

# Liquid Domestic Waste Disposal



Saskatchewan  
Ministry of  
Environment  
(Environment), under  
the authority of *The  
Environmental  
Management and  
Protection Act, 2002*,  
regulates the  
practice of liquid  
domestic waste  
hauling and disposal.

In order to protect  
public health and the  
environment, the  
transportation and  
disposal of liquid  
domestic waste must  
be done using best  
management  
practices outlined in  
this factsheet and in  
accordance with the  
permit required to  
transport and  
dispose of liquid  
domestic waste.  
This factsheet is  
intended as a source  
of information for  
persons engaged in  
the business of  
liquid domestic  
waste handling.

## Report Illegal Dumping

1-800-667-7561

EPB 349 Nov/08

Liquid domestic waste is not usually an extreme environmental hazard unless discharged in a manner where it can impact surface water or shallow groundwater. With proper application, liquid waste can be a resource (fertilizer, source of moisture) rather than becoming a pollutant.

*The Municipal Refuse Management Regulations* is the principal legislation for allowing the collection, transportation and disposal of liquid domestic waste. Section 14 (1) states "No person shall carry on the business of transporting 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 Sewage EB02A must be submitted to your local Environment office 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 an 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 has been denied or the distance to an existing sewage system is not economically feasible, spreading of liquid domestic sewage on land may be done **in accordance with all of the following**:
  - o on the generator's own property or where **written permission has been obtained** from the landowner on whose property the sewage will be deposited;
  - o liquid domestic waste (septage) is to be spread greater than 100 metres from any watercourse, slough, surface water, water well highway or road. Liquid domestic waste shall not be spread within 1.0 kilometre of communities, occupied dwellings, resort/recreational areas and places of public assembly;
  - o liquid domestic waste is to be spread so as not to pool or runoff to watercourses, water bodies, or surface drainage patterns to sloughs.
  - o liquid domestic waste is not to be spread during a precipitation event or to wet, flooded or frozen soils or to snow;
  - o any disposal to land shall be by a subsurface injection method. Surface application is acceptable provided the permit holder ensures sewage is tilled into the soil within 4 days after deposition; and
  - o any changes to disposal locations must be identified in writing to local Environment Office
- liquid domestic waste shall not be deposited at solid waste disposal grounds unless otherwise approved by Environment;
- liquid domestic waste haulers who collect any hazardous substance or materials may not spread collected hazardous material on land or dispose of the hazardous material in any sewage system;
- vehicles, tanks or tankers employed to transport hazardous waste shall not be employed to transport liquid domestic waste without first being thoroughly cleaned;
- field re-entry by people or pets within 30 days of application should be avoided. Beef cattle, horses, sheep, goats, llama, elk and bison should not be allowed access to application areas for two months (six months for swine or sheep);
- application to sandy soils (greater than 70 per cent) sand, or areas of bedrock or bog, is not allowed;
- where repeated applications are employed, resultant concentrations of metals in soils shall not exceed values outlined in Table 2 of Land Application of Municipal Sewage Sludge Guidelines EPB 296. Further guidance on determination of resultant concentrations in soils is available from Environment;



Saskatchewan  
Ministry of  
Environment

[www.environment.gov.sk.ca](http://www.environment.gov.sk.ca)

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**Saskatchewan Ministry of  
Environment Offices**

Assiniboia	642-7242
Beauval	288-4710
Big River	469-2520
Buffalo Narrows	235-1740
Candle Lake	929-8400
Chitek Lake	984-2343
Christopher Lake	982-6250
Creighton	688-8812
Cumberland House	888-5810
Cypress Hills	662-5435
Dorintosh	236-7680
Estevan	637-4600
Fort Qu'Appelle	332-3215
Hudson Bay	865-4400
Humboldt	682-6726
Kindersley	463-5458
La Ronge	425-4234
Leader	628-3100
Lloydminster	825-6430
Loon Lake	837-2410
Maple Creek	662-5434
Meadow Lake	236-7557
Melfort	752-6214
Melville	728-7480
Moose Jaw	694-3659
Moosomin	435-4545
Nipawin	862-1790
North Battleford	446-7416
Outlook	867-5560
Pelican Narrows	632-5510
Pierceland	839-6250
Pinehouse	884-2060
Porcupine Plain	278-3540
Preeceville	547-5660
Prince Albert	953-2322
Regina	787-2080
Saskatoon	933-6240
Shaunavon	297-5433
Southend	758-6255
Spiritwood	883-8501
Stony Rapids	439-2062
Swift Current	778-8205
Wadena	338-6254
Weyburn	848-2344
Yorkton	786-1463

- permit is non-transferable and records shall be kept as specified by Environment;
- Environment may make other permit conditions for specific situations; and
- 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 rates 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.

The maximum volume of liquid domestic waste (septage) that may be applied to any site during a one-year period varies based on the actual amount of nitrogen required for the crop and the anticipated yield and the available nitrogen as determined by a soil test. The maximum volume is calculated by the following formula:

$\text{Annual Application Rate} = \frac{\text{Pounds of Nitrogen Required for Crop Yield}}{0.0026}$ <p>(gallons/acre/year)</p> <p>(Assumes 350 mg/Kg total nitrogen for domestic septage and 2.5 per cent solids (about 1.4 per cent total nitrogen on a dry weight basis).)</p>
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Site specific application rates should be determined to avoid addition of excessive nitrogen needs for crop production and as a means to avoid migration of nitrogen compounds to underlying soils and groundwater.

Both liquid Domestic Waste Hauler permit application and permission forms are available from: <http://www.environment.gov.sk.ca/Default.aspx?DN=772d1c7b-02db-44b5-aade-40fa2a9a4f4b> or all Ministry of Environment offices. Further information on land disposal of liquid domestic waste can be obtained from Environment.

**Other Sources of Information**

A Guide to the Federal EPA Rule for Land Application of Domestic Septage to Non-Public Contact Sites (Agricultural Land, Forests and Reclamation Sites). United States Environmental Protection Agency, Office of Wastewater Enforcement and Compliance (WH-547), WPA/832-B-92-005, September 1993.