

BULK WATER HAULING GUIDELINES

Under *The Public Health Act* regulations, **Bulk Water Haulers** must obtain a permit to sell or convey water for sale for domestic purposes.

For the purposes of this guideline, “**Bulk Water**” is defined as potable water intended for human consumption that is conveyed and dispensed from an approved transport vehicle (*Water Hauling Truck*).

The water hauling vehicle and associated equipment must be designed, operated and maintained in a sanitary manner to ensure that water does not become contaminated and pose a risk to Public Health.

This is a guideline only. Additional items may be required by the Medical Officer of Health and/or Public Health Inspector pursuant to the *Water Supplies Regulation* and the *Food and Food Handling Establishments Regulation* (*The Public Health Act*).

BULK WATER HAULING GUIDELINES

1. Definitions & Regulatory References

The *Public Health Act* and its regulations require the owner of a bulk water hauling vehicle to apply for a permit to operate. The initial approval is issued by the Medical Officer of Health pursuant to the *Water Supplies Regulation*¹. The on-going responsibility for inspection and permit renewal is administered by the local Public Health Inspector pursuant to the *Food and Food Handling Regulation*². The follow excerpts provide relevant definitions and regulatory references:

Water Supplies Regulation (Man. Reg. 330/88R):

Sale of water for domestic purposes

4 No person shall sell or offer to sell water or convey water for sale for domestic purposes except by written permission of the medical officer of health.

5 No water for sale for domestic purposes shall be transported or conveyed in any vehicle unless the tanks, other receptacles and equipment are maintained in sanitary condition and in good repair to the satisfaction of the medical officer of health.

Food and Food Handling Establishments Regulation (Man. Reg. 339/88R)

"food" means any substance intended for human consumption and includes ice, water or other liquids.

"food handling establishment" includes... any place, premises, structure or vehicle in which food is
(a) manufactured, processed, prepared, packaged, stored or handled...

Registration

2 No person shall construct, extensively remodel or operate a food handling establishment or other building intended to be used as a food handling establishment without first registering the food handling establishment by completing and filing a registration form in a form approved by the minister.

Permits

3(1) Subject to subsections (4) and (5), and to section 3.1, no person shall operate a food handling establishment unless in possession of a valid and subsisting permit in a form approved by the minister, issued by the director or a public health inspector.

The owner of a vehicle used to transport or distribute bulk water shall ensure that the following standards are met:

2. Registration

For the purposes of obtaining a permit to operate a bulk water hauling vehicle, an owner must register each vehicle separately by completing the form provided in *Appendix A* of this guideline ([also available on-line³](#)). The completed application(s) must be submitted to the local Public Health Inspector for review and processing in consultation with the regional Medical Officer of Health.

Note: operators who hold existing permits issued prior to 2012, will be required to re-register their vehicle(s) with Manitoba Health in order to ensure completeness and accuracy of data to facilitate the annual permit renewal process. As part of this process, certain upgrades or procedural safeguards may be required by the Medical Officer of Health or Public Health Inspector to ensure minimum standards are met.

3. Permits

All vehicle owners must hold a valid health permit for each vehicle in order to operate as a bulk water hauler. Permits are not transferable to another person. Permits expire on March 31st of each year and are renewed automatically by the local Public Health Inspector provided the vehicle is designed, maintained and operated in compliance with the guideline requirements.

A copy of the current Permit must be kept in the vehicle and be produced by the driver upon the request of a Public Health Inspector or Drinking Water Officer. For the purposes of transferring a permit to a new owner/operator, please refer to *Appendix A* of this guideline on registering and re-registering of vehicles.

4. Water Source(s)

All bulk water supplied and/or transported must be obtained from an *approved source*, such as:

- a) a Public Water Supply System, as defined and licensed pursuant to the *Drinking Water Safety Act⁴*; or
- b) a Semi-Public Water Supply System, as defined and licensed pursuant to the *Drinking Water Safety Act*.

5. Vehicle Design

The container used to transport potable water must meet NSF/ANSI Standard 61⁵ or equivalent standards for food or water grade containers. For example, water tank interiors must be composed of or coated with food grade contact material that is non-corrodible (*e.g. stainless steel, fiberglass, plastic, approved epoxy liner*). Hoses, nozzles and other equipment used in the transport and delivery of water must also be constructed of food grade materials. All equipment must be maintained in good repair and kept in sanitary condition. The use of “pre-owned” equipment is limited to components that have been used exclusively for hauling potable water.

Water tanks and associated equipment that have been approved for bulk water shall not be used for any other purpose (*i.e. hauling non-potable water*), unless prior written approval has been obtained from the Public Health Inspector.

Bulk water tanks must be clearly and permanently labeled '**POTABLE WATER ONLY**' (*or similar wording approved by the local Public Health Inspector*), in contrasting letters at least 15 cms (6 inches) tall.

6. Operational Standards

6.1 Equipment

Appropriate measures must be taken to protect the water and its source, the storage tank, and all other equipment from contamination during filling, storage, transportation and delivery.

- Hoses & nozzles used for water intake or discharge shall be protected in such a manner that prevents them from becoming contaminated when not in use (*i.e. threaded or clamped caps*).
- All pump lubricants must be “food grade” approved.
- Visual inspections must be conducted daily to ensure access/fill hatch seals are in good repair and are providing a proper sanitary seal.
- Movable equipment (nozzles) should be cleaned and sanitized daily by using a solution of 100 mg/L household bleach, or equivalent in the sanitizing procedure.
- A written procedure for emergency disinfection of equipment following a contamination incident (example: hose falling on the ground) must be kept in the truck (*see Appendix B: “Procedures for Emergency Disinfection of Water Truck Equipment”*).

- Tanks must be sanitized at least three times per year (*spring, summer & fall*); and immediately after any contamination incident or after a failed bacteriological water analysis (see *Appendix C: 'Procedures for Routine Cleaning and Disinfecting of Potable Water Tanks'*).
- Equipment design must allow for easy access for cleaning purposes (*i.e. access ports*)

6.2 Record Keeping

Operators of bulk water hauling vehicles shall keep an activity log book in the water hauling vehicle and make it available to a Public Health Inspector or Drinking Water Officer upon request. A sample activity logbook is included in *Appendix D*. Logbook records should include the following data:

- a) the date & location of each water fill
- b) the date & location of each water delivery
- c) when applicable - the date of any emergency disinfection work
- d) when applicable - any comments or observations regarding problems encountered with the water supply or water hauling vehicle equipment.
- e) when applicable - routine equipment maintenance work performed on water tank, hoses, nozzles, valves, pumps, bacteriological samples, etc.

6.3 Bacteriological Sampling

Operators of water hauling vehicles must demonstrate at reasonable intervals that their vehicle is being maintained in sanitary condition and not creating a source of contamination. As a condition of their permit, operators shall ensure that water samples are collected from the vehicle and submitted to an accredited laboratory for analysis at the following frequencies ^{1, 4, 6, 7}:

Sample Location	No. Of Samples/Year	Required Tests	Guideline Limits
Bulk Water Vehicle (<i>i.e. from fill hose or tank outlet</i>)	4	E. coli & Heterotrophic Plate Count (HPC)	E. coli = zero (<1) HPC = 500

All laboratory results must be kept on file by the operator for a minimum of 2 years and made available for review upon request of a Public Health Inspector. All positive E. Coli results (*where bacteria exceed Health Canada Guidelines for Drinking Water Quality*⁷) must be reported immediately to a Public Health Inspector and measures taken in accordance with *Appendix C: 'Procedures for Routine Cleaning and Disinfecting of Potable Water Tanks'*.

6.4 Boil Water Advisories

Public and Semi-Public Water Supply Systems are occasionally affected by degraded water quality or the risk of potential contamination. Boil Water Advisories (BWA) are issued to notify all users that the water is no longer considered 'potable' and safe for drinking water purposes.

In the event of a BWA, bulk water haulers will be contacted by the Public Health Inspector and provided with specific instructions on special operating measures required to safeguard the public. A failure to abide may result in temporary suspension of an operating permit during the course of the BWA.

For further information, please contact your local Public Health Inspector or visit the Health Protection Unit website at: manitoba.ca/healthprotection

APPENDIX A:



**PERMIT APPLICATION - REGISTRATION FORM
Bulk Water Hauler**

PURSUANT TO MANITOBA REGULATION 330/88R and MANITOBA REGULATION 339/88R

1. NAME OF BUSINESS: _____
2. WORKBASE LOCATION: (Civic or Legal Description) _____
(City/Town/Rural Municipality) _____ (Province) _____ (Postal Code) _____
TELEPHONE: () _____ FAX: () _____
3. MAILING ADDRESS: _____
(City) _____ (Province) _____ (Postal Code) _____
TELEPHONE: () _____ FAX: () _____
4. BUSINESS TYPE: INCORPORATED (Registered Legal Name) _____
 SOLE PROPRIETORSHIP PARTNERSHIP (List partners) _____
5. OWNER/CONTACT: (Name) _____ (Driver's License #) _____
ADDRESS: _____
(City/Town) _____ (Province) _____ (Postal Code) _____
TELEPHONE: () _____ CELL: _____ EMAIL: _____
6. VEHICLE IDENTIFICATION INFORMATION: (Provide at least **two** of the following vehicle identifiers)
Make/Model/Year: _____
VIN #: _____
Licence Plate #: _____
Self-Assigned Fleet # (if applicable) : _____
7. PLEASE CHECK ONE OF THE FOLLOWING:
 New Permit Application
 Existing Permit Update/Renewal (For pre-2012 permit holders only)
8. PROPOSED WATER SOURCES: (Please specify civic address or legal description – add extra pages if necessary)

DATE

SIGNATURE OF OWNER / REPRESENTATIVE

****NOTE: ORIGINAL SIGNED COPY TO BE SUBMITTED TO PUBLIC HEALTH INSPECTOR.**

For more information please visit: manitoba.ca/healthprotection

APPENDIX B: Procedures for Emergency Disinfection of Water Truck Equipment^{8 9 10}

If a water hose, nozzle or other equipment is accidentally contaminated during the course of water delivery and it can be effectively sanitized at the site, considerable time can be saved. The alternative is to return to the base and clean and sanitize the contaminated piece of equipment there.

The most common causes of contamination to hose ends and nozzles are dropping them on the ground or the falling off of a protective cover. The following procedures are designed for these types of contamination.

Equipment Required

- Household bleach (scent-free)
- Covered, clean and sanitized plastic container at least 8 liters, approximately two gallons, in size or larger.
- Measuring spoon for measuring bleach.
- Personal protective equipment (*i.e. goggles with side shields, appropriate gloves, appropriate apron or smock*)

Procedure

1. Run potable water from the water truck through the hose, nozzle or other contaminated equipment to remove any visible dirt.
2. Fill plastic container with potable water from the water truck and thoroughly rinse(*) all visible dirt from the hose end, nozzle or other contaminated equipment.
3. Discard the water and thoroughly rinse the plastic container with potable water from the water truck.
4. Fill the plastic container with potable water from the water truck to a level that will allow complete immersion of the contaminated equipment. It is a good idea to mark the levels of water that you may be using on your container. This allows direct filling without having to measure the water to determine the amount of chlorine to add.
5. Put on appropriate personal protective equipment.
6. Add chlorine bleach to create a 200 mg/L (ppm) solution. This requires approximately 1 teaspoon of bleach, or 5 ml, per liter of water. An eight-liter solution will require approximately 8 teaspoons, or 3 tablespoons or 40 mL of household bleach.
7. Completely immerse the equipment to be sanitized in the solution and allow a minimum of 2 minutes of contact time.
8. The equipment is now ready to use.

***Note:** This procedure is only effective when visible dirt and soil can be completely rinsed off the piece of equipment prior to sanitizing. If the visible soil cannot be removed, the piece of equipment must be properly washed with detergent, rinsed and disinfected prior to use. Contact your local Public Health Inspector if you have further questions – contact information available on-line at:

manitoba.ca/healthprotection

APPENDIX C: Procedures for Routine Cleaning & Disinfection of Potable Water Tanks^{8, 9, 10}

1. Drain water from the tank.
2. Wash and remove dirt from the inside surfaces of the tank by means of a high pressure hose.
3. Remove wash water and sediments from the bottom of the tank. These can be vacuumed out.
4. Rinse inside surfaces of the tank with potable water. Again remove the rinse water.
5. Disinfect the inside surfaces of the tank as well as the distribution lines as follows:
 - a) Fill the tank with potable water.
 - b) Add 8 L of household bleach to every 4,500 L (1000 gal) of water (100 mg/L (ppm) chlorine solution) and mix well.
6. Run water from the water hose until the smell of chlorine is detected in the water.
7. Shut off the water hose. Let the chlorine solution sit in the water tank and system for at least 20 minutes.
8. Completely drain the chlorine solution from the tank to a municipal sewer or suitable location that will not adversely affect aquatic life.
9. Cleaning and disinfecting of the water tank should be done routinely a minimum of 3 times a year (i.e. spring, summer & fall).

Note: This procedure is only effective when visible dirt and soil can be completely rinsed off the piece of equipment prior to sanitizing. If the visible soil cannot be removed, the piece of equipment must be properly washed with scent-free detergent, rinsed and disinfected prior to use. Contact your local Public Health Inspector if you have further questions – contact information available on-line at:

manitoba.ca/healthprotection

References:

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- ¹ *Water Supplies Regulation* (Man. Reg. 330/88R), *The Public Health Act*:
<http://web2.gov.mb.ca/laws/regs/p210e.php>
- ² *Food and Food Handling Establishments Regulation* (Man. Reg. 339/88R), *The Public Health Act*:
<http://web2.gov.mb.ca/laws/regs/p210e.php>
- ³ *Manitoba Health Protection Unit website*, Food Safety webpage, Fact Sheets, Guidelines, Standards, Web links and Registration Forms
manitoba.ca/healthprotection
- ⁴ *The Drinking Water Safety Act, C.C.S.M. c. D101*, Province of Manitoba:
<http://web2.gov.mb.ca/laws/statutes/ccsm/d101e.php>
- ⁵ *NSF/ANSI Standard 61*, Drinking Water System Components – Health Effects:
http://www.techstreet.com/cgi-bin/pdf/preview/2580676/previews/NSF_61-10a_pre.pdf
- ⁶ *Guidance for Providing Safe Drinking Water in Areas of Federal Jurisdiction* (Version 1), Section 6.4.2 “Trucked (Hauled) Water”, Health Canada, Interdepartmental Working Group on Drinking Water, August 2005.
<http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/guidance-federal-conseils/index-eng.php>
- ⁷ *Guidelines for Canadian Drinking Water Quality*, Health Canada:
http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2010-sum_guide-res_recom/index-eng.php
- ⁸ *Environmental Public Health Field Manual for Private, Public and Communal Drinking Water Systems in Alberta*, Section 5.5 “Bulk Water”, Alberta Health & Wellness, Second Edition (2004):
<http://www.health.alberta.ca/documents/Drinking-Water-Systems-2004.pdf>
- ⁹ *AWWA Standard C652-11 Disinfection of Water Storage Facilities*, American Water & Wastewater Association:
www.awwa.org/bookstore
- ¹⁰ *Code of Hygienic Practice for Commercial Pre-packaged and Non-Prepackaged Water*, Section 6.0 “Transportation of Prepackaged and Non-Prepackaged (Vended) Water”, Canadian Food Inspection System Implementation Group, (August 2003):
<http://www.cfis.agr.ca/english/indexe.shtml>
- ¹¹ *Drinking Water Advisory Committee Report*, Manitoba Health, Office of the Chief Medical Officer of Health, (November 6, 2000):
www.gov.mb.ca/health/publichealth/cmoh/docs/DWAC_report.doc