activity logbook shall be kept for a period of not less than two years. Refer to **Appendix 3 (Daily Activity Log Sheet)**.

Logbook records shall include:

- a) the date, time, volume and location of each water delivery;
- b) the date and time of equipment disinfection;
- c) quarterly water sample laboratory results;
- d) a compliance checklist with vehicle information (Appendix 2)
- e) comments on problems encountered with the water supply, water haulage vehicle, and any equipment (i.e., unusual water colour or odours(s)).

*Reference document:*

*Ministry of Health and Long Term Care  
Mandatory Health Guidelines*



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COMPLIANCE CHECKLIST for OWNERS of
POTABLE WATER HAULAGE VEHICLE

Owner/Operators may use this form to log information about each water haulage vehicle and
review compliance with the Water Haulage Guidelines. Discuss any areas of non-compliance with
district Health Inspector. Upon completion, please insert into log book.

1. VEHICLE INFORMATION

Vehicle Description (e.g. make, model) License Plate #:
Tank Capacity
Bulk water vehicle is used to supply:
cistern/other drinking source
other use (specify)

2. WATER SOURCE INFORMATION

List Water source(s): (Name of Water Supply and Filling location(s))

3. TANK AND EQUIPMENT STANDARDS:

Tank Construction: stainless steel fiberglass plastic other
(if other, specify)
(Note: Interior tank surface must be made of food grade material. Surface must not be painted nor consist of other
toxic/non-food grade metal or coating. Inspector may require that owner/operator provide documentation to substantiate
or confirm that the tank or any piece of associated equipment is made of corrosion-resistant, readily cleanable and food
grade material suitable for handling potable water)
Has truck been used for hauling other material(s) prior to its current use Yes No
(if yes state other uses)
Is maintenance hole large enough to permit a thorough haulage tank inspection? Yes No
Presence of bottom drain:
(required to permit complete drainage of haulage tank after disinfection). Yes No
Are all openings and vents constructed and maintained to prevent the entry of dust
during transit and water discharge ( i.e. presence of screens, caps)? Yes No
List cleaning and disinfection chemicals used:

Are hoses in good condition and provided with threaded or clamped end plugs or alternatively, stored within a tight, clean storage compartment to protect interior water-contact surfaces ..... Yes  No

Are hoses disinfected before each use ..... Yes  No

Is water pump(s) utilized ..... Yes  No   
If yes, do pump(s) comply with guidelines ..... Yes  No

Operator trained by employer for tank maintenance and sanitation? ..... Yes  No

Exterior condition of tank and equipment  
Clean: ..... Yes  No   
Rusted: ..... Yes  No   
In good repair: ..... Yes  No

**"Potable Water" or "Drinking Water"** labeling (15cm/6" lettering min.) on tank and on re-moveable equipment (i.e. hoses) (approximately 5cm/2" lettering) ..... Yes  No

**4. RECORD KEEPING**

Log book contains the following information:

- Date, time and location of each water delivery ..... Yes  No
- Volume of water delivered to each site ..... Yes  No
- Date and time of equipment disinfection ..... Yes  No
- Water sample results (quarterly) ..... Yes  No
- Comments on problems encountered with water supply, water haulage vehicle, and/or equipment (i.e. unusual water colour or odour) ..... Yes  No

**5. COMPLIANCE**

Is vehicle in compliance with Water Haulage Guideline? ..... Yes  No

If no, please note below areas of non compliance and a proposed timeframe for compliance.  
(Note: Areas of non compliance and proposed compliance time-frames are subject to a review and approval by your district Public Health Inspector.)

Areas of non compliance and proposed compliance time-frame

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\_\_\_\_\_

Date \_\_\_\_\_ Operator \_\_\_\_\_

**(Upon completion insert in log book)**

**WATER HAULAGE LOG BOOK  
DAILY ACTIVITY SHEET**

Vehicle Description/plate # \_\_\_\_\_

DELIVERIES					COMMENTS	OPERATOR SIGNATURE
Date	Time	Location	Volume (gallons /litres)	Date of Tank Disinfection (monthly)		

Results of quarterly water sample:  
 Date sample taken: \_\_\_\_\_ Total Coliform \_\_\_\_\_ E. coli \_\_\_\_\_  
 Date sample taken: \_\_\_\_\_ Total Coliform \_\_\_\_\_ E. coli \_\_\_\_\_  
 Date sample taken: \_\_\_\_\_ Total Coliform \_\_\_\_\_ E. coli \_\_\_\_\_  
 Date sample taken: \_\_\_\_\_ Total Coliform \_\_\_\_\_ E. coli \_\_\_\_\_

**Notes:** 1 Water Samples to be taken for laboratory testing 4 times per year.  
 2 Records to be held for a period time not less than 2 years.