THE CORPORATION OF THE TOWN OF GEORGINA
OF THE
REGIONAL MUNICIPALITY OF YORK

BY-LAW 2011-0044 (REG-1)

BEING A BY-LAW TO PROHIBIT OR REGULATE THE REMOVAL OF TOPSOIL, THE PLACING OR DUMPING OF FILL MATERIAL AND THE ALTERATION OF THE GRADE OF LAND IN ALL AREAS WITHIN THE TOWN OF GEORGINA

WHEREAS Section 142 of the *Municipal Act, 2001*, as amended authorizes the Council of The Corporation of the Town of Georgina to pass by-laws for prohibiting or regulating the *placing* or *dumping* of *fill* of any kind and for prohibiting or regulating the alteration of the *grade* of land in any defined area or areas within the Town of Georgina other than those areas subject to regulations made under Clause 28(1) of the *Conservation Authorities Act*, as amended;

AND WHEREAS *Council* deems it in the public interest to regulate the *dumping* and *placing* of *fill* and other *site alterations* in order to ensure that existing *drainage* patterns are maintained and that any changes to existing *drainage* patterns are appropriate to protect environmental features; to prevent the importation of hazardous material; and to keep the disturbance of landform characteristics to a minimum within all areas of the Town of Georgina other than those areas subject to regulations made under Clause 28(1) of the *Conservation Authorities Act*, as amended;

AND WHEREAS it is deemed necessary and advisable to repeal said By-law 91-139 (REG-1) together with any other by-laws or parts thereof inconsistent with the provision of this by-law;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWN OF GEORGINA ENACTS AS FOLLOWS:

PART 1 DEFINITIONS:

In this by-law:

1. "*AGRICULTURAL LANDS*" includes all lands that are used by a farming business registered under the *Farm Registration and Farm Organizations Funding Act, 1993, S.O. 1993, c.21,* as amended, for growing of crops, including nursery and horticultural crops; raising livestock; raising of other animals for food, fur, fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production;

2. "*BODY of WATER*" includes any body of flowing or standing water whether naturally or artificially created;

3. "*CLEARING* and/or *GRUBBING*" means the removal of all surface objects, brush, roots and other protruding obstructions, trees and stumps which result in the removal of *topsoil* or the alteration of *grade* of land;

4. "*CONSERVATION AUTHORITY*" means the Lake Simcoe Region Conservation Authority;

5. "*CORPORATION*" means The Corporation of the Town of Georgina;

6. "*DEVELOPMENT*" means the construction of buildings and above or underground services such as roads, parking lots, paved storage areas, watermains, storm and sanitary sewers, general grading works and similar facilities on any lands within the Municipality;

7. "*DIRECTOR*" means the Director of Engineering and Public Works of the *Corporation* and shall include any person authorized by the *Director* to carry out any of the powers or duties of the *Director* pursuant to this by-law;

8. "*DRAINAGE*" means the movement of water to a place of disposal or facilitation of movement, whether by way of the natural characteristics of the ground surface, aquifer or by an artificial method;

9. "*DUMP, DUMPED OR DUMPING*" means the movement and depositing of *fill* in a location other than where the *fill* was obtained and includes the movement and depositing of *fill* from one location on a property to another location on the same property.

10. "*FILL*" means any type of material deposited or *placed* on lands and, without limiting the generality of the foregoing, includes soil, stone, concrete, construction materials/rubble, asphalt, sod or turf either singly or in combination thereof;

11. "*GRADE*" shall be defined as follows:

    a. "*EXISTING GRADE*" means the elevation of the existing ground surface of the lands upon which *dumping* and/or *placing* of *fill* is proposed and of the abutting ground surface up to 3 metres wide surrounding such lands. Except that where *placing* or *dumping* of *fill* or alteration of the grade has occurred in contravention of this by-law, "existing grade" shall mean the ground surface of the land as it existed prior to the placing or dumping of fill or to any site alteration requiring a permit under this by-law;

    b. "*FINISHED GRADE*" means the approved elevation of ground surface of land upon which *fill* has been *placed* in accordance with this by-law;

    c. "*PROPOSED GRADE*" means the proposed elevation of ground surface of land upon which *fill* is proposed to be *placed*;

12. "*INSPECTOR*" means any *Town* employee authorized to enforce the by-laws of the *Town*;

13. *"MUNICIPAL SERVICES FEE"* means a fee charged by the *Town* in order to maintain municipal infrastructure;

14. "*NORMAL AGRICULTURAL PRACTICE*" includes sod-farming, greenhouse operations and nurseries for horticultural products but does not include the sale, exchange or other disposition of *topsoil* or *peat*;

15. *"ONTARIO LAND SURVEYOR (OLS)"* means the holder of a license issued by the Association of Ontario Land Surveyors;

16. "*OWNER*" includes the person registered as the owner on title upon which *fill* is proposed to be *placed* or *dumped* and any person, firm, or corporation managing or controlling such lands;

17. "*PEAT*" means the non-decayed or partially decayed organic deposits chiefly from sphagnum moss and often accumulated in fens and bogs;

18. "*PERMIT*" means a permit issued by the Department of Engineering and Public Works, upon review and approval of the *Director* or person authorized to issue said permit, pursuant to the provisions of this by-law;

19. "*PLACE, PLACED OR PLACING*" means the distribution of *fill* on lands to establish a *finished grade* different than the *existing grade*;

20. "*PONDING*" means the accumulation of surface water in an area not having drainage there from where the lack of drainage is caused by the *placing* or *dumping* of *fill* or the alteration of the *grade*;

21. "PROFESSIONAL ENGINEER" means a person who holds a license or a temporary license to engage in the practice of professional engineering issued under the *Professional Engineers Act*, R.S.O. 1990, c. P.28;

22. "*QUALIFIED TREE CONSULTANT*" means an arborist certified by the International Society of Arboriculture who has a diploma (minimum) in arboriculture or urban forestry;

23. "*RETAINING WALL*" means a wall made of concrete, concrete product or other materials designed to contain and support *fill* which has a *finished grade* higher than that of adjacent lands;

24. *"SECURITY OR SECURITY DEPOSIT"* means an amount given as collateral paid by cash, certified cheque, or Letter of Credit to ensure the fulfilment of the terms of the permit or to cover the cost of repairing damage to municipal property caused as a result of work undertaken as part of the permit;

25. "*SITE ALTERATION*" means *dumping* of *fill*, the removal of *topsoil* from land, or the alteration of the *existing grade* of land by any means including *placing fill*, *clearing* and *grubbing*, the compaction of *soil* or the creation of impervious surfaces, or any combination of these activities;

26. "*SOIL*" means material commonly known as earth, *topsoil*, loam, compost, organics, *peat*, subsoil, clay, sand or gravel or any combination thereof;

27. "*SWALE*" means shallow depression in the ground sloping to a place of disposal for the purpose of providing a method of *drainage* of surface water;

28. "*TOPSOIL*" means those horizons in a soil profile, commonly known as the "O" and "A" horizons, containing organic material and includes deposits of partially decomposed organic matter such as *peat*, detritus and humus;

29. "*TOWN*" means the Corporation of the Town of Georgina;

30. "*WATERCOURSE*" means a natural or man-made channel or *swale* in which water flows, either continuously or intermittently with some degree of regularity;

31. "*WETLAND*" means land such as swamps, marsh, bog or fen not including land that is being used for agricultural purposes and no longer exhibits wetland characteristics that:

    a) Is seasonally or permanently covered by shallow water or has the water table close to or at the surface; and

    b) Has hydro-soils and vegetation dominated by hydrophilic or water-tolerant plants.

PART 2 GENERAL PROHIBITIONS AND REGULATIONS:

a) No person shall *place* or *dump* any *fill*, remove any *peat, topsoil* or otherwise alter the *grade* of land by causing, permitting or performing any form of *site alteration* on land within the *Town* except in accordance with this by-law and without the *owner* first receiving a *permit* issued by the *Director* under this by-law;

b) No person shall *place* or *dump* any *fill* or alter any grade that is on any land zoned for environmental protection or open space purposes pursuant to applicable zoning by-laws, or within or adjacent to a watercourse, flood plain or a wetland or other such regulated areas pursuant to *Conservation Authorities Act*, Section 28, Ontario Regulation 182/06, unless approval therefore has been issued by the *Conservation Authority* or a *permit* has been issued pursuant to this by-law;

c) No person shall *place* or *dump* any *fill* or otherwise alter the *grade* of land by causing, permitting or performing any form of *site alteration* on land within the *Town* except in accordance with applicable zoning by-laws, the *Lake Simcoe Protection Plan*, the *Greenbelt Plan*, and the *Lake Simcoe Source Protection Plan*, when enacted;

d) No person shall fail to comply with an order issued pursuant to this by-law;

e) No person shall cause, permit or perform a *site alteration* on lands that are subject to an approved site plan, draft plan of subdivision or a consent under Sections 41, 51 or 53 respectively of the *Planning Act*, as amended, without a site plan agreement, pre-servicing agreement, subdivision agreement or consent agreement entered into under those sections;

f) No person shall *place* or *dump* any *fill*, remove any *peat, topsoil* or otherwise alter the *grade* of land by causing, permitting or performing any form of *site alteration* which would interfere with the existing drainage pattern of adjacent lands, or cause obstruction to existing drainage flows or obstruct or impede the function or flow of existing drainage swales or cause additional surface and ground waters to be discharged onto adjacent lands;

g) No person shall place or dump any fill, remove any *peat, topsoil* or otherwise alter the grade of land by causing or permitting or performing any form of site alteration which would cause surface drainage to flow, discharge or be directed onto adjacent lands other than directly into a natural watercourse, or any approved Municipal, Regional, or Provincial drainage system;

h) No person, in the performance of a *site alteration*, shall injure or destroy a municipal tree or other tree which is subject to tree protection measures as a condition of a permit issued under this by-law except to the extent that such injury or destruction is specifically authorized in writing in accordance with the provisions of this by-law and any other applicable by-laws of the *Town* or the Regional Municipality of York for the protection of trees;

i) Notwithstanding anything else contained in this by-law except for Part 3, no person shall cause, permit or perform a *site alteration* on any lands which were previously licensed or permitted and used as a pit or quarry under the *Aggregate Resources Act*, R.S.O. 1990, c. A.8, as amended, (or any predecessor legislation thereof), or otherwise, whether such lands have been rehabilitated or not;

j) No person shall *place* or *dump fill* or cause or permit *fill* to be *placed* or *dumped* unless such *fill* complies with the Ministry of Environment standards for clean *fill*, as described in Part 4.2(f) of this by-law;

k) No person shall undertake *site alteration* or cause *site alteration* to occur on any land for storage purposes unless the outside storage of such *fill* (where the *site alteration* involves *fill*) on the land is permitted by the municipal Zoning By-law and such storage shall not exceed one thousand (1000) cubic metres;

l) No person shall perform a *site alteration* or permit the performance of a *site alteration*:

(i) Between the hours of 8:00 p.m. and 7:00 a.m., Monday to Saturday;

(ii) All day Sunday and Statutory Holidays;

(iii) During any period in which a wind warning for the area has been issued by Environment Canada;

(iv) During or within twenty-four (24) hours of receiving a rainfall and/or snow melt event.

PART 3 EXEMPTIONS

3.1 This by-law is not applicable to the following:

a) The use, operation, establishment, alteration, enlargement or extension of a waste management system or waste disposal site within the meaning of Part V of the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended, or a waste, waste disposal or waste management system that is exempted by regulation from said Part V;

b) The construction, extension, alteration, maintenance or operation of works under Section 26 of the *Public Transportation and Highway Improvement Act*, R.S.O. 1990 c. P.50, as amended;

c) Emergency measures taken by the *Town* or the Regional Municipality of York or any other Federal, Provincial or Regional agency, to prevent flooding, *erosion*, slipping of *soil* or damage of trees;

d) The activities of the *Town*, the Regional Municipality of York or the *Conservation Authority* related but not limited to the establishment or maintenance of utilities and services, roads, bridges, flood and *erosion* control facilities, walkways, bicycle paths, fences, *retaining walls*, steps and lighting;

e) The *placing* or *dumping* of *fill*, removal of *topsoil* or alteration of the *grade* of land as a condition to the approval of a site plan, a plan of subdivision or a consent under Sections 41, 51 or 53, respectively of the *Planning Act* or as a requirement of a site plan agreement or subdivision agreement entered into under those sections;

f) The *placing* or *dumping* of *fill*, removal of *topsoil* or alteration of the *grade* of land as a condition to a development permit authorized by regulation made under Section 70.2 of the *Planning Act* or as a requirement of an agreement entered into under that regulation;

g) Aggregate, as defined in the *Aggregate Resources Act*, brought onto a pit or quarry operating under a license or wayside permit issued under that Act as part of the operations of that pit or quarry;

h) The *placing* or *dumping* of *fill*, removal of *topsoil* or alteration of the *grade* of land undertaken on land described in a license for a pit or quarry or a permit for a wayside pit or wayside quarry issued under the *Aggregate Resources Act*;

i) Any rehabilitation or *filling* activity in a pit or quarry licensed under the *Aggregate Resources Act*, and specifically addressed on the approved site plan when there is insufficient overburden retained to rehabilitate such pit or quarry in accordance with that Act;

j) The removal of *topsoil* from *agricultural lands* incidental to a *normal agricultural practice* including such removal as an incidental part of sod-farming, greenhouse operations and nurseries for horticultural products. This exception does not include the removal of *topsoil* for sale, exchange or other disposition;

k) To *fill* being *placed* on lands shown in a grading and *drainage* plan approved by the *Town* in conjunction with subdivision or site plan approvals, provided the provisions of such approvals relating to *fill* are adhered to and all requirements set forth in this by-law concerning said *fill* placement and *grading* are met.

3.2 No *fill* permit is required for:

a) The *placing* or *dumping* of *soil* on lands for the purpose of lawn dressing, landscaping or adding to flower beds or vegetable gardens, provided that the ground elevation of the lands is not increased by more than fifteen (15) centimetres and there is no significant change in the direction or rate of *drainage* to neighbouring properties. Such alteration shall not take place within sixty (60) centimetres of any property line. Such *placing* of *fill* shall not exceed twenty (20) cubic metres per year;

b) The resurfacing or paving of existing driveways where there is no alteration to the existing driveway base and no significant change in the direction or rate of *drainage* to neighbouring properties;

c) The *placing* or *dumping* of *fill* in an excavation to the elevation of *existing grade* following the demolition or removal of a building or structure for which a building permit has been issued;

d) *Fill* being *placed* or *dumped* on lands for the purpose of flood or *erosion* control to establish *finished grade* shown on a grading and *drainage* plan approved by the *Conservation Authority* or by the *Director* in conjunction with a subdivision approval;

e) *Site alteration* involving an amount of *soil* of less than twenty (20) cubic metres on a *lot* within any one year period, provided that there is no significant change in the direction or rate of *drainage* to neighbouring properties, and unless the site includes or is adjacent to a *body of water*. Such alteration shall not take place within sixty (60) centimetres of any property line;

f) Replacement of *topsoil* for restoration of *agricultural lands* used for *normal agricultural practices*, as an incidental part of sod farming, greenhouse operations, and nurseries for horticultural practices which shall not exceed 20 centimeters annually, or at the discretion of the *Director*. Storage of such *topsoil* shall not exceed one thousand (1000) cubic metres.

PART 4 REQUIREMENTS FOR ISSUANCE OF A PERMIT

4.1 An *owner* applying for a permit shall provide the following:

a) The name and address of the *owner* of the land upon which the *fill* is to be *dumped* or *placed*;

b) The municipal address of the land on which the *fill* is to be *dumped* or *placed*;

c) The legal description of the land upon which the *fill* is to be *dumped* or *placed*;

d) Payment of the applicable fees calculated in accordance with rates set out in Schedule 'A' and Schedule 'B' of this by-law;

e) A scaled drawing of any *retaining wall* that may be required and a description, including dimensions, of any materials to be used in the construction of such *retaining wall*;

f) Payment of applicable security in the amount as prescribed in the fee schedule attached to this by-law as Schedule 'A' or Schedule 'B'. The owner or owner's consultant shall provide a detailed breakdown of the cost estimate for the proposed work;

g) A *site alteration/grading* plan satisfactory to the Director, accurately indicating the following:

(i) The property lines of the lands for the *site alteration* with dimensions;

(ii) For *site alteration* quantity less than two hundred and fifty (250) cubic metres, existing spot elevations on three (3) metre grids across the lands and three (3) metres beyond the property lines to clearly show the existing *drainage* patterns on the lands and on the abutting lands; and for *site alteration* in an amount greater than two hundred and fifty (250) cubic metres, a site plan including a topographic survey at one metre contour intervals certified by a Professional Engineer or Ontario Land Surveyor defining all material and manmade features, including top and bottom of slopes, *drainage* patterns, tree lines, buildings, and stockpiles on the lands and within thirty (30) metres on abutting lands and *water bodies*; and, a description of the type, quantity and location of natural land cover features on the site and within thirty (30) metres on adjacent lands;

(iii) All existing storm sewers, ditches, *swales*, creeks, *watercourses* and *wetlands* on the lands and on abutting lands and public highways;

(iv) All existing buildings, the species and size in caliper of all trees, the location of all shrubs and driveways on the lands and of all easements and right-of-ways over, under, across or through the lands;

(v) *Proposed grades* and *drainage* systems upon completion of the *site alteration* operation;

(vi) Detailed hydro-geological analysis and report, including all design calculations, prepared by a qualified Professional Engineer for the design and construction of soak away pits/dry wells;

(vii) All proposed ground covering to be used upon completion of the *site alteration* operation;

(viii) All *erosion*, sediment and tree protection measures for the *site alteration* operation;

h) A description of the proposed *site alteration* including a description of the source of the *fill* with a letter from the party from whom the *fill* was acquired attesting that the *fill* meets the requirements for clean *fill* set out in Part 4.2(f) and 5.2(e) of this by-law if applicable, the quantity of the *fill* expressed in cubic metres, and contact information for the party from whom the *fill* was acquired;

i) Copies of all approvals, including but not limited to, Lake Simcoe Region Conservation Authority, Ministry of Transportation, Ministry of Natural Resources, Regional Municipality of York.

4.2 Where greater than 250m^3 of *fill* is being *dumped*, the *owner* shall provide the information set out in Part 4.1 and enter into an agreement with the *Town*, approved by:

i) The *Director* where the quantity of fill being *dumped* or *placed* is less than 2000m^3 or;

ii) Town Council where the quantity of fill being *dumped* or *placed* is greater than 2000m^3;

whereby the *owner* has agreed to the following:

a) To retain a qualified engineer or environmental consultant approved by the *Director* who is responsible for ensuring that the *site alteration* is in accordance with reasonable engineering and environmental practices; is in accordance with the protocol attached as Schedule 'C' to this by-law; is in accordance with the plans submitted for the permit; and is in accordance with Part 5.2 of this by-law;

b) To undertake the *site alteration* in accordance with sub-section (a);

c) To require the environmental consultant to report in writing on a regular basis that the *placing* and *dumping* of fill is in accordance with sub-section (a) above;

d) To require the environmental consultant to provide a report upon completion of the project or at the expiration of the permit, which includes a topographic 'as-constructed' survey certified by a Professional Engineer or Ontario Land Surveyor confirming that the volume of fill material placed on the property is in accordance with the requirements of the permit;

e) To require that the *site alteration* be completed by a specified date;

f) Not to contaminate the natural environment and to abide by all applicable environmental laws and regulations;

g) Ensure that all *fill* used is material that does not contain any putrescible material and which meets any of the following criteria:

(i) Rock, including demolition debris such as domestic brick and concrete that does not contain cement fines, exposed rebar, paint or coatings, decomposable materials, plastic, asphalt, petroleum products, hydrocarbon materials and any putrescible organic materials;

(ii) *Soil* that meets the standards set out in Table 1 of the Soil, Ground Water and Sediment Standards referenced in O. Reg. 153/04, as amended for quantities less than 2000m^3;

(iii) Liquid slurry material, to the extent that the free water is removed and the resulting wet or slurried material meets the standards set out in Table 1 of the Soil, Ground Water and Sediment Standards referenced in O. Reg. 153/04, as

amended, and any free water from the liquid slurry that meets the standards set out in Table 1 of the Soil, Ground Water and Sediment Standards referenced in O. Reg. 153/04, as amended;

(iv) *Topsoil*, sod and turf materials to be stockpiled for use as final cover only.

h) To provide a report from the qualified Engineer or Environmental Consultant referred to in sub-section (a) that he/she is satisfied that the *placing* or *dumping* will not result in:

(i) Soil *erosion*;
(ii) Blockage of a *watercourse*;
(iii) Siltation in a *watercourse*;
(iv) Pollution of a *watercourse*;
(v) Flooding or *ponding* on adjacent lands;
(vi) Flooding or *ponding* caused by a *watercourse* overflowing its banks;
(vii) A detrimental effect on any trees of a caliper of seventy-five (75) millimetres or more located on the lands;
(viii) Detrimental effect on matters of inherent biological sensitivity such as aquifer recharge, water quality, unusual plants or wildlife and overwintering habitats;
(ix) Unauthorized injury or destruction of municipal trees or other trees protected under by-laws of the *Town* or the Regional Municipality of York;
(x) Injury or destruction of other trees, which in the opinion of the *Director*, could reasonably be avoided;

i) To provide security to be used to remedy any breach of the by-law or agreement and to indemnify the *Town* for any liability, costs, damages or losses incurred directly or indirectly caused by the issuing of a permit;

j) Notify an *inspector* in writing within forty-eight (48) hours of commencing any work;

k) Notify an *inspector* in writing of the completion of any erosion control measures within fourteen (14) days after their installation;

l) Obtain the permission of the *Director* in writing prior to modifying the site alteration plan;

m) Inspect the control measures at least once a week and after each rainfall of at least one (1cm) centimeter and make any necessary repairs;

n) Install all tree protection measures required by the approved *site alteration* plan prior to commencing any work and maintain these tree protection measures throughout the entire duration of the work;

o) Ensure that all *fill* meets standards prescribed by the Ministry of the Environment for any current land use and any future land use for the land designated under an Official Plan or amendment to an Official Plan approved by Council of the *Town* or Regional Municipality of York;

p) Install and maintain the *erosion* and sediment control measures as identified in the approved *site alteration* plan and the latest *Conservation Authority* guidelines for erosion measures;

q) Install temporary signage in accordance with Ministry of Transportation Book 7 regulations on all roadways immediately adjacent to the site where *fill* is being *dumped* or *placed*;

r) Ensure that no mud is tracked onto municipal roadways and that these roadways are not damaged as a result of the *site alteration*.

4.3 No permit shall be issued pursuant to Part 4.2 and no amendments shall be made to this by-law until Council, for more than 2000m^3 of fill material, has considered the application or amendment at a public meeting, at which the applicant or any interested members of the public will have a fair opportunity to make representation, notice of which is given to the adjacent property owners and agencies in a similar manner to Regulation 199/96 of the *Planning Act*.

4.4 The *Director* shall issue a permit when:

a) The *Director* is satisfied that the lands which are the subject of the application for a permit are not within an area where *site alteration* is prohibited under Part 2 (b) and (c) if applicable, of this by-law or is an activity regulated under Part 3 of this by-law; and

b) The applicant has fulfilled all requirements of Part 4.1 of this by-law and if required by Part 4.2 entered into the agreement referred to in Part 4.2.

4.5 Where a permit has been issued under this by-law authorizing the *site alteration* on lands, no person shall *place* or *dump fill* except in accordance with the plans, documents and any other information required for the issuing of the permit and in compliance with the agreement entered into with the *Corporation* and this by-law.

4.6 The *Town* may draw on the security required pursuant to Part 4.1 (f) in order to remedy any breach of the provisions of this by-law, the conditions imposed on the *fill* permit by the *Director*, or any other obligation of the *owner* relating to the *fill* permit and, without limiting the generality of the foregoing, such security may be used to return the land to a condition satisfactory to the *Director* and to pay any outstanding amounts owed by the *owner* that relate to the *fill* permit including those amounts owed pursuant to Part 4.2 of this by-law.

4.7 Where the *Director* deems it necessary to have fill material inspected or analyzed to ensure compliance with MOE standards, Part XV.1 of the Environmental Protection Act, and/or Table 1 of O. Reg. 153, as amended of the *Environmental Protection Act*, a third party geotechnical consultant may be hired by the *Town* at the expense of the owner, to provide all necessary inspections, analysis and reports.

PART 5 EXPIRY, RENEWAL, REVOCATION AND TRANSFER OF PERMITS

5.1 a) The permit issued pursuant to Part 4.4 shall be valid for a period of one (1) year from the date of issuance but shall expire after six (6) months from the date of issuance if work has not been commenced by that date;

b) A permit which is no longer valid or which has expired pursuant to Part 5.1(a) may be renewed within a six (6) month period following the date of expiry upon written application to the *Director* accompanied by a payment of one half of the original permit fee, provided that the previously permitted work has not been revised. The written request/application shall include a report prepared by the environmental consultant, including a topographic 'as-built' survey certified by a Professional Engineer or Ontario Land Surveyor, confirming the volume of fill material placed on the site at the time of renewal;

c) A permit may be cancelled upon written request from the *owner* or person authorized in writing by the owner to the *Director.* A site inspection will be conducted to ensure that no work has commenced and that the site is in an acceptable condition, and at the discretion of the *Director,* a refund of the deposit less the applicable administration fee will be issued;

d) Where fill quantities have been placed which exceed the amount specified in the permit, the landowner will be considered to be in contravention of the permit and will be required to remove all fill material placed in contravention of the permit unless a revised application is provided pursuant to Part 4 of this by-law and approved by the *Director*, including payment of all applicable fees as outlined in Schedule A and Schedule B;

e) If title to the land for which a permit has been issued is transferred while the permit remains in effect, the permit shall be cancelled unless the new *owner,* within thirty (30) days of the transfer:

(i) Provides the *Town* with an undertaking agreeing to comply with all conditions under which the existing permit was issued; or

(ii) Applies for and obtains a new permit in accordance with the provisions of this by-law.

5.2 Every person who undertakes a *site alteration* or causes a *site alteration* to occur on lands shall:

a) Ensure that the *finished grade* surface is protected by sod, turf, seeding for grass, greenery, asphalt, concrete or such other provisions as shown on the submitted plans;

b) Ensure that no trench in which piping is laid forming part of the *drainage* system is covered and backfilled until the work has been inspected and approved by the qualified engineer or environmental consultant referred to in Part 4;

c) Provide such protection for trees on the *site alteration* plan as may be required by the qualified engineer or environmental consultant referred to in Part 4;

d) Ensure that all *fill* used is clean and free of rubbish, glass, garbage, termites, organic materials, liquid and toxic chemicals and other contaminants;

e) Ensure that *fill* is *placed* or *dumped* in such a manner and any *retaining wall* containing such *fill* is erected in such a manner that no *ponding* is caused on abutting lands and that adequate provision is made to properly manage all surface stormwater *drainage.*

5.3 The *Director* may revoke the permit and require that all work on the site shall cease for the following reasons:

a) The permit was obtained on mistaken, false or incorrect information;

b) The permit was issued in error;

c) The *owner* or Permit holder requests in writing, that it be revoked;

d) The terms of an agreement under this by-law have not been complied with;

e) Work authorized under the permit has not been commenced prior to its expiry date;

f) An *owner* has failed to comply with the provisions of this bylaw.

5.4 The administration and enforcement of this by-law shall be performed by the *Director,* by persons authorized by the *Director* and by such municipal law enforcement officers of the *Corporation* as may be appointed by the Council of the *Corporation.*

PART 6 ADMINISTRATION AND ENFORCEMENT

6.1 Employees of the Department of Engineering and Public Works of the *Town,* or any employees that are otherwise authorized to enforce the by-laws of the *Town* are appointed as *inspectors* for all purposes of this by-law.

6.2 *Inspectors* may, at any reasonable time enter and inspect any land to determine whether the provisions of this by-law, or a condition of a permit issued under this by-law have been complied with. This power of entry does not allow the *inspector* to enter any building.

6.3 Upon completion of the work pursuant to the permit, the *owner* and/or permit holder shall so advise the *Director.*

6.4 No person shall obstruct an inspector who is carrying out an inspection pursuant to this by-law.

6.5 This by-law shall apply to all *site alteration*, including *placing* and *dumping* of *fill*, on all lands within the *Town* whether such activity occurred prior to the date of the passage of this by-law, or subsequent to the passage of this by-law.

PART 7 ORDERS

7.1 If after inspection, an *inspector* is satisfied that a contravention of this by-law has occurred, the *inspector* shall notify the *owner* and the permit holder of the particulars with a "Notice of Contravention" and/or an "Order to Comply" pursuant to Section 444(1) or 445(1) of the *Municipal Act, 2001*, as amended, at the same time and provide all occupants with a copy of the notice and such order shall contain:

a) The municipal address and the legal description of the land;

b) Reasonable particulars of the contravention;

c) The period within which there must be compliance.

7.2 The *Director* or an *inspector* by a written "Notice of Contravention" and/or an "Order to Comply" pursuant to Section 444(1) or 445(1) of the *Municipal Act, 2001*, as amended, may require any person who has altered the *grade* of land, or who has caused or permitted the *grade* to be altered contrary to the provisions of this by-law, or who has *placed* or *dumped fill*, or who has caused or permitted *fill* to be *placed* or *dumped*, or who has caused or permitted any other form of *site alteration* contrary to the provisions of this by-law:

a) To cease all work in respect of the *site alteration*;

c) To remove the *fill*;

c) To *fill* in any excavations or ponds; and/or

d) To do all work necessary;

(i) to eliminate any hazard resulting from the alteration of the *grade* or the *dumping* or *placing* of *fill* and to restore the land to a condition of safety;

(ii) to preserve the land pending fulfillment of all requirements outlined in Part 4.1 and 4.2 of this by-law for the issuance of a permit;

(iii) to restore the land to its former condition prior to the alteration of the *grade* of the land or to the *placing* or *dumping* of the *fill* on the land or other *site alteration*.

7.3 The notice and/or order referred to in Parts 7.1 and 7.2 shall also contain:

a) The time frame in which the work contained in the order must be carried out;

b) A notice stating that if the work is not done in compliance with the order within the period it specifies, the *Corporation* may have the work done at the expense of the *owner*.

7.4 An *owner* who has received a "Notice of Contravention" and/or an "Order to Comply" shall comply with the "Notice of Contravention" and/or the "Order to Comply" within the time frame specified in the "Notice of Contravention" or the "Order to Comply", otherwise, the *Director* may draw on the financial securities as required.

7.5 A "Notice of Contravention" or an "Order to Comply" shall be served personally or by prepaid registered mail or in accordance with Part 7.7.

7.6 A "Notice of Contravention" or an "Order to Comply" pursuant to this by-law sent by prepaid registered mail shall be sent to the last known address to the *owner* of the land and permit holder.

7.7 An *inspector* who is unable to effect service pursuant to Part 7.1 of this by-law shall place a placard containing the terms of the "Notice of the Contravention" or an "Order to Comply" in a conspicuous place on the property and the placing of the placard shall be deemed to be sufficient service of the "Notice of Contravention" or an "Order to Comply" on the *owner* and permit holder.

7.8 If the *owner* or permit holder fails to do the work required by the "Order to Comply" within the period it specifies, the *Corporation*, in addition to all other remedies it may have, may do the work and for this purpose may enter on the land with its employees and agents. The costs incurred by the *Corporation* in so doing shall be paid by the *owner* of the land and may be recovered by the *Corporation* in like manner as taxes or drawing on financial securities provided.

PART 8 WORK UNDERTAKEN BY MUNICIPALITY

8.1 If the work required by an Order under Part 7 of this by-law is not done within the specified time period, the *Town,* in addition to all other remedies it may have, may do the work at the *owner's* expense and may enter upon land, at any reasonable time, for this purpose in accordance with the provisions of the *Municipal Act, 2001*.

PART 9 PENALTY AND OFFENCE

9.1 (a) Any person other than a corporation who contravenes the provisions of this by-law, the terms or conditions of a permit issued pursuant to this by-law, or an order issued pursuant to this by-law and Section 444(1) or 445(1) of the *Municipal Act, 2001* as amended is guilty of an offence and, upon conviction, is liable:

(i) On a first conviction, to a fine of not more than $10,000.00 for each day or part of a day on which the offence occurs or continues;

(ii) On any subsequent conviction to a fine of not more than $25,000.00 for each day or part of a day on which the offence occurs or continues;

(b) For contravention of this by-law or Orders issued under Part 7 to stop the injuring or destruction of trees:

(i) On a first conviction, to a fine of not more than $10,000 for each day or part of a day on which the offence occurs or continues;

(ii) On any subsequent conviction, to a fine of not more than $25,000.00 for each day or part of a day on which the offence occurs or continues;

9.2 A corporation that contravenes any provision of this by-law, the terms or conditions of a permit issued pursuant to this by-law, or an order issued pursuant to this by-law and Section 444(1) or 445(1) of the *Municipal Act, 2001*, as amended, is guilty of an offence and on conviction is liable:

(i) On a first conviction, to a fine of not more than $50,000.00 for each day or part of a day on which the offence occurs or continues;

(ii) On any subsequent conviction to a fine of not more than $100,000.00 for each day or part of a day on which the offence occurs or continues.

9.3 If a person is convicted of an offence for contravening an order to stop the injuring or destruction of trees the court in which the conviction has been entered, or any court of competent jurisdiction thereafter, may order the person to rehabilitate the land or plant or replant trees in such manner and within such period as the court considers appropriate, including any silvicultural treatment necessary to reestablish the trees.

PART 10 SEVERABILITY

Should a court of competent jurisdiction declare any provision of this by-law to be invalid or of no force and effect, the provision is deemed severable from this by-law and it is the intention of Town Council that the remainder of the by-law shall survive and be applied and enforced in accordance with its terms to the extent possible under the law.

PART 11 ENACTMENT

This by-law shall come into force and effect on the date of passing.

By-law 91-139 (REG-1) is hereby repealed.

READ a first, second, third time and finally passed this 26th day of April, 2011.

Robert Grossi, Mayor

Lisa Lyons, Deputy Clerk

SCHEDULE 'A'

FEE SCHEDULE – SITE ALTERATION (FILL PLACEMENT)

DESCRIPTION	APPLICATION FEE	SECURITY DEPOSIT
Fill **Less than 250 cubic metres**	**$500.00**	**$2,500.00**
Fill **greater than 250 cubic metres but less than 2000 cubic metres**	**$750.00**	**$10,000**
Fill placement 2000 cubic metres or greater	**$1,000.00**	**$25,000**
Security for payment of Municipal Services Fee (Fill placement 2000 cubic metres or greater)	**--**	**$0.50 per cubic metre of fill to be placed**
Extension of permit for *Fill* 250 cubic metres or less (sec. 5.1(b))	**$250.00**	
Extension of permit for *Fill* greater than 250 cubic metres but less than 2000 cubic metres (sec. 5.1(b))	**$375.00**	
Extension of permit for fill greater than 2000 cubic metres (sec. 5.1(b))	**$500.00**	

*The above application fees are non-refundable.

The owner or owner's consultant shall provide a detailed breakdown of the cost estimate for the proposed work.

***NOTE: The above fees shall be doubled in the event that the Applicant has performed any *site alteration* in contravention of this by-law.**

OTHER APPLICABLE FEES

Municipal Services Fee (where quantities are 2000 cubic metres or greater)	**$0.50 per cubic metre of fill material to be placed** **To be paid at completion of project upon confirmation of volume totals**
Preparation of Site Alteration Agreement	**$6,150.00**
Amendment to Agreement	**$2,050.00**

The *Corporation* may engage legal, engineering, hydrology, environmental, arborists, landscape or any other consultant the *Director* deems necessary in order to evaluate studies and/or agreements in which case the costs incurred for such evaluations shall be charged back to the applicant plus a 5% administration charge; (sec. 4.6, 4.7)

SCHEDULE 'B'

FEE SCHEDULE – LOT GRADING AND DRAINAGE (RESIDENTIAL)

FEES APPLICABLE TO ALL RESIDENTIAL CONSTRUCTION AS NOTED WHERE **NO MORE THAN 50m^3** OF FILL IS IMPORTED (INCLUDING GRANULAR MATERIAL FOR DRIVEWAYS AND SEPTIC SYSTEMS)

DESCRIPTION	APPLICATION FEE	SECURITY DEPOSIT
Construction of principal buildings, septic systems and accessory structures greater than 20 square metres. Construction of additions to accessory structures greater than 20 square metres.	**$300.00**	**$2,500.00**
Additions to existing principal buildings. Foundation repairs or replacement, house raising and construction of new foundations for same. Construction of in-ground pools. Construction of accessory structures greater than 10 square metres but less than 20 square metres. Additions to existing accessory structures greater than 10 square metres but less than 20 square metres.	**$150.00**	**$1,000.00**
Extension of permit for principal buildings, septic systems and accessory structures greater than 20 square metres.	**$150.00**	
Extension of permit for Additions to existing principal buildings or accessory structures. Foundation repairs or replacement, house raising. Construction of in-ground pools. Construction of accessory structures less than 20 square metres.	**$75.00**	

The above application fees are non-refundable.

***NOTE: The above fees shall be doubled in the event that the Applicant has performed any *site alteration* prior to the submission or approval of an application in contravention of this by-law.**

SCHEDULE 'C'

ENVIRONMENTAL CONTROL PROGRAM

Operational Standards:

The following are proposed standards for the maintenance and operation of the fill area:

1. Site personnel will receive specialized training for their specific work tasks.

2. The placement of clean fill material at the site will be adequately and continually supervised.

3. Clean material will be placed in an orderly manner at the fill area.

4. Procedures will be established, signs posted, and safeguards maintained for the prevention of on-site accidents.

5. Vehicular access to the property will be by roadway closed by a gate capable of being locked.

6. Access roads and on-site roads will be provided so that vehicles hauling clean material to and on the site may travel readily under all normal weather conditions.

7. Access to the site will be limited to times when an attendant is on duty and accessible only to persons authorized to deposit clean material at the fill area.

8. Drainage passing over or through the site will not adversely affect adjoining properties. Natural drainage will not be obstructed.

9. Clean fill material will be placed in such manner that groundwater aquifers will not be impaired.

10. If groundwater contamination in excess of the Ontario Ministry of the Environment (MOE) Guideline is encountered, action will be taken to isolate the source of contamination and effectively prevent the egress of contaminants from the Site.

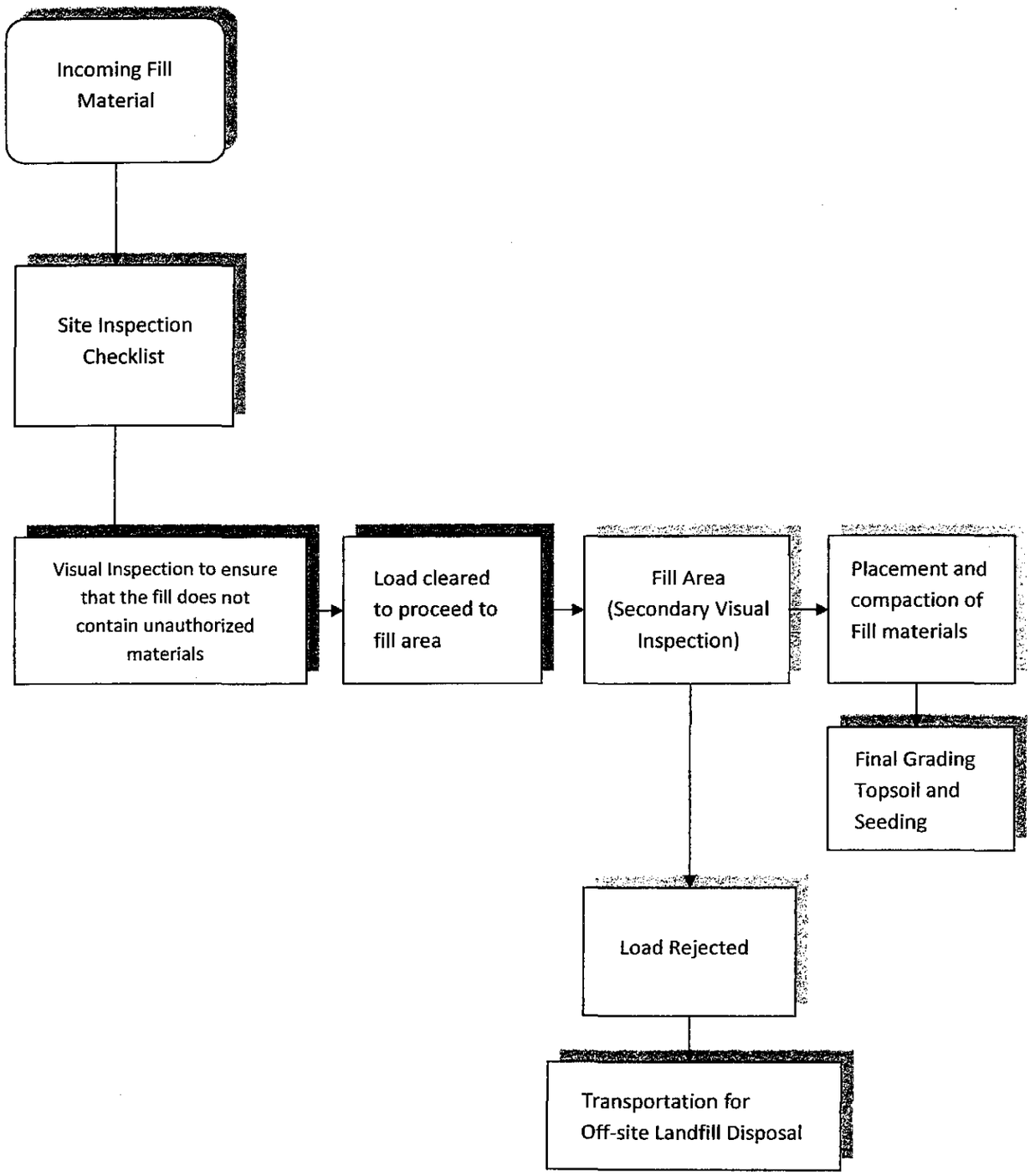
11. Where there is a possibility of groundwater pollution resulting from the operation of the fill area, samples will be taken and tests made by the owner of the site to measure the extent of contamination and, if necessary, measures will be taken for the collection and treatment of contaminants and for the prevention of groundwater pollution. .

12. When the fill area has reached its limit of fill, a final cover of soil will be designed and constructed to a grade capable of supporting vegetation and that minimizes erosion. All slopes will be designed to drain runoff away from the cover and to prevent water from ponding. No standing water will be allowed anywhere in or on the completed fill area. The fill area will then be seeded with vegetation to minimize wind and water erosion. The vegetation used will be compatible with i.e., grow and survive under the local climatic conditions and will include of a diverse mix of native and introduced species consistent with the post closure land use. Temporary erosion control measures will be undertaken while vegetation is being established.

Attachment -Operational Flowchart

SCHEDULE 'C' – CONTINUED

ENVIRONMENTAL CONTROL PROGRAM – OPERATIONAL FLOW CHART



Fill Screening Procedures:

The initial inspection of the truck and its load of inert fill will include a review of the chain of custody provided by the transporter and a visual inspection of the fill for signs of contamination. If at any point during the visual inspection there is evidence that the fill may be contaminated it will be rejected.

The attached Fill Inspection Checklist will be used to record and document the chain of custody and all initial and secondary inspections.

The first procedure for the site inspector will be to record the load number, truck number, the name of the company hauling the fill, the driver's name and ensure that the transporter provides a chain of custody (refer to check list). The chain of custody will include a record for the fill being delivered from its place of origin to the site.

The chain of custody will include information concerning the inert fill, the transport of the inert fill, and the truck itself. Information pertaining to the inert fill should include: place of origin; soil constituents; proof that the fill is clean; and copies of analyses to provide evidence that the soil is not contaminated, Records pertaining to the transport should include: a list of all drivers involved in the haulage of the inert fill from its place of origin to the Site; documentation of all stops made from the place of origin to the Site; documentation that ensures the truck is at the proper location. Records of transport cleaning and sanitation procedures for the truck and loading equipment should also be provided upon request to ensure that the fill has not been contaminated by previously transported materials,

An initial visual inspection of the inert fill will occur while the fill is still in the truck and, if the fill is deemed satisfactory, a secondary visual inspection will be preformed when the fill is being dumped in the designated fill area, both initial and secondary inspections will include a firsthand observation of the following:

- Odours
- Unusual clumping
- Hazardous materials (biomedical, flammable, etc.)
- Food, household waste
- Discolouration
- Viscosity (liquid and sludge)
- Putrecible wastes
- Any other unauthorized materials

Initial and secondary inspections will include the raking and probing of the fill in order to agitate the soil and bring underlying soil to the surface so that an accurate representation of the soil may be inspected.

If there is evidence that the soil *may* be contaminated the site inspector will reject the load,

When either the initial or secondary inspections provide evidence that the soil is not clean the truckload will be refused and directed to the appropriate licensed waste disposal facility, the site supervisor will document what was found, why the load was refused and to which facility the load was directed.

Attachment -Fill Inspection Checklist

Fill Inspection Checklist

Fill Site:	Date:	Ticket No.:
	Time:	Inspector:
Driver Information: Company: _____ Truck No.: _____ Driver Name.: _____	No. of Loads:	Quantity: m^3
	ACCEPTED	REJECTED
Source Information: Address:	Report Provided at Source: YES NO	Type of Fill: (Check appropriate box) RESIDENTIAL INDUSTRIAL AGRICULTURAL

Visual Inspection Report		Load(s) Contains Clean Fill	
	Primary Inspection	YES	NO
If "NO", complete the following:	Secondary Inspection	YES	NO
1	Odours		
2	Unusual Discolouration		
3	Hazardous Materials (Biochemical, Flammable)		
4	Food/ Domestic Waste		
5	Liquid or Sludge		
6	Construction Materials (Wood, Drywall, etc.)		
7	Scrap Metals		
8	Vegetation (Stumps, Sod)		
9	Asphalt		
10	Other (Describe)		

Comments:

Groundwater Monitoring:

Procedures for the Groundwater Monitoring Program

To monitor the quality of groundwater migrating off-site a minimum of three monitor wells will be installed down gradient from the fill area as shown on the attached Site Grading Plan. Periodic analytical testing of the groundwater will be conducted to ensure that the groundwater values are less than the values contained in Table A of the MOE Guideline.

The following is an outline of the items related to the groundwater monitoring program that are addressed in the Environmental Control Program:

The impacts of the seepage of leachate from the fill area will be assessed in a systematic fashion using the techniques described below.

Procedures for performing the groundwater assessment:

1. The concentration of constituents in the leachate will be determined from laboratory analyses of groundwater samples collected down gradient from the fill area.

2. Acceptable groundwater assessment. The groundwater will be considered acceptable if the groundwater values are less than the values contained in Table A of the Ontario Ministry of the Environment (MOE) Guideline for Use at Contaminated Sites in Ontario, Revised February 1997 (Guideline). Initial groundwater analyses will include the following parameters:

   Ca, Mg, Na, K, Al, Ba, Be, B, Cd, Cr, Co, Cu, Fe, Pb, Mn, Mo, Ni, P, Si, Ag, Sr, S, n, Ti, V, Zn, Sn, Benzene, Toluene, Ethyl Benzene, m/p-Xylene, o-Xylene, gasoline range organics < CIO, diesel range organics C10-C24.

Attachment -Table A Guideline Criteria, Target Parameters

Attachment -Site Grading Plan

Design, Construction and Operation of Groundwater Monitoring Systems

All fill areas, will be identified and studied through a network of monitoring wells operated during the active life of the fill area and for two years after closure. Monitoring wells designed and constructed as part of the monitoring network will be maintained along with records that include, but are not limited to, well location, well size, type of well, the design and construction practice used in its installation and well and screen depths.

1. Standards for the location of monitoring points:

   (a) Monitoring points will be established at sufficient locations down gradient with respect to groundwater flow to detect discharge of potential contaminants from within the fill area.

   (b) Monitoring wells will be located in stratigraphic horizons that could serve as contaminant migration pathways.

(c) Monitoring wells will be established as close to the potential source of discharge as possible without interfering with the fill operations, and within half the distance from the edge of the potential source of discharge to property line down gradient with respect to groundwater flow, from the source.

(d) A minimum of at least one monitoring well will be established at the property line and will be located down gradient from the fill area with respect to groundwater flow. Such well or wells will be used to monitor any statistically significant increase in the concentration of any constituent, in accordance with the Guideline, and will be used for determining compliance with applicable groundwater quality parameters.

2. Standards for monitoring well design and construction:

(a) All monitoring wells will be cased in a manner that maintains the integrity of the borehole. The casing material will be inert so as not to affect the water sample. Well casings requiring a solvent-cement type coupling will not be used.

(b) Wells will be screened to allow sampling only at the desired interval. Annular space between the borehole wall and well screen section will be packed with gravel or sand sized to avoid clogging by the material in the zone being monitored. The slot size of the screen will be designed to minimize clogging. Screens will be fabricated from material expected to be inert with respect to the constituents of the groundwater to be sampled.

(c) Annular space above the well screen section will be sealed with a relatively impermeable, expandable material such as a cement /bentonite grout, which does not react with or in any way affect the sample, in order to prevent contamination of samples and groundwater and avoid interconnections. The seal will extend to the highest known seasonal groundwater level.

(d) The annular space will be back-filled from an elevation below the frost line and mounded above the surface and sloped away from the casing so as to divert surface water away.

(e) The annular space between the upper and lower seals and in the unsaturated zone may be backfilled with uncontaminated cuttings.

(f) All wells will be covered with caps and equipped with devices to protect against tampering and damage.

(g) All wells will be developed to allow free entry of water to minimize turbidity of the sample and minimize clogging.

(h) Other sampling methods and well construction techniques may be utilized if they meet Provincial water well construction standards.

3. Standards for Sample Collection and Analysis:

(a) The groundwater monitoring program will include consistent sampling and analysis procedures to assure that monitoring results can be relied upon to provide data representative of groundwater quality in the zone being monitored.

(b) The operator will utilize procedures and techniques to ensure that collected samples are representative of the zone being monitored and that prevent cross contamination of samples from other monitoring wells or from other samples.

(d) The operator will establish a quality assurance quality control program for groundwater sample collection.

(e) The operator will institute a chain of custody procedure to prevent tampering and contamination of the collected samples prior to completion of analysis.

Groundwater Monitoring Program:

1. The operator will implement a monitoring program in accordance with the following requirements:

(a) Monitoring schedule and frequency:

(i) The monitoring period will begin as soon as a fill permit is issued. Monitoring will continue for a minimum period of two years after closure. The operator will sample all monitoring points on a quarterly basis.

(ii) The monitoring frequency may change on a well by well basis to an annual schedule if all constituents monitored within the zone of attenuation are less than or equal to Guideline criteria for three consecutive quarters. However, monitoring will return to a quarterly schedule at any well where a statistically significant increase is determined to have occurred in the concentration of any constituent with respect to the previous sample.

(iii) Monitoring will be continued for a minimum period of two years after closure. Monitoring beyond the minimum period may be discontinued if no statistically significant increase is detected in the concentration of any constituent above that measured and recorded during the immediately proceeding scheduled sampling for three consecutive quarters.

(b) Criteria for choosing constituents to be monitored:

(i) The operator will monitor each well for constituents that will provide a means for detecting groundwater contamination. Constituents will be chosen for monitoring if the constituent appears in, or is expected to be in, the leachate.

(ii) One or more indicator constituents, representative of the transport processes of constituents in the leachate, may be chosen for monitoring in place of the constituents it represents.

2. If the analysis of the monitoring data shows that the concentration of one or more constituents is attributable to the fill operations and exceeds Guideline criteria, then the operator will conduct a groundwater impact assessment. The assessment monitoring program will be conducted in accordance with the following requirements:

(a) The impact assessment will be conducted to collect additional information to assess the nature and extent of groundwater contamination, which will consist of, but not be limited to, the following steps:

(i) More frequent sampling of the wells in which the observation occurred;

(ii) More frequent sampling of any surrounding wells;

(iii) The placement of additional monitoring wells to determine the source and extent of the contamination; and

(iv) Monitoring of additional constituents to determine the source and extent of contamination.

(b) If the analysis of the assessment monitoring data shows that the concentration of one or more constituents monitored is above the applicable groundwater quality standards and is attributable to the fill operations, the operator will determine the nature and extent of the groundwater contamination, including an assessment of the continued impact on the groundwater should additional fill continue to be accepted at the facility, and will implement remedial action.

Plugging and Sealing of Drill Holes:

1. All drill holes, including exploration borings that are not converted into monitoring wells, monitoring wells that are no longer necessary to the operation of the site, and other holes that may cause or facilitate contamination of groundwater shall be sealed in accordance Ontario Regulation 903.

SCHEDULE 'C' – CONTINUED

SOIL, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV.1 OF THE ENVIRONEMENTAL PROTECTION ACT, JULY 27, 2009 TABLES 1 AND 2

TABLE 1: Full Depth Background Site Condition Standards

Table 1	Soil (other than sediment) µg/g		Ground Water (µg/L)	Sediment (µg/g)
Contaminant	Agricultural or Other Property Use	Residential/ Parkland/Institutional/ Industrial/Commercial/ Community Property Use	All Types of Property Uses	All Types of Property Uses
Acenaphthene	0.05	0.072	4.1	NV
Acenaphthylene	0.093	0.093	1	NV
Acetone	0.5	0.5	2700	NV
Aldrin	0.05	0.05	0.01	0.002
Anthracene	0.05	0.16	0.1	0.22
Antimony	1	1.3	1.5	NV
Arsenic	11	18	13	6
Barium	210	220	610	NV
Benzene	0.02	0.02	0.5	NV
Benz[a]anthracene	0.095	0.36	0.2	0.32
Benzo[a]pyrene	0.05	0.3	0.01	0.37
Benzo[b]fluoranthene	0.3	0.47	0.1	NV
Benzo[ghi]perylene	0.2	0.68	0.2	0.17
Benzo[k]fluoranthene	0.05	0.48	0.1	0.24
Beryllium	2.5	2.5	0.5	NV
Biphenyl 1 1'-	0.05	0.05	0.5	NV
Bis(2-chloroethyl)ether	0.5	0.5	5	NV
Bis(2-chloroisopropyl)ether	0.5	0.5	120	NV
Bis(2-ethylhexyl)phthalate	5	5	10	NV
Boron (Hot Water Soluble)*	NA	NA	NA	NA
Boron (total)	36	36	1700	NV
Bromodichloromethane	0.05	0.05	2	NV
Bromoform	0.05	0.05	5	NV
Bromomethane	0.05	0.05	0.89	NV
Cadmium	1	1.2	0.5	0.6
Carbon Tetrachloride	0.05	0.05	0.2	NV
Chlordane	0.05	0.05	0.06	0.007
Chloroaniline p-	0.5	0.5	10	NV
Chlorobenzene	0.05	0.05	0.5	NV
Chloroform	0.05	0.05	2	NV
Chlorophenol 2-	0.1	0.1	8.9	NV
Chromium Total	67	70	11	26
Chromium VI	0.66	0.66	25	NV
Chrysene	0.18	2.8	0.1	0.34
Cobalt	19	21	3.8	50
Copper	62	92	5	16
Cyanide (CN-)	0.051	0.051	5	0.1
Dibenz[a h]anthracene	0.1	0.1	0.2	0.06
Dibromochloromethane	0.05	0.05	2	NV
Dichlorobenzene 1 2-	0.05	0.05	0.5	NV
Dichlorobenzene 1 3-	0.05	0.05	0.5	NV
Dichlorobenzene 1 4-	0.05	0.05	0.5	NV
Dichlorobenzidine 3 3'-	1	1	0.5	NV
Dichlorodifluoromethane	0.05	0.05	590	NV
DDD	0.05	0.05	1.8	0.008
DDE	0.05	0.05	10	0.005
DDT	0.078	1.4	0.05	0.007
Dichloroethane 1 1-	0.05	0.05	0.5	NV
Dichloroethane 1 2-	0.05	0.05	0.5	NV
Dichloroethylene 1 1-	0.05	0.05	0.5	NV
Dichloroethylene 1 2-cis-	0.05	0.05	1.6	NV
Dichloroethylene 1 2-trans-	0.05	0.05	1.6	NV
Dichlorophenol 2 4-	0.1	0.1	20	NV
Dichloropropane 1 2-	0.05	0.05	0.5	NV
Dichloropropene 1 3-	0.05	0.05	0.5	NV
Dieldrin	0.05	0.05	0.05	0.002

Table 1	Soil (other than sediment) µg/g		Ground Water (µg/L)	Sediment (µg/g)
Contaminant	Agricultural or Other Property Use	Residential/ Parkland/Institutional/ Industrial/Commercial/ Community Property Use	All Types of Property Uses	All Types of Property Uses
Diethyl Phthalate	0.5	0.5	30	NV
Dimethylphthalate	0.5	0.5	30	NV
Dimethylphenol 2 4-	0.2	0.2	10	NV
Dinitrophenol, 2,4-	2	2	10	NV
Dinitrotoluene 2,4 & 2,6-	0.5	0.5	5	NV
Dioxane - 1,4	0.2	0.2	50	NV
Dioxin/Furan (TEQ)	0.000007	0.000007	0.000015	NV
Endosulfan	0.04	0.04	0.05	NV
Endrin	0.04	0.04	0.05	0.003
Ethylbenzene	0.05	0.05	0.5	NV
Ethylene dibromide	0.05	0.05	0.2	NV
Fluoranthene	0.24	0.56	0.4	0.75
Fluorene	0.05	0.12	120	0.19
Heptachlor	0.05	0.05	0.01	NV
Heptachlor Epoxide	0.05	0.05	0.01	0.005
Hexachlorobenzene	0.01	0.01	0.01	0.02
Hexachlorobutadiene	0.01	0.01	0.01	NV
Hexachlorocyclohexane Gamma-	0.01	0.01	0.01	NV
Hexachloroethane	0.01	0.01	0.01	NV
Hexane (n)	0.05	0.05	5	NV
Indeno[1 2 3-cd]pyrene	0.11	0.23	0.2	0.2
Lead	45	120	1.9	31
Mercury	0.16	0.27	0.1	0.2
Methoxychlor	0.05	0.05	0.05	NV
Methyl Ethyl Ketone	0.5	0.5	400	NV
Methyl Isobutyl Ketone	0.5	0.5	640	NV
Methyl Mercury **	NV	NV	0.12	NV
Methyl tert-Butyl Ether (MTBE)	0.05	0.05	15	NV
Methylene Chloride	0.05	0.05	5	NV
Methlynaphthalene, 2-(1-) ***	0.05	0.59	2	NV
Molybdenum	2	2	23	NV
Naphthalene	0.05	0.09	7	NV
Nickel	37	82	14	16
Pentachlorophenol	0.1	0.1	0.5	NV
Petroleum Hydrocarbons F1****	10	10	420	NV
Petroleum Hydrocarbons F2	10	10	150	NV
Petroleum Hydrocarbons F3	50	50	500	NV
Petroleum Hydrocarbons F4	50	50	500	NV
Phenanthrene	0.19	0.69	0.1	0.56
Phenol	0.5	0.5	5	NV
Polychlorinated Biphenyls	0.3	0.3	0.2	0.07
Pyrene	0.19	1	0.2	0.49
Selenium	1.2	1.5	5	NV
Silver	0.5	0.5	0.3	0.5
Styrene	0.05	0.05	0.5	NV
Tetrachloroethane 1 1 1 2-	0.05	0.05	1.1	NV
Tetrachloroethane 1 1 2 2-	0.05	0.05	0.5	NV
Tetrachloroethylene	0.05	0.05	0.5	NV
Thallium	1	1	0.5	NV
Toluene	0.2	0.2	0.8	NV
Trichlorobenzene 1 2 4-	0.05	0.05	0.5	NV
Trichloroethane 1 1 1-	0.05	0.05	0.5	NV
Trichloroethane 1 1 2-	0.05	0.05	0.5	NV
Trichloroethylene	0.05	0.05	0.5	NV
Trichlorofluoromethane	0.05	0.25	150	NV
Trichlorophenol 2 4 5-	0.1	0.1	0.2	NV
Trichlorophenol 2 4 6-	0.1	0.1	0.2	NV
Uranium	1.9	2.5	8.9	NV
Vanadium	86	86	3.9	NV
Vinyl Chloride	0.02	0.02	0.5	NV

Table 1	Soil (other than sediment) µg/g		Ground Water (µg/L)	Sediment (µg/g)
Contaminant	Agricultural or Other Property Use	Residential/ Parkland/Institutional/ Industrial/Commercial/ Community Property Use	All Types of Property Uses	All Types of Property Uses
Xylene Mixture	0.05	0.05	72	NV
Zinc	290	290	160	120
Electrical Conductivity (mS/cm)	0.47	0.57	NA	NA
Chloride	NA	NA	790000	NV
Sodium Adsorption Ratio	1	2.4	NA	NA
Sodium	NA	NA	490000	NV

Notes

( ) Standard in bracket applies to medium and fine textured soils

N/V= No value derived. N/A = Not applicable

* The boron standards are for hot water soluble extract for all surface soils. For subsurface soils the standards are for total boron (mixed strong acid digest), as ecological criteria are not considered.

**Analysis for methyl mercury only applies when mercury (total) standard is exceeded

*** The methyl naphthalene standards are appliable to both 1-methyl naphthallene and 2- methyl naphthalene , with the provision that if both are detected the sum of the two must not exceed the standard.

**** F1 fraction does not include BTEX; however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result.

TABLE 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition

Table 2	Soil Standards (other than sediment) µg/g			Potable Ground Water µg/L
Contaminant	Agricultural or Other Property Use	Residential/ Parkland/Institutional Property Use	Industrial/ Commercial/Community Property Use	All Types of Property Use
Acenaphthene	(29) 7.9	(29) 7.9	(29) 21	4.1
Acenaphthylene	(0.17) 0.15	(0.17) 0.15	(0.17) 0.15	1
Acetone	(28) 16	(28) 16	(28) 16	2700
Aldrin	0.05	0.05	(0.11) 0.088	0.35
Anthracene	(0.74) 0.67	(0.74) 0.67	(0.74) 0.67	2.4
Antimony	7.5	7.5	(50) 40	6
Arsenic	11	18	18	25
Barium	390	390	670	1000
Benzene	(0.17) 0.21	(0.17) 0.21	(0.4) 0.32	5
Benz[a]anthracene	(0.63) 0.5	(0.63) 0.5	0.96	1
Benzo[a]pyrene	0.078	0.3	0.3	0.01
Benzo[b]fluoranthene	0.78	0.78	0.96	0.1
Benzo[ghi]perylene	(7.8) 6.6	(7.8) 6.6	9.6	0.2
Benzo[k]fluoranthene	0.78	0.78	0.96	0.1
Beryllium	(5) 4	(5) 4	(10) 8	4
Biphenyl 11'-	(1.1) 0.31	(1.1) 0.31	(210) 52	0.5
Bis(2-chloroethyl)ether	0.5	0.5	0.5	5
Bis(2-chloroisopropyl)ether	(1.8) 0.67	(1.8) 0.67	(13) 11	120
Bis(2-ethylhexyl)phthalate	5	5	(35) 28	10
Boron (Hot Water Soluble)*	1.5	1.5	2	NA
Boron (total)	120	120	120	5000
Bromodichloromethane	(1.9) 1.5	(1.9) 1.5	(1.9) 1.5	16
Bromoform	(0.26) 0.27	(0.26) 0.27	(1.7) 0.61	25
Bromomethane	0.05	0.05	0.05	0.89
Cadmium	1	1.2	1.9	2.7
Carbon Tetrachloride	(0.12) 0.05	(0.12) 0.05	(0.71) 0.21	(5) 0.79
Chlordane	0.05	0.05	0.05	7
Chloroaniline p-	(0.53) 0.5	(0.53) 0.5	(0.53) 0.5	10
Chlorobenzene	(2.7) 2.4	(2.7) 2.4	(2.7) 2.4	30
Chloroform	(0.17) 0.05	(0.17) 0.05	(0.18) 0.47	(22) 2.4
Chlorophenol 2-	(2) 1.6	(2) 1.6	(3.9) 3.1	8.9
Chromium Total	160	160	160	50
Chromium VI	(10) 8	(10) 8	(10) 8	25
Chrysene	(7.8) 7	(7.8) 7	9.6	0.1
Cobalt	22	22	(100) 80	3.8
Copper	(180) 140	(180) 140	(300) 230	87
Cyanide (CN-)	0.051	0.051	0.051	66
Dibenz[a h]anthracene	0.1	0.1	0.1	0.2
Dibromochloromethane	(2.9) 2.3	(2.9) 2.3	(2.9) 2.3	25
Dichlorobenzene 1 2-	(1.7) 1.2	(1.7) 1.2	(1.7) 1.2	3
Dichlorobenzene 1 3-	(6) 4.8	(6) 4.8	(12) 9.6	59
Dichlorobenzene 1 4-	(0.097) 0.083	(0.097) 0.083	(0.57) 0.2	1
Dichlorobenzidine 3 3'-	1	1	1	0.5
Dichlorodifluoromethane	(25) 16	(25) 16	(25) 16	590
DDD	3.3	3.3	4.6	10
DDE	(0.33) 0.26	(0.33) 0.26	(0.65) 0.52	10
DDT	0.078	1.4	1.4	2.8
Dichloroethane 1 1-	(0.6) 0.47	(0.6) 0.47	(0.6) 0.47	5
Dichloroethane 1 2-	0.05	0.05	0.05	(5) 1.6
Dichloroethylene 1 1-	0.05	0.05	(0.48) 0.064	(14) 1.6
Dichloroethylene 1 2-cis-	(2.5) 1.9	(2.5) 1.9	(2.5) 1.9	(17) 1.6
Dichloroethylene 1 2-trans-	(0.75) 0.084	(0.75) 0.084	(2.5) 1.3	(17) 1.6
Dichlorophenol 2 4-	(0.27) 0.19	(0.27) 0.19	(0.27) 0.19	20
Dichloropropane 1 2-	(0.085) 0.05	(0.085) 0.05	(0.68) 0.16	5
Dichloropropene 1 3-	(0.081) 0.05	(0.081) 0.05	(0.081) 0.059	0.5
Dieldrin	0.05	0.05	(0.11) 0.088	0.35

Table 2	Soil Standards (other than sediment) µg/g			Potable Ground Water µg/L
Contaminant	Agricultural or Other Property Use	Residential/ Parkland/Institutional Property Use	Industrial/ Commercial/Community Property Use	All Types of Property Use
Diethyl Phthalate	0.5	0.5	0.5	38
Dimethylphthalate	0.5	0.5	0.5	38
Dimethylphenol 2 4-	(53) 38	(53) 38	(53) 38	59
Dinitrophenol, 2,4-	(2.9) 2	(2.9) 2	(2.9) 2	10
Dinitrotoluene 2,4 & 2,6-	0.5	0.5	0.5	5
Dioxane - 1,4	0.2	1.8	1.8	50
Dioxin/Furan (TEQ)	0.000013	0.000013	0.000099	0.000015
Endosulfan	0.04	0.04	(0.38) 0.3	1.5
Endrin	0.04	0.04	0.04	0.48
Ethylbenzene	(1.6) 1.1	(1.6) 1.1	(1.6) 1.1	2.4
Ethylene dibromide	0.05	0.05	0.05	0.2
Fluoranthene	0.69	0.69	9.6	0.41
Fluorene	(69) 62	(69) 62	(69) 62	120
Heptachlor	0.15	0.15	0.19	1.5
Heptachlor Epoxide	0.05	0.05	0.05	0.048
Hexachlorobenzene	0.52	0.52	0.66	1
Hexachlorobutadiene	(0.014) 0.012	(0.014) 0.012	(0.095) 0.031	(0.6) 0.44
Hexachlorocyclohexane Gamma-	(0.063) 0.056	(0.063) 0.056	(0.063) 0.056	1.2
Hexachloroethane	(0.07) 0.089	(0.07) 0.089	(0.43) 0.21	2.1
Hexane (n)	(34) 2.8	(34) 2.8	(88) 46	(520) 51
Indeno[1 2 3-cd]pyrene	(0.48) 0.38	(0.48) 0.38	(0.95) 0.76	0.2
Lead	45	120	120	10
Mercury	(1.8) 0.25	(1.8) 0.27	(20) 3.9	(1) 0.29
Methoxychlor	0.13	0.13	1.6	6.5
Methyl Ethyl Ketone	(44) 16	(44) 16	(88) 70	1800
Methyl Isobutyl Ketone	(4.3) 1.7	(4.3) 1.7	(210) 31	640
Methyl Mercury **	(0.0094) 0.0084	(0.0094) 0.0084	(0.0094) 0.0084	0.15
Methyl tert-Butyl Ether (MTBE)	(1.4) 0.75	(1.4) 0.75	(2.3) 1.6	15
Methylene Chloride	(0.96) 0.1	(0.96) 0.1	(2) 1.6	50
Methylnaphthalene, 2-(1-) ***	(3.4) 0.99	(3.4) 0.99	(42) 30	3.2
Molybdenum	6.9	6.9	40	70
Naphthalene	(0.75) 0.6	(0.75) 0.6	(28) 9.6	11
Nickel	(130) 100	(130) 100	(340) 270	100
Pentachlorophenol	0.1	0.1	(3.3) 2.9	30
Petroleum Hydrocarbons F1****	(65) 55	(65) 55	(65) 55	750
Petroleum Hydrocarbons F2	(150) 98	(150) 98	(250) 230	150
Petroleum Hydrocarbons F3	(1300) 300	(1300) 300	(2500) 1700	500
Petroleum Hydrocarbons F4	(5600) 2800	(5600) 2800	(6600) 3300	500
Phenanthrene	(7.8) 6.2	(7.8) 6.2	(16) 12	1
Phenol	9.4	9.4	9.4	890
Polychlorinated Biphenyls	0.35	0.35	1.1	3
Pyrene	78	78	96	4.1
Selenium	2.4	2.4	5.5	10
Silver	(25) 20	(25) 20	(50) 40	1.5
Styrene	(2.2) 0.7	(2.2) 0.7	(43) 34	5.4
Tetrachloroethane 1 1 1 2-	(0.05) 0.058	(0.05) 0.058	(0.11) 0.087	1.1
Tetrachloroethane 1 1 2 2-	0.05	0.05	(0.094) 0.05	1
Tetrachloroethylene	(2.3) 0.28	(2.3) 0.28	(2.5) 1.9	(17) 1.6
Thallium	1	1	3.3	2
Toluene	(6) 2.3	(6) 2.3	(9) 6.4	24
Trichlorobenzene 1 2 4-	(1.4) 0.36	(1.4) 0.36	(16) 3.2	70
Trichloroethane 1 1 1-	(3.4) 0.38	(3.4) 0.38	(12) 6.1	200
Trichloroethane 1 1 2-	0.05	0.05	(0.11) 0.05	(5) 4.7
Trichloroethylene	(0.52) 0.061	(0.52) 0.061	(0.61) 0.55	(5) 1.6
Trichlorofluoromethane	(5.8) 4	(5.8) 4	(5.8) 4	150
Trichlorophenol 2 4 5-	(5.5) 4.4	(5.5) 4.4	(10) 9.1	8.9
Trichlorophenol 2 4 6-	(2.9) 2.1	(2.9) 2.1	(2.9) 2.1	2
Uranium	23	23	33	20
Vanadium	86	86	86	6.2
Vinyl Chloride	(0.022) 0.02	(0.022) 0.02	(0.25) 0.032	(1.7) 0.5

Table 2	Soil Standards (other than sediment) µg/g			Potable Ground Water µg/L
Contaminant	Agricultural or Other Property Use	Residential/ Parkland/Institutional Property Use	Industrial/ Commercial/Community Property Use	All Types of Property Use
Xylene Mixture	(25) 3.1	(25) 3.1	(30) 26	300
Zinc	340	340	340	1100
Electrical Conductivity (mS/cm)	0.7	0.7	1.4	NA
Chloride	NA	NA	NA	790000
Sodium Adsorption Ratio	5	5	12	NA
Sodium	NA	NA	NA	490000

Notes

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