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This document is ***not*** the official version of these regulations. The regulations and the amendments printed in the ***Royal Gazette*** should be consulted to determine the authoritative text of these regulations.

For more information concerning the history of these regulations, please see the ***Table of Regulations***.

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CHAPTER E-9

ENVIRONMENTAL PROTECTION ACT

SEWAGE DISPOSAL SYSTEMS REGULATIONS

Pursuant to section 25 of the *Environmental Protection Act* R.S.P.E.I. 1988, Cap. E-9, Council made the following regulations:

(In these regulations Imperial measurements are added editorially for convenience and are not exact equivalents of the metric measurements specified)

1. In these regulations — Definitions

(a) "application for permit" means an application on a form approved by the Minister; — application for permit

(b) "alternative multiple trench disposal field" means a multiple trench disposal field oriented across the slope of a property with lateral spacing of no less than 4 metres (13 ft) between the lines (see Appendix A, Figure A.2); — alternative multiple trench disposal field

(c) "authority having jurisdiction" means the Department of Fisheries, Aquaculture and Environment; — authority having jurisdiction

(d) "barrier material" means a non-degradable, manmade fibre (such as polyester or polypropylene) which allows water to flow and prevents the migration of soil fines into gravel; — barrier material

(e) "bedrock" means a solid or continuous body of rock, with or without fractures, or a weathered or broken body of rock fragments overlying a solid body of rock; — bedrock

(f) "bottom header" means the disposal field header connecting the lower ends of the disposal field drainage pipe or leaching chambers opposite to the ends connected by the top header (see Appendix A, Figures A.1 and A.2); — bottom header

(g) "Board" means the Board of Examiners appointed under these regulations; — Board

(g.1) "cafeteria" means a restaurant in which food is displayed on counters and patrons serve themselves; — cafeteria

(h) "capacity" means the liquid capacity of a septic tank between the waterline and the floor of the tank; — capacity

certificate of compliance

(i) "certificate of compliance" means a certificate on a form approved by the Minister;

certified

(j) "certified" means guaranteed by a Standards Council of Canada Accredited Testing Agency as being in conformance with the latest CSA Standard pertinent to the application of the product;

contour trench disposal field

(k) "contour trench disposal field" means a relatively narrow and shallow disposal bed constructed in a trench of constant depth, with both the trench bottom and the lip of the trench wall at the ground surface horizontal throughout the entire length (see Appendix A, Figures A.3 and A.3.1);

contractor

(l) "contractor" means any person, corporation, company, firm, organization or partnership performing or engaging to perform for his or its own benefit or that of another, with or without remuneration or gain, any sewage disposal system work or installation within the scope of these regulations;

contractor's licence

(m) "contractor's licence" means a licence issued under section 3;

cottage

(n) "cottage" means a non-commercial summer dwelling of two bedrooms or less, having less than 85 m^2 (900 ft^2) of floor area;

CSA

(o) "CSA" means the Canadian Standards Association;

disposal field

(p) "disposal field" means that part of an on-site sewage disposal system designed and installed in accordance with these regulations for the subsurface distribution of septic tank effluent into the soil;

drainage pipe

(q) "drainage pipe" means the certified, perforated, rigid, straight, sewer pipe used in a disposal field;

duplex

(r) "duplex" means a building that is divided into two dwelling units;

dwelling

(s) "dwelling" means a building or portion thereof designed, arranged or intended for residential occupancy;

dwelling unit

(t) "dwelling unit" means two or more rooms used or intended for domestic use of one or more individuals living as a single housekeeping unit with cooking and sanitary facilities;

effluent

(u) "effluent" means sewage after it has passed through a septic tank or some other type of treatment;

effluent line

(u.1) "effluent line" means a pipe that transports effluent from a septic tank to a disposal field;

existing parcel

(u.2) "existing parcel" means any parcel in existence prior to June 12, 1993;

(v) "filter sand" means clean, washed, screened or natural sand having less than 10% by weight retained on a 10 mm (3/8 in) sieve and less than 2% by weight passing a 0.075 mm (#200 US std.) sieve and the permeability of the sand must be not less than 0.0004 m/s (0.0013 ft/s); filter sand

(w) "good quality fill" means a reasonably uniform sand or sandy gravel containing a small proportion of silt but no more than 30 % of the material shall be retained on a 10 mm (3/8 in) sieve and a minimum of 2.5 % and a maximum of 15% must pass the 0.075 mm sieve (#200 US std.); good quality fill

(x) "gravel" means clean, washed or screened small pieces of rock or crushed rock of a consistency or hardness which is not conducive to premature deterioration, and of which 98% by weight shall pass a 40 mm (1½ in) screen and 98% by weight shall be retained on a 12.5 mm (½ in) screen; gravel

(x.1) "grease interceptor tank" means a tank installed in front of the septic tank to remove grease, oil and fats from sewage; grease interceptor tank

(y) "header" means pipe used to connect the ends of lines of drainage pipe or leaching chambers; header

(z) "leaching chamber" means a prefabricated device approved by the authority having jurisdiction for use in a disposal field as an alternative to gravel and drainage pipe; leaching chamber

(aa) "leaching chamber disposal field" means a system of leaching chambers arranged in a multiple trench or serial distribution configuration (see Appendix A, Figure A.4 and A.4.2); leaching chamber disposal field

(bb) "licence" means a licence issued pursuant to these regulations by the authority having jurisdiction to any person or any contractor; licence

(bb.1) "licensed contractor" means a contractor who holds a contractor's licence; licensed contractor

(bb.2) "licensed pumper" means a person who holds a pumper's licence; licensed pumper

(bb.3) "licensed site assessor" means a person who holds a site assessor's licence; licensed site assessor

(cc) "liquid depth" means the maximum vertical depth of liquid which a septic tank can contain before the liquid discharges through the septic tank outlet; liquid depth

(dd) "Minister" means the Minister of Fisheries, Aquaculture and Environment; Minister

multiple family dwelling

(ee) "multiple family dwelling" means a building containing three or more dwelling units;

multiple trench disposal field

(ff) "multiple trench disposal field" means a system of drainage pipes and gravel arranged in the form of narrow, parallel trenches connected to a header (see Appendix A, Figure A.1);

natural boundary

(gg) "natural boundary" means the visible high water mark of any stream, river, or other body of water;

owner

(hh) "owner" includes any person, firm, corporation or agent controlling or occupying the property under consideration;

parcel

(ii) "parcel" means any lot, block or other area in which real property is held or into which real property is subdivided and can include two or more adjacent lots, blocks or areas of property upon which a sewage disposal system is being situated;

permeable soil

(jj) "permeable soil" means soil having a hydraulic conductivity in the range of 8.0×10^{-3} cm/s to 8.0×10^{-5} cm/s (3.1×10^{-8} in/s to 3.1×10^{-5} in/s);

permit

(kk) "permit" means a written approval from the authority having jurisdiction;

potable water

(ll) revoked by EC427/03;

pressure distribution system

(mm) "pressure distribution system" means a distribution system designed such that a pump or siphon supplies septic tank effluent to non-perforated pipe that is drilled with holes of such diameter and spacing that the top header, full length of all interconnecting pipes, and the bottom header are under a positive pressure;

pumper's licence

(mm.1) "pumper's licence" means a licence issued under subsection 22(2);

registered installer

(nn) "registered installer" means a person who is employed and supervised by a contractor, and is registered with the authority having jurisdiction as a person qualified to install sewage disposal systems;

restaurant

(nn.1) "restaurant" means a place where meals can be bought and eaten and includes a cafeteria and an institutional kitchen;

septage

(oo) "septage" means all settled solids, scum, liquid or other material removed from a septic tank or disposal field;

septic tank

(pp) "septic tank" means a watertight receptacle that receives sewage which is designed and installed so as to permit settling of settleable solids from the sewage, retention of the solids and scum,

partial digestion of the organic matter, and discharge of the liquid portion into a disposal field;

(qq) "sewage" means any human waste emitted from a house or premises where persons work, live or frequent and includes waste from ablutions, culinary activities and laundering; — sewage

(rr) "sewage disposal system" includes any system or part thereof for disposing of sewage or waste by means of one or more settling or septic tanks and one or more disposal fields, and any other system or part thereof for sewage or waste disposal not directly connected to a municipal or approved central sewage collection system; — sewage disposal system

(ss) "sewage holding tank" means a closed, water-tight receptacle designed and used to receive and store sewage or septic tank effluent which does not discharge waste water; — sewage holding tank

(ss.1) "sewer line" means a pipe that transports sewage from a building to a septic tank or a sewer collection main; — sewer line

(ss.2) "site assessor's licence" means a licence issued under section 17.1; — site assessor's licence

(tt) "site suitability assessment" means an assessment completed on property to determine the suitability of that property for on site sewage disposal and may include test pit inspection(s) and permeability test(s); — site suitability assessment

(uu) "sludge" means the semi-liquid material that is removed from a wastewater treatment system as an end product of the treatment process; — sludge

(vv) "standard disposal field" means — standard disposal field
(i) a multiple trench or alternative multiple trench disposal field, or
(ii) another type of disposal field permitted under section 21, but does not include a contour trench or leaching chamber disposal field (see Appendix A, Figure A.1);

(ww) "top header" means the first header of each disposal field to receive effluent from the septic tank (see Appendix A, Figures A.1 and A.2); — top header

(xx) "unstabilized sewage" means sewage that has been held in a septic tank or a holding tank for less than 30 days; — unstabilized sewage

(yy) "waterline" means the maximum elevation of the liquid in a septic tank; — waterline

water table

(zz) "water table" means the level at which water stands in a shallow well open along its depth and penetrating the surficial deposits just deeply enough to encounter standing water in the bottom (level of water in saturated soil where hydraulic pressure is equal to zero). (EC403/03; 427/03)

Categories of property

1.1. For the purposes of these regulations, a Category I, II or III lot is a property that has been assessed as such in a site suitability assessment completed in accordance with section 17. (EC427/03)

Application

2. (1) These regulations apply to the installation, construction, reconstruction or modification of sewage disposal systems.

System expansion or modification

(2) Where an existing sewage disposal system is to be expanded or modified, the authority having jurisdiction may, for the purpose of protecting public health or the environment, require the entire existing sewage disposal system or any part thereof to be modified or replaced in conformance with the provisions of these regulations. (EC403/03; 427/03)

LICENCES AND PERMITS

Licence

3. (1) No contractor shall install, construct, reconstruct or modify a sewage disposal system, or cause the same to be done, without first obtaining a contractor's licence.

Site supervision

(2) No licensed contractor shall permit a sewage disposal system to be installed, constructed, reconstructed or modified unless the licensed contractor, or a registered installer in the employ of the licensed contractor, is present on the job site during the installation, construction, reconstruction or modification.

Responsibility

(3) Where a licensed contractor carries out work on a sewage disposal system, or causes it to be carried out, the licensed contractor shall ensure that the work is carried out in compliance with the standards and requirements prescribed in these regulations.

Application

(4) The application for a contractor's licence shall be made in such form and manner as prescribed by the authority having jurisdiction and submitted with the prescribed fee.

Qualifications

(5) A contractor's license shall be granted to a contractor if:

(a) an application for a contractors license is made; and

(b) an applicant has attended a seminar or workshop sponsored by the authority having jurisdiction and has completed and passed an examination administered by the Board of Examiners; or

(c) an applicant holds a license issued by another province or territory and the Minister considers the license to be equivalent to a contractor's license issued under these regulations.

Waiver

(6) Revoked by EC427/03.

Appointment of the Board

(7) The Minister shall appoint a Board of Examiners consisting of a Chairperson and two other members, all of whom shall hold office at the Minister's discretion and for a period not exceeding three years.

Duties of the Board

(8) The Board of Examiners may perform the following duties:

(a) sit on such days and at such times as the chairperson may determine or at the request of the Minister;

(b) delegate authority to one of its members to conduct, review and grade examinations;

(c) review applications for licences, and determine whether the applicants meet the qualifications required by these regulations;

(d) review applications for recognition of licences issued by another province or territory;

(e) subject to the approval of the Minister, set the examination required for contractor's licences;

(f) notify licence applicants of the time and place of the examination;

(g) conduct the examinations;

(h) grade completed examinations;

(i) provide the Minister with recommendations for approval or denial of a contractor's licence.

Transfer

(9) No contractor's licence issued under the provisions of this section is transferable.

Time frame

(10) A contractor's licence is valid for a period of not more than twenty-four months from the date of issuance.

Expiry

(11) A contractor's licence shall expire on the date indicated on the licence and may be renewed upon payment of the renewal fee.

Suspension

(12) The Minister may suspend a contractor's licence for a period of time if the Minister is satisfied that one or all of the following conditions prevail:

(a) the licence holder has been convicted of two or more offences under these regulations or any regulations replaced by these regulations;

(b) the licence holder has obtained a licence through misrepresentation or fraud;

(c) the licence holder has allowed some other person to have the use of their licence;

(d) the licence holder has failed to attend a workshop or seminar sponsored by the authority having jurisdiction for two consecutive years.

Registered installer

(13) Before any person may qualify as a registered installer, he or she must have registered their attendance at a workshop or seminar sponsored by the authority having jurisdiction and must have paid the application fee.

Renewal

(14) The registration for registered installers is valid for not more than twenty-four months from the date of registration or renewal.

Continuing education

(15) Any registered installer who fails to attend a workshop or seminar sponsored by the authority having jurisdiction for two consecutive years, shall cease to be registered.

Reinstatement of qualifications

(16) Where a contractor ceases to be qualified in accordance with subsection (12) he or she may be reinstated by the Minister upon reapplication pursuant to subsection (4) and in such circumstances the Minister may require reexamination pursuant to clause (5)(b).

Variance

(17) Notwithstanding these regulations, the owner of a dwelling may install an on-site sewage disposal system for the dwelling unit provided that

(a) the lot conforms to a Category I lot as set out in the Planning Act Regulations (EC601/77);

(b) the on-site sewage disposal system to be installed is a standard, multiple-trench, sewage disposal system for a single family dwelling; and

(c) not more than one on-site sewage disposal system will be installed by the dwelling owner in a calendar year. (EC403/03; 427/03)

Permit

4. (1) No contractor or dwelling owner shall commence the construction, reconstruction, installation or modification of a sewage disposal system, or cause the same to be done, unless

(a) an application for a permit has been completed, and a permit has been issued pursuant to these regulations;

(b) the application fee has been paid in full; and

(c) the person installing the system has a copy of the permit in his or her possession on site.

Multiple installations

(2) No person shall be granted a sewage disposal permit to install more than one on-site sewage disposal system per calendar year unless that person holds a valid contractor’s licence.

Construction and installation

(3) No contractor, registered installer or dwelling owner shall install, construct, reconstruct or modify a sewage disposal system unless it is designed, located, installed, constructed, reconstructed or modified in accordance with the standards and requirements prescribed in these regulations.

Construction prohibited

(4) The Minister may prohibit the construction, reconstruction, installation or modification of a sewage disposal system when, in the Minister's opinion, weather conditions or ground conditions are unsuitable.

Covering system

(5) No contractor, registered installer or dwelling owner shall cover a sewage disposal system, or cause the same to be done, without having first served notice to, and received instructions from, the authority having jurisdiction.

Deviation

(6) Upon receipt of a permit for a sewage disposal system, no contractor, registered installer or dwelling owner shall deviate from the conditions of the permit without prior approval of the authority having jurisdiction.

Permit duration

(7) A sewage disposal system permit issued pursuant to subsection (1), shall be valid for a period of twenty-four months from the date of issue. (EC403/03; 427/03)

FEES

Fees

5. (1) The fees payable for an application are as follows:

(a) for an application by a contractor for a sewage disposal system permit	$ 75
(b) for an application by a dwelling owner for a sewage disposal system permit	$100
(c) for an application for a site suitability assessment per lot	$ 65
(d) for an application for, or renewal of, a pumper's licence (2 yrs)	$250
(e) for an application for, or renewal of, a contractor's licence (2 yrs)	$250
(f) for an application for, or renewal of, a qualified site assessor's licence (2 yrs)	$250
(g) for an application to be registered as a registered installer, or to renew a registration as a registered installer (2 yrs)	$ 25

(EC732/04)

Extra inspections

(2) An inspection fee of $50.00 per inspection shall be payable where extra inspections are required:

(a) for reinspection of a sewage disposal system that has been found to have deficiencies;

(b) for additional requested inspections. (EC403/03; 427/03)

CERTIFICATE OF COMPLIANCE

Certificate of compliance

6. Within 60 days of construction, reconstruction or installation of a sewage disposal system, the licensed contractor shall furnish a certificate of compliance to the owner and the authority having jurisdiction. (EC403/03; 427/03)

ORDER TO UNCOVER SYSTEM

Power to order system

7. Where the authority having jurisdiction finds that a sewage disposal system has been constructed, reconstructed, installed or modified and covered without permission, the authority having jurisdiction may order the owner of the system or the licensed contractor to uncover all or part of the system for inspection. (EC403/03; 427/03)

LOCATION — RESTRICTIONS

Beach setback

8. (1) No contractor, registered installer or dwelling owner shall install or construct a sewage disposal system, or cause the same to be done, on a lot or existing parcel of land closer to the beach than

(a) the distance determined by multiplying the erosion rate for that shoreline by 60; or

(b) 23 m (75 ft),

whichever is greater, measured from the top of the bank to the nearest portion of the system.

Application

(2) This section does not apply to approved lots or existing parcels of land as defined in the Planning Act Subdivision and Development Regulations (EC693/00). (EC403/03; 427/03)

SEPTIC TANKS

Standards and requirements

8.1 Section 9, Table A of Appendix A, and Appendix E prescribe the standards and requirements for

(a) septic tanks used in the installation, construction, reconstruction or modification of sewage disposal systems; and

(b) the sewer lines, effluent lines and grease interceptor tanks connected to such septic tanks. (EC427/03)

Septic tank location

9. (1) A septic tank shall be located not less than

(a) 15.2 m (50 ft) from any well;
(b) 3.0 m (10 ft) from a parcel boundary; and
(c) 4.6 m (15 ft) from a foundation wall.

Sewer line

(2) A sewer line shall
(a) be constructed of sewer pipe that is straight, non-perforated, rigid, smooth bore, watertight, certified and of an SDR (or equivalent) grade;
(b) have sealed joints;
(c) be located a minimum of 3.0 m (10 ft) from any well;
(d) have certified, long-sweep fittings for changes in direction; and
(e) be located no closer than 450 mm (18 in) from a water line.

Elevation

(3) The elevation of a septic tank shall be such as to afford a minimum slope of two percent in the sewer line from the building to the tank.

Effluent line

(3.1) An effluent line from a septic tank to a disposal field shall have a minimum slope of one percent.

Construction

(4) A septic tank shall be watertight and constructed of concrete, polyethylene or other material not subject to corrosion or decay and which is approved by the authority having jurisdiction, but concrete used in the construction shall not be in block form and steel septic tanks shall not be permitted.

Risers

(5) A single-compartment septic tank shall have a riser section that
(a) is installed over the outlet opening in the top of the septic tank;
(b) has a watertight seal where it joins the tank;
(c) raises the outlet opening sufficiently to prevent flooding by surface water; and
(d) is equipped with a tamper-resistant lid labelled "DANGER—DO NOT ENTER".

Idem

(5.1) Each compartment of a multiple-compartment septic tank shall have a riser section that is installed and equipped in accordance with the requirements of clauses (5)(a) to (d).

Installation of prefabricated septic tanks

(5.2) Every prefabricated septic tank shall be installed in accordance with the manufacturer's recommendations.

Standard for prefabricated concrete septic tanks

(6) Every prefabricated concrete septic tank shall be designed and constructed in conformity with the latest CSA Standard for prefabricated septic tanks.

Standard for polyethylene and fibreglass tanks

(7) Every polyethylene and every fibreglass septic tank shall be certified as being in accordance with the latest CSA Standard for prefabricated septic tanks.

Cast-in-place concrete septic tanks

(8) Every cast-in-place concrete septic tank shall conform to the following standards:

(a) concrete shall have a 28 day minimum compressive strength of 25 MPa (3625 psi) and a strength test shall comprise two standard cured cylinders, and testing procedures shall be in accordance with CSA Standard A23.2 and evaluation of strength tests shall be in accordance with CSA Standard A23.1;

(b) the minimum wall thickness of a cast-in-place concrete septic tank shall be 15 cm (6 in), and the minimum floor thickness shall be 10 cm (4 in);

(c) means of access shall be provided over the inlet and outlet of a septic tank and an access opening shall have a minimum inside dimension of 50 cm (20 in) and shall be provided with covers;

(d) the liquid depth of a septic tank shall be not less than 90 cm (36 in);

(e) septic tanks shall have a minimum of 22.5 cm (9 in) of air space between the waterline and the interior side of the septic tank cover;

(f) septic tank inlets shall have either inlet baffles, T, TY, or elbow fittings to maintain a quiescent flow of sewage into the septic tank and the inlet baffles or inlet fittings shall extend not more than 7.5 cm (3 in) and not less than 2.5 cm (1 in) below the waterline;

(g) septic tank outlets shall have either open topped T, or open topped TY fittings or baffles which extend a minimum of 45 cm (18 in) below the waterline and above the waterline to within 5 cm (2 in) of the septic tank cover;

(h) septic tanks shall have not less than 5 cm (2 in) difference in elevation between the bottom of the inlet pipe where it enters the interior of the septic tank and the bottom of the outlet pipe where it begins to pass through the wall of the tank towards a disposal field;

(i) travel distance of sewage between the inlet and outlet within a septic tank shall be not less than 120 cm (48 in), measured horizontally.

Compartments

(9) A septic tank having a capacity of greater than 4090 litres (900 imperial gallons) shall have two compartments; the capacity of the first compartment shall be equal to two-thirds of the total septic tank capacity, a minimum opening of 20 cm by 20 cm (8 in by 8 in) shall be left in the partition in the septic tank, and such opening shall be half-way in the liquid depth.

Septic tank, minimum capacity

(10) The minimum septic tank capacity for a dwelling unit shall be as set out in Table A of Appendix A.

Idem, other than those listed in Table

(11) Septic tanks for establishments other than those listed in Table A of Appendix A shall have a minimum septic tank capacity determined by the following formula:

(a) for an estimated (or determined) sewage flow of less than 6800 litres/day (1500 Igal/day), the capacity of the septic tank shall be two times the flow;

(b) for an estimated (or determined) sewage flow of greater than 6800 litres/day (1500 Igal/day), the capacity of the septic tank shall be determined as follows:

5100 + Q (metric); or
1125 + Q (imperial),
where Q is the daily sewage flow.

Tank capacity

(12) In no case shall the septic tank capacity be less than 2725 litres (600 imperial gallons).

Minimum sewage flow

(13) The minimum sewage flow from the establishments identified in Appendix B shall comply with the respective minimum sewage flows identified therein or shall be as determined by measurement.

Septic tank effluent filter

(14) A septic tank serving a restaurant shall be fitted with an effluent filter that is installed in accordance with the manufacturer's recommendations.

Grease interceptor tank

(15) A grease interceptor tank shall be installed in front of a septic tank serving a restaurant.

Idem

(16) A grease interceptor tank installed in accordance with subsection (15) shall

(a) be watertight;

(b) be constructed of

(i) precast concrete and shall conform with the standards for prefabricated concrete septic tanks required by subsection 9(6),

(ii) polyethylene and shall be certified as being in accordance with the latest CSA Standard for prefabricated septic tanks, or

(iii) any other material, other than steel, that is not subject to corrosion or decay, and which is approved by the authority having jurisdiction;

(c) have a minimum capacity of 2725 litres (600 imperial gallons);

(d) be connected only to a dishwasher or to a kitchen sink that does not have a garbage grinder; and

(e) be located not less than 1.5m (5 ft) from the building containing the dishwasher or kitchen sink to which the tank is connected.

Idem

(17) The capacity of a grease interceptor tank shall be calculated, for the purposes of clause (16)(c), in accordance with the equation set out in Appendix E. (EC403/03; 427/03)

Abandoned septic tank

9.1 (1) For the purposes of this section, a septic tank is abandoned if it is disconnected from a source of sewage on a parcel served by the septic tank.

Decommissioning abandoned septic tank

(2) The owner of a parcel served by a septic tank shall ensure that the septic tank is decommissioned, in accordance with this section, by a licensed contractor within 10 days after the septic tank is abandoned.

Abandoned septic tank

(3) A licensed contractor shall decommission an abandoned septic tank

(a) by removing the contents of the tank, disinfecting the tank and filling the tank with clean soil fill; or

(b) by removing the tank, disinfecting the resulting excavation and filling the excavation with clean soil fill.

Notice

(4) Where a licensed contractor decommissions an abandoned septic tank, the licensed contractor shall notify the authority having jurisdiction of the decommissioning. (EC427/03)

SEWAGE PUMPING STATIONS AND SIPHON CHAMBERS

Standards and requirements

9.2 Section 10 prescribes the standards and requirements for

(a) sewage pumping stations and siphon chambers used in the installation, construction, reconstruction or modification of sewage disposal systems; and

(b) the sewer lines connected to such pumping stations and siphon chambers. (EC427/03)

Pumping station or siphon chamber required

10. (1) A sewage pumping station or siphon chamber is required where

(a) the required length of a standard disposal field or a leaching chamber disposal field exceeds 150 m (500 ft);

(b) the required length of a contour trench disposal field exceeds 46 metres (150 feet); or

(c) the disposal field is to be at an elevation higher than the elevation of the septic tank.

Location

(2) A sewage pumping station or siphon chamber shall be located not less than

(a) 15.2 m (50 ft) from any well;

(b) 3.0 m (10 ft) from a parcel boundary; and

(c) 4.6 m (15 ft) from a foundation wall.

Gravity sewer line

(3) The sewer line from the septic tank to the sewage pumping station or siphon chamber

(a) shall be constructed of non-perforated, rigid, smooth-bore, watertight, certified, sewer pipe with sealed joints; and
(b) shall be located a minimum of 3.0 m (10 ft) from any well.

Pressure sewer line

(4) The pressure sewer line from the sewage pumping station or siphon chamber to the disposal field
(a) shall be certified pressure sewer pipe (SDR 26 or equivalent) with sealed joints; and
(b) shall be located a minimum of 3.0 m (10 ft) from any well.

Pumping station construction

(5) A sewage pumping station
(a) shall be watertight and constructed of concrete, polyethylene or other material not subject to corrosion or decay, and which is approved by the authority having jurisdiction but concrete used in the construction shall not be in block form and steel pumping stations shall not be permitted;
(b) shall be designed and constructed to withstand the lateral and bearing loads to which it will be subjected;
(c) shall provide at least one quarter (1/4) day storage above the high alarm set point;
(d) shall have a secured, water-tight, above-ground access with a minimum inside dimension of 50 cm (20 in); and
(e) shall be wired in compliance with section 18 of the Canadian Electrical Code.

Pumps

(6) All pumps used in sewage pumping stations shall
(a) be open face centrifugal type designed to pump sewage;
(b) have a capacity approximately 2.5 times the average daily flow in litres per minute (gallons/minute) but not less than 23 litres per minute (5 gallons/ minute) at the system head;
(c) be provided with a suitable shut off valve on the discharge line; and
(d) be piped so that they can be removed for servicing without having to completely dewater the pumping station or without requiring service personnel to enter the lift station.

Pumping station controls

(7) Each sewage pumping station shall be provided with control
(a) to automatically start and stop the pumps based on water level;
(b) to automatically alternate the pumps in a multiple-pump system;
(c) to provide a high water level alarm (audiovisual) in an area where it may be easily monitored; and
(d) to provide a pump failure alarm (audiovisual), in a multiple pump system, when a pump motor fails to start on demand.

Siphon chamber construction

(8) A siphon chamber

(a) shall be watertight and constructed of concrete, polyethylene or other material not subject to corrosion or decay, and which is approved by the authority having jurisdiction but concrete used in the construction shall not be in block form and steel siphon chambers shall not be permitted;
(b) shall be designed and constructed to withstand the lateral and bearing loads to which it will be subjected;
(c) shall have an average discharge rate greater than 2.5 times the average daily influent flow in gallons per minute;
(d) shall have a volume equal to 0.6 the volume of the drainage pipe in the disposal field to which it discharges; and
(e) shall have a secured, water-tight, above-ground access with a minimum inside dimension of 50 cm (20 in). (EC403/03; 427/03)

DISPOSAL FIELDS

Standards and requirements

10.1 Sections 11 to 15 prescribe the standards and requirements for disposal fields used in the installation, construction, reconstruction or modification of sewage disposal systems. (EC427/03)

Disposal fields

11. (1) A disposal field shall not be located
(a) in an area where either the maximum water table or bedrock is less than 0.6 m (2 ft) below the ground surface at any time;
(b) in soil which does not meet the definition of permeable soil;
(c) in any area which may be subject to flooding either by a natural body of water or by surface water runoff;
(d) under a roadway;
(e) under a paved area;
(f) under an area used by motor vehicles;
(g) under an area used intensively by livestock;
(h) less than 6.1 m (20 ft) from a foundation;
(i) less than 3.0 m (10 ft) from a parcel boundary or an embankment;
(j) less than 15.2 m (50 ft) from any well; or
(k) less than 15.2 m (50 ft) from a natural boundary of a body of water.

Installation of disposal field

(2) A disposal field shall be installed
(a) approximately parallel to the ground contour to spread the effluent across a longer slope interface; and
(b) with a minimum depth of 0.3 m (12 in) of permeable soil below the bottom of any trench of the disposal field.

Septic tank required

(3) A disposal field shall not be installed unless a septic tank had first been constructed in accordance with section 9.

(4) Whenever possible, a sewage disposal system shall be located downgrade of the nearest well. (EC403/03; 427/03) Location

12. (1) Unless otherwise approved by the authority having jurisdiction, a standard disposal field shall be rectangular, with an even number of parallel lines of drainage pipe and shall have a top and bottom header (see Appendix A, Figures A.1 and A.2) and the pipe connecting the disposal field with the septic tank shall connect at the centre of the top header with an equal number of lines on each side of the connection. Standard disposal field

(2) The pipe from the septic tank to the top header shall be non-perforated, rigid, smooth bore, certified sewer pipe with sealed joints. Pipe

(3) The top header of a standard disposal field shall be level and constructed of non-perforated, rigid, smooth bore, certified sewer pipe and fittings, with sealed joints. Top header

(4) The bottom header of a standard disposal field shall be level and constructed of drainage pipe, or non-perforated, certified sewer pipe and fittings. Bottom header

(5) When the bottom header of a disposal field is constructed of drainage pipe, its installation shall conform with the drainage pipe construction and installation requirements of subsection 11(1), (6) and (9). Installation

(6) As shown in Appendix A, Figure A.1.1, drainage pipe in a multiple trench disposal field shall be Drainage pipe

(a) a minimum of 750 mm (3 in) interior diameter;

(b) laid on a slope of not less than 5 cm (2 in) and not more than 10 cm (4 in) per 15 m (50 ft) of length, with parallel lines not less than 1.5 m (5 ft) apart;

(c) laid in lines of not more than 30 m (100 ft) long;

(d) laid on at least 20 cm (8 in) depth of gravel in a 45 cm (18 in) wide trench or on at least 15 cm (6 in) depth of gravel in a 60 cm (24 in) wide trench;

(e) completely covered with gravel and the full width of the gravel shall be covered with barrier material.

(7) Barrier material shall be a light weight (50 g/m^2 or more) non-woven (i.e. felted, needle punched or heat bonded fibre) fabric or proprietary geotextile with a permeability greater than 0.001 m/s (0.04 in/sec) and an opening size of less than 700 µm (0.028 in). Barrier material

(7.1) Barrier material shall be covered with between 0.3 m (12 in) and 0.4 m (15 in) of soil. *Idem*

Multiple disposal fields

(8) Where the total length of drainage pipe exceeds 150 m (500 ft), there shall be constructed two or more separate disposal fields connected to the septic tank by using

(a) a sewage pumping station; or

(b) a siphon chamber.

Trenches

(9) Unless otherwise approved by the authority having jurisdiction, the bottom of standard disposal field trenches shall be

(a) level and of equal elevation; and

(b) not less than 45 cm (18 in) in width.

Disposal field minimum drainage pipe length

(10) The minimum total length of drainage pipe for single and multiple family dwellings on Category I or Category II lots is given in Appendix A, Table A.1 and the minimum total length of drainage pipe for establishments identified in Appendix B, or others not listed, shall be calculated using the estimated (or measured) daily sewage flow and the on-site sewage disposal system design formula in Appendix D.

Designed systems for Category III properties

(10.1) The sewage disposal system installed on a lot with a water table between 0.6 m (2 ft) and 1.2 m (4 ft) below the soil surface shall be designed by a qualified engineer.

Cottage sewage disposal system

(11) A cottage sewage disposal system shall have a minimum septic tank capacity of 2725 litres (600 imperial gallons) and a minimum drainage pipe length equal to 75% of the minimum drainage pipe length listed for a two bedroom single family dwelling (see Appendix A, Table A.1). (EC403/03; 427/03)

Alternative multiple trench disposal field

13. (1) The alternative multiple trench disposal field shall conform with all requirements of sections 11 and 12 and shall have lines spaced at a minimum of 4 m (13 ft) apart and be oriented so as to have the greatest dimension across the slope (see Appendix A, Figure A.2).

Pipe

(2) The pipe from the septic tank to the top header shall be non-perforated, rigid, smooth bore, certified sewer pipe with sealed joints.

Alternative multiple field lines

(3) Where the lines of drainage pipe in an alternative multiple trench disposal field are laid to have the effluent in the drainage pipe flow in the direction of the natural slope of the land, the disposal field must have a bottom header constructed of drainage pipe. The installation of the header shall conform with the drainage pipe construction and installation requirements of subsections 11(1), 12(6) and (9).

Bottom header

(4) When the bottom header in an alternative multiple trench disposal field is installed in accordance with subsection (3), the pipe shall be laid in a trench that follows as nearly as possible along a natural elevation

contour line of the site, with the bottom of the trench, the gravel bed and the drainage pipe laid truly level.

Disposal field, minimum drainage pipe length

(5) For single and multiple family dwellings the minimum total length drainage pipe in an alternative multiple trench disposal field is given in Appendix A, Table A.1, and the minimum total length of drainage pipe for establishments identified in Appendix B, or others not listed, shall be calculated using the estimated (or measured) daily sewage flow and the on-site sewage disposal system design formula in Appendix D. (EC403/03; 427/03)

Leaching chamber disposal field

14. (1) A leaching chamber disposal field may be used for those applications and locations where soil and other site conditions are suitable for a standard disposal field.

Pipe

(2) The pipe from the septic tank to the top header shall be non-perforated, rigid, smooth bore, certified sewer pipe with sealed joints.

Location

(3) Unless otherwise stated, installation of a leaching chamber disposal field shall conform with all requirements of Section 11.

Materials

(4) The leaching chamber shall be constructed from suitable materials that are impervious to septic tank effluent and to soil chemicals and it shall not be subject to corrosion, and shall be structurally capable of supporting the loads to which it will be subjected.

Design and manufacture

(5) Leaching chambers shall be designed and manufactured such that, when installed, they fit tightly and securely together so as to prevent backfill soil migration into the chamber void space and end plates must be included in the design and installation.

Configuration

(6) Leaching chamber systems may be installed in a multiple-trench or in a serial distribution configuration (see Appendix A, Figure A.4 and Figure A.4.2).

Multiple trench

(7) When leaching chambers are installed in a multiple-trench configuration, the following shall apply (see Appendix A, Figure A.4):

(a) the leaching chamber disposal field shall be installed
  (i) approximately parallel to the ground contour,
  (ii) with lines of chambers of equal length, and
  (iii) with a minimum depth of 0.3 m (12 in) of permeable soil below the bottom of any trench of the disposal field;
(b) the minimum distance between the walls of adjacent trenches shall be 0.9 m (3 ft);
(c) the bottom of each trench shall be level and of equal elevation;
(d) the chambers shall be covered with between 0.3 m (12 in) and 0.4 m (15 in) of soil cover;

(e) each line of chambers shall be fed from a header, via tees, and the downstream end of each line of chambers shall be connected to a bottom header;

(f) for gravity-fed systems, the inlet pipe shall extend through the end plate and terminate on an adequate splash plate;

(g) for pressure distribution systems, perforated, CSA-approved, PVC pipe, extending the length of the chambers, is required.

Multiple disposal fields

(8) Where the total length of leaching chambers in a multiple-trench configuration exceeds 150 m (500 ft), there shall be constructed two or more separate disposal fields connected to the septic tank by using

(a) a sewage pumping station; or

(b) a siphon chamber.

Serial distribution

(9) When leaching chambers are installed in a serial distribution configuration

(a) the basic trench construction shall comply with subsection (7) and each row shall be connected and placed parallel to the existing natural grade (see Appendix A, Figure A.4.2);

(b) the maximum number of lines that shall be connected for gravity distribution is five, with the maximum length of any one line being 30 m (100 ft); and

(c) subject to subsection (13), the minimum distance between the walls of adjacent trenches shall be 0.9 m (3 ft);

(d) the minimum depth of permeable soil below the bottom of any trench shall be 0.3 m (12 in);

(e) the lines of chambers shall be of equal length unless otherwise approved by the authority having jurisdiction; and

(f) the slope across the disposal field area shall not be less than five percent.

Approval

(10) Every leaching chamber manufacturer must receive product approval from the authority having jurisdiction prior to use of its chambers on Prince Edward Island.

Evidence of compliance

(11) Before approving any leaching chamber, the authority having jurisdiction may require that the manufacturer provide such evidence as it considers necessary to establish compliance with subsections 14(4) and (5).

Leaching chamber sizing

(12) The sizing of 0.9 m (3 ft) wide leaching chamber systems for single and multiple family dwellings shall be as set out in Appendix A, Table A.1 and leaching chamber systems for establishments identified in Appendix B, or others not listed, shall be sized using the estimated (or measured) daily sewage flow and the on-site sewage disposal system design formula in Appendix D.

Minimum distances

(13) When a leaching chamber disposal field is installed on a Category II lot, the minimum distance between the walls of adjacent trenches shall be 2.1 m (7 ft). (EC403/03; 427/03)

Contour trench disposal field

15. (1) A contour trench disposal field may be installed on a lot with a slope of 5% to 30%, and its installation shall conform with all the requirements of section 11.

Design

(2) A contour trench disposal field shall be designed as shown in Appendix A, Figures A.3 and A.3.1.

Disposal field, minimum drainage pipe length

(3) For single and multiple family dwellings the minimum total length drainage pipe in a contour trench disposal field is given in Appendix A, Table A.1. The minimum total length of drainage pipe for establishments identified in Appendix B, or others not listed, shall be calculated using the estimated (or measured) daily sewage flow and the on-site sewage disposal system design formula in Appendix D.

Pipe

(4) The pipe from the septic tank to the contour trench disposal field shall be non-perforated, rigid, smooth bore, certified sewer pipe with sealed joints.

Drainage pipe location

(5) The drainage pipe in a contour trench disposal field shall be situated towards the up-slope side of the bed and, where the bed is curved to follow the contour, the pipe shall be laid to a line that reduces the curvature of the pipe.

Gravity fed

(6) A contour trench disposal field shall be operated as follows:

(a) for systems of 30 m (100 ft) or less, the disposal field shall be gravity fed using drainage pipe fed from either the end or near the centre of the field;

(b) for systems of 30 m to 45 m (100 ft to 150 ft), the disposal field shall be gravity fed using drainage pipe fed from near the centre of the field;

(c) for beds longer than 45 m (150 ft), the disposal field shall be pressure fed by a pump or siphon system.

Construction

(7) A contour trench disposal field shall be constructed to the following minimum standards (see Appendix A, figures A.3.1 through A.3.3):

(a) the minimum trench width shall be 0.9 m (3 ft);

(a.1) the minimum depth of permeable soil below the bottom of any trench shall be 0.3 m (12 in);

(b) the minimum trench length shall be 30 m (100 ft) for single family dwellings and 23 m (75 ft) for cottages;

(c) the sides and bottom of the trench shall be raked to remove the smeared and compacted soil;

(d) 7.5 cm (3 in) of filter sand shall be placed on the bottom of the trench and shall be benched up on the down-slope wall of the trench;
(e) a minimum of 10 cm (4 in) of gravel shall be placed the entire width of the trench;
(f) the drainage pipe shall be laid on a slope of 8 to 12.5 cm per 50 m (2 to 3 in per 100 ft);
(g) the drainage pipe must be covered with at least 7.5 cm (3 in) of gravel;
(h) the full width of gravel in the trench shall be covered with barrier material;
(i) the barrier material shall be covered with between 0.3 m (12 in) and 0.4 m (15 in) of soil, as measured directly over the distribution pipe. (EC403/03; 427/03)

SEWAGE HOLDING TANKS

Sewage holding tank

16. (1) No licensed contractor shall install or construct a sewage holding tank on an existing parcel, or cause it to be installed or constructed on such a parcel, without the approval of the authority having jurisdiction.

Permission to install

(1.1) The authority having jurisdiction shall, on application, approve the installation or construction of a sewage holding tank on an existing parcel if

(a) a source of sewage presently exists on the parcel and, in the opinion of the authority having jurisdiction, no practical alternative disposal system can be installed; or
(b) the sewage holding tank is to be installed or constructed for commercial use and, in the opinion of the authority having jurisdiction, no practical alternative sewage disposal system can be installed or constructed.

Restriction

(1.2) No licensed contractor shall install or construct a sewage holding tank, or cause it to be installed or constructed, unless the tank as installed or constructed complies with the requirements of this section.

Construction

(2) A sewage holding tank shall be designed, constructed and installed in accordance with section 9.

Requirements for dwelling unit

(3) Notwithstanding subsection (2), a sewage holding tank installed or constructed for a dwelling unit shall

(a) have a liquid holding capacity of not less than 4500 litres (1000 gallons);
(b) have a high liquid level alarm probe positioned at the 3/4 mark of the tank and which shall be connected to an alarm system in the dwelling unit that may easily be heard or monitored;
(c) be readily accessible to a pumping vehicle; and

(d) have a watertight pump out connection which does not allow the unauthorized discharge of sewage.

Requirements for commercial use

(4) Notwithstanding subsection (2), a sewage holding tank installed or constructed to service a commercial establishment shall

(a) have a liquid holding capacity of not less than two days' storage and not less than 6800 litres (1500 gallons);

(b) have a high liquid level alarm (audiovisual)

(i) that is positioned at the 3/4 mark of the tank, and

(ii) connected to an alarm system in the commercial establishment that may easily be heard or monitored;

(c) be readily accessible to a pumping vehicle; and

(d) have a watertight pump out connection which will not allow unauthorized discharge of sewage. (EC403/03; 427/03)

SITE SUITABILITY ASSESSMENTS

Site suitability assessment

17. (1) The authority having jurisdiction may require that the owner of a lot, for which an application for a sewage disposal permit has been submitted, have a site suitability assessment completed on said lot.

Categories of lot

(2) A site suitability assessment of a lot must assess the lot as one of the lot categories established under section 23 of the *Planning Act* Subdivision and Development Regulations in accordance with the standards specified in that section. (EC403/03; 427/03)

Site assessor's licence

17.1 (1) Subject to subsection (2), no person shall perform a site suitability assessment without first obtaining a site assessor's licence.

Exceptions

(2) A person may perform a site suitability assessment without a site assessor's license if the person is

(a) an engineer, as defined under the *Engineering Profession Act*; or

(b) an environment officer.

Application for site assessor's licence

(3) An application for a site assessor's licence shall be

(a) made to the authority having jurisdiction in a form approved by the authority having jurisdiction; and

(b) submitted together with the fee prescribed in subsection 5(1).

Qualifications

(4) The Minister shall, on application, grant a site assessor's licence to an applicant if

(a) the application is made in accordance with subsection (3); and

(b) the applicant has

(i) at least two years of post secondary education in a related field of study, and

(ii) either

(A) has successfully completed a course of instruction established or adopted by the Board of Examiners, or
(B) holds a licence issued by another province or territory that the Minister considers to be equivalent to a site assessor's licence.

Licence not transferable

(5) A site assessor's licence is not transferable.

Expiry

(6) A site assessor's licence expires on the date indicated on the licence, which may not be more than 24 months from the date of issuance.

Suspension

(7) The Minister may suspend a site assessor's licence for such period as the Minister considers appropriate if the Minister is satisfied that the licence holder has engaged in conduct for which a contractor's licence may be suspended under subsection 3(12). (EC427/03; 116/04)

Variances

18. Notwithstanding the provisions of these regulations affecting the design and location of a sewage disposal system, the Minister may vary those provisions where, because of existing lot size or other reasons, compliance is impossible, except that the variance with respect to setback from a well shall not be reduced by more than 10 percent of the required distance. (EC403/03)

MISCELLANEOUS

Maintenance

19. The owner of a sewage disposal system shall ensure that the system is maintained in accordance with the procedures outlined in Appendix C. (EC403/03; 427/03)

Increase of requirements

20. Where, in the opinion of the Minister, the requirements of these regulations are inadequate, the Minister may increase the minimum requirements. (EC403/03)

Exception

21. Notwithstanding any other provisions of these regulations, the authority having jurisdiction may permit the construction, reconstruction or installation of a type of sewage disposal system not authorized herein if it is satisfied that the system to be used is satisfactory for the treatment and disposal of the sewage it is to receive. (EC403/03)

Sewage disposal system cleaning

22. (1) No person shall engage in the cleaning of a sewage disposal system or a wastewater treatment system, or in the land spreading of septage or sludge, unless the person

(a) first obtains a pumper's licence from the Minister; and
(b) complies with the provisions of these regulations.

Pumper's licence

(2) The Minister shall, on an application for the issuance or renewal of a pumper's licence referred to in subsection (1), issue or renew the licence if the application

(a) is made in a form acceptable to the Minister; and

(b) is accompanied by the prescribed fee.

Conditions for disposal

(3) The ultimate disposal of septage or sludge from sewage disposal systems or wastewater treatment systems shall be done in accordance with the following conditions:

(a) septage or sludge shall not be placed or spread on frozen or snow-covered ground and, during the period of time when the ground is frozen or snow-covered, an alternative method of disposing of septage or sludge, acceptable to the authority having jurisdiction, shall be utilized;

(b) septage or sludge shall not be placed or spread, in the same calendar year, on land to be used for animal pasture or on land to be used to produce crops for human consumption;

(b.1) septage or sludge shall be spread on the land using a diffuser plate or other equipment acceptable to the authority having jurisdiction;

(c) septage or sludge shall not be placed or spread upon any ground except in accordance with the following criteria:

(i) at least 300 m (1000 ft) from land zoned for business or residential use,

(ii) at least 300 m (1000 ft) from any dwelling on adjacent property,

(iii) at least 15 m (50 ft) from the edge of a provincial public highway,

(iv) at least 150 m (500 ft) from any water well,

(v) in respect of distance from any watercourse

(A) at least 15 m (50 ft) where the land slope averages less than 2 percent,

(B) at least 37 m (120 ft) where the land slope averages between 2 and 5 per cent,

(C) at least 107 m (350 ft) where the land slope averages between 5 and 10 per cent,

(D) at least 213 m (700 ft) where the land slope exceeds 10 per cent.

Holding of septage or sludge

(3.1) No person shall place septage or sludge in any holding site without the prior approval of the authority having jurisdiction.

Alternative disposal method

(4) In accordance with clause (3) (a), the authority having jurisdiction may approve an alternative disposal method or site for septage or sludge

disposal, if it is satisfied that the method and the site is satisfactory for the safe treatment and disposal of the waste.

Duration of license

(5) All licences granted under this section shall be valid for a period of not more than twenty-four months from the date of issuance. (EC403/03)

Renewal

(6) Revoked by EC427/03.

Disposal at waste treatment system

23. No person shall dispose of unstabilized sewage at any place other than a waste treatment system. (EC403/03; 427/03)

Offences

24. Any person who violates any provision of these regulations or fails to comply with any condition of a permit or fulfil any obligations imposed on him by these regulations, is guilty of an offence and is liable on summary conviction to the penalties specified in section 32 of the *Environmental Protection Act.* (EC403/03)

SCHEDULE I

TABLE A
STANDARD SEPTIC TANK CAPACITY

Number of bedrooms in dwelling unit	Minimum liquid capacity of septic tank	
	(litres)	(imperial gallons)
2 or less	2725	600
3	2725	600
4	3400	750
5	4090	900
6	4540	1000
7	5000	1100

APPENDIX A
TABLE A.1

Appendix A

Table A.1 **Minimum Drainage Pipe Length**

Category I Lot		Minimum Total Length of Drainage Pipe						
		# of Bedrooms						
System Description	Minimum Trench Width	2	3	4	5	6	Duplex**	4plex**
1. Multiple Trench System	0.46 m (18 in.)	85 m (280 ft)	110 m (360 ft)	134 m (440 ft)	162 m (530 ft)	180 m (590 ft)	220 m (720 ft)	440 m (1440 ft)
2. Alternative Multiple Trench System	0.6 m (2 ft)	67 m (220 ft)	91 m (300 ft)	116 m (380 ft)	140 m (460 ft)	165 m (540 ft)	182 m (600 ft)	364 m (1200 ft)
3. Contour System Type C1	0.9 m (3.0 ft)*	30 m (100 ft)	37 m (120 ft)	49 m (160 ft)	61 m (200 ft)	75 m (245 ft)	74 m (240 ft)	148 m (480 ft)
4. Contour System Type C2	0.9 m (3.0 ft)*	30 m (100 ft)	37 m (120 ft)	49 m (160 ft)	61 m (200 ft)	75 m (245 ft)	74 m (240 ft)	148 m (480 ft)
5. Leaching Chamber	0.9 m (3 ft)	43 m (138 ft)	55 m (175 ft)	69 m (225 ft)	80 m (262 ft)	91 m (300 ft)	110 m (360 ft)	220 m (720 ft)
Category II Lot		Minimum Total Length of Drainage Pipe						
		# of Bedrooms						
System Description	Minimum Trench Width	2	3	4	5	6	Duplex**	4plex**
1. Alternative Multiple Trench System	0.46 m (18 in.)	85 m (280 ft)	110 m (360 ft)	134 m (440 ft)	162 m (530 ft)	180 m (590 ft)	220 m (720 ft)	440 m (1440 ft)
2. Contour System Type C1	0.9 m (3 ft)*	37 m (120 ft)	46 m (150 ft)	57 m (187 ft)	71 m (235 ft)	85 m (280 ft)	92 m (300 ft)	184 m (600 ft)
3. Contour System Type C2	0.9 m (3 ft)*	37 m (120 ft)	46 m (150 ft)	57 m (187 ft)	71 m (235 ft)	85 m (280 ft)	92 m (300 ft)	184 m (600 ft)
4. Leaching Chamber	0.9 m (3 ft)	53 m (175 ft)	69 m (225 ft)	86 m (280 ft)	100 m (328 ft)	114 m (375 ft)	138 m (450 ft)	274 m (900 ft)

* Slope Dependent - This width will vary depending on the slope of the land
** Based on 3 bedrooms per unit

APPENDIX A
SEPTIC SYSTEM DESIGN

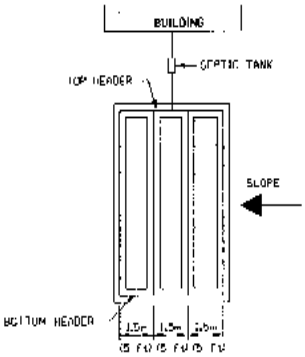

Figure A.1 Typical standard disposal field

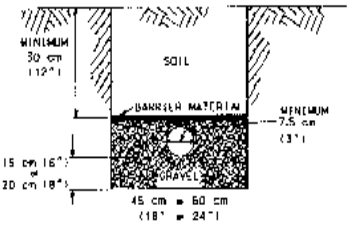

Figure A.1.1 Typical trench cross section

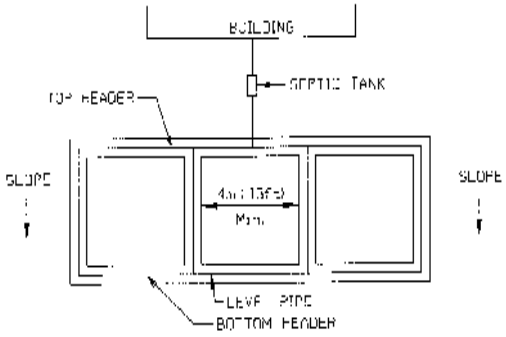

Figure A.2 Typical alternative multiple trench disposal field

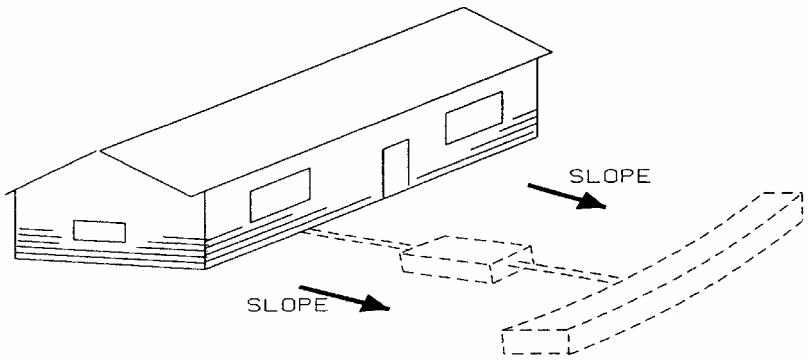

Figure A.3 Contour trench disposal field

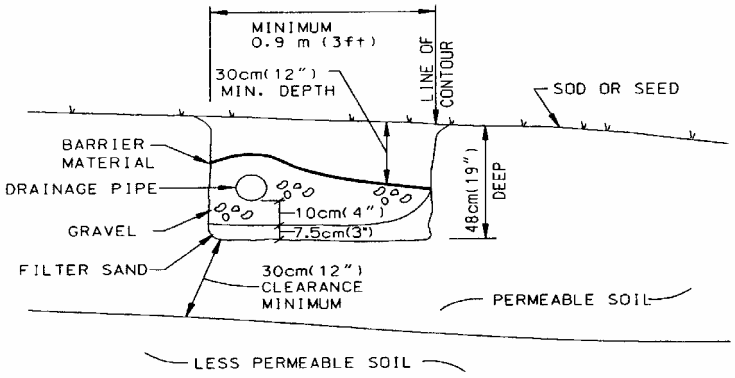

Figure A.3.1 Typical (type C1) contour trench disposal field

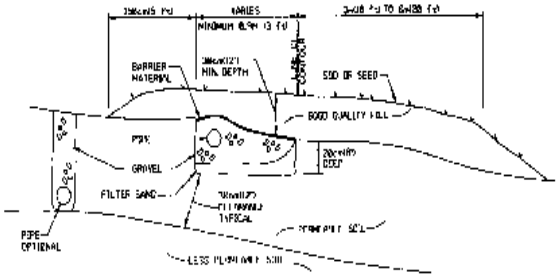

Figure A.3.2 Typical (Type C2) contour trench disposal field

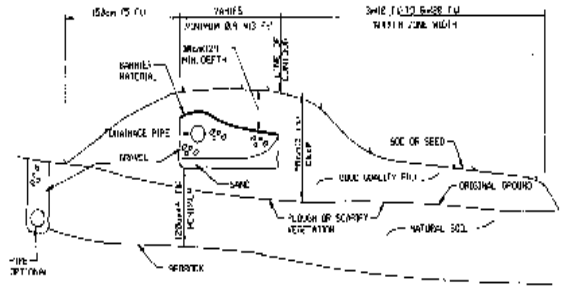

Figure A.3.3 Typical (Type C3) contour trench disposal field

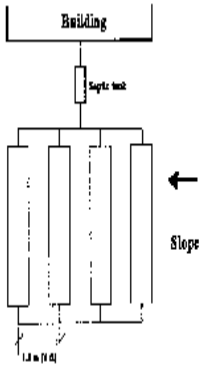

Figure A.4 Typical multiple-trench leaching chamber disposal field

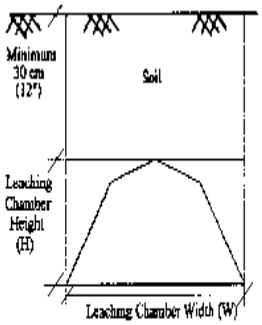

Figure A.4.1 Typical leaching chamber trench cross section

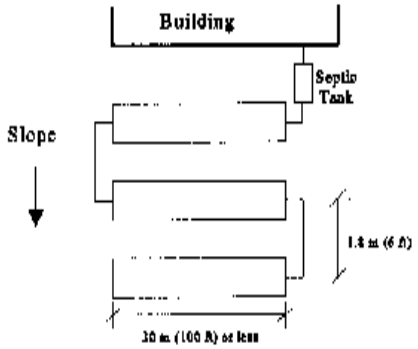

Figure A.4.2 Typical serial distribution leaching chamber disposal field

APPENDIX B
ESTIMATED DAILY SEWAGE FLOW RATES
(for establishments listed)

Source	Unit	Flow	
		(Litres/unit/day)	(Igal/unit/day)
Residential			
Apartments	person	230	50
Motel (Rental Cottages)			
with kitchen	bedroom	450	100
without kitchen	bedroom	320	70
Trailer Park (mini home)	trailer	2050	230
Boarding House			
with meals	person	180	40
without meals	person	160	35
Commercial			
Airport	passenger	22	5
Office/Business	employee	80	17
Bar/Tavern	seat	140	30
Beauty Salon	customer	80	17
Gas Station	hose	570	125
Laundry	machine	1700	375
Restaurant			
eat-in	seat	160	35
take-out only	parking space	70	15
Shopping Centre	parking space	10	2
	employee	45	10

ESTIMATED DAILY SEWAGE FLOW RATES
(for establishments listed)

Source	Unit	Flow	
		(Litres/unit/day)	(Igal/unit/day)
Recreational			
Cafeteria	customer	10	2
	employee	45	10
Campground			
washrooms and toilets only	site	320	70
site with sewer hookups	site	390	85
central comfort station	site	390	85
Day Camp (no meals)	person	70	15
Dining Hall	meal served	30	6
Swimming Pool	person	45	10
Theatre	seat	24	5
Dormitory	person	160	35
Institutional			
Medical Hospital	bed	1050	230
Rest House/Nursing Home	bed	570	125
School			
cafeteria, gym, and showers	student	90	20
cafeteria only	student	80	17
Church/Assembly Hall			
with kitchen	seat	45	10
no kitchen	seat	23	5

APPENDIX C
SEWAGE DISPOSAL SYSTEM MAINTENANCE

Proper routine maintenance is a key to long term satisfactory operation of an on-site sewage disposal system. This is the responsibility of the owner.

In order to get the optimum performance out of a septic system, the following should be noted:

(a) When the system is being installed, reference the location of the septic tank and the disposal field to some permanent markers.

(b) Do not overload the hydraulic design of the system. Keep water consumption to a minimum and repair leaky faucets or toilet tanks.

(c) Do not allow large quantities of fats, plastics and chemicals to enter the system.

(d) Have the septic tank pumped when required. The required frequency depends on the habits of the household and on the septic tank capacity. However, pumping every 3 to 5 years is suggested.

(e) Remove any large trees from the immediate area of the disposal field to prevent roots from clogging the pipes.

(f) Maintain a sod cover over the disposal field to prevent erosion and increase water dissipation through evapotranspiration.

(g) Do not allow vehicles to drive over the disposal field.

(h) Divert roof drains and surface drainage away from the area of the disposal field.

APPENDIX D
ON-SITE SEWAGE DISPOSAL SYSTEM DESIGN (Metric)
(for systems other than those listed in Table A)

(1) Calculate the wastewater flow (Q)
(2) Calculate septic tank volume based on clause 9(8)(b) of these regulations.
(3) Calculate the length of the disposal system according to the following:
(a) Choose the soil loading rate (SLR).
(i) For 'Category I' conditions choose
- 36 (m^2/1000 litres/day) for a multiple trench disposal field
- 36 (m^2/1000 litres/day) for a leaching chamber disposal field
- 31 (m^2/1000 litres/day) for a contour trench disposal field
(ii) For 'Category II' conditions choose
- 41 (m^2/1000 litres/day) for a multiple trench disposal field
- 41 (m^2/1000 litres/day) for a leaching chamber disposal field
- 36 (m^2/1000 litres/day) for a contour trench disposal field
(b) Choose the contact area / linear metre of trench (CA)
(i) For a multiple trench system the CA is .6 (m^2/m)
(ii) For a leaching chamber system the CA for
- Infiltrator^{tm} leaching chambers is 1.2 (m^2/m)
- Biodiffuser^{tm} leaching chambers is 1.2 (m^2/m)
- EnviroChamber^{tm} leaching chambers is 1.2 (m^2/m)
(iii) For a contour trench disposal field the contact area for
- a 0.9 m wide trench is 1.1 (m^2/m)
- a 1.2 m wide trench is 1.4 (m^2/m)
- a 1.5 m wide trench is 1.7 (m^2/m)
- a 1.8 m wide trench is 2.0 (m^2/m)
(c) Calculate the required drainage pipe length using the following formula :

Where,

Flow (Q) is the design flow referenced from Appendix B or as determined by actual measured readings.

Soil loading rate (SLR) is the disposal area required for each one thousand litres per day of wastewater generated and is expressed as square metres per 1000 litres per day (m^2/1000 litres/day).

Contact area (CA) is the minimum square metres per linear metre of gravel / soil interface on the bottom of the trenches in the disposal field. The contact area is expressed as square metres per linear metre (m^2/m).

Design Example - Metric

Design a sewage disposal system for a 5-unit motel. Each unit contains one bedroom and a kitchen. Calculate the length of drainage pipe required for the sewage disposal system for (i) a multiple trench disposal field, (ii) a 0.9 metre contour trench disposal field, and (iii) a leaching chamber disposal field. The motel is located on a 'Category I' lot

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(1) From Appendix B, flow (Q) = 450 litres/unit/day
Therefore, Q = 5 units x 450 litres/unit/day = 2250 litres/day

(2) From clause 9(8)(b) of these regulations, the septic tank capacity = 1.5 x 2250 litres/day = 3375 litres

(3) (a) For 'Category I' conditions choose a soil loading rate (SLR) of
- 36 (m^2/1000 litres/day) for the multiple trench and leaching chamber disposal fields

- 31 (m^2/1000 litres/day) for the contour trench disposal field

(b) Choose a contact area/linear metre of trench (CA) as follows:

(i) For a multiple trench disposal field the CA is .6 (m^2/m)

(ii) For a leaching chamber disposal field the CA is 1.2 (m^2/m)

(iii) For a 0.9 metre contour trench disposal field the CA is 1.1 (m^2/m)

Drainage pipe length = $\frac{\text{2250 (litres/day) x 36 } (m^2/\text{1000 litres/day})}{\textbf{0.6 } (m^2/m)}$ = 135 metres (multiple trench)

= $\frac{\text{2250 (litres/day) x 36 } (m^2/\text{1000 litres/day})}{\textbf{1.2 } (m^2/m)}$ = 67.5 metres (leaching chamber)

= $\frac{\text{2250 (litres/day) x 31 } (m^2/\text{1000 litres/day})}{\textbf{1.1 } (m^2/m)}$ = 63.4 metres (contour trench)

ON -SITE SEWAGE DISPOSAL SYSTEM DESIGN (Imperial) (for systems other than those listed in Table A)

(1) Calculate the wastewater flow (Q)

(2) Calculate septic tank volume based on clause 9(8)(b) of the Sewage Disposal Regulations

(3) Calculate the length of the disposal system according to the following:

(a) Choose the soil loading rate (SLR).

(i) For 'Category I' conditions choose
- 1.75 (ft^2/Igal/day) for a multiple trench disposal field
- 1.75 (ft^2/Igal/day) for a leaching chamber disposal field
- 1.5 (ft^2/Igal/day) for a contour trench disposal field

(ii) For 'Category II' conditions choose
- 2.0 (ft^2/Igal/day) for a multiple trench disposal field
- 2.0 (ft^2/Igal/day) for a leaching chamber disposal field
- 1.75 (ft^2/Igal/day) for a contour trench disposal field

(b) Choose the contact area / linear foot of trench (CA)

(i) For a multiple trench system the CA is 2.0 (ft^2/ft)

(ii) For a leaching chamber system the CA for
- Infiltrator^{tm} leaching chambers is 4.0 (ft^2/ft)
- Biodiffuser^{tm} leaching chambers is 4.0 (ft^2/ft)
- EnviroChamber^{tm} leaching chambers 4.0 (ft^2/ft)

(iii) For a contour trench disposal field the contact area for
- a 3-foot wide trench is 3.5 (ft^2/ft)
- a 4-foot wide trench is 4.5 (ft^2/ft)
- a 5-foot wide trench is 5.5 (ft^2/ft)
- a 6-foot wide trench is 6.5 (ft^2/ft)

(c) Calculate the required drainage pipe length using the following formula :

Where,

Flow (Q) is the design flow referenced from Appendix B or as determined by actual measured readings.

Soil loading rate (SLR) is the disposal area required for each imperial gallon per day of wastewater generated and is expressed as square feet/imperial gallon/day (ft^2/Igal/day).

Contact area (CA) is the minimum square feet per linear foot of gravel / soil interface on the bottom of the trenches in the disposal field. The contact area is expressed as square feet per linear foot (ft^2/ft).

Design Example - Imperial

Design a sewage disposal system for a 5-unit motel. Each unit contains one bedroom and a kitchen. Calculate the length of drainage pipe required for the sewage disposal system for (i) a multiple trench disposal field, (ii) a 3-foot contour trench disposal field, and (iii) a leaching chamber disposal field. The motel is located on a 'Category I' lot.

(1) From Appendix B, Flow (Q) = 100 Igal/unit/day
Therefore, Q = 5 units x 100 Igal/unit/day = 500 Igal/day

(2) From clause 9(8)(b) of these regulations, the septic tank capacity = 1.5 x 500 Igal/day = 750 Igal

(3)(a) For 'Category I' conditions choose a soil loading rate (SLR) of
- 1.75 (ft^2/Igal/day) for the multiple trench and leaching chamber disposal fields.
- 1.5 (ft^2/Igal/day) for the contour trench

(b) Choose a contact area/linear foot of trench(CA) as follows:

(i) For a multiple trench disposal field the CA is 2.0 (ft^2/ft)

(ii) For a leaching chamber disposal field the CA is 4.0 (ft^2/ft)
(iii) For a 3-foot contour trench disposal field the CA is 3.5 (ft^2/ft)

Drainage pipe length = $\frac{500 \text{ (Igal/day)} \times 1.75 \text{ } (ft^2/\text{Igal/day})}{2.0 \text{ } (ft^2/ft)}$ = 438 ft (multiple trench)

= $\frac{500 \text{ (Igal/day)} \times 1.75 \text{ } (ft^2/\text{Igal/day})}{4.0 \text{ } (ft^2/ft)}$ = 219 ft (leaching chamber)

= $\frac{500 \text{ (Igal/day)} \times 1.5 \text{ } (ft^2/\text{Igal/day})}{3.5 \text{ } (ft^2/ft)}$ = 214 ft (contour trench)

(EC403/03)

SCHEDULE II

APPENDIX E

For a restaurant other than a cafeteria:

V grease = D*(HR/2)*GL*ST*LF

Where:
- **D = Number of seats in dining room**
- **HR = Number of hours open per day**
- **GL = Gallons of wastewater per meal (2 or more)**
- **ST = Storage capacity (normally 2)**
- **LF = Loading factor depending on restaurant location**
  - **1.25 - central locations**
  - **1.0 - recreational areas**
  - **0.5 to 0.8 - other locations**

For a cafeteria:

V grease = M*GL*ST*LF

Where:
- **M = Total number of meals served per day**
- **GL = Gallons of wastewater per meal (2 or more)**
- **ST = Storage Capacity (normally 2)**
- **LF = Loading factor**
  - **1.0 with dishwasher**
  - **0.5 without dishwasher**

(EC427/03)