

EPB 349 - Liquid Domestic Waste Disposal

The Water Security Agency, under the authority of *The Environmental Management and Protection Act, 2010* regulates the business of liquid domestic waste (sewage) hauling and disposal.

In order to protect public health and the environment, the transportation and disposal of liquid domestic waste must be done in accordance with the permit required to transport and dispose of liquid domestic waste, and using the best management practices outlined in this factsheet. This factsheet is intended as a source of information for persons engaged in the business of liquid domestic sewage handling. To report illegal dumping of liquid domestic waste, call **1-800-667-7561**.

When liquid domestic waste is discharged in a manner where it can impact surface water or shallow groundwater, it represents a potential hazard to human health and environmental quality. With proper management and application, liquid waste can be a resource (fertilizer, source of moisture), rather than becoming a pollutant.

The Municipal Refuse Management Regulations are the principle regulation for allowing the collection, transportation and disposal of liquid domestic waste. Section 14(1) states “No person shall carry on the business of transporting and disposing of liquid domestic sewage without a permit issued by the minister authorizing him to do so.” An Application for a Permit to Transport and Dispose of Liquid Domestic Waste must be submitted to the Water Security Agency and the operations shall be in accordance with the following conditions:

- Liquid domestic sewage collected by a liquid domestic sewage transporter must be disposed of in a Water Security Agency approved sewage system, subject to conditions required by the owner of the sewage system, including written permission to do so.
- If access to an approved sewage system is not available or if written permission cannot be obtained from the owner of an approved lagoon located within 50 kms, then the liquid domestic waste may be land spread **in accordance with all of the following:**
- the liquid domestic sewage hauler has obtained the prior written consent of the owner of land used for agricultural purposes to dispose of the liquid domestic sewage on his or her land;
- there is a written agreement between the liquid domestic sewage hauler and the owner of land used for agricultural purposes that includes a provision stating that the landowner will:
 - 1) prohibit individuals, other than the liquid domestic sewage hauler, and pets from entering the land on which the liquid domestic sewage has been disposed of for 30 days following the disposal;
 - 2) prohibit cattle, horses, goats, llama, elk, bison and other similar livestock from entering the land on which the liquid domestic sewage has been disposed of for two (2) months following the disposal; and

- 3) prohibit swine and sheep from entering the land on which the liquid domestic sewage has been disposed of for six (6) months following the disposal;
 - 4) ensure that no actions are taken to lure wildlife to the land on which the liquid domestic sewage has been disposed of for at least six (6) months following the disposal;
- the liquid domestic sewage hauler ensures that clear and legible signs are posted on agricultural land on which liquid domestic sewage has been disposed of:
 - 1) in conspicuous locations at the site;
 - 2) that state, “No Trespassing” or a similar statement; and
 - 3) for at least 30 days following the disposal.
 - If an owner of agricultural land on which liquid domestic sewage has been disposed of has not complied with the terms of the written agreement set out as noted above then no liquid domestic sewage shall be disposed of on any property of that landowner.
 - If a liquid domestic sewage hauler is disposing of liquid domestic sewage to land used for agricultural purposes, the liquid domestic sewage hauler must do so in accordance with the following:
 - liquid domestic sewage is to be applied to land:
 - 1) by subsurface injection;
 - 2) by surface application, followed by soil cultivation within four days after application;
 - 3) by surface application, followed by covering the application area with soil or other material within four (4) days after application; or
 - 4) subject to clause (b), by surface application onto agricultural land with substantial live vegetation cover;
 - liquid domestic sewage is not to be disposed of:
 - 1) on native prairie;
 - 2) on land covered in trees or bush;
 - 3) on any vegetable, fruit or root crops that are intended for human consumption and that might be eaten raw;
 - 4) on fields growing cereal, oil seed, pulse or corn crops, from the time the crop is planted until it is harvested;
 - 5) on forage crops, within two (2) months before harvesting;
 - 6) on soils having greater than 70% sand, in areas of bedrock or in a bog;
 - 7) on land used for dairy pasture;
 - 8) on land within 1000 metres of an occupied building, recreational area or other place of public assembly;
 - 9) on land within 150 metres of any water body, slough, water well, highway, cemetery or public road; or
 - 10) in a permanent or intermittent water body, watercourse, stream or drainage channel;

- 11) on land subject to water erosion; or
 - 12) on wet or frozen soils, unless in accordance with an approved Waste Management Plan;
- liquid domestic sewage is not to be mixed with:
 - 1) grease from grease traps;
 - 2) hazardous substances;
 - 3) hazardous waste; or
 - 4) industrial waste, including waste generated from a vehicle washing facility;
 - liquid domestic sewage is to be disposed of on land in a manner that eliminates pooling or runoff to water wells, watercourses, water bodies, surface drainage patterns, sloughs or any land that drains onto land owned by another person;
 - land with less slope is to be used before land that has more slope.
 - Every liquid domestic sewage hauler who intends to change the disposal location previously provided to the minister shall, before disposing of liquid domestic sewage at the new disposal location, provide written notice to the minister:
 - 1) advising the minister that he or she intends to use a specified approved lagoon or land to dispose of liquid domestic sewage; and
 - 2) setting out the legal land description of the approved lagoon or land at/on which he or she is proposing to dispose of the liquid domestic sewage.
 - Every liquid domestic sewage hauler shall ensure that the following records are kept and retained for at least seven (7) years from the date the record was created:
 - 1) the date, location, description, and volume of liquid domestic sewage picked up and disposed of;
 - 2) the written consent of the owner of the sewage works where, or the land on which, liquid domestic sewage was disposed of;
 - 3) records of any environmental sampling, analysis or monitoring that has been conducted
 - Every liquid domestic sewage hauler shall ensure that the records required to be kept pursuant to this section are made available to the minister on request.
 - A liquid domestic sewage hauler shall ensure that, on transfer of ownership of his or her hauling business, the records required to be kept pursuant to this section are transferred to the new owner.
 - A liquid domestic sewage hauler shall not haul liquid domestic sewage in a tank that has been used to transport a hazardous substance or a hazardous waste unless the tank used to transport a hazardous substance or hazardous waste if that tank, after the hazardous substance or hazardous waste has been removed:

- - 1) contains less than 0.1% of the original amount of hazardous waste substance as residue in the container; and
 - 2) if applicable, has all flammable vapours reduced to less than 10% of the lower explosive limit for that material.
- Application rates for liquid domestic waste shall be in accordance with agronomic rates. Table 1 provides general guidance. Actual application rates are subject to a number of factors such as soil type, climatic conditions, expected yield and level of available nitrogen as determined by a soil test. Liquid domestic waste shall not be applied to cereal, oil seed or corn crop fields between planting and harvesting. A 30 day forage crop specific post-application harvest interval may apply.

Table 1: Guidelines for Liquid Domestic Waste Application Rates Based on Typical Crop Nitrogen Requirements

	Expected Yield (bu/acre/yr)	Nitrogen Requirement (lb/acre/yr)	Annual Application Rate (gal/acre/yr)	Application Time
Alfalfa	5*	290	111,500	At least 30 days prior to harvest
Barley	80	111	42,700	Prior to seeding
Canola	35	111	42,700	Prior to seeding
Clover	4*	215	82,700	At least 30 days prior to harvest
Flax	24	71	27,300	Prior to seeding
Grass	3*	102	39,200	At least 30 days prior to harvest
Lentils	30	92	35,400	Prior to seeding
Oats	100	106	40,800	Prior to seeding
Field Peas	50	153	58,800	Prior to seeding
Rye	55	92	35,400	Prior to seeding
Silage (Barley/Corn)	5*	155	60,000	At least 30 days prior to harvest
Spring Wheat	40	85	32,700	Prior to seeding
Sunflower	50	75	28,800	Prior to seeding
Winter Wheat	50	68	26,200	Prior to seeding

*measured in ton/acre/year.

