

# Sewer / Solid Waste Treatment

## Sewer / Solid Waste Treatment

**Description** Our documents make a number of references to sewers, sewage and solid waste treatment. See below for the specifics.

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**Notes**

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**Policy** Title: Sewage Treatment Plant Policy  
Policy No.: 2006 - 4 Supersedes:  
Effective Date: August 14, 2006 Approval By Council Motion No.: 8

Purpose: To permit future development by allowing the town to review future development on an individual basis.

Definitions: N/A

Policy Statement:  
Presently, the Town’s sewage treatment plant is operating at full capacity and until the hydraulic load is reduced, the Town is not in a position to permit development. The Town has identified a number of sources of infiltration and is aggressively pursuing a resolution.

The Town is committed to development and until the plant capacity is improved, we will require reviewing future town development on an individual basis. Therefore, for all developments, we request the developer provide peak and average sanitary flows from the new facility.

Presently, the Town anticipates that a number of the major corrective actions will be completed by December 1, 2006. It is anticipated that these corrective actions will enhance the performance of the plant immediately and the flow monitoring at the plant should reflect the improvement immediately.

Excluding the immediate benefits that should be reflected by December 1, 2006, the Town commits to a continuous enhanced infiltration reduction program.

Should plant flow readings not reflect a reduction in plant hydraulic loading, by June 1, 2007, the Town commits to assessing the overall program and commits to implementing the plant upgrade program (ie - installation of baffles in the lagoons as per SGE Acres/ABL recommendation in their May 2006 report).

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**Bylaw** Town of Annapolis Royal Sewer Bylaw  
Part I – General

Definitions

1. In this Bylaw:

(a) “Biochemical Oxygen Demand” (hereinafter abbreviated as B.O.D) means the quantity of oxygen, expressed in milligrams per litre, utilized in the biochemical oxidation of organic matter contained in sewage, over a period of five (5) days in twenty degrees centigrade, as determined in accordance with the latest edition of “Standard Methods”;

(b) Building service connection means a piping system that conveys sewage, liquid waste, stormwater or surface runoff from a property to a Town sewer.

(c) “CAO” means the Chief Administrative Officer of the Town of Annapolis Royal;

(d) “Chemical Oxygen Demand” (hereinafter abbreviated as C.O.D.) means the measure of chemically

## Sewer / Solid Waste Treatment

decomposable materials in domestic or industrial sewage as represented by the oxygen utilized as determined in accordance with the latest edition of "Standard Methods";

- (e) "Combined sewer" means a sewer owned by the Town and intended to function simultaneously as a storm sewer and sanitary sewer;
  - (f) "Council" means the Council of the Town of Annapolis Royal;
  - (g) "Equivalent dwelling unit" means a single family home or a commercial or institution that has five or less plumbing fixtures (or one equivalent unit for each five fixtures or part thereof);
  - (h) "pH" means the measure of the intensity of the acid or alkaline condition of a solution determined by the hydrogen ion activity of the solution in accordance with the latest edition of "Standard Methods";
  - (i) "Private drain" means any means of regulating or controlling or channeling the flow of water, stormwater, wash water, floor drain water or effluent, domestic sewage or commercial sewage and which is located on privately-owned property and which is not owned by the Town;
  - (j) "Public stormwater system" means a system which makes use of any combination of pipes, ditches, drains, or swales owned and maintained by the Town and which system includes laterals to private property boundaries and which system is designed to gather and transport natural surface water;
  - (k) "Sanitary sewer" means a sewer receiving and carrying liquid and water-carried wastes and to which storm, surface, or groundwaters are not intentionally admitted;
  - (l) "Sewage" means the combination of liquid and water-carried wastes from buildings, containing animal, vegetable, or mineral matter in suspension or solution, together with such groundwater, surface water or stormwater as might be present;
  - (m) "Sewer lateral" means that portion of a sewer system leading from a main public sewer collector line to the boundary of the private property which adjoins or abuts the land in which the main public sewer collector is installed;
  - (n) "Standard Methods" means the procedures, with amendments applicable at the date of testing, as set out in a publication titled "Standard Methods for Examination of Water and Waste Water" which is published by the American Public Health Association and the Water Pollution Control Federation, or an equivalent procedure which has received the approval of the Department of Environment (N.S.);
  - (o) "Stormwater" means water from precipitation of all kinds and includes water from the melting of snow and ice, groundwater discharge and surface water;
  - (p) "Superintendent of Public Works Supervisor" means that staff person who is given the responsibility for, among other things, the Town's wastewater facilities, stormwater systems and combined systems and is the Town's Engineer as designated by the CAO;
  - (q) "Town" means the Town of Annapolis Royal;
  - (r) "Wastewater facilities" means the structures, pipes, devices, equipment, process or things used, or intended, for the collection, transportation, pumping or treatment of sewage and disposal of the effluent.
2. Any person who owns a property upon which, or under which, a private drain is installed shall be responsible to maintain and repair such private drain.
3. (a) Every owner of a dwelling or equivalent dwelling unit shall maintain the sewage building service connection to the Town's wastewater facilities. Any dwelling or equivalent dwelling unit that has flow in excess of 720 imperial gallons (3,273 litres) per day will be deemed to have excessive infiltration and must be repaired and/or replaced at the owner's expense.

## Sewer / Solid Waste Treatment

(b) Excluding the amount of infiltration, should the Town through its investigations determine that a dwelling sewage building service connection is damaged, the dwelling owner shall repair or replace the sewage building service connection immediately, at the owner's expense.

4. No person shall connect a private drain, carrying domestic sewage or effluent or commercial sewage or effluent, to a public stormwater system.

### Part II – Protection of Public Sewers

5. (1) In relation to the Town's wastewater facilities, the Town's stormwater system or a combined system, no person shall:

(a) damage or remove any manhole cover, catch basin, flag, vent, shaft, French drain, grating or any other item forming part of any such system; or

(b) obstruct or interfere with the flow of water or effluent or material in any such system.

(2) No person shall discharge, or cause or permit the discharge, into any part of the Town's wastewater facilities, or a stormwater system, or building service connection connecting with the Town's wastewater facilities or stormwater system of the Town, the following:

(a) sewage of a temperature in excess of sixty-five degrees Celsius (65C) (150F);

(b) any inflammable or explosive matter such as, but not limited to, gasoline, benzene, naphtha, fuel oil or acetone;

(c) any quantity of matter capable of obstructing the flow in, or interfering with the proper operation of any part of such system such as, but not limited to, ashes, underground garbage, sand, gravel, straw, mud, shavings, metal, glass, rags, feathers, plastic, wood or cellulose;

(d) sewage having a pH of less than five and one-half (5.5) or greater than ten and one-half (10.5) or having any other corrosive characteristic which renders it hazardous to any such system or to personnel working with any such system such as, but not limited to, battery plating waste, battery acid wastes, copper sulphate, chromium salts, chromium compounds or brine;

(e) sewage which emits an offensive odour or foam or which otherwise causes a nuisance, such as, but not limited to, sewage containing hydrogen sulphide, n-Butyl-Mercaptan, carbon disulphide, ammonia, trichloroethylene, sulphur dioxide, formaldehyde, chlorine, bromine or pyridine;

(f) sewage containing fish, animal or human offal or containing pathological or medical waste;

(g) sewage in which the concentration of any of fats, wax, grease, mineral or vegetable oil in the liquid or solid form exceeds one hundred (100) milligrams per litre in the case of sewage of animal or vegetable origin, or exceeds fifteen (15) milligrams per litre in the case of sewage of mineral origin;

(h) sewage containing herbicides, pesticides, xenobiotics, including polychlorinated biphenols (PCB's), or radioactive materials that are not approved for disposal in a sanitary sewer by the Atomic Energy Control Board of Canada;

(i) sewage which results in an unacceptable level of discoloration such as, but not limited to, dry wastes or tanning solutions;

(j) sewage in which the concentration of suspended solids exceeds three hundred (300) milligrams per litre;

(k) sewage in which the concentration of B.O.D. exceeds three hundred (300) milligrams per litre;

(l) sewage in which the concentration of C.O.D. exceeds one thousand (1,000) milligrams per litre;

Sewer / Solid Waste Treatment

(m) sewage in which the concentration of any of the substances listed in the table below exceeds the allowable concentration noted and expressed in milligrams per litre;

Substance	Allowable Concentration
Aluminum	50.0
Antimony	5.0
Arsenic	1.0
Barium	5.0
Bismuth	5.0
Cadmium	1.0
Chloride	1500.0
Chromium	5.0
Cobalt	5.0
Copper	2.0
Cyanide	2.0
Fluorides	10.0
Iron	10.0
Lead	2.0
Manganese	5.0
Mercury	0.1
Molybdenum	5.0
Nickel	2.0
Phenol	1.0
Phosphorous	10.0
Selenium	5.0
Silver	1.0
Sulphate	1500.0
Tin	5.0
Titanium	5.0
Vanadium	5.0
Zinc	2.0

(n) sewage consisting of the contents of septic tanks or holding tanks, sludge from a sewage treatment plant or wastes from marine vessels or vehicles;

(o) sewage containing substances for which special treatment or disposal practices are required by Provincial or Federal legislation.

Part III – Connections - General

6. No person shall:

(a) permit stormwater, surface water, ground water, roof runoff, subsurface drainage, cooling water or industrial process waters to be discharged into a sanitary sewer;

(b) connect a sump pump to a sanitary sewer;

(c) discharge sewage anywhere except into a municipal sewer, private on-site sewage system or central sewage collection and treatment system;

(d) permit any contents of a septic tank or cesspit to be discharged into a Town sewer or watercourse.

7. No person shall begin work to connect any building service connection to the Town's wastewater facilities stormwater system or combined system without:

(a) filling out an application and paying the applicable fee of \$50.00 and obtaining the appropriate

## Sewer / Solid Waste Treatment

permit or letter of permission from the Superintendent of Public Works to do so; and

(b) if necessary, filling out an application and paying the applicable fee of \$50.00 and obtaining the appropriate permit or letter of permission from the Superintendent of Public Works to break up the soil and pavement of a Town street;

(c) obtaining information from the Public Works Supervisor, or authorized staff representative of the Public Works Supervisor, as to appropriate size, design, rate of descent, materials and other specifications applicable to the proposed work.

8. No person shall make the actual connection of a private drain to a building service connection to the Town's wastewater facilities, stormwater system or combined system, without:

(a) ensuring that the Superintendent of Public Works or authorized staff representative of the Superintendent of Public Works, is contacted and has an opportunity to make an inspection of the building service connection as constructed and of the proposed connection to such system so as to determine that the work is in compliance with the requirements of the Bylaw; and

(b) receiving from the Superintendent of Public Works or representative a certificate of approval authorizing the actual connection.

9. In the event that the said Superintendent of Public Works or representative is unable to authorize the actual connection, the person wishing to make the connection shall be informed of such refusal and the reason therefore, in writing, within four (4) business days of the date of the inspection.

10. Any person refused permission to so connect a building service connection may appeal to Town Council within fourteen (14) days of receipt of the refusal provided under Section 7.

11. If no sanitary sewer lateral is in place to receive the connection of the building service connection and carry it to the main sanitary sewer collector line, the cost of installing such sanitary sewer lateral shall be borne by the person wishing to make connection of the building service connection to the main sanitary sewer collector line even though the said sanitary sewer lateral will be installed. All such work shall be carried out in accordance with the National Plumbing Code of Canada and only if the authorized in writing by the Superintendent of Public Works of the Town.

12. Any person constructing a building service connection, or connecting a building service connection to the Town's wastewater facilities or stormwater system or a combined system, shall do so in accordance with the National Plumbing Code of Canada which, by reference in Part 7 of the National Building Code of Canada, applies in the Town of Annapolis Royal as a result of the Town's Building Bylaw.

### Part IV – Compulsory Connection

13. Every owner of property, the nearest part of which is not more than one hundred (100) feet (approx. 30.48 metres) from any portion of a Town sewer, when served with a notice in writing by the Superintendent of Public Works, shall;

(a) construct a building service connection to the Town sewer no later than thirty (30) days from the service of the notice, whether by personal service or registered mail addressed to the last known address of that person; and

(b) The property owner shall pay the Town a lump sum of \$1,500 per lateral and the Town will install a gravity sewer lateral from the Town's sewer main to the property line and the property owner shall install and pay for the lateral from the property line to the building.

(c) follow Part III of this Bylaw as regards obtaining any required permits and permissions or approvals; and

(d) connect the building service connection to the Town sewer according to the provisions of this Bylaw.

Sewer / Solid Waste Treatment

14. Council may exempt any such owner from the requirements of Section 14 if it appears to Council that the subject property:

- (a) is adequately served with sewer and drainage; or
- (b) would not be adequately served by connection with the Town sewer.

15. (a) If required by the Superintendent of Public Works pursuant to a notice given under Section 14, the owner shall cause any septic tank, cesspool, privy or private on-site sewage disposal system on the property to be abandoned and removed or filled with suitable material in a manner acceptable to the Superintendent of Public Works.

(b) Where the owner of a property is notified by the Superintendent of Public Works pursuant to a bylaw or an enactment, to remove or close up a cesspit, septic tank, privy or private on-site sewage disposal system on the property, and the owner fails to comply with the notice, or where the owner of a property fails to comply with a notice requiring the construction of a building service connection in accordance with this bylaw, the Superintendent of Public Works may cause to be done all work necessary for compliance with the notice.

(c) The Superintendent of Public Works may require, as part of the work necessary for compliance, the installation of a suitable water closet and its connection with a Town sewer.

16. The Superintendent of Public Works shall not give any notice under this Part unless and until the Town sewer, to which the property is to be connected, has been in place for at least one (1) year.

**Part V – Penalties**

17. (a) When the Superintendent of Public Works or Council lawfully directs that anything be done pursuant to this Bylaw and it is not done, the Superintendent of Public Works or Council may cause it to be done at the expense of the person in default.

(b) Where the Superintendent of Public Works or Council lawfully causes work to be done pursuant to the Bylaw, the rest of the work, with interest at the rate of 12% from the completion of the work until the date of payment is a first lien on the property on the property upon which, or for the benefit of which the work was done.

**Part VI – Repeal**

18. Bylaw 114 of the Town of Annapolis Royal, which Bylaw received approval of the Minister of Municipal Affairs on the 26th day of March, 1992 is hereby repealed.

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**MPS Section 17**

Sewage lines throughout the Town were recently upgraded. The present collection system consists of variously-sized gravity lines and five electrically-operated pumping stations that pump sewage to an lagoon-aeration treatment plant. This plant was constructed on the northeast side of the Town in 1978, and still has some capacity to handle new development in the Town. The County use of the system has increased to more than 50% and this has diminished the security for new Town developments having ready access to sewage treatment. The sewage-collection system is at present connected on School and Champlain Street to the storm-water system, allowing storm water to flow into the lagoon during periods of heavy rainstorm and meltwater flow. This is an unsatisfactory situation, given the limited capacity of the treatment plant.

An inventory and engineering assessment of sewer and storm-sewer lines is available for planning and maintenance purposes. The Annapolis District Planning Commission has developed a geographic information system for the Town that allows for accurate identification of the system and its components. Map E: Existing Services indicates where services are situated.

Sewer / Solid Waste Treatment

<b>MPS Section</b>	17.1	Council shall maintain a program to separate, as far as possible, storm-water drainage from the sanitary sewer system.
<b>MPS Section</b>	17.2	Council shall require all subdividers to install and bear the costs of sanitary sewer mains and laterals within any new subdivision in an area requiring these services. Subdividers shall also bear all costs of installation of mains required to connect to the existing Town mains. Subdivision requiring servicing shall typically abut an existing serviced area.
<b>MPS Section</b>	17.3	All additional sanitary sewer lines shall be constructed to meet the standards set out in the Subdivision By-law or as determined by the Town Engineer.
<b>MPS Section</b>	17.4	The Town shall reserve sufficient land for a third cell of the lagoon sewage treatment system to allow for future expansion.
<b>MPS Section</b>	17.5	The Town shall reserve sufficient capacity in the sewage treatment system to accommodate potential development within Town boundaries.
<b>MPS Section</b>	20	The Town has embarked on several initiatives to provide and involve the Community with sustainable solid waste management. The Town is recognized by the United Nations for its Zero Waste program. The community, together with Council and the Solid Waste & Environment Committee, is committed to improving existing programs and using only environmentally responsible ways to manage solid waste.
<b>MPS Section</b>	20.1	Council shall supervise the collection and storage of solid waste to ensure that the solid-waste management program is being carried out in a safe and sanitary manner.
<b>MPS Section</b>	20.2	Council shall promote cost-effective and responsible alternatives to traditional solid-waste management
<b>MPS Section</b>	27.11.1	It shall be the intent of Council to administer the Sewer By-law and update as required in order to clearly define the responsibilities of the user and effectively regulate the type, strength and volume of effluent discharged.