

The Town of Berwick

A BY-LAW RESPECTING THE REGULATION OF DISCHARGES TO THE PUBLIC SEWER SYSTEMS

This By-law may be cited as the "Sewer Use By-law".

Section 1

DEFINITIONS

1.1 In this By-law:

- (a) **"Basic user"** means the owner of any property any boundary of which lies within One Hundred feet (100') of a Town sanitary sewer line, other than an Industrial User or a Residential Institutional User as defined in this bylaw;
- (b) **"biochemical oxygen demand"** or **"BOD"** means the quantity of oxygen utilized, expressed in milligrams per litre, in the biochemical oxidation of matter within a one hundred and twenty hour period at a temperature of twenty degrees centigrade as determined according to procedures set forth in the latest edition of "Standard Methods";
- (c) **"chemical oxygen demand"** or **"COD"** means the quantity of oxygen utilized in the chemical oxidation of organic matter, expressed in milligrams per litre, as determined in accordance with the latest edition of "Standard Methods";
- (d) **"combined sewer"** means a sewer intended to function simultaneously as a storm sewer and a sanitary sewer (from MGA);
- (e) **"composite sample"** means a sample which is composed of a series of grab samples taken at intervals during the sampling period;
- (f) **"Council"** means the Council of the Town of Berwick;
- (g) **"Engineer"** means the Engineer for the Town of Berwick and includes a person acting under the supervision and direction of the Engineer (from MGA);
- (h) **"grease"** means total oil and grease extracted from aqueous solution or suspension according to the laboratory procedures set forth in "Standard Methods", and

includes, but is not limited to, hydrocarbons, esters, oils, fats, waxes and high molecular fatty acids;

- (i) "**Industrial user**" means Eden Valley Poultry Ltd;
- (j) "**Inspector**" means the "Engineer" as defined in this bylaw, for the purposes of carrying out any observations, inspections or sampling as prescribed by this by-law;
- (k) "**MGA**" means the *Municipal Government Act* of Nova Scotia, being Chapter 18, Statutes of Nova Scotia, 1998, as amended from time to time;
- (l) "**matter**" includes any solid, liquid, or gas;
- (m) "**pH**" means the measure of the intensity of the acid or alkaline condition of a solution determined by the hydrogen ion concentration of the solution as determined by "Standard Methods";
- (n) "**phenolic compounds**" means hydroxyl derivatives of benzene and its condensed nuclei, concentrations of which shall be determined by "Standard Methods";
- (o) "**sanitary sewer**" is defined to have the same meaning as the words are defined in the MGA - which, as of the date of the passing of this bylaw, read: "...means a sewer receiving and carrying liquid and water-carried wastes and to which storm, surface, or ground waters are not intentionally admitted.";
- (p) "**sewage**" is defined to have the same meaning as the word is defined in the MGA - which, as of the date of passing of this bylaw, read: "...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.";
- (q) "**sewer**" is defined to have the same meaning as the word is defined in the MGA - which, as of the date of passing of this bylaw, read: "...means a pipe or conduit for carrying sewage, groundwater, stormwater or surface runoff, and includes all sewer drains, storm sewers, clearwater sewers, storm drains and combined sewers vested in, or under the control of, a municipality.";
- (r) "**Standard Methods**" means the analytical and examination procedures provided in the current edition (at the time of testing) of "Standard Methods for the examination of Water and Wastewater", published jointly by the American Public Health Association and the American Water Works Association;

- (s) "**storm sewer**" is defined to have the same meaning as the words are defined in the MGA - which, as of the date of passing of this bylaw, read: "...means a sewer that carries stormwater and surface runoff water, excluding sewage." ;
- (t) "**stormwater**" is defined to have the same meaning as the word is defined in the MGA - which, as of the date of passing of this bylaw, read: "...means water from precipitation of all kinds, and includes water from the melting of snow and ice, groundwater discharge and surface water.";"**stormwater system**" is defined to have the same meaning as the words are defined in the MGA - which, as of the date of passing of this bylaw, read: "...means a method or means of carrying stormwater, including ditches, swales, sewers, drains, canals, ravines, gullies, pumping stations, retention ponds, streams, watercourses, floodplains, ponds, springs, creeks, streets or private roads, roadways or driveways." ;
- (u) "**suspended solids**" means insoluble matter than can be removed by filtration through a standard glass fibre filter as provided by "Standard Methods";
- (v) "**TKN**" or "**kjeldahl nitrogen**" means total organic nitrogen as determined by one of Method 420A or 424B in Standard Methods;
- (w) "**Town**" means the Town of Berwick;
- (x) "**wastewater facilities**" is defined to have the same meaning as the words are defined in the MGA - which, as of the date of passing of this bylaw, read: "...means the structures, pipes, devices, equipment processes or other things used, or intended, for the collection, transportation, pumping or treatment of sewage and disposal of the effluent".

Section 2

DISCHARGES TO VARIOUS SYSTEMS

PROHIBITIONS:

Named Substances:

- 2.1 No person shall discharge any of the following named substances - in quantities as described - into any building service connection, wastewater facilities or stormwater system:

- (a) sewage having a pH of less than 5.5 or exceeding 9.5.
- (b) dyes or other coloring materials which are capable of discolouring the effluent which is discharged from the sewage treatment plant.
- (c) hydrogen sulphide, mercaptans, carbon disulphide, other reduced sulphur compounds, amines and ammonia;
- (d) ashes, cinders, sand, potters clay, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics or wood;
- (e) paunch manure, intestinal contents from horses, cattle, sheep or swine, hog bristles, pig hooves or toenails, animal intestines or stomach casings, bones, hides or parts thereof, manure of any kind, poultry entrails, heads, feet or feathers, eggshells, fleshing and hair resulting from tanning operations;
- (f) sewage containing any of the following in excess of the indicated concentrations in milligrams per litre:

| | |
|--------------------|----------|
| Cyanide (HCN) | 1.2 mg/l |
| Copper (Cu) | 2.0 mg/l |
| Chromium (cr) | 2.8 mg/l |
| Nickel (Ni) | 5.0 mg/l |
| Lead (pb) | 0.7 mg/l |
| Cadmium (Cd) | 0.7 mg/l |
| Zinc (Zn) | 2.0 mg/l |
| Phenolic Compounds | 0.1 mg/l |

2.2 Section 333 (1) Limits – General:

No person shall permit the discharge of any matter - in excess of limitations set by Council where applicable - as listed in Sec. 333 (1) of the MGA (a copy of which Sub-Section is attached to each hard-copy version of this bylaw) into wastewater facilities or a stormwater system of the Town - or into wastewater facilities or a stormwater system or building service connection connecting with the wastewater facilities or stormwater system of the Town;

2.3 Section 333 (1) Limits – Basic User:

The limits prescribed by the Council - for a basic user of the wastewater facilities of the Town - on certain of the items listed in Sec. 333 (1) of the MGA, are as follows:

- (a) no liquid or vapour having a temperature in excess of 65 degrees Celsius;
- (b) no animal fats, wax, grease or vegetable oil in liquid or solid form in concentrations in excess of 20 milligrams per litre if such is of mineral or synthetic origin, and in concentrations in excess of 150 milligrams per litre if such is of animal or vegetable origin;
- (c) suspended solids are restricted to a total of 200 milligrams per litre during any one calendar day;
- (d) BOD₅ is restricted to a maximum of 600 pounds (270 kilograms) during any one calendar day;
- (e) BOD₅ is also restricted to a maximum of 200 milligrams per litre during any one calendar day;
- (f) absolutely no toxic substance.

2.4 Section 333 (1) Limits – Industrial User:

The limits prescribed by the Council - for an Industrial user of the wastewater facilities of the Town - on certain of the items listed in Sec. 333 (1) of the MGA, are as follows:

- (a) no liquid or vapour having a temperature in excess of 65 degrees Celsius;
- (b) no animal fats, wax, grease or vegetable oil in liquid or solid form in concentrations in excess of 20 milligrams per litre if such is of mineral or synthetic origin, and in concentrations in excess of 150 milligrams per litre if such is of animal or vegetable origin;
- (c) wastewater flows are restricted to a total of 475,000 Imperial gallons (2,156,000 litres) during any one calendar day;
- (d) total BOD₅ (CBOD + NBOD) is restricted to a total of 1,800 pounds (820 kilograms) per day;

- (e) concentrations of total BOD5 (CBOD + NBOD) in excess of 250 milligrams per litre;
- (f) suspended solids are restricted to a total of 1,800 pounds (820 kilograms) during any one calendar day;
- (g) concentrations of total suspended solids (TSS) in excess of 250 milligrams per litre;
- (h) absolutely no toxic substances;
- (i) total nitrogen (TKN) is restricted to a total of 30 milligrams per litre or a maximum of 60 pounds (27 kilograms) during any one calendar day.

Section 3

DILUTION

- 3.1 In determining whether any limit described in this bylaw is contravened, the volume of any water that has been added and of any storm water discharge to a combined sewer shall be disregarded for the purpose of calculating whether the limit has been met such that compliance with the limit cannot be attained by dilution.

All previous versions of this Bylaw and the Sewer Discharge Bylaw are hereby repealed upon the date of this Bylaw coming into effect.

Section 4

NOTIFICATION OF ANTICIPATED OVERSTRENGTHS

- 4.1 In the event that an Industrial User determines, or becomes aware, anticipates or foresees, that a circumstance at that User's plant or elsewhere on that User's property may, or will, result – or has resulted – in an extraordinary level of discharge to the Town's wastewater system, then that Industrial User shall immediately notify the CAO or Superintendent of Public Works of the Town – via telephone and confirm immediately by either fax or e-mail – of the said circumstances and the anticipated level of discharge.

Section 5

SAMPLING AND ANALYSIS

- 5.1 The Engineer or Inspector may conduct an inspection of the matter being discharged from any premises within the Town for the purposes of determining compliance with the provisions of this bylaw.
- 5.2 Where the Engineer or Inspector takes a sample of such matter:
- (a) one sample alone is sufficient and without limiting the generality of the foregoing the sample may be a composite of six grab samples taken over a period of 6 hours or a composite sample taken over twenty-four (24) hours, and may contain additives for its preservation and may be collected manually or by using an automatic sampling device;
 - (b) except as otherwise provided in this By-law, all tests, measurements, analyses and examinations shall be carried out in accordance with Standard Methods;
 - (c) in any tests, analyses or examinations to determine concentration, the measurement shall be of the total quantity, including both dissolved and particulate.
- 5.3 Any test results obtained by the Town and based on the Town's samples shall be deemed accurate for the purposes of the voluntary payment provisions of this bylaw.

Section 6

SAMPLING AND TESTING BY INDUSTRIAL USERS

- 6.1 Each Industrial User shall install and maintain devices, consisting of a flow meter and a flow-activated composite sampling device – designed to, and capable of, monitoring flows and strengths in terms of BOD, Suspended Solids, TKN and COD – at the Town's manhole, located on or just outside the limits of its property, in such manner as is directed by the Engineer.
- 6.2 Each Industrial User shall take flow readings and composite samples from the devices it has installed, per the preceding provision, at the Town's manhole.

- 6.3 Flow readings and test results – based on composite samples – submitted by the Industrial Users to the Town per the requirements of this bylaw shall be based on the flow meter located at, and samples taken by the device installed at, the Town's manhole.
- 6.4 An Industrial User may be allowed to, if so requested in writing and authorized by resolution of Council, utilize a manhole other than the Town's manhole (referred to as an "alternate approved sampling site") for the purposes of the three preceding Clauses and any such request shall include a section providing clear and unequivocal authorization to the Town to carry out, at such alternate approved sampling site, any routine, random or other sampling that the engineer feels is called for pursuant to Clauses 6.11 and 6.12 of this Bylaw.
- 6.5 A Council resolution as referenced above may contain conditions, one of which shall be that permission to use the alternate approved sampling site may be revoked by Council resolution, if such is recommendation by the engineer based on grounds which are deemed by Council to justify such action.
- 6.6 Each Industrial User shall take daily readings from its flow meter and forward a weekly batch (Sunday to Saturday) to the engineer on Tuesday of each week.
- 6.7 Each Industrial User shall take composite samples on a daily basis, have those samples subjected to tests for BOD, Suspended Solids, TKN, pH and COD as soon as possible, and forward a weekly batch (Sunday to Saturday) consisting of all such test results to the engineer on Tuesday of each week.
- 6.8 An Industrial User may be allowed, if so requested in writing and authorized by the engineer, an exemption from the requirements of the preceding clause for the full length of any interruption of its production – such interruption, to qualify under this Clause, to be for a minimum period of 5 consecutive days.
- 6.9 Each Industrial User shall ensure that any alternate approved sampling site is accessible to employees, consultants or agents of the Town - at any time and without notice - for the purposes of observing, sampling and measuring the flow of sewage therein.
- 6.10 The Town shall conduct, at its own expense, routine sampling, either at its own manhole or at an alternate approved sampling site; however, should such routine sampling indicate that test result data as submitted by the Industrial User disagrees with the test result data from the samples taken by the Town, the Town may increase its routine sampling, and may carry out random sampling, and all costs associated

with such increased routine or random sampling shall be at the expense of the said Industrial User, and shall be in addition to any other charges imposed on that Industrial User by this bylaw or any other bylaw of the Town and any such samples shall be split and one portion presented to the said Industrial User for comparative analysis.

- 6.11 Each Industrial User shall have its flow meter tested and calibrated at least once per year, starting at a date within 30 days of the Town enacting this bylaw, and a copy of the results of such testing is to be delivered to the office of the engineer within 2 weeks of its receipt by the Industrial User.
- 6.12 The Town shall have the right to estimate flow quantity for billing and any other purposes should the flow monitoring device of the Industrial User fail and any such estimates are to be based on historical flow data and are to take into account any modifications that might reasonably be expected to affect flow quantity.

Section 7

OFFENCES

- 7.1 Any person who contravenes any provision of this By-law is guilty of an offence and is liable, upon conviction, to a fine of not less than one hundred dollars (\$100.00) and not more than ten thousand dollars (\$10,000.00) and, in default of payment, to imprisonment for a term of not more than two (2) months.
- 7.2 Every day during which an offence occurs or continues is a separate offence.

Section 8

VOLUNTARY PAYMENT

- 8.1 Any person who is alleged to have violated this By-law, and where the notice of alleged violation so provides, may pay a penalty to the office of the CAO for the Town provided that said payment is made within a period of fourteen (14) days following the date of the written notice of alleged violation and said payment shall be in full satisfaction of the alleged violation, releasing and discharging that person from all penalties that otherwise might have possibly resulted.

8.2 A written notice of alleged violation, including notification that voluntary payments are available, will be forwarded to the alleged violator only in the case of the following Levels of overstrengths:

Level 1 - 11,001 to 11,500 pounds (5000 to 5227 kilograms) of total BOD₅ over 6 consecutive calendar days, or
 2,001 to 2,200 pounds (910 to 1000 kilograms) of total BOD₅ in one calendar day, or
 61 to 66 pounds (27 to 30 kilograms) of TKN in one calendar day.

Level 2 - 11,501 to 12,000 pounds (5228 to 5455 kilograms) of total BOD₅ over 6 consecutive calendar days, or
 2,201 to 2,300 pounds (911 to 1045 kilograms) of total BOD₅ in one calendar day, or
 67 to 72 pounds (28 to 33 kilograms) of TKN in one calendar day.

Level 3 - 2,301 to 2,400 pounds (1046 to 1090 kilograms) of total BOD₅ in one calendar day, or
 73 to 78 pounds (34 to 36 kilograms) of TKN in one calendar day.

8.3 The voluntary payments applicable to each of the three (3) Levels outlined above are as follows:

| | TOTAL DAILY BOD₅ | TKN | TOTAL BOD₅ over 6 consecutive days |
|----------|------------------------------------|------------|--|
| Level 1: | \$1,000.00 | \$600.00 | \$2,500.00 |
| Level 2: | \$3,000.00 | \$1,500.00 | \$5,000.00 |
| Level 3: | \$5,000.00 | \$2,500.00 | |

8.4 The voluntary payment applies to each characteristic (BOD₅ or TKN) of the subject overstrength discharge. That is, for an overage of both daily total BOD₅ and TKN in the first Level outlined above, the total voluntary payment would be \$1,600.00. Should the daily total BOD₅ of the overstrength discharge be in the first Level and the TKN in the second Level, the total voluntary payment would be \$2,500.00.

8.5 The option of voluntary payment is not available to an alleged violator unless an appropriate written notice of alleged violation is received by that User and only if the overstrength falls within, and is allowed by, one of the three (3) Levels outlined above.

Section 9

OTHER TOWN REMEDIES

- 9.1 In addition to, or as an alternative to, prosecution or any other remedy provided for in this bylaw, the Town may, in the event that Town Council feels - based on evidence of continued overstrength discharges from an Industrial User and based on test results at the STP and the advice of the Town's consulting engineers - that the continued proper operation of the STP is in jeopardy, give direction to Town staff to engage, either partially or fully, the restricting valve in the discharge line from that particular Industrial User.
- 9.2 In addition to, or as an alternative to, prosecution or any other remedy provided for in this bylaw, the Town may seek a Court Order - by way of Section 184 of the *Municipal Government Act* or by any other avenue available to it - to direct an Industrial User to cease discharging into the Town's wastewater system - until such time as Town officials, based on test results at the STP and the advice of the Town's consulting engineers, deem that the STP has recovered sufficiently that it once again is capable of accepting that User's average daily discharge volume and strength.

History of this Bylaw:

Enacted - November 13, 2001
Revised - March 12, 2013