

# ALBERTA PRIVATE SEWAGE SYSTEMS

## STANDARD OF PRACTICE 2009

### Site Evaluation

#### Number of Soil Profiles Investigated

A minimum of two test pit excavations shall be investigated at the proposed location for the *soil*-based treatment component to classify and assess the treatment capacity of the *soil*.

#### Minimum Depth of Soil Investigation

The *soil* profiles shall be investigated to a

Site Evaluation Report<sup>1</sup>. minimum depth below ground surface of

- i) 1.2 m (4 ft.) for *treatment mounds*,
- ii) 2.7 m (9 ft.) for *treatment fields* receiving *primary treated effluent level 1*,
- iii) 2 m (7 ft.) for a *treatment field* receiving *secondary treated effluent (level 2 or better)*, or
- iii) 1.8 m (6 ft.) for *open discharge systems*, or

2. depth at which *vertical separation* limiting features such as saturated *soil* indicators or limiting soil conditions are encountered.

A report as required by Article 7.1.1.3. shall be developed and included in the system design information.

### Vertical Separation

*Soil*-based treatment systems shall maintain a *vertical separation* between the point of *effluent* infiltration into the *soil* and a *water table* or an impervious layer of not less than

1. 1500 mm (5 ft.) when receiving *primary treated effluent level 1*,
2. 900 mm ( 3 ft.) when receiving *secondary treated effluent (level 2 or better)*,
3. 900 mm (3 ft.) below a *treatment mound* as measured from the bottom of the required 300 mm (1 ft.) depth of *sand layer* intended to provide secondary treatment, or
4. the depth of *soil* required to achieve a 7-day *effluent* travel time to the design boundary depth, provided the design boundary depth does not exceed 2.4 m (8 ft.), as set out in Article 8.1.1.5.

Within the required vertical separation there shall be at least 300 mm of in situ soil that is assigned a loading rate within this standard.

### Article 2.1.2.4 Separation from Specific Surface Waters

1. The *soil*-based treatment component of an *on-site wastewater treatment system* shall be located not less than 90 m (300 ft.) from the *shore* of a
  - lake,
  - river,
  - stream, or
  - creek.

Despite the requirements of Sentence 1, where a principal building or other *development* feature is situated between the *soil*-based treatment component and a lake, river, stream, or creek, such that a failure of the system causing effluent on the ground surface will be obvious and create an undesirable impact on the owner, the distance may be reduced to the minimum distance requirements set out in this standard for the particular type of treatment system being used.

A water tight septic tank or similar component need not meet requirements of this Article.

### Septic Tank Working Capacity

The *working capacity* of a *septic tank* shall not be less than the volume set out in Table 4.2.2.2. for a single family *dwelling* or duplex, or the volume required by Article 4.2.1.1.

Table 4.2.2.2. Working Capacity of Septic Tank	
Number of Bedrooms	Working Capacity Volume
2 or 3 bedrooms	3360 L (740 Imp. gal.)
4 bedrooms	4360 L (940 Imp. gal.)
5 bedrooms	5230 L (1,150 Imp. gal.)
6 bedrooms	6140 L (1,350 Imp. gal.)

*Note: Table 4.2.2.2. provides the working capacity volume required of the septic tank for residential applications where there are no conditions that require additional flow to be added to the peak daily volume.*

## Septic Tanks and Holding Tanks

### Separation Distances

*Septic tanks* and holding tank shall not be located within

1. 1 m (3.25 ft.) from a *property* line,
2. 10 m (33 ft.) from a *water source*,
3. 10 m (33 ft.) from a *water course*, and
4. 1 m (3.25 ft.) from a *building*.

## Separation Distances

A *treatment field*, measured from any part of a *weeping lateral trench*, shall not be located within

1. 1.5m (5 ft.) from a *property line*,
2. 15 m (50 ft.) from a *water source*,
3. 15 m (50 ft.) from a *water course*, except as provided in Article 2.1.2.4,
4. 10 m (33 ft.) from a basement, cellar, or crawl space,<sup>1</sup>
5. 1 m (3.25 ft.) from a *building* that does not have a permanent foundation,
6. 5 m (17 ft.) from a *building* that has a permanent foundation but does not have a basement, cellar, or crawl space, and
7. 5 m (17 ft.) from a *septic tank* or *packaged sewage treatment plant*.

<sup>1</sup> Note: Clause (1)(d)—The 10 m (33 ft.) requirement to a basement, cellar, or crawl space is intended to protect excavations below grade from accumulating migrating effluent. A crawl space that is not below grade, or where the level of the ground surface at the treatment area is below the level of the crawl space, the separation required is 5 m (17 ft.) clearance as it can be treated as a building without a basement.

A **treatment mound** shall not be located within

1. 3m (10 ft.) of a *property line*,
2. 15 m (50 ft.) of a *water source*,
3. 15 m (50 ft.) of a *water course*, except as provided in Article 2.1.2.4,
4. 3 m (10 ft.) of a *septic tank*,
5. 10m (33 ft.) of a basement, cellar, or crawl space, and
6. 10m (33 ft.) of a *building* that does not have a basement, cellar, or crawl space.

For the purposes of Sentence (1), all measurements are to be taken from the point where the side slope of the mound intersects with the natural *soil* contour.

An **effluent open discharge** to the ground surface may be installed in a location that provides separation distances from the point of discharge of not less than

1. 50 m (165 ft.) to a *water source*,
2. 50 m (165 ft.) to a *water course* except as required by Article 2.1.2.4.
3. 45 m (150 ft.) to a *building*, and
4. 90 m (300 ft.) to a *property line*.

## **Open Discharge Prohibited**

1. An open discharge shall not be installed on a *property* located within a quarter section where more than 4 parcels, excluding the remnant of the parcel, have been subdivided out of the quarter section.<sup>1</sup>

*i. <sup>1</sup> Intent: Sentence (1)—Existing systems may remain in operation but once the number of subdivided parcels exceeds 4, additional open discharge systems are not allowed.*

2. An *open discharge system* shall not be used where
  - i. the expected peak volume of *wastewater* per day, as determined by Section 2.2., exceeds 3 m<sup>3</sup> (660 Imp. gal.) per day, or
  - ii. the strength of the effluent will exceed the quality of *primary treated effluent level 1*.

A **lagoon serving a single-family dwelling** or duplex shall not be located within

1. 100 m (330 ft.) from a *water source*,
2. 90 m (300 ft.) from a *water course*,
3. 45 m (150 ft.) from a *building*, and
4. 30 m (100 ft.) from a *property* line.

A **lagoon serving other than a single-family dwelling** or duplex shall not be located within

1. 90 m (300 ft.) from a *building*,
2. 100 m (330 ft.) from a *water source*,
3. 90 m (300 ft.) from a *water course*,
4. 30 m (100 ft.) from a *property* line, and
5. 90 m (300 ft.) from a numbered primary or secondary road.

All measurements shall be taken from the outside of the *berm*, where the side slope of the *berm* intersects with the natural ground surface.

**Comments:** Options for Private Sewage Systems are listed above.

***The following criteria must be followed:***

Permits are required before installation commences

If installing any system other than an open discharge to the ground surface, consult your local plumbing inspector before starting installation

**DO NOT COVER** the installation before calling for an inspection.

If you have any questions, please contact:

Alberta Municipal Affairs

1-866-421-6929

[http://municipalaffairs.gov.ab.ca/cp\\_permit\\_information\\_search.cfm](http://municipalaffairs.gov.ab.ca/cp_permit_information_search.cfm)

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