

CITY OF PRINCE ALBERT BYLAW NO. 48 OF 2015

*A Bylaw of The City of Prince Albert respecting the
management of the Sewage Works System.*

WHEREAS Council may provide for the regulation and control of the Sewage Works System of the City as a public utility service;

AND WHEREAS Council may establish the terms under which a public utility service may be supplied;

AND WHEREAS The City of Prince Albert has works for the collection, treatment and disposal of sewage and certain other types of deleterious material;

NOW, THEREFORE, THE COUNCIL OF THE CITY OF PRINCE ALBERT IN OPEN MEETING ASSEMBLED ENACTS AS FOLLOWS:

SHORT TITLE

1. This Bylaw shall be known as the "Sanitary Sewer Bylaw".

DEFINITIONS

2. In this Bylaw:
 - (a) "Act" means The Cities Act.
 - (b) "applicant" means a person executing an application for, making use of or accepting the supply of water services within the meaning of the Water Services Bylaw at premises served by a sanitary sewer connection or, if there is no person who has executed such application, the owner of real property served by sewer services.

- (c) "*backwater valve*" means a valve that permits flow in one direction but prevents a return flow designed for use in a building drain.
- (d) "*Biochemical Oxygen Demand (BOD)*" means the quantity of oxygen expressed in parts per million or milligrams per litre utilized in the biochemical oxidation of organic matter for 5 days at a temperature of 20° Centigrade. The determination of the Biochemical Oxygen Demand shall be in accordance with the procedures set forth in Standard Methods.
- (e) "*building drain*" means that part of the lowest horizontal piping of a drainage system which receives the discharge from the soil, water and drainage pipes inside the walls of the building except the building storm sewer and conveys such discharge to the sanitary sewer connection.
- (f) "*building storm sewer*" means that part of the lowest horizontal piping of a drainage system which receives storm water and all other drainage pipes conveying storm water from the premises to the storm sewer connection.
- (g) "*City*" means The City of Prince Albert.
- (h) "*Director of Public Works*" means the Director of Public Works for the City and anyone acting or authorized by the City Manager or Director of Public Works to act on behalf of the Director of Public Works in the administration of the responsibilities under this Bylaw.
- (i) "*Connections Bylaw*" means the Connections Bylaw of The City of Prince Albert, being Bylaw No. 12 of 1995, or such Bylaw or Bylaws as may be substituted therefor from time to time.
- (j) "*Council*" means the Council of the City.
- (k) "*Custom Work Order Policy*" means the estimation of the value of work performed by City forces or on behalf of the City that is calculated by the Director of Public Works to constitute the standard charge for all work of a similar nature which is deemed to reflect the actual cost to the City of labour, equipment, material used, all

applicable taxes, plus an administration fee equal to 15 percent of the value of the cost; the invoicing for the work performed on the basis of the standard charge, crediting any deposit which the Director of Public Works may have required to be paid and the requirement of the person making the deposit to pay any balance owing.

- (l) “*Director of Financial Services*” means the City Treasurer or the Director of Financial Services for the City and anyone acting or authorized by the City Manager, the City Treasurer or the Director of Financial Services to act on behalf of the Director of Financial Services.
- (m) “*fixture*” means a receptacle, appliance, apparatus or other device that discharges sewage and includes a floor drain.
- (n) “*Grease*” means fats, waxes, oils and other non-volatile material determined in accordance with the procedures contained in Standard Methods.
- (o) “*industrial effluent works*” means any works for the collection, containment, storage, transmission, treatment or disposal of industrial waste.
- (p) “*industrial waste*” means any waste other than radioactive waste generated by any process of industry, manufacturing, trade or business or the development of a natural resource and includes seepage, rainwater or water resulting from the melting of snow or ice which enters industrial effluent works.
- (q) “*meter*” means a device capable of measuring volume of water approved as to specification by the Director of Public Works.
- (r) “*natural outlet*” means any outlet into a ditch, water course, pond, drainage channel, lake or other body of surface or ground water.
- (s) “*pH*” means the logarithm to the base 10 of the reciprocal of the hydrogen ion concentration in moles per litre.

- (t) *"preliminary treatment facility"* means sewage works not owned or under the control of the City that modifies or holds sewage by any means.
- (u) *"premises"* means any real property or building.
- (v) *"radioactive waste"* means uranium, thorium, plutonium, neptunium, deuterium, their respective derivatives and compounds, radioactive isotopes of all elements and any substances containing such isotopes in greater concentration than is normally found in plant and animal life.
- (w) *"Regulations"* means the Regulations Governing Plumbing and Drainage under The Public Health Act or such other provincial regulations as may be promulgated under a provincial act replacing The Public Health Act which govern plumbing and drainage.
- (x) *"sanitary sewer connection"* means a pipe which conveys sewage, ground water or other waste from the building drain of premises to the Sewage Works System, private sewage disposal system or private sewage works.
- (y) *"sewage"* or *"effluent"* means liquid waste other than storm water and not containing any substances referred to in Section 7.
- (z) *"Sewage Works System"* means the whole or any part of the equipment by which or through which the City collects and disposes of sewage, whether or not same is owned or under the control of the City, and the improvement, extension and replacement of such equipment, the sewer mains, manholes, sewage lift stations, force mains, all other related appliances and appurtenances as are designed to form a part thereof and the treatment processes by which sewage is treated by or on behalf of the City before discharge into the environment.
- (aa) *"sewer services"* means all aspects of service to applicants and owners supplied pursuant to this Bylaw through the Sewage Works System.

- (bb) “*shredded garbage*” means the organic waste from the preparation, cooking and dispensing of food which has been shredded so that no particle is greater than one (1) centimeter in any dimension.
- (cc) “*Standard Methods*” means the analytical and examination procedures set forth in the current edition of “Standard Methods for Examination of Water and Waste Water,” published jointly by the American Public Health Association, the American Waterworks Association and the Water Pollution Control Federation from time to time.
- (dd) “*standard sewage*” or “*normal sewage*” means sewage having a BOD content of 300 or less and having a Suspended Solids content in milligrams per litre of 300 or less and having a Grease Content of 100 or less.
- (ee) “*storm water*” means rainwater or water from the melting of snow or ice.
- (ff) “*Suspended Solids*” means solids that either float on the surface of or are in suspension in sewage or other liquids and which are removed by laboratory filtering.
- (gg) “*treatment facility*” means those components of the Sewage Works System that modify the sewage for its lawful discharge into the environment.
- (hh) “*water services*” means all aspects of service supplied pursuant to the Water Services Bylaw to applicants, owners and persons hauling water from the water crane and includes the water supplied from the Waterworks System.
- (ii) “*Water Services Bylaw*” means Bylaw No. 47 of 2015 of The City of Prince Albert or such other Bylaw or Bylaws as may be substituted therefor from time to time.
- (jj) “*Waterworks System*” means the whole or any part of the equipment by which or through which the City conveys water, its improvement, extension or replacement and, not to limit the

generality of the foregoing, includes pumps, sedimentation system, filtration system, Water Treatment Plant, reservoirs, water mains, pipe valve connections, corporation stops, hydrants, valves, and other related works, curb stops, meters and related appliances, all other appurtenances as are designed to form a part thereof and the treatment processes by which water is treated before conveyance into the water mains.

INTERPRETATION

3. (1) Unless the context otherwise requires, subject to Section 2, terms and expressions used in this Bylaw shall have the same meaning as in the Act and the Regulations and in the event of conflict, the Act shall apply.

(2) All words, either in this Bylaw or in the Schedule hereto, shall be interpreted to include a corporation or partnership or such number and gender as the context may require. Marginal notes and headings shall not be given any effect in determining the proper interpretation of this Bylaw.

LIMITATION OF LIABILITY

4. (1) Sewer services shall only be supplied on the condition that the applicant shall make no claim against the City, its officials, employees or agents except with respect to damage caused by the negligence of the City, its officials, employees or agents acting within the scope of their employment, as the case may be. It is a further condition of supply that the applicant shall make no claim for any indirect, incidental or consequential damages, including, but not limited to, lost profits. Not to limit the generality of the foregoing, the City shall not be liable for:

- (a) actions based in nuisance;
 - (b) actions in respect of losses which may reasonably have been prevented by a properly maintained backwater valve;
- or

- (c) actions in respect of losses related to the interruption or termination of sewer services or failure or refusal to provide sewer services whether or not notice was provided.

(2) Sewer Services shall only be provided on the condition that the applicant shall indemnify and save harmless the City, its officials, employees and agents in respect of all claims arising from the provision of sewer services excepting those claims caused by negligence as described in Subsection (1). Not to limit the generality of the foregoing, the applicant shall indemnify and save harmless the City, its officials, employees and agents from and against claims for damages by the applicant or any third party arising directly or indirectly:

- (a) from the connection with the Sewage Works System or the provision of sewer services to the premises owned or occupied by the applicant or any person to whom the applicant is an agent;
- (b) from the failure of the Sewage Works System, sanitary sewer connection or any part thereof or appurtenance thereto; or
- (c) from the absence or lack of a proper operating backwater valve.

ADMINISTRATION

5. (1) The Sewage Works System, its operation, maintenance, repair and replacement shall be under the general direction and control of the Director of Public Works. The installation and construction of the Sewage Works System or other works in connection therewith shall be under the general direction and control of the Director of Public Works. The Director of Public Works shall keep full descriptions of all works constructed and forming part of the Sewage Works System. The system for draining sewage as described on the plans filed in the department of the Director of Public Works are hereby adopted as the configuration of sewage drainage for the City. Notwithstanding the foregoing, the

City shall not be restricted from entering into any agreement for the provision of treatment of sewage for its lawful discharge into the environment.

(2) No person other than the Director of Public Works, a City employee acting in the course of his duties or a contractor authorized by the Director of Public Works shall make or terminate a connection with, uncover, tamper with, attach or detach any line, pipe or otherwise manipulate any portion of the Sewage Works System.

APPLICATION FOR SEWER SERVICES

6. (1) No person shall use sewer services without application first having been made either pursuant to the Water Services Bylaw or, at premises where no water services are provided, pursuant to an agreement with the City. Every application for water services shall be deemed to include an application for sewer services where the premises at which water services are supplied are, also, served with sewer services.

(2) The applicant shall ensure that the terms under which sewer services are provided are not breached. The applicant shall be liable to pay all costs, rates, charges and penalties that may be set by the City.

(3) The applicant shall be liable for any breach of this Bylaw arising on the premises to which his application for sewer services pertains, whether the breach is actually committed by him or by another person, unless such breach was caused by a trespasser upon the premises so supplied with sewer services.

USE OF SEWER SERVICES

7. (1) No person shall place, deposit, discharge or suffer or permit or cause to be placed, deposited or discharged into a fixture, building drain, sanitary sewer connection or the Sewage Works System any of the following:

- (a) liquid or vapour having a temperature greater than 65° Centigrade, excepting boiler blowdown;

- (b) gasoline, benzene, naphtha, fuel oil, paint, solvent, or any flammable or explosive liquid, solid or gas;
- (c) garbage other than shredded garbage, provided, however, that shredded garbage shall not be discharged from a garbage disposal unit operated by a motor having horsepower rating greater than one-third horsepower unless a permit has been obtained from the Director of Public Works;
- (d) ashes, cinders, grit, sand, stone, cloth, clothing, plastic bags or plastic sheeting or any other solid or viscous substance;
- (e) paunch manure, pig's hooves or toenails, bones, hog bristles, hides or parts of hides, animal or fish fat or flesh, horse, cattle, sheep, poultry or swine manure, poultry entrails, heads, feet, feathers, eggshells, fleshings or hair resulting from tanning operations or other types of noxious or malodorous substances capable of creating a public nuisance in or damage to the Sewage Works System or hazard to the health of personnel carrying out duties in relation to the Sewage Works System;
- (f) wastes having a pH lower than 5.5 or higher than 9.5;
- (g) storm water including, and not to limit the generality of the foregoing, surface water and roof drainage from the surface of a development or roof of any building upon a development for which a storm drainage plan is required pursuant to the Connections Bylaw;

- (h) wastes containing any of the exotic communicable diseases listed by Health Canada as requiring special handling, including Lassa Fever, Marburg Virus Disease, Ebola Virus Disease, Junin and Machupo Hemorrhagic Fevers and the Crimean-Congo Hemorrhagic Fever;
- (i) wastes containing microbiology laboratory waste consisting of: laboratory cultures, stocks or specimens of microorganisms, live or attenuated vaccines, human or animal cell cultures used in research and laboratory material that has come into contact with any of the same; or
- (j) radioactive waste.

(2) Every person who has knowledge that a substance has been discharged contrary to Subsection (1) shall forthwith report same to the Director of Public Works, unless he has reasonable grounds to believe that it has been reported to the Director of Public Works by another person.

8. No person shall place, deposit or cause, suffer or permit to be placed or deposited into any natural outlet or in, on or under any premises within the City or in any area under the jurisdiction of the City any industrial waste, sewage, human or animal excretion, excepting well-rotted manure for horticultural purposes or as otherwise is in accordance with the provisions of this Bylaw.

9. (1) Within the time and in the manner provided pursuant to the Regulations, when a sanitary sewer main forming a part of the Sewage Works System abuts premises, the owner of the premises shall, at his own expense, submit the applications required by this Bylaw and by provincial law to the appropriate authorities and upon obtaining the necessary approvals from such authorities, install fixtures and sanitary sewer connection.

(2) Subsequent to installation of a sanitary sewer connection to serve premises, septic tanks, cesspools, private sewage disposal system and private sewage works at that location shall be decommissioned in a manner and within the time permitted by the Regulations, Saskatchewan Health and the Director of Public Works.

(3) Notwithstanding Subsections (1) or (2), if permitted by the Regulations and Saskatchewan Health, upon application by the owner of the premises, the Director of Public Works may, in writing, approve the installation or continued maintenance of a privy vault, septic tank, sewage holding system, private sewage disposal system or private sewage works for such period and upon such conditions as the Director of Public Works may deem appropriate. The owner of the premises shall ensure compliance with conditions of approval.

PRIVATE SEWAGE WORKS

10. Where a sanitary sewer main forming a part of the Sewage Works System is not available to serve the premises, the owner of the premises shall drain sewage from the premises into a private sewage disposal system or private sewage works which are constructed and operated in compliance with the Regulations.

11. No owner of any premises shall commence construction or operate or cause, suffer or permit construction to be commenced or operation to continue of a lawful private sewage disposal system or private sewage works until he has filed with the Director of Public Works proof of compliance with the requirements of The Public Health Act and Regulations.

12. The owner of premises having a lawful private sewage disposal system or private sewage works shall, at his own expense, operate and maintain same in such manner as shall ensure that no nuisance arises by reason of such operation and in accordance with the Regulations and other applicable federal and provincial laws.

DISCHARGE INTO SEWER WORKS SYSTEM

13. Where blockage of or damage to the Sewage Works System arises by reason of any person failing to comply with the provisions of this Bylaw, in addition to any penalty which may be imposed, the applicant shall be liable to the City for any costs of the City arising from the clearing of such blockage and the repairing of such damage, calculated pursuant to the Custom Work Order Policy. Such costs shall constitute a debt owing to the City payable by the applicant. The debt may be added to the water account of the applicant.

14. (1) An owner of premises required to have an interceptor pursuant to the Regulations including, without limiting the foregoing, a public garage, vehicle repair garage, residential garage, automobile wash bay, dry-cleaning establishment, milk plant, creamery, laboratory, commercial kitchen, and the owner of premises on which is operated a concrete plant, aggregate washing plant, or any other place where gasoline, oil, grease, chemicals, grit or other materials are generated which, in the opinion of the Director of Public Works, may interfere with the efficient operation of the Sewage Works System, shall install and maintain an interceptor on the premises to collect deleterious material and prevent same from entering the Sewage Works System.

(2) Interceptors shall be of a design specified by the Regulations, approved by Saskatchewan Health and the Director of Public Works. The Owner shall clean and maintain the interceptor in an efficient working condition at his own expense without discharging the deleterious material collected in the interceptor into the Sewage Works System.

(3) In the event of breach of this section, in addition to any penalty which may be imposed, the Director of Public Works may enter upon the premises and carry out such installation, cleaning and maintenance with City forces or contractor retained by the City, and the owner shall be liable to pay the costs therefore, calculated pursuant to the Custom Work Order Policy.

PERMIT FOR DISCHARGE OF INDUSTRIAL WASTES

15. (1) Notwithstanding any other provision in this Bylaw, no person shall discharge or cause, suffer or permit to be discharged any industrial waste into any fixture, building drain, sanitary sewer connection or any part of the Sewage Works System unless a permit from the Director of Public Works to allow for such discharge is first obtained.

(2) The owner of premises desiring to discharge industrial waste into the Sewage Works System shall make application for a permit at the office of the Director of Public Works and shall include particulars of the industrial operation proposed, an accurate chemical and physical analysis, quantity and discharge rate for the industrial waste and sewage proposed to be discharged and other particulars that the Director of Public Works may require.

(3) The Director of Public Works may refuse to provide a permit where he is of the opinion that discharge from the premises may deleteriously affect sewage treatment processes or any part of the Sewage Works System. Any permit issued by the Director of Public Works may include conditions that, in the opinion of the Director of Public Works, are necessary or desirable to ensure the lawful operation of the Sewage Works System by the City. Not to limit the generality of the foregoing, the permit may stipulate that the owner shall, at his own expense, provide and maintain:

- (a) industrial effluent works or preliminary treatment facilities conforming with the Regulations and the requirements of other applicable provincial and federal laws;
- (b) an interceptor conforming with the Regulations and the requirements of other applicable provincial and federal laws;
and/or
- (c) a control manhole which conforms with Subsection (4) of this section;

to make the character of the industrial waste such that when the normal treatment processes of the treatment facility of the Sewage Works System are applied to the industrial waste, it may be lawfully disposed of into the environment.

(4) A control manhole required as a condition of a permit shall be constructed according to plans, located at such position and connected to the Sewage Works System in the manner approved by the Director of Public Works. The control manhole shall be accessible to a person authorized pursuant to Section 17 at all reasonable times for the observation, sampling and measurement of the industrial waste.

(5) In the event of any change in the chemical and physical analysis, quantity and discharge rate of industrial waste for which a permit has issued, the owner of the premises to which the permit pertains shall give written notice of same to the Director of Public Works. Whether or not notice has been given, in the event of any change in the chemical and physical analysis, quantity or discharge rate for the industrial waste pursuant to the permit, the City may revoke the permit if, in the opinion of the Director of Public Works, the discharge of the industrial waste may jeopardize the lawful operation of the Sewage Works System by the City.

CONTROL OF DISCHARGE

16. (1) By written notice to the owner, the Director of Public Works may require that a preliminary treatment facility or other method of disposal be implemented or constructed and maintained by the owner for the treatment of sewage other than standard sewage generated upon the premises prior to its discharge into the Sewage Works System or any natural outlet. In the event that the Director of Public Works requires that another method of disposal be implemented, the owner shall ensure that such method only disposes of waste in accordance with other applicable City bylaws, federal and provincial Acts and

Regulations and in particular The Environmental Management and Protection Act.

(2) The Director of Public Works may stipulate a time limit in the notice within which the owner of the premises to which the notice pertains shall ensure that the preliminary treatment facility or other method of disposal is implemented and properly operating. Notwithstanding the foregoing, if the Director of Public Works is of the opinion that the discharge from the premises to the Sewage Works System may:

- (a) contain any substance:
 - (i) defined by The Environmental Management and Protection Act as a hazardous substance, hazardous waste or waste dangerous goods;
 - (ii) listed upon Schedule "A" attached hereto and forming part of this Bylaw; or
 - (iii) having toxic, poisonous, corrosive or hazardous properties which are capable of causing damage to structures, equipment, sewage treatment processes or personnel carrying out duties in relation to the Sewage Works System;
- (b) contain suspended solids of such character or quantity that treatment processes of the Sewage Works System for standard sewage are insufficient to result in a substance that may lawfully be released into the environment;
- (c) interfere with sewage treatment processes, the efficient operation of the Sewage Works System or damage any part of the Sewage Works System;

- (d) result in a breach of any agreement to which the City is a party with respect to sewage treatment or jeopardize the continued treatment of sewage pursuant to such agreement; or
- (e) jeopardize the lawful operation of the Sewage Works System or the treatment of wastes therein,

by notice sent by registered mail to the assessed owner of the premises, the Director of Public Works may prohibit discharge from the premises until the preliminary treatment facility or other method of disposal is implemented and properly operating.

(3) The plans, specifications and operation of the preliminary treatment facility or other method of disposal shall comply with the Regulations and all applicable provincial and federal laws and shall be subject to the prior written approval of the Director of Public Works. The owner of the premises shall ensure that the preliminary treatment facility or other method of disposal is constructed in accordance with the approved plans with no deviation.

(4) In the event of discharge of sewage from premises in breach of a notice from the Director of Public Works referred to in this section, in addition to any penalty which may be imposed, the Director of Public Works, using City forces or contractor retained by the City, may enter upon the premises and terminate the sewer services to the premises, and the owner shall be liable to pay the costs therefor, calculated pursuant to the Custom Work Order Policy.

ACCESS TO PREMISES

17. (1) The Director of Public Works is authorized to have free access at all reasonable times to those parts of premises to which sewer services are or have been provided that he considers necessary to fulfil the duties arising from the provision of sewer services whether or not sewer services are actually being supplied at the time access is required. As evidence of his authority, the Director

of Public Works and any person acting on his instruction who requires access to fulfil such instructions shall produce a City of Prince Albert identification card.

(2) The Director of Public Works, City employee or person acting under the direction of the Director of Public Works shall have the right at all reasonable times to enter any premises referred to in Subsection (1) for the purpose of inspection, observation, measurement, sampling and testing as provided in this Bylaw.

(3) The same persons referred to in Subsection (2) are hereby authorized to enter any premises where sewer services are to be discontinued or are discontinued to remove any fitting, wire, machine, apparatus, pipe or other thing that is appurtenant to the Sewage Works System.

(4) Any sewer services supplied by the City through the Sewage Works System shall only be supplied on the condition that, at his own cost, every applicant, owner, tenant and occupant of premises where sewer services are provided shall ensure that there is an easy means of access for the observation, measurement, sampling and testing as provided in this Bylaw.

ACCOUNTS PAYABLE BY AN OWNER

18. (1) The applicant whose premises are not served entirely with water from the Waterworks System may obtain sewer services at such rates and upon such terms and conditions as the City and owner may mutually agree.

(2) If the account referred to in Subsection (1) does not form part of the applicant's water account and it remains unpaid for a period in excess of 30 days after the date of the invoice, interest at the rate of 1.5 percent per month or 18 percent per annum shall be added until payment is made or the amount is added to taxes. If such account is in arrears after December 31 of the year in which it becomes payable, the amount shall be added to and thereby forms part of taxes on the premises served with sewer services.

SEWER CONSUMPTION CHARGES

19. (1) For standard sewage, where water services pursuant to the Water Services Bylaw are provided to the applicant, the applicant shall be liable to pay a sewer consumption charge as set by the City's Water and Sewer Utility Rates and Fees Bylaw.

City of Prince Albert Sewer Surcharge Reduction Program

City of Prince Albert Commercial and Industrial Water Consumers can apply for a reduction on the sewer surcharge. The reduction applies to the portion of water that is not discharged into the sanitary sewer system. Schedule "B" of this Bylaw outlines the City of Prince Albert Sewer Surcharge Reduction Program.

(2) Where no meter is installed on the premises or if for any reason a reading of a meter has not been taken or the meter fails to register water supplied, the Director of Financial Services may estimate the sewer consumption charge on the basis of 100% of the value of water usage in a previous similar period or an average seasonal consumption plus 10 percent.

Where there is no previous comparable usage, the applicant may be billed and shall be liable to pay for that amount that is, in the opinion of the Director of Financial Services, a reasonable charge based on an estimate for similar use. The decision of the Director of Financial Services as to the value of the charge shall be final and binding.

(3) Where concentrated sewage is discharged into the sewer system from premises served by the Waterworks System or from premises served in whole or in part with water from sources other than the Waterworks System, the applicant or the owner, respectively, shall pay to the City the rate for standard sewage and in addition shall be liable to pay a surcharge calculated as follows:

- (a) for Suspended Solids:
 - (i) 100-percent surcharge on the rate for standard sewage where the Suspended Solids in such sewage are between 300 and 400 mg/l;
 - (ii) 200-percent surcharge on the rate for standard sewage where the Suspended Solids in such sewage are between 400 and 500 mg/l;
 - (iii) 300-percent surcharge on the rate for standard sewage where the Suspended Solids in such sewage are in excess of 500 mg/l.

- (b) for BOD:
 - (iv) 100-percent surcharge on the rate for standard sewage where the BOD in such sewage is between 300 and 400 mg/l;
 - (v) 200-percent surcharge on the rate for standard sewage where the BOD in such sewage is between 400 and 500 mg/l;
 - (vi) 300-percent surcharge on the rate for standard sewage where the BOD in such sewage is between 400 and 500 mg/l.

(c) for Grease:

- (vii) 100-percent surcharge on the rate for standard sewage where the Grease in such sewage is between 100 and 200 mg/l;
- (viii) 200-percent surcharge on the rate for standard sewage where the Grease in such sewage is between 200 and 300 mg/l;
- (ix) 300-percent surcharge on the rate for standard sewage where the suspended solids in such sewage are in excess of 300 mg/l.

(4) The surcharges referred to in this section are cumulative if more than one of the test criteria limits are exceeded.

(5) The sewer services charges set by the City's Water and Sewer Utility Rates and Fees Bylaw shall be added to and form part of the water account of the applicant and shall be enforceable in the manner provided in the Water Services Bylaw and the Act.

SEPTIC TANK PUMPOUT

20. (1) No person shall pump out a septic tank into the Sewage Works System without first obtaining the written consent of the Director of Public Works and making payment of such charges as the City and the person may mutually agree. The Director of Public Works may refuse to accept sewage from a septic tank pumpout service at his discretion.

(2) If authorized for acceptance by the Director of Public Works, the contents of the septic tank shall only be discharged into the Sewage Works System provided that the sewage does not contain substances referred to in

Section 7 and in Subsections 16(2)(a) to (f) inclusive and shall only be discharged at the place and in the manner approved by the Director of Public Works.

(3) Before or after the discharge of the septic tank into the Sewage Works System, the Director of Public Works may require the person requesting the service to provide accurate information regarding the character of the sewage. The Director of Public Works may require an analysis of the characteristics of the sewage prior to permitting discharge of the septic tank into the Sewage Works System.

(4) Nothing in this section shall be interpreted to relieve any person discharging the contents of a septic tank into the Sewage Works System from complying with all provisions governing the lawful use of the Sewage Works System.

TERMINATION OR INTERRUPTION OF SERVICE

21. (1) The City may limit or discontinue the furnishing of sewer services and may refuse to supply sewer services or to limit the hours during which any person may use sewer services:

- (a) by reason of works undertaken by the City;
- (b) in circumstances where a new sanitary sewer connection is required under the Connections Bylaw; or
- (c) in the exercise of the authority provided in this Bylaw or the exercise of discretion by Council or the Director of Public Works where the circumstances are such that, in its or his opinion, the public interest may so require.

(2) When sewer services are interrupted or terminated pursuant to Subsection (1)(a), such attempt to notify the owner, applicant or occupant of the premises affected by the intended interference shall be made as, in the opinion of the Director of Public Works, is reasonable in the circumstances. Except as otherwise provided in this Bylaw, in any other case, the termination or interruption of sewer services may be effected without notice.

(3) If sewer services are interrupted by reasons unknown or frozen sanitary sewer connection, the Director of Public Works shall ascertain if the place of the failure is between the sanitary sewer main and the property line of the street abutting the land or building to which the sewer services are provided. In the event that the place of the interruption is so situate, he shall take such action as he deems reasonably necessary to remedy the failure or interruption. Should such action require the installation of an automatic device requiring a power supply, it shall be a condition of continued supply of sewer services to the premises that the power supply be provided without cost to the City.

(4) The owner or occupant of the premises supplied with sewer services shall be responsible to make satisfactory repairs to that portion of the sanitary sewer connection on his land from the property line of the street. If, after receiving notice from the Director of Public Works to repair same, the owner or occupant fails to effect repairs satisfactory to the Director of Public Works within the time allowed in the notice, the Director of Public Works may enter upon the premises and complete the necessary repairs with City forces or otherwise. The owner and occupant shall be jointly and severally liable to pay the cost of the repairs, calculated pursuant to the Custom Work Order Policy.

(5) Water services and sewer services may be discontinued to any premises, and the City may refuse to provide water services and sewer services thereat if the applicant has failed to ensure that there is no breach of the terms under which such services are provided to the premises.

SAMPLING AND ANALYSIS

22. (1) By sampling and analysis of the characteristics of the sewage being discharged into the Sewage Works System from premises where sewage other than standard sewage may be generated, the Director of Public Works shall from time to time determine such characteristics and maintain a record of each such analysis.

(2) The Director of Public Works shall take all samples and make all such analyses over a period which, in his opinion, will give sufficient data to determine the characteristics of the average sewage from each such premises referred to in Subsection (1).

23. (1) The value of any surcharge referred to in this Bylaw shall be calculated and paid on the basis of the latest series of tests made by the Director of Public Works pursuant to the most recent series of tests referred to in Section 22. Such surcharge shall not be changed until a subsequent series of tests indicate that the sewage from the premises contains a concentration to which a different surcharge is applicable.

(2) If any person assessed a surcharge is of the opinion that the degree of concentration in the sewage discharged from the premises has been reduced by reason of the installation of a preliminary treatment facility or other reason, he may request that the Director of Public Works undertake sampling and analysis at his expense.

(3) If tests made pursuant to Subsection (2) indicate less sewage concentration than prior tests and, in the opinion of the Director of Public Works, such tests represent the average sewage from the premises operating under normal conditions, the surcharge thereafter shall be calculated on the basis of such test until otherwise altered pursuant to this Bylaw.

PROTECTION OF SEWAGE WORKS SYSTEM

24. Every applicant, owner and occupant of premises supplied with sewer services shall, at his own expense, ensure that:

- (a) all sanitary sewer connections, related Sewage Works System appliances, pipes and fixtures between the City's sewer main and the premises at which sewer services are supplied are kept in good maintenance and repair, excepting for any portion thereof lying between the sewer main and the property line abutting the premises to which sewer services are provided; and
- (b) the sanitary sewer connection, valves, pipes, and other sewer services appliances of the Sewage Works System from the premises to the property line of the street abutting the premises to which sewer services are provided are protected against any damage from tampering, frost or other source of damage.

OFFENCES

25. Any person who:

- (a) discharges or causes, suffers or permits to be discharged any liquid, solid or gas into a fixture, building drain, sanitary sewer connection or any part of the Sewage Works System not permitted to be discharged into the Sewage Works System pursuant to this Bylaw;
- (b) discharges or causes, suffers or permits to be discharged any solid, liquid or gas in breach of the conditions of a permit to discharge industrial waste into the Sewage Works System;
- (c) falsifies information or provides false information required to be submitted pursuant to or under this Bylaw;

- (d) removes or causes, suffers or permits the removal of ground cover above any part of the Sewage Works System or a sanitary sewer connection which reduces coverage to less than 3 metres from the grade;
- (e) connects or causes, suffers or permits the connection of any pipe or fixture for sewer services except in accordance with this bylaw;
- (f) hinders, obstructs or interferes with the Director of Public Works or the Director of Financial Services or persons acting under the direction of either in the lawful exercise of their duties under this Bylaw or The Cities Act or represents himself as a person designated for the purpose of carrying out duties pursuant to this Bylaw when not so authorized;
- (g) without the consent of the Director of Public Works, enters or is found within:
 - (i) the J.W. Oliver Pollution Control Centre, the facility or grounds of same situate upon real property located east of Mattes Avenue, south of River Street East, Prince Albert, Saskatchewan; or
 - (ii) any part of the Sewage Works System, including any sewer main, manhole or sewage lift station; or
- (h) breaches any provision of this Bylaw;

is guilty of an offence punishable on summary conviction, except if such person is carrying out his duties as a person authorized to do so pursuant to Section 5 or 17.

26. Any person in violation of a provision of this Bylaw shall be guilty of an offence and shall be liable upon summary conviction to a fine not exceeding:

- (a) \$2,000.00 in the case of an individual; or
- (b) \$5,000.00 in the case of a corporation.

27. If any section, subsection, sentence, clause, phrase or other portion of this Bylaw is for any reason held invalid or unconstitutional by any court of competent jurisdiction, that portion shall be deemed to be a separate, distinct and independent provision, and the holding of the court shall not affect the validity of the remaining portions of the Bylaw.

28. Bylaw number 10 of 1995 is hereby repealed.

29. This Bylaw shall come into force and take effect on, from and after the final passing thereof.

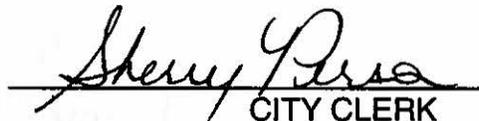
INTRODUCED AND READ A FIRST TIME THIS 21st DAY OF DECEMBER, A.D. 2015.

READ A SECOND TIME THIS 21st DAY OF DECEMBER, A.D. 2015.

READ A THIRD TIME AND PASSED THIS 21st DAY OF DECEMBER, A.D. 2015.



MAYOR



CITY CLERK

SCHEDULE "A"
TO BYLAW NO. 48 OF 2015

**CHEMICAL SPECIFIC HAZARD,
DISPOSAL, SPILL CLEANUP AND
STORAGE GROUP DESIGNATIONS**

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
acacia gum	1	1	1	2	21	F ₀
acetaldehyde	2	4	2	13	2	G ₀
acetamide	1	1	1	2	20	E ₀
acetanilide	2	1	1	2	20	E ₀
acetic acid (concentrated)	4	3	3	1	24a	G ₀
acetic anhydride	4	3	3	8	24a	G ₀
acetone	1	3	1	10	18	G ₀
aceto – carmine stain	1	1	1	2	21	F ₀
aceto – orcein (2% solution)	1	1	1	2	21	G ₀
acetyl chloride	4	4	4	Special Hazard - See Appendix B		
acetylcholine bromide	2	1	1	2	21	F ₀
acridine orange	2	1	1	2	5	F ₀
adipic acid	1	1	1	2	24a	G ₀
adipyl chloride	2	1	2	8	4c	G ₀
adrenaline	2	1	1	1	21	F ₀
agar flake	1	1	1	2	21	F ₀
agar powder	1	1	1	2	21	F ₀
albumin	1	1	1	2	21	F ₀
alizarin red	2	1	1	2	18	F ₀
alizarin yellow	2	1	1	2	18	F ₀
alum	1	1	1	2	11	D _{1/s}
alumina (aluminum oxide)	2	1	1	2	21	D _{1/s}
aluminum sulphate & ammonium	1	1	2	2	21	D _{1/s}
aluminum carbide	2	3	3	16	25	C ₁
aluminum carbonate	1	1	1	2	21	D _{1/s}
aluminum chloride, anhydrous	2	1	2	8	1b	C ₁
aluminum hydroxide	1	1	1	2	21	D _{1/s}
aluminum metal	1	1	1	2	27a	D _{1/s}
aluminum metal (dust)	2	3	3	5	21	D _{1/s}
aluminum nitrate	1	3	3	4	12a	B ₁

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
aluminum potassium phosphate	1	1	1	2	21	D _{1/s}
aluminum potassium sulphate	1	1	1	2	21	D _{1/s}
aluminium sodium sulfate	1	1	1	2	21	D _{1/s}
aluminum sulfate	1	1	1	2	11	D _{1/s}
Aluminum sulfide	2	2	2	6	23	C ₁
amberlite ion exchange resins	1	1	1	2	21	F _o
ammonia (anhydrous, gas)	4	2	4	14	GC	I
ammonium acetate	1	1	1	2	21	D _{1/s}
ammonium alum	1	1	1	2	21	D _{1/s}
ammonium bicarbonate	1	1	1	2	21	D _{1/s}
ammonium bifluoride	3	1	3	7	10	D _{1/s}
ammonium bromide	2	1	2	3	1b	D _{1/s}
ammonium chloride	1	1	1	2	1b	D _{1/s}
ammonium chromate	2	2	2	3	11	D _{1/s}
ammonium citrate	1	1	1	2	21	B ₁
ammonium dichromate	2	2	2	4	12a	B ₁
ammonium ferrous sulfate	1	1	1	2	11	D _{1/s}
ammonium fluoride	3	1	3	7	1b	D _{1/s}
ammonium hydroxide (concentrated)	3	1	3	6	10	D _{1/L}
ammonium hydroxide (diluted 10%)	2	1	2	1	10	D _{1/L}
ammonium metavanadate	2	1	2	3	27i	D _{1/s}
ammonium molybdate	2	1	2	3	21	D _{1/s}
ammonium nitrate	1	4	3	4	12a	B ₁ (separate)
ammonium oxalate	3	1	2	13	24a	F _o
ammonium phosphate (monobasic)	1	1	1	2	21	D _{1/s}
ammonium phosphate (dibasic)	1	1	1	2	21	D _{1/s}
ammonium polysulfide solution	3	1	3	6	23	D _{1/L}
ammonium sulfamate	2	1	2	3	19	D _{1/s}
ammonium sulfate	1	1	1	2	11	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
ammonium sulfide	3	1	3	6	23	D _{1/s}
ammonium sulfite	2	1	2	6	12b	D _{1/s}
ammonium thiocyanate	2	1	2	2	11	J
ammonium thiosulfate	1	1	2	2	12b	D _{1/s}
amyl acetate	1	2	1	10	18	G ₀ (flammable)
amyl alcohol	2	2	1	10	18	G ₀ (flammable)
aniline	3	2	1	Special Hazard - See Appendix B		
aniline blue (water soluble)	3	1	1	2	5	F ₀
antimonous chloride	2	1	2	8	27d	D _{1/s}
antimony metal	2	1	1	3	27a	D _{1/s}
antimony pentachloride	2	1	3	16	27d	C ₁
antimony pentasulfide	2	3	2	16	27d	D _{1/s}
antimony potassium tartrate	2	1	1	16	27d	F ₀
antimony sulfate	2	1	1	16	27d	D _{1/s}
antimony trioxide	2	1	1	16	27d	D _{1/s}
antimony trisulfide	2	1	1	16	27d	D _{1/s}
arsenic metal	3	1	1	16	27d	D _{1/s} (poison)
arsenic pentoxide	3	1	1	16	27d	D _{1/s} (poison)
arsenic trichloride	4	1	4	16	27d	D _{1/s} (poison)
arsenic trioxide	4	1	1	16	27d	D _{1/s} (poison)
ascarite	2	1	1	2	21	D _{1/s}
ascorbic acid	1	1	1	2	21	F ₀
bacto-lipase base	1	1	1	2	21	D _{1/s}
balsam, Canada	1	1	1	2	21	G ₀
barium, carbonate	2	1	2	6	27h	D _{1/s}
barium chloride	2	1	1	3	27h	D _{1/s} (poison)
barium dioxide	2	1	1	4	27h	B ₁
barium hydroxide	2	1	1	6	27h	D _{1/s}
barium nitrate	2	1	2	4	27h	B ₁
barium sulfide	2	1	2	6	27h	D _{1/s}
basic fuchsin (special)	1	1	1	2	21	E ₀
beef extract	1	1	1	2	21	F ₀

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
Benedict's qualitative solution	2	1	1	1	21	D _{1/L}
benzoic acid	1	1	1	2	24a	G ₀
benzophenone	2	1	1	3	18	F ₀
benzoyl peroxide	3	4	4	Special Hazard - See Appendix B		
bile salts	1	1	1	2	21	G ₀
bismarck brown Y	2	1	1	2	5	E ₀
bismuth metal	2	1	1	3	27d	D _{1/S}
bismuth nitrate	2	2	2	4	27d/12a	B ₁
bismuth oxide	2	1	1	3	27d	D _{1/S}
bismuth trichloride	2	1	2	8	27d	C ₁
biuret (reagent)	2	1	1	1	20	E ₀
biuret (MP 177°)	2	1	1	2	20	E ₀
boric acid crystal	1	1	1	2	24b	A ₁
boron metal	1	1	1	16	21	C ₁
bouin's fluid	3	1	1	1	21	G ₀ (keep saturated with water)
Bromine (reagent)	4	2	4	Special Hazard - See Appendix B		
bromine (water)	3	1	3	7	12a	B ₁
bromoacetanilide	2	1	1	6	6	E ₀
bromoethane (reagent)	2	1	2	11	4b	G ₀ (flammable)
bromothymol blue	1	1	1	1	21	G ₀
broth (nutrient)	1	1	1	1	21	E ₀
butanol	2	2	1	10	18	G ₀
n-butyl phthalate	2	1	1	10	18	G ₀
isobutyl alcohol	2	2	1	10	18	G ₀ (flammable)
s-butyl alcohol	2	2	1	10	18	G ₀ (flammable)
t-butyl alcohol	2	2	1	10	18	G ₀ (flammable)
butyric acid	2	2	1	7	24a	G ₀
cadmium carbonate	3	1	1	16	27f	D _{1/S} (poison)
cadmium iodide	3	1	1	16	27f	D _{1/S} (poison)
cadmium metal	3	1	1	16	27f	D _{1/S} (poison)
cadmium nitrate	3	2	3	16	27f	B ₁
caffeine	1	1	1	2	21	F ₀

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
calcium acetate	1	1	1	2	21	F _o
calcium carbide	3	3	3	16	25	C _i
calcium carbonate (powder)	1	1	1	2	11	D _{1/s}
calcium chloride	1	1	1	2	11	D _{1/s}
calcium fluoride	2	1	1	16	1b	D _{1/s}
calcium hydroxide	1	1	1	6	10	D _{1/s}
calcium hypochlorite	2	1	2	4	12a	B ₁
calcium metals (turnings)	3	1	3	9	3	C ₁
calcium metal	3	1	3	9	3	C ₁
calcium nitrate	1	2	3	4	12a	B ₁
calcium oxide	3	2	3	9	10	D _{1/s}
calcium phosphate (mono-basic)	1	1	1	2	21	D _{1/s}
calcium phosphate (tri-basic)	1	1	1	2	21	D _{1/s}
calcium propionate	1	1	1	2	21	D _{1/s}
calcium sulfate	1	1	1	2	21	D _{1/s}
calcium sulfide	2	1	2	6	23	D _{1/s}
camphor	2	1	1	2	18	G _o (flammable)
carbon	1	1	1	2	21	D _{1/s}
carbon disulfide	2	3	1	Special Hazard - See Appendix B		
carbon tetrachloride	2	1	1	Special Hazard - See Appendix B		
carborundum powder	1	1	1	2	21	D _{1/s}
carmine (biological stain)	2	1	1	2	21	G _o
casein pure	1	1	1	2	21	F _o
cerous sulfate	1	1	1	2	21	D _{1/s}
cesium chloride	1	1	1	2	21	D _{1/s}
charcoal	1	1	1	2	21	F _o
chlorine water (saturated)	2	1	2	7	12a	B ₁
2-chloro-2-methylpropane	3	3	1	11	4b	G _o (flammable)
chromium acetate	2	1	1	16	27f	F _o
chromium chloride	2	1	1	16	27f	D _{1/s}
chromium metal	1	1	1	16	27f	D _{1/s}
chromium nitrate	2	2	2	4	27f	B ₁
chromium potassium sulfate	2	1	1	16	27f	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
chromium trioxide	3	1	3	4	27f	B ₁ (poison)
citric acid	1	1	1	1	21	G _o
cobalt (wire)	1	1	1	2	27a	D _{1/s}
cobalt carbonate	2	1	1	2	11	D _{1/s}
cobalt chloride (paper)	2	1	1	2	11	D _{1/s}
cobaltous chloride	2	1	1	2	11	D _{1/s}
cobaltous nitrate	2	2	3	4	12a	B ₁
cobaltous sulfate	2	1	1	2	11	D _{1/s}
coconut oil	1	1	1	2	21	G _o
collodion	2	4	1	10	28	G _o (flammable)
congo red	1	1	1	2	21	E _o
copper metal	1	1	1	2	27a	D _{1/s}
corn starch	1	1	1	2	21	F _o
cottonseed oil	1	1	1	2	21	G _o
crystal violet (staining solution)	1	1	1	1	5	G _o
cupric acetate	2	1	1	3	21	F _o
cupric bromide	2	1	1	3	11	D _{1/s}
cupric carbonate	2	1	1	3	11	D _{1/s}
cupric chloride	2	1	1	3	11	D _{1/s}
cupric nitrate	2	2	3	4	12a	B ₁
cupric oxide	2	1	1	3	11	D _{1/s}
cupric sulfate	2	1	1	3	11	D _{1/s}
cupric sulfide	2	1	1	6	23	D _{1/s}
cuprous chloride	2	1	1	3	11	D _{1/s}
cyclohexanol	2	2	1	10	18	G _o
cyclohexane	2	2	1	10	18	G _o (flammable)
devarda's alloy	1	1	1	9	21	D _{1/s}
dextrose	1	1	1	2	21	F _o
diastase	1	1	1	2	21	F _o
dibromobenzene (para)	2	1	1	16	4b	G _o
dichlorobenzene (para)	2	1	1	16	4b	G _o
dichloromethane	2	1	1	11	4b	G _o
dichlorotetrafluoroethane	1	1	1	14	GC	I (gas cylinder)
diethyl ether (ethyl ether)	2	4	4	Special Hazard - See Appendix B		

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
4,5-dihydroxy-3-(p-sulftophenyl-azo)-2,7 naphthalene disulfonic acid trisodium salt	2	1	1	3	8	F _o
dimethyl glyoxime	2	1	2	3	21	F _o
dinitrophenylhydrazine	2	4	4	Special Hazard - See Appendix B		
diphenylamine	3	1	2	12	5	E _o
s-diphenyl carbizone	2	1	2	3	8	G _o
eosin B	2	1	1	2	4b	F _o
eosin Y (ph 0.0-3.0)	2	1	1	2	4b	F _o
eriochrome black	2	1	1	2	21	F _o
ethyl acetate	2	4	1	10	18	G _o (flammable)
ethyl alcohol	1	2	1	10	18	G _o (flammable)
ethylamine	3	3	3	12	7	E _o (flammable)
ethyl bromide	2	1	1	11	4b	G _o (flammable)
ethyl butyrate	2	2	1	10	18	G _o (flammable)
ethyl carbamate	2	1	1	3	18	E _o
ethylenediamine	3	3	2	12	7	E _o
ethylene dichloride	2	3	1	11	4b	G _o (flammable)
ethylene glycol (reagent)	2	1	1	2	18	G _o
ethylenedinitrilotetracetic acid (EDTA)	2	1	1	2	21	G _o
ethyl iodide	2	2	1	11	4b	G _o
Fehling alkaline No. 1	2	1	1	1	21	D _{1/L}
Fehling alkaline No. 2	2	1	1	1	21	D _{1/L}
ferric ammonium citrate	1	1	2	2	21	F _o
ferric ammonium sulfate	2	1	1	2	11	D _{1/s}
ferric chloride	2	1	1	2	11	D _{1/s}
ferric nitrate	2	2	2	4	12a	B ₁
ferric oxide	1	1	1	2	21	D _{1/s}
ferric sulfate	1	1	1	2	21	D _{1/s}
ferrous ammonium chloride	1	1	1	2	11	D _{1/s}
ferrous ammonium sulfate	1	1	1	2	11	D _{1/s}
ferrous ammonium sulfite	1	1	1	8	12b	D _{1/s}
ferrous chloride	2	1	1	2	11	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
ferrous sulfate	2	1	1	2	11	D _{1/s}
ferrous sulfide	1	1	2	2	23	D _{1/s}
ferrous sulfite	2	1	2	8	12b	D _{1/s}
fluorescein (free acid)	2	1	1	2	21	F _o
formalin (conc.)	3	1	3	13	2	G _o (flammable)
formic acid	2	2	2	1	24a	G _o
fructose	1	1	1	2	21	F _o
fuchsin (acid)	2	1	1	2	21	G _o
fumaric acid	1	1	1	2	24a	G _o
gelatin	1	1	1	2	21	F _o
geraniol	1	1	1	2	18	G _o
glibberellic acid	1	1	1	2	24a	G _o
glycerin jelly	1	1	1	2	24a	G _o
glycerol	1	1	1	2	18	G _o
gold chloride	2	1	1	2	return for salvage	D _{1/s}
graphite (powder)	1	1	1	2	21	D _{1/s}
heptane	2	4	1	10	18	G _o (flammable)
hexane	2	4	1	10	18	G _o (flammable)
1,6-hexanediamine	2	2	2	12	7	E _o
hydriodic acid	2	1	3	7	24b	A ₁ (acid)
hydrobromic acid	2	1	3	14	24b	A ₁ (acid)
hydrochloric acid (4%)	2	1	2	1	24b	A ₁ (acid)
hydrochloric acid (4%-24%) (N-6N)	3	1	3	7	24b	A ₁ (acid)
hydrofluoric acid	4	1	4	Special Hazard - See Appendix B		
hydrogen peroxide 3%	1	1	1	1	22a	B ₁
hydrogen peroxide 30%	4	1	4	16	22a	B ₁
hydrogen sulfide	3	3	2	14	GC	I (gas cylinder)
hydroquinone	2	1	2	13	18	G _o
indigo carmine	2	1	1	2	4c	F _o
3-indoleacetic acid	1	1	2	2	4c	G _o
iodine	2	1	2	4	12a	B ₁
iodine solution (1N)	2	1	1	1	12a	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
ion exchange resins	1	1	1	2	21	F _o
iron metal	1	1	1	2	21	D _{1/s}
iron pyrites	1	1	2	2	21	D _{1/s}
iron sulfide	1	1	2	2	23	D _{1/s}
isobutyl alcohol	2	2	1	10	18	G _o (flammable)
isopropyl alcohol	2	2	1	10	18	G _o (flammable)
kaolin	1	1	1	2	21	D _{1/s}
kerosene	2	2	1	10	18	G _o
lactic acid	1	1	1	2	24a	G _o
lactose	1	1	1	2	21	F _o
Lanolin (anhydrous)	1	1	1	2	21	F _o
lanthanum nitrate	3	2	3	4	12a	B ₁
lauric acid	1	1	1	2	24a	G _o
lauroyl peroxide	3	3	3	Special Hazard - See Appendix B		
lead arsenate	2	1	1	16	27d	D _{1/s} (poison)
lead carbonate	2	1	1	16	27f	D _{1/s} (poison)
lead chloride	2	1	1	16	27f	D _{1/s} (poison)
lead chromate	2	1	1	16	27f	D _{1/s} (poison)
lead dioxide	2	1	1	16	27f/12a	B ₁
lead metal	2	1	1	16	27a	D _{1/s}
lead nitrate	2	2	3	16	27f/12a	B ₁ (poison)
lead oxide (red)	2	1	1	16	27f	D _{1/s} (poison)
lead oxide (yellow)	2	1	1	16	27f	D _{1/s} (poison)
lead sulfide	2	1	1	16	27f	D _{1/s} (poison)
limewater (tablets)	1	1	1	2	21	D _{1/s}
lithium acetate	2	1	1	2	11	F _o
lithium aluminum hydride	3	1	3	Special Hazard - See Appendix B		
lithium chloride	2	1	1	2	11	D _{1/s}
lithium fluoride	3	1	1	3	1b	D _{1/s}
lithium hydroxide	4	1	3	6	10	D _{1/s}
lithium nitrate	2	2	2	4	12a	B ₁
litmus granular blue	1	1	1	2	21	F _o
Lugol's iodine	2	1	1	1	21	D _{1/s}
lycopodium powder inert	1	1	1	2	21	F _o
magnesia mixture	1	1	1	2	21	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
magnesium bromide	2	1	1	2	11	D _{l/s}
magnesium carbonate	1	1	1	2	21	D _{l/s}
magnesium chloride	1	1	1	2	11	D _{l/s}
magnesium hydroxide	1	1	1	2	21	D _{l/s}
magnesium hypophosphite	2	1	2	5	11	D _{l/s}
magnesium metal (purified powder)	1	3	3	9	3	C ₁
magnesium metal (purified ribbon)	1	2	2	9	3	C ₁
magnesium rods	1	2	2	9	27a	D _{l/s}
magnesium sulphate	1	1	1	2	21	D _{l/s}
malachite green	1	1	1	2	6	F _o
maleic acid	2	1	1	2	21	G _o
maleic anhydride	2	1	2	2	21	F _o
maltose	1	1	1	2	21	F _o
manganese carbonate	2	1	1	2	11	D _{l/s}
manganese dioxide	2	2	2	4	12a	B ₁
manganese metal (dust)	2	2	1	9	27a	D _{l/s}
manganese sulfate	1	1	1	2	11	D _{l/s}
mannose (dl)	1	1	1	2	21	F _o
marble chips	1	1	1	2	21	D _{l/s}
menthol	2	1	1	2	18	F _o
mercuric chloride	3	1	1	16	27b	D _{l/s} (poison)
mercuric iodide	3	1	1	16	27b	D _{l/s} (poison)
mercuric nitrate	3	3	3	16	27b/12a	B ₁
mercuric oxide	3	1	1	16	27b	B _{l/s} (poison)
mercuric sulfate	3	1	1	16	27b	D _{l/s} (poison)
mercuric sulfide	2	1	1	16	27b	D _{l/s} (poison)
mercurous chloride	2	1	1	16	27b	D _{l/s} (poison)
mercurous nitrate	3	3	3	16	27b	B ₁ (poison)
mercury chloride	3	1	1	16	27b	D _{l/s} (poison)
mercury iodide	3	1	1	16	27b	D _{l/s} (poison)
mercury metal	3	1	1	16	27b	D _{l/s}
mercury nitrate	3	1	1	16	27b/12a	B ₁ (poison)

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
mercury oxide	3	1	1	16	27b	B _{1/5} (poison)
methanol	3	3	1	10	18	G ₀ (flammable)
2-methyl amino phenol sulfate	3	1	1	2	5	F ₀
methyl cellulose	1	1	1	2	21	F ₀
methyl ethyl ketone	2	2	1	10	18	G ₀ (flammable)
methyl methacrylate	2	2	2	10	18	G ₀ (flammable)
methyl orange	2	1	1	2	21	F ₀
methyl p-hydroxybenzoate	2	1	1	2	18	G ₀
2-methyl propanol	2	2	1	10	18	G ₀ (flammable)
methyl red	2	1	1	2	21	G ₀
methyl red hydrochloride	2	1	1	2	21	G ₀
methyl salicylate	3	1	1	10	18	G ₀
methyl violet B-2	2	1	1	2	5	F ₀
monochlorodifluoromethane	1	1	1	11	GC	I (gas cylinder)
naphthalene (tech)	2	1	1	2	18	F ₀
nickel metal (shot)	2	1	1	2	27a	D _{1/5}
nickelous acetate	2	1	1	3	11	F ₀
nickelous ammonium sulfate	2	1	1	3	11	D _{1/5}
nickelous carbonate	2	1	1	6	11	D _{1/5}
nickelous chloride	2	1	1	3	11	D _{1/5}
nickelous nitrate	2	2	3	4	12a	B ₁
nickelous sulfate	2	1	1	3	11	D _{1/5}
nigrosine (water soluble)	2	1	1	1	11	F ₀
ninhydrin (TLC reagent)	2	1	1	2	18	G ₀
nitric acid (concentrated)	4	3	4	7	24b	A ₁ (acid-sep.)
nitric acid (dilutes; less than 1%)	3	1	2	1	24b	A ₁ (acid)
nitrophenylazoresorcinol	3	1	1	3	8	F ₀
octyl acetate	2	1	1	2	18	F ₀
oleic acid	1	1	1	2	24a	G ₀
olive oil	1	1	1	2	18	G ₀
orange IV	2	1	1	2	21	F ₀
oxalic acid	3	1	1	16	24a	G ₀
palmitic acid	1	1	1	2	21	G ₀
palm oil	1	1	1	2	21	G ₀

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
pancreatin (powder)	1	1	1	2	21	F _o
paraformaldehyde	2	3	2	3	2	G _o
paraffin	1	2	1	2	18	F _o
pentane (normal)	2	4	1	10	18	G _o (flammable)
pentyl alcohol	2	3	1	10	18	G _o (flammable)
pepsin	1	1	1	2	21	F _o
peptone	1	1	1	2	21	F _o
perchloric acid	4	4	4	Special Hazard - See Appendix B		
permutit	2	1	1	2	21	F _o
petroleum ether	2	4	1	10	18	G _o (flammable)
petroleum jelly	1	1	1	2	21	F _o
petrolatum	1	1	1	2	21	F _o
phenolindophenol	2	1	1	3	18	G _o
phenolphthalein	2	1	1	2	21	F _o
phenol	4	2	2	3	18	G _o
phenyl benzoate	3	1	1	2	18	G _o
phenylhydrazine hydrochloride	2	2	3	5	16	F _o
phenylthiocarbamide	2	1	1	16	14	J
phenyl salicylate	2	1	1	2	18	F _o
1-phenyl-2-thiourea (MP 153-155°)	2	1	1	16	14	J
phosphoric acid (concentrated)	3	3	4	7	24b	A ₁ (acid cabinet)
phosphorous amorphous (red)	2	1	1	16	27c	C ₁
phosphorous (purified, yellow)	4	4	4	Special Hazard - See Appendix B		
phosphorous pentoxide	4	4	4	Special Hazard - See Appendix B		
phosphorus trichloride	3	1	2	Special Hazard - See Appendix B		
phthalic acid	2	1	1	2	24a	G _o
phthalic anhydride	2	1	1	8	24a	G _o
picric acid	2	3	4	Special Hazard - See Appendix B		
potassium acetate	1	1	1	2	21	F _o
potassium bicarbonate	1	1	1	2	21	D _{1/s}
potassium bichromate	2	2	2	4	12a	B ₁
potassium bisulfate	2	1	2	7	21	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
potassium bisulfite	2	1	2	7	11	D _{1/s}
potassium bitartrate	1	1	1	2	21	F _o
potassium binoxalate	2	1	1	2	18	F _o
potassium bromate	2	2	2	4	12a	B ₁
potassium bromide	2	1	1	2	1b	D _{1/s}
potassium carbonate	1	1	1	6	11	D _{1/s}
potassium chlorate	2	4	4	16	12a	B ₁
potassium chloride	1	1	1	2	21	D _{1/s}
potassium chromate	2	4	4	4	11	D _{1/s}
potassium dichromate	2	2	2	4	12a	B ₁
potassium dihydrogen orthophosphate	1	1	1	2	21	D _{1/s}
potassium ferricyanide	2	1	1	2	11	J
potassium hydrogen carbonate	1	1	1	2	21	D _{1/s}
potassium hydrogen phthalate	1	2	1	2	21	F _o
potassium hydride	2	1	1	16	17	G ₁
potassium tartrate	1	1	1	2	21	F _o
potassium hydroxide (concentrated)	4	1	4	16	10	D _{1/s}
potassium iodate	2	2	2	4	12a	B ₁
potassium iodide	2	1	1	2	1b	D _{1/s}
potassium metal	4	4	4	Special Hazard - See Appendix B		
potassium nitrate	1	2	3	4	12a	B ₁
potassium nitrite	2	2	2	4	12a	B ₁
potassium oxalate	3	1	2	2	18	F _o
potassium perchlorate	3	3	4	16	12a	B ₁
potassium periodate	3	3	3	4	12a	B ₁
potassium permanganate	2	3	3	4	12a	B ₁
potassium phosphate (monobasic)	1	1	1	2	21	D _{1/s}
potassium phosphate (tribasic)	1	1	1	2	21	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
potassium sodium tartrate	1	1	1	2	21	F _o
potassium sulfate	1	1	1	2	21	D _{1/s}
potassium sulfide	2	1	2	16	23	D _{1/s}
potassium sulfite	2	1	2	6	12b	D _{1/s}
potassium thiocyanate	2	1	2	2	14	J
potato dextrose agar	1	1	1	2	21	F _o
propanol	2	3	1	10	18	G _o (flammable)
propionic acid	2	2	1	7	24a	G _o
n-propyl alcohol	2	3	1	10	18	G _o (flammable)
propylene glycol	1	1	1	2	18	G _o
pyridine	2	3	2	12	5	E _o
pyrogallol	2	1	1	3	18	F _o
quinine sulfate	2	1	1	2	5	F _o
resorcinol	2	1	1	3	18	F _o
Ringer's solution	1	1	1	1	21	D _{1/L}
Rose's alloy	1	1	1	3	21	D _{1/s}
rose Bengal (biological stain)	2	1	1	2	6	F _o
rose water	1	1	1	1	21	D _{1/L}
rosin	1	1	1	2	21	G _o
safranin – O (reddish)	2	1	1	2	21	F _o
salicylic acid	2	1	1	10	24a	G _o
saline solution	1	1	1	1	21	D _{1/L}
sand	1	1	1	2	21	D _{1/s}
Schiff's aldehyde	2	1	1	2	2	G _o
sebacyl chloride	1	1	1	2	1a	G _o
silica gel	1	1	1	2	21	D _{1/s}
silicic acid	1	1	1	2	21	D _{1/s}
silicon dioxide	1	1	1	2	21	D _{1/s}
silicon metal	1	1	1	2	21	D _{1/s}
silver acetate	2	1	1	4	12a	H _o (poison)
silver nitrate	2	2	3	4	12a	B ₁
silver oxide	2	1	1	4	12a	B ₁
silver sulfate	2	1	1	2	11	D _{1/s} (poison)
soap, castile (powder)	1	1	1	2	21	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
soap solution (wanklyn's)	2	1	1	2	21	D _{1/s}
soda lime	4	1	2	6	10	D _{1/s}
sodium acetate	1	1	1	2	21	F _o
sodium alkylaryl sulphonate	2	1	1	2	21	G _o
sodium arsenite	2	1	1	16	27d	D _{1/s} (poison)
sodium bicarbonate	1	1	1	2	11	D _{1/s}
sodium binoxalate	3	1	1	2	18	F _o
sodium bismuthate	2	1	1	2	11	D _{1/s}
sodium bisulfite	2	1	2	6	12b	D _{1/s}
sodium borate	2	1	1	2	21	D _{1/s}
sodium bromate	2	3	3	4	12a	B ₁
sodium carbonate	2	1	2	6	11	D _{1/s}
sodium chlorate	3	3	3	16	12a	B ₁
sodium chloride	1	1	1	2	11	D _{1/s}
sodium chromate	2	2	2	4	11	D _{1/s}
sodium citrate	1	1	1	2	21	D _{1/s}
sodium cobaltinitrite	2	1	1	4	12a	B ₁
sodium formate	2	1	1	5	12b	F _o
sodium hydrogen sulfate	2	1	2	2	11	D _{1/s}
sodium hydroxide (concentrated)	4	1	4	16	10	D _{1/s} -D _{1/s}
sodium hypochlorite	2	3	3	4	12a	B ₁
sodium iodide	2	1	1	2	11	D _{1/s}
sodium metabisulfite	1	1	2	6	12b	D _{1/s}
sodium metal	3	4	4	Special Hazard - See Appendix B		
sodium metasilicate	4	1	2	16	11	D _{1/s}
sodium nitrate	1	2	3	4	12a	B ₁
sodium oleate	1	1	1	2	21	F _o
sodium orthophosphate	1	1	1	2	21	D _{1/s}
sodium peroxide	3	3	3	4	22a	B ₁
sodium phosphate (mono)	1	1	1	2	21	D _{1/s}
sodium phosphate (dibasic)	1	1	1	2	21	D _{1/s}
sodium phosphate (tribasic)	2	1	1	2	21	D _{1/s}
sodium propionate	1	1	1	2	21	F _o
sodium pyrophosphate	1	1	1	3	11	D _{1/s}

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
sodium silicate	1	1	1	1	11	D _{1/s}
sodium sulfate	1	1	1	2	21	D _{1/s}
sodium sulfide	2	1	2	6	23	D _{1/s}
sodium sulfite	2	1	2	6	12b	D _{1/s}
sodium tartrate	1	1	1	2	21	F ₀
sodium thiosulfate	1	1	1	2	12b	D _{1/s}
stannic chloride	2	1	1	8	1b	D _{1/s}
stannic oxide	2	1	1	2	21	D _{1/s}
stannic sulfate	2	1	1	2	11	D _{1/s}
stannous chloride	2	1	1	2	12b	D _{1/s}
stannous oxide	2	1	1	2	21	D _{1/s}
stannous sulphate	2	1	1	2	11	D _{1/s}
starch (arrow root substance)	1	1	1	2	21	F ₀
starch corn	1	1	1	2	21	F ₀
starch, potato	1	1	1	2	21	F ₀
stearic acid	1	1	1	2	21	G ₀
streptomycin sulfate	2	1	1	2	21	F ₀
strontium chloride	1	1	1	2	27h	D _{1/s}
strontium nitrate	1	2	3	4	27h	B ₁
succinic acid	1	1	1	2	21	G ₀
sucrose	1	1	1	2	21	F ₀
sudan III	2	1	1	2	21	F ₀
sudan IV	2	1	1	2	21	F ₀
sulfamic acid	2	1	1	2	19	A ₁
sulfanilic acid	2	1	1	2	24a	G ₀
sulfur (lumps)	1	1	1	2	21	D _{1/s}
sulfur (sublimed flowers)	1	1	1	2	21	D _{1/s}
sulfuric acid (concentrated)	4	1	4	16	24b	A ₁ (acid cabinet)
talcum (lab powder)	1	1	1	2	21	D _{1/s}
tannic acid	2	1	1	2	24a	G ₀
tartaric acid	1	1	1	2	24a	G ₀
thioacetamide	2	1	2	3	13	E ₀
thiourea	2	1	1	3	13	E ₀

Chemical	Toxicity and/or Corrosivity	Flammability	Explosivity	Disposal	Spill Clean-Up	Storage Group
tin metal	1	1	1	2	27a	D _{1/s}
tincture green soap	1	1	1	2	21	D _{1/L}
titan yellow	2	1	1	2	21	F ₀
titanium dioxide	1	1	1	2	21	D _{1/s}
titanium tetrachloride	3	1	3	8	1b	D _{1/L}
toluene	2	3	1	10	18	G ₀ (flammable)
trichlorotrifluoroethane	1	1	1	11	4b	G ₀
1,1,2-trichloro-1,2,2 trifluoroethane	1	1	1	11	4b	G ₀
1,1,1-trichloro-2 methyl-2-propanol	2	1	1	11	4b	G ₀
trichlorotributyl alcohol	2	2	2	11	4b	G ₀ (flammable)
triethanolamine	1	1	1	12	7	E ₀
tungsten metal	1	1	1	2	21	D _{1/s}
tungstic acid	2	1	1	2	21	A ₁
turpentine oil (rectified)	2	2	1	10	18	G ₀ (flammable)
turpentine (pure gum spirits)	2	2	1	10	18	G ₀
universal indicator solution	2	1	1	1	21	G ₀
uracil (MP 335°)	1	1	1	2	5	E ₀
urea	1	1	1	2	21	E ₀
vanadium metal	1	1	1	16	27i	D _{1/s}
vanadium pentoxide	2	1	1	16	27i	D _{1/s}
wood's metal (reagent stick)	1	1	1	2	21	D _{1/s}
Wright's stain	2	1	1	2	21	F ₀
xylene	2	2	1	10	18	G ₀ (flammable)
yeast	1	1	1	2	21	F ₀
zeolite	1	1	1	2	21	D _{1/s}
zinc acetate	1	1	1	2	21	F ₀
zinc carbonate	1	1	1	2	11	D _{1/s}
zinc chloride	2	1	1	2	11	D _{1/s}
zinc metal (powder)	1	2	1	2	27a	D _{1/s}
zinc nitrate	1	2	3	4	12a	B ₁
zinc oxide	1	1	1	2	21	D _{1/s}
zinc stearate	1	1	1	2	21	F ₀
zinc sulfate	2	1	1	2	11	D _{1/s}
zinc sulfide	2	1	1	2	23	D _{1/s}

In the event that any particular substance is not described, the following references should be consulted to obtain more information:

National Institute for Occupational Health and Safety. 1984. School Science laboratories. A Guide to some Hazardous Substances. Prepared by the Council of State Science Supervisors, U.S. Consumer Product Safety Commission, Washington, D.C. 59 pages.

Armour, M. A., Brown, L. M., and G. L. Weir. 1984. Hazardous Chemicals Information and Disposal Guide (2nd ed.) Department of Chemistry, University of Alberta, Edmonton, Alberta. 287 pages.

Environmental Protection Service, Unpublished Report, Technical Manual for the Management of Chemical Wastes in Laboratories. Industrial Programs Branch, EPS, Environment Canada, Ottawa, Ontario. 325 pages.

Hawley, G. G., 1981. The Condensed Chemical Dictionary (10th ed.) Van Nostrand Reinhold Company, Toronto, Ontario.

Sax, N. I., 1979. Dangerous Properties of Industrial Materials (5th ed.) Van Nostrand Reinhold Company, Toronto, Ontario.

Key to Schedule "A" to Bylaw No. 48 of 2015

Hazard Ratings

Toxicity and corrosivity

- (4) = Extremely dangerous
- (3) = Dangerous
- (2) = Caution
- (1) = Minimal hazard

Flammability

- (4) = Extremely dangerous
- (3) = Dangerous
- (2) = Caution
- (1) = Non-flammable

Explosivity

- (4) = Extremely dangerous
- (3) = Dangerous
- (2) = Caution
- (1) = Minimal hazard

Disposal Classifications

In addition to the other categories, a column has been placed in the list which indicates 16 preferred types of disposal for the chemical. Chemicals for disposal should be segregated according to the categories listed below and chemicals in categories one and two may be disposed of directly by the user.

Disposal Segregation Categories

1. Chemicals that may be disposed of in small quantities (less than 1 pint or 500 grams at any one time) by dilution with copious quantities of water into a municipal sanitary sewage system. (Please note that a septic tank should not be used.) Check to ensure that local by-laws do not prohibit this practice.
2. Chemicals that are considered to present negligible hazard and may be treated as normal refuse.

Storage Segregation Categories

(Each chemical in categories 3 to 13 is to be kept in its respective container provided the container is intact.)

Otherwise, the defective container must be emptied into or packaged in a second container before being segregated for storage.)

3. Non-reactive chemicals.
4. Strong oxidizing agents.
5. Strong reducing agents.
6. Bases (caustic).
7. Acids.
8. Water reactive chemicals which are acid producing.
9. Water reactive chemicals which are base producing.
10. Non-reactive solvents.
11. Halogenated hydrocarbons.
12. Amines.
13. Organic acids and aldehydes.
14. Gas cylinders. (These are to be returned to the manufacturer. If they are refused by the manufacturer, the Provincial Ministry of the Environment should be contacted).
15. PCB's. (Environment Canada should be contacted).
16. Special disposal procedure. (Consult Provincial Ministry for the Environment for instructions).

Spill Cleanup

<u>Category</u>	<u>Personal Protection</u>	<u>Spill Cleanup Actions</u>
1a Organic Acid Halides	Rubber gloves, self-contained breathing apparatus or fume hood,	Cover with excess sodium bicarbonate. If a small quantity is involved, scoop the mixture into a large beaker of water and let stand for a few minutes. Slowly pour into the drain with copious amounts of water. If a large quantity is involved scoop the resulting bicarbonate mixture into a plastic bag, cardboard box or small fiber drum. This material can then be burned in an incinerator or spread on the ground and flooded with water. The site of the spill should be washed with soapy water.
1b Inorganic Halides	lab coat	
2 Aldehydes	Rubber gloves, self-contained breathing apparatus, laboratory coat.	Eliminate all sources of ignition and flammables. Small – Absorb on paper towel. Evaporate in fume hood and burn the paper. Large – Cover with sodium bisulfite (NaHSO_3). Add small amount of water and mix. Scoop into large beaker. After one hour wash down the drain with a large excess of water. Wash site with soap solution.
3 Alkali and Alkaline Earth Metals Metal Alkyls and Alkoxides	Leather gloves, large face shield, laboratory coat. (Class D fire extinguisher should be available)	Small – Cover with excess dry soda ash. Mix and add slowly to butyl alcohol. Note the evolution of highly flammable hydrogen gas. After 24 hours dilute the strongly basic mixture and add to drain with large excess of water. OR Large Spill – Mix with dry soda ash. Scoop into a dry bucket. In a remote area spread onto a large iron pan. Cover with scrap wood, paper and ignite with an excelsior train.
4b Organic Halogen and Related Compounds	Rubber gloves, self-contained breathing apparatus, laboratory coat.	Eliminate all sources of ignition. Absorb on paper towels or with vermiculite. Place on an iron, glass or plastic dish in a hood. Allow to evaporate. Burn the paper or vermiculite. Wash site with soap solution.

Spill Cleanup

<u>Category</u>	<u>Personal Protection</u>	<u>Spill Cleanup Actions</u>
4c Substituted Organic Acids	Rubber gloves, self-contained breathing apparatus or all-purpose canister respirator, laboratory coat.	Eliminate all sources of ignition. Turn on the fume hood if acid is volatile. Cover the spill on bench and floor with excess sodium bicarbonate and vermiculite. Mix and scoop into a large beaker of water. When reaction is complete, pour down the drain with a large excess of water. Wash site with soap solution.
5 Aromatic Amines	Butyl rubber gloves, plastic laboratory coat, self-contained breathing apparatus.	On skin and clothing – Wash skin with strong soap solution immediately. Rinse thoroughly. Contaminated clothing should be removed, dried, and washed with strong soap solution – or destroyed. It may be necessary to destroy shoes by burning. Small spills – Absorb liquids on paper towels. Brush solids onto paper. Place in an iron pan and allow evaporation in the fume hood. Add crumpled paper and burn. Wash site with strong soap solution. Large spills – Cover large spills with sand and soda ash mixture (90-10). Mix and shovel into a cardboard box. Pack with much excess crumpled paper. Burn in an open pit or in an incinerator with afterburns and scrubber.
6 Aromatic Halogenated Acids and Nitro Compounds	Butyl rubber gloves, protective laboratory coat, self-contained breathing apparatus, protective shoes.	On skin – Wash with strong soap solution immediately. Rinse well. Contaminated gloves clothing, shoes – Remove and clean at once or destroy by burning.

- 6 Aromatic Halogenated Acids and Nitro Compounds (continued)

Small spills on tables or floor – Absorb liquid spills on paper towels or vermiculite; sweep solid spills onto paper. Put on an iron pan in the fume hood and allow to evaporate. Burn the paper or vermiculite in the absence of other flammables. Wash the site thoroughly with strong soap solution.

Special Note: Certain aromatic nitro compounds, such as picric acid, dinitro's and trinitro's etc.; are explosive and shock sensitive. Contact authorities for further information before dealing with spills involving these compounds.

- 7 Aliphatic Amines Butyl rubber gloves, face shield or all-purpose canister respirator, laboratory coat. Liquid or solid – Cover with sodium bisulfate. Spray with water and wash into drain with large excess of water.

- 8 Azides and Azo Compounds Leather gloves, heavy face shield, laboratory coat. Work from behind a barricade (body shield or wall). Avoid unnecessary heat, friction or impact. Absorb the liquid on paper or with vermiculite. If it is a solid, dampen and brush onto paper with great care. Place in plastic bag and take outside for burning.
OR
Sponge up with water, followed by decontamination with a 10% ceric ammonium nitrate solution or 20% sodium nitrite solution.

Special Note: The organic azides and heavy metal azides are explosive. Alkali and alkaline earth azides are not considered explosive under normal laboratory conditions.

Keep stock of all azides very low. Stamp date and receipt on package.

- 9 Carbon Disulfide Rubber gloves, safety glasses, laboratory coat. If hood is not available wear self-contained breathing apparatus. Carbon dioxide fire extinguisher should be available. Eliminate flammables and all sources of ignition. Allow to evaporate or absorb with paper towels and evaporate in hood on an iron pan or glass dish. Burn the paper.

10 Caustic Alkali and Ammonia
Rubber gloves, large face shield (wear all-purpose or special canister respirator for NH_3^*), Laboratory coat.

Solid – Sweep up, dilute and neutralize with 6M-HCl in a large bucket. Wash down drain with large excess of water.
Solution – Neutralize and mop up – or use water-vac. Discharge to sewer with large excess of water.

11 Inorganic Salts
Rubber gloves, safety glasses, laboratory coat.

1. Solutions – Cover with soda ash, mix and scoop into a beaker of water. Neutralize with 6M-HCl and wash down drain with excess water.

2. Solids – Collect in a beaker. Dissolve in large amount of water. Add soda ash, mix and treat as above.

If spill contains a fluoride, add slaked lime in addition to the above treatment.

12a Oxidizing Agents
Rubber gloves, face shield, laboratory coat. Body shield should be available for the more active agents. Replace face shield with self-contained breathing apparatus for such agents as chlorine and bromine.

1. Gas leak: If the valve is leaking because it cannot be closed (a common occurrence), the gas can be bubbled through a reducer (sodium sulfite) and excess sodium bicarbonate solution. Be sure to include a trap in the line to prevent the solution being sucked back into the cylinder. If this cannot be done, the cylinder should be placed in or adjacent to a fume hood and left to bleed off.

For fluorine gas do not use a solution. Use a scrubber filled with solid bicarbonate, soda lime or granulated charcoal.

2. If the oxidizer is a liquid or a solid – Cover with a reducer (hyppo, a bisulfite, or a ferrous salt but not carbon, sulfur or strong reducing agents). Mix well and spray with water. A sulfite or a ferrous salt will require addition of some 3M- H_2SO_4 to promote rapid reduction. Scoop slurry into a container of water and neutralize with soda ash. Wash down the drain with excess water. Wash site thoroughly with a soap solution containing some reducer.

12b Reducing Substances
Rubber gloves, safety glasses, laboratory coat. Work in hood or wear a respirator.

Gas leak: Eliminate all sources of ignition. If the valve is leaking because it cannot be closed, the gas can be bubbled through a calcium hypochlorite solution. Be sure to include a trap in the line to prevent the solution being sucked back into the cylinder.

Solid: Cover spill with soda ash or sodium bicarbonate. Mix and spray with water. If effervescent wait until reaction is complete. Scoop into a large beaker and cautiously add equal volume of calcium hypochlorite (reaction may be vigorous). Add more water, stir, and allow to stand for one hour. Dilute and neutralize the oxidizing solution with 6M-HCl or 6M-NH₄OH as necessary and transfer to the drain with excess of water.

13 Mercaptans and Organic Sulfides
Rubber gloves, self-contained breathing apparatus, laboratory coat.

Eliminate all sources of ignition. Cover with weak aqueous solution of calcium hypochlorite (up to 15%) with stirring. (Sodium hypochlorite available in 5% concentrations as household bleach is also suitable.) Scoop into a large beaker. After 12 hours, neutralize with 6M-HCl or 6M-NH₄OH as necessary. Wash to sewer with excess water. Wash site of spill with strong soap solution to which some hypochlorite has been added.

WARNING!

Use of dry hypochlorite may cause violent reaction or flash fire.

14 Cyanides
Long rubber gloves, self-contained breathing apparatus, laboratory apron or coat.

Scoop into a large beaker and make alkaline with sodium hydroxide solution. Add to the slurry an excess of ferrous sulfate solution. After one hour, flush down the drain with excess water.

Evacuate the laboratory and isolate the area during decontamination.

15 Ethers
Rubber gloves, large heavy face shield (if in doubt use body shield also). Self-contained breathing apparatus.
Eliminate all sources of ignition and flammables. Adsorb on paper towel. Evaporate from an iron pan in a hood. Allow time for vapors to completely escape the hood vents, then burn the paper.

16 Hydrazines
Rubber gloves, self-contained breathing apparatus. Impervious clothing recommended. Body shield should be available.
Eliminate all sources of ignition and flammables.
1. On skin or clothing – Wash skin immediately. Remove contaminated clothing at once.

2. Deluge spill area with large quantities of water and flush the dilute mixture (below 40% hydrazine) to a catch basin for subsequent disposal.

17 Hydrides
Rubber gloves, fire proof clothing, face shield. Work from behind body shield where possible. Keep available pulverized dolomite or dry graphite for fire fighting.
Eliminate all sources of ignition. Scoop in dry plastic bag which has first been purged with an inert gas such as nitrogen. Remove to the outside for burning. Flood the burned residues with water to ensure complete destruction of hydrides. destruction of hydrides.

Eliminate all sources of ignition and flammables.

18 Hydrocarbons, Alcohols Ketones and Esters
Rubber gloves, face shield, laboratory coat. Have all-purpose canister mask available.
1. A gas leak from a faulty tank – Keep concentration of gas below the explosive mixture range by forced ventilation. Remove tank to an open area and allow dissipation to the atmosphere. Attempt to cap the valve outlet and return tank to the supplier.

2. A liquid – Absorb on paper. Evaporate on an iron pan in a hood. Burn the paper.

3. A solid – Sweep onto paper and place in an iron pan in the hood. Burn the paper and compound.

19 Inorganic Amides and Derivatives Rubber gloves, large face shield, protective laboratory coat. A large body shield should be available.

Eliminate all sources of ignition. Sweep up solid amide onto dry paper. Cautiously add to cold water in small portions with agitation. Neutralize with 6M-HCl or 6M-NH₄OH as necessary and discharge into drain with large excess of water.

20 Organic Amides Rubber gloves, safety glasses, laboratory coat.

Scoop into a plastic bag or onto a paper towel. Remove to the outside, add alcohol and burn in a safe place.

21 Miscellaneous Non Hazardous Substances Rubber gloves, safety glasses, laboratory coat.

1. Solutions – Recover with mop and dispose by discarding to sewer. Clean area with soap and water.

2. Solids – Collect in a beaker or on a tray and dispose as normal refuse. Clean area with soap and water.

22a Inorganic Peroxides Rubber gloves, large face shield, laboratory coat. A body shield should be available.

Cover with at least double volume of sand-soda ash mixture (90%-10%). Mix thoroughly and break up any lumps of peroxide. With a plastic scoop add slowly to a large beaker of sodium sulfite solution (3 or 4 litres) with stirring. Neutralize with dilute sulfuric acid. When settled decant the sulfate solution into drain with excess water. The sand can be sent to the landfill.

Hydrogen Peroxide (spill or package lots): Dilute and wash down drain with excess of water.

22b Organic Peroxides Rubber gloves, large heavy face shield, laboratory coat. Work from behind heavy body shield in hood.

Eliminate all sources of ignition.

1. Liquid peroxide spills may be absorbed in large quantity of vermiculite or sand. Using a soft plastic scoop, carefully place the mixture in a plastic container. Spread on a steel pan or in a deep pit. Ignite from a distance with an excelsior train or a long torch. Wash the scoop and container with 30% FeSO₄-H₂O. Burn the original cartons and bags.

22b Organic Peroxides
(continued)

2. Solid peroxide spills should be mixed with a large volume of vermiculite or sand. Carefully transfer as above and burn.
3. A very small quantity of #1 or #2 may be destroyed by adding 10 volumes of 20%NaOH. After 24 hours, neutralize with 6M-HCl and pass into drain with large excess of water.

CAUTION: Keep stock low and date each container as received. Never transfer to glass stoppered containers or screw cap bottles which can cause dangerous friction.

23 Inorganic Sulfides
Rubber gloves, safety glasses.
Work in hood or wear self-contained breathing apparatus, laboratory coat.

Eliminate all sources of ignition. Add FeCl₃ solution. Stir until FeS formation is complete. Add slight excess of soda ash. Scoop up and wash into drain with excess water. Wash site with soap solution.

OR

Absorb with vermiculite or sodium bicarbonate and scoop into plastic bag or wide-mouthed glass jar. Close tightly, remove to safe place outside and add FeCl₃ solution. Stir until reaction is complete. Add slight excess sodium bicarbonate and wash into drain with excess water.

24a Organic Acids

Rubber gloves, face shield, laboratory coat. Body shield and self-contained breathing apparatus should be available.

Eliminate all sources if ignition.

1. Cover contaminated surfaces with soda ash or sodium bicarbonate. Mix and add water if necessary. Scoop up slurry and wash neutral (6M-NH₄OH or 6M-HCl as required) waste down drain with excess water. Wash site with soda ash solution.

24b Inorganic Acids

Rubber gloves, self contained breathing apparatus, laboratory coat. Have body shield available.

1. Cover the contaminated surface with sodium bicarbonate or a soda ash – slaked lime mixture (50-50). Mix and add water if necessary to form a slurry. Scoop up slurry and wash down the drain with excess water. Wash site with soda ash solution.

25 Carbides

Rubber gloves, safety glasses, laboratory coat.

Cover with dry vermiculite, scoop into a dry bucket or plastic bag and transfer to a safe open area. Dispose of the material cautiously by adding it slowly to a large volume of water. Burn the hydrocarbon gas using a pilot burner. Allow to stand for 24 hours and run to sewer with excess water.

27a Scrap Metals

Heavy gloves, safety glasses, laboratory coat.

Recover and consign for salvage. Small quantities may be assigned to landfill.

27b Mercury

Rubber gloves, self-contained breathing apparatus, laboratory coat.

Metal – Collect all droplets and pools at once by means of a suction pump and aspirator bottle with a long capillary tube. Cover fine droplets in non-accessible cracks with calcium polysulfide and excess sulfur. Combine all contaminated mercury in a tightly stoppered bottle. Retain remnants and contact environmental authorities for advice regarding final disposal.

CAUTION: The toxicity of mercury is such that the element and its compounds should not be allowed to contaminate air or water.

27c Phosphorus Rubber gloves, large face shield.

White or yellow phosphorus.

Cover with wet sand. Spray with water to keep sand wet. Scoop into a bucket of water. After standing overnight, recover and repackage.

OR

If quantity is very small (e.g., fragments of sticks of yellow phosphorus), cover with water and remove to an open area. Pour onto the ground or a steel pan. The water will evaporate and dry yellow phosphorus will ignite spontaneously in air and burn away.

Red Phosphorus.

Sweep up and burn on an iron pan in the hood.

27d Arsenic, Antimony and Bismuth Rubber gloves, safety glasses, respirator, laboratory coat. Work in fume hood.

Recover solids by carefully sweeping up with small scoop. Recover liquids by absorbing with vermiculite. Retain remnants and consult environmental authorities for advice regarding final disposal.

27f Lead, Cadmium and Chromium Robber gloves, safety glasses, respirator or work in fume hood.

Recover solids by carefully sweeping up with a small scoop. Recover solutions by absorbing with vermiculite. Exercise extreme caution with nitrates. Retain remnants and consult environmental authorities for advice regarding final disposal.

27h Strontium and Barium Compounds Rubber gloves, safety glasses and laboratory coat.

Recover solids by carefully sweeping up with a small scoop. Recover solutions by absorbing with vermiculite. Exercise caution with nitrates and do not contaminate with organic materials. Retain remnants and consult environmental authorities for advice regarding final disposal.

271 Vanadium Compounds Rubber gloves, large face shield, laboratory coat. (Wear self-contained respirator if spill is large.)

Cover with powdered ammonium carbonate. Add a layer of crushed ice and spray with 6M-NH₄OH while stirring. Scoop slurry into a wide mouth bottle, save for salvage. Wash site with soap water.

Special Note: Disposal procedures for remnants of spills are not applicable to bulk chemicals. Consult the disposal column and pertinent explanations for disposal of bulk chemicals.

28 Collodion Rubber gloves, face shield and work
(Nitrocellulose outside or in fume hood.
Lacquer)

Eliminate sources of ignition. Absorb spilled material with paper towels or rags. Remove to an outside open area, spread on the ground and ignite with an excelsior train or a long torch. Avoid direct breathing of vapours.

Storage Category

In this storage system inorganic compounds are classified into the following compatible groups.

Class A₁

This category contains inorganic acids, excluding all inorganic acids capable of behaving as oxidizing agents (e.g., nitric acid (HNO₃), perchloric acid (HClO₄) and nitrous acid (HNO₂)) as well as cyanic acid. The common inorganic acids included in this section are: boric acid (H₃BO₃), carbonic acid (H₂CO₃), phosphoric acid (H₃PO₄), hydrochloric acid (HCl), hydrogen sulfide (H₂S), sulfuric acid (H₂SO₄), hydrobromic acid (HBr), and hydroiodic acid (HI).

Notes:

1. Nitric and nitrous acid should be further separated from the above binary and oxy acids.
2. Although a 70% perchloric acid/water mixture is not explosive by itself, the use of perchloric acid often leads to the formation of solid perchlorates which are very explosive. It is recommended this be removed from school laboratories.
3. Due to its toxic and explosive risks cyanic acid should be removed from school laboratories.

Class B₁

Inorganic salts capable of acting as oxidizing agents. Included in this section are inorganic nitrate/nitrite salts*, all inorganic oxidizers such as metal peroxides and potassium

*Further isolate ammonium nitrate/nitrite salts.

permanganate, concentrated halogen solution, chlorates, chlorites, perchlorates and hypochlorites.

Class C₁

Chemicals contained in this group are all air/or water sensitive chemicals including all alkali and alkaline metals, hydrides, carbides, aluminum chloride, phosphorous chloride, phosphorous pentoxide and elemental phosphorous. It is recommended elemental phosphorous be further separated from the alkali metals.

Class D₁

This section contains (except cyanides) all remaining inorganic salts, reducing agents, inorganic bases in both the solid and liquid state, elemental amalgam compounds and all non-water/air sensitive elements.* It is suggested, depending on storage space, that the inorganic bases be further separate from the remaining class D₁ compounds.

The organic chemicals are also further subdivided according to the following classifications.

Class EO

This classification covers all organic bases in both the solid and liquid state including amines, amides, alkoxides, aniline, carboxylate salts and/or solutions. It is further suggested, that with available storage space solids be separated from liquids.

* If carbon disulfide is necessary it should be placed in this category but kept cool and well sealed due to its low flashpoint (-30°C) and neurological toxin properties.

Class F₀

This category covers all organic solid compounds excluding organic acids, bases, oxidizers and cyanides. Included in this classification are metal acetates solid polyhydroxy aldehydes and ketones, solid esters, solid halogenated aliphatic, olefinic and aromatic compounds, solid organometallics*, high molecular weight alkanes, alkenes and alkynes, and solid aliphatic, olefinic and aromatic alcohols.

Class G₀

Included in this category are all organic solvents and organic acids with the exception of cyanides. This covers all liquid alkanes, alkenes and aromatic hydrocarbons, liquid aliphatic, olefinic and aromatic alcohols, all liquid halogenated hydrocarbons and all organic acids liquid or solid.

Class H₀

Included in this classification are all organic oxidizers. This section contains benzoyl peroxide which can explode spontaneously when dry. It is recommended that benzoyl peroxide be removed from the school laboratory if present.

Class I

This category includes all gas cylinders.

The following two classes contain cyanide/cyanate chemicals of organic and inorganic nature.

* It is recommended that any organometallic chemicals be removed from school laboratories because of their inherent reactivity.

Class J

This classification includes all organic and inorganic cyanide containing chemicals.

Class K

Included in this category are organic and inorganic isocyanates.

Schedule "B" to Bylaw No. 48 of 2015
City of Prince Albert Sewer Surcharge Reduction Program

C – 1 Application Form

City of Prince Albert Commercial and Industrial Water Consumers can apply for a reduction on the sewer surcharge. The reduction applies to the portion of water that is not discharged into the sanitary sewer system.

Application Procedure:

1. *Commercial and Industrial Water Consumers must send a letter to the City Manager, City of Prince Albert, stating that they wish to apply for a Sewer Surcharge Reduction. The letter must contain the Applicant's water account number and client number.*
2. *The City will send the Applicant a package that will:*
 - o *Acknowledge receipt of application letter*
 - o *Provide a copy of this Bylaw and Form*
3. *The Applicant then has nine months from receipt of original letter of application to submit the following to the City:*
 - o **Submission of Verification Report**
Consumers shall be required, at their sole expense, to submit to the City a verification report issued by an independent licensed professional engineer or accountant no later than nine months from the date of the application, setting out the consumer's water consuming processes and verification regarding the portion of water that is not discharged into the sanitary sewer system.

Note: The report may be prepared in any format, but must be sufficiently detailed to allow City staff to analyze discharge process.
 - o *A Sanitary Sewer Flow Differential Summary Form certified by a Professional Engineer or Accountant (attached Form to this Bylaw).*
4. *The City will notify the Applicant by mail if the application has been approved.*

Schedule "B" to Bylaw No. 48 of 2015
City of Prince Albert Sewer Surcharge Reduction Program

C – 2 Reduction on portion of surcharge on water rates for sewage services

The City shall, where a consumer has made a successful application under this Schedule, provide a reduction to the consumer in relation to the portion of the water that is not discharged by that consumer to the sanitary sewer system.

C – 3 Inspection of Premises by City

The City shall be entitled to conduct an inspection of the consumer's premises to verify any and all information in relation to the application submitted by the consumer.

C – 4 Verification of water consumption and sewage discharge

The City shall be entitled to request a verification of the water consumption and sewage discharge should the nature of a business change. Any failure to comply by the consumer with this requirement shall result in the revocation of any reduction granted to the consumer pursuant to this Schedule.

C – 5 Notification of change in sewage discharge

In the event of any change concerning sewage discharge in relation to the amount of water supplied, the consumer shall immediately notify the City Manager. Any failure to comply with this requirement shall entitle the City to revoke or suspend any reduction granted to the consumer and to require the consumer to pay the full surcharge from the time of the change.

C – 6 Effective date of reduction

No consumer shall be entitled to a reduction until such reduction is authorized by the City Manager in accordance with this Schedule. However, once authorized, the consumer shall be entitled to a reduction in their sewer surcharge effective the date the City Manager approves the application.

C – 7 No reduction for outstanding arrears

Any consumer who is in arrears with regard to payments for water rates or sewer surcharges shall not be entitled to any reduction so long as such arrears remain outstanding.

Schedule "B" to Bylaw No. 48 of 2015
City of Prince Albert Sewer Surcharge Reduction Program

C – 8 Sewer Surcharge Reduction Program

Water Consumption (cubic feet) on Water Bill

Multiplied by: Percentage Sanitary Contribution of Purchased Water

(box 4 on Sanitary Sewer Flow Differential Summary Spreadsheet)

4. <u>Percentage Sanitary Contribution of Purchased Water</u>
PER CENT = $\frac{\text{Sanitary Contribution (Box 3)}}{\text{Purchased Water (Box 1)}} \times 100 =$

Multiplied by: Sewer Consumption Rate as per the City's Water and Sewer Utility Rates and Fees Bylaw

Schedule "B" to Bylaw No. 48 of 2015
City of Prince Albert Sewer Surcharge Reduction Program

C – 9 Criteria for approval of applications

Applications shall be granted only if the amount of reduction in sewage discharged in relation to water supplied is in conformance with the following:

- A. For consumers with a total annual water consumption of up to and including 50,000 cubic feet, sewage flow must be more than 20% less than total annual water consumption; or*
- B. For consumers with a total annual water consumption between 50,000 cubic feet and up to and including 500,000 cubic feet, sewage flow must be more than 15% less than total annual water consumption; or*
- C. For consumers with a total annual water consumption between 500,000 cubic feet and up to and including 50,000,000 cubic feet, sewage flow must be more than 10% less than total annual water consumption; or*
- D. For consumers with a total annual water consumption of over 50,000,000 cubic feet, sewage flow must be more than 5% less than total annual water consumption.*

Sanitary Sewer Flow Differential Summary Spreadsheet:

To Qualify for a reduction, applicants must meet the following criteria:

- for consumers with total annual water consumption (Box 1) \leq 50,000 cubic ft
 - Sanitary Contribution (Box 4) must be \leq 80%
- for consumers with total annual water consumption (Box 1) $>$ 50,000 cubic ft and \leq 500,000 cubic ft
 - Sanitary Contribution (Box 4) must be \leq 85%
- for consumers with total annual water consumption (Box 1) $>$ 500,000 cubic ft and \leq 50,000,000 cubic ft
 - Sanitary Contribution (Box 4) must be \leq 90%
- for consumers with total annual water consumption (Box 1) $>$ 50,000,000 cubic feet
 - Sanitary Contribution (Box 4) must be \leq 95%

Schedule "B" to Bylaw No. 48 of 2015
City of Prince Albert Sewer Surcharge Reduction Program

Sanitary Sewer Flow Differential Guidelines and Definitions
Guidelines and Definitions

LOCATION:	Buildings must be located within the City of Prince Albert.
SOURCE:	The source from which the water associated with a function/process must be obtained by the City of Prince Albert's distribution system.
FUNCTION/PROCESS:	An activity associated with the operation of your company which consumes water.
QUANTIFICATION:	Quantification of your water consuming functions/processes is the basis of your report. Describe the function/process which uses the water and define the distribution of the water at the end of the function/process, stating the method by which the distribution was determined.
VOLUME:	Your report must deal with ANNUAL CONSUMPTION. Consumption must be expressed in cubic feet.
PRODUCTS:	Net water added to final goods produced by your company.
PROCESS:	Water consumed during a manufacturing or production process.



Building Owner: _____
 Building Address: _____
 Mailing Address: _____
 Contact Name & Title: _____
 Telephone Number: _____ Fax Number: _____
 Email Address: _____
 Annual Survey / Study Period: From: _____ To: _____
 Water Account No.: _____

1.	<u>Total Annual Water Sources</u>	<u>Annual Volume (Cubic Feet)</u>
	Municipal System (Purchased Water)	
	Other (Specify) _____	
	** Total Annual Water Consumption (water purchased)	
	Total Inflow =	_____

2.	<u>Distribution (to Non-Sanitary System Components)</u>	<u>Annual Volume (Cubic Feet)</u>
	Products	
	Process	
	Other (Specify) _____	
	** ex) water distributed/sold	
	Total Non-Sanitary Outflow =	_____

3.	<u>Sanitary Contribution</u>	<u>Annual Volume (Cubic Feet)</u>
	-	
	Contribution = Total Inflow (Box 1) - Total Non-Sanitary Outflow (Box 2)	= _____

4.	<u>Percentage Sanitary Contribution of Purchased Water</u>	
	$\text{PER CENT} = \frac{\text{Sanitary Contribution (Box 3)}}{\text{Purchased Water (Box 1)}} \times 100 =$	_____

5.	<u>Percentage of Water that is Not Discharged to Sanitary Sewer System</u>	
	$\text{PER CENT} = \frac{\text{Total Non-Sanitary Outflow (Box 2)}}{\text{Total Inflow (Box 1)}} \times 100 =$	_____

6.	<u>Professional Certification</u>	
	STUDY UNDERTAKEN BY (Print Name and Phone No.)	
	Name of Company: _____	
	Address: _____	
	THE ABOVE IS CERTIFIED AS BEING TRUE ANALYSIS OF THE WATER BALANCE OF THE ABOVE COMPANY.	
	_____ Signature	_____ Date
		_____ Professional Engineer/Accountant