

TOWN OF OLDS
Bylaw 2018-45
WATER and WASTEWATER

A BYLAW of the Town of Olds in the Province of Alberta **RESPECTING WATER and WASTEWATER** in the Town of Olds.

WHEREAS Section 7 of the Municipal Government Act, Chapter M-26 2000 and amendments thereto, provide for the passing of a bylaw by a Municipal Council respecting Public Utilities within the Town and,

WHEREAS Waterworks and Wastewater are defined as a Public Utility.

NOW THEREFORE THE MUNICIPAL COUNCIL OF THE TOWN OF OLDS, IN THE PROVINCE OF ALBERTA, DULY ASSEMBLED, ENACTS AS FOLLOWS:

SHORT TITLE

This Bylaw may be referred to as the **WATER AND WASTEWATER BYLAW** of the TOWN OF OLDS.

SECTION I – USE AND CONTROL

The use and Control of all Public Waterworks, Water Treatment Systems, Common Wastewater and of any Sewage Disposal Works connected therewith, shall be in accordance with this Bylaw.

SECTION II – AREA OF RESPONSIBILITY

All Waterworks, Sanitary Wastewater System, Storm Wastewater System, Drains and Wastewater Disposal Works, belonging to the Town now laid down, or hereafter laid down shall be under the direct control of the Town of Olds.

SECTION III – DEFINITIONS

- 3.01 Authorized Person means any representative appointed by the Town of Olds.
- 3.02 Chief Administrative Officer (C.A.O.) Municipal Government Act, Section 207
- a) Is the administrative head of the municipality;
 - b) Ensures that the policies and programs of the municipality are implemented;
 - c) Advises and informs the Council on the operation and affairs of the municipality;
 - d) Performs the duties and function and exercises the powers assigned to a Chief Administrative Officer by this and other enactments or assigned by Council.
- 3.03 Council means the Municipal Council of the Town of Olds.
- 3.04 Dual Flush Model Toilets means all toilets that have a 6 litre maximum full flush for solids and a 4 litre maximum reduced flush for liquids
- 3.05 Litres per Minute (lpm) means the amount of water in litres passing through a pipe per minute.



- 3.06 Meter means a water meter used to measure the amount of water used in metric measurement.
- 3.07 New Customer means an individual, partnership or corporation who is the Owner of the Lands and who submits an application for utility service for those Lands;
- 3.08 Occupant means any Person other than the Owner who is in possession of the Property, including, but not limited to, a licensee, tenant or agent of the Owner;
- 3.09 Once-through Cooling Equipment means cooling, air conditioning or refrigeration systems in buildings, building systems and equipment (including stand-alone ice machines), which rely upon the temperature of the water supply for cooling purposes and deliver water to a drain or other discharge facility without having recycled that water.
- 3.10 Owner means
- i. any Person registered as the Owner of the Property under the *Land Titles Act*;
 - ii. a Person who is recorded as the Owner of the Property on the Assessment Roll of the Town;
 - iii. a Person who has become the beneficial Owner of the Property, including by entering into a Purchase and Sale Agreement, whether they have purchased or otherwise acquired directly from the Owner or from another purchaser, and who has not yet become the registered Owner thereof;
 - iv. a Person holding himself out as the Person exercising the power or authority of Ownership or, who for the time being exercises the powers and authority of Ownership over the property; or
 - v. A Person in control of the property under construction.
- 3.11 Person means firm, corporation, owner, occupier, lessee or tenant.
- 3.12 Street Main means that portion of water and/or Wastewater line that is laid for the service of more than one person.
- 3.13 Town means the Town of Olds.
- 3.14 Wastewater Service Line means that line extending from the main in the street to the property line of the building being serviced.
- 3.15 Water Service Line means that line extending from the main in the street to the property line of the building being serviced.
- 3.16 Xeriscaping means gardening practices that use native plants and drought-tolerant species which require less water and chemicals.



SECTION IV - WATERWORKS

- 4.01(a) Any Owner who requires water service (residential) in the Town of Olds shall make an application to the Town on such form as utilized by the Town from time to time. Failure to make an application to the Town of Olds prior to usage of water shall constitute a contravention of this bylaw.
- 4.01(b) Upon the acceptance of the application, an account shall be set up in the name of the Owner of the Property. An Owner may request in writing that the monthly utility billings under the account be submitted directly to the Occupant of the property if someone other than the Owner or to another third party, including but not limited to a property manager or both. Such a request does not limit the liability of the Owner to ensure the utility account remains in good standing.
- 4.02(a) Any Owner who requires water service (commercial) in the Town of Olds shall make an application to the Town on such form as utilized by the Town from time to time. Failure to make an application to the Town of Olds prior to usage of water shall constitute a contravention of this bylaw.
- 4.02(b) Upon the acceptance of the application for a commercial utility service, an account shall be set up in the name of the Owner of the Property. An Owner may request in writing that the monthly utility billings under the account be submitted directly to the Occupant of the property if someone other than the Owner or a third party, including but not limited to a property manager or both. Such a request does not limit the liability of the Owner to ensure the utility account remains in good standing.
- 4.03 All water service pipes laid in private property, between the property line and the water meter, shall be C.S.A. approved material of equal quality to the service pipes in the street between the watermain and the property line.
- 4.04 All water users require meters and radio transmitting devices to be installed on their premises at the costs as stated in the Town of Olds "Rates Bylaw".
- 4.05 All Water Meters supplied by the Town of Olds shall at all times be the property of the Town. Payment of a connection fee or other fee does not constitute a sale.
- 4.06 The user shall be responsible for damage to the remote reading device, which may result from other than normal wear and tear.
- 4.07 No connection may be made to the water service pipe between the property line and the meter.
- 4.08 All owners, tenants or occupiers shall give access to an authorized Town employee to:
- (a) Install, service or seal a water meter and shall be liable for any damage which may occur to said meter.
 - (b) Install, service or maintain a radio transmitter
 - (c) Shut off and seal a water line for nonpayment.
 - (d) Read a meter.

- 4.09 Any person permitting any meter to be damaged by frost shall be liable for all costs incurred in the replacement of said meter. Replacement costs shall include the costs for any Town employees required to complete the replacement, the costs for Town equipment, contracted services and goods purchased. The said charges shall be subject to the same penalties and are collectible by the same procedures as taxes levied by the Town.
- 4.10 Any person permitting any radio transmitter to be damaged shall be liable for all costs incurred in the replacement of said radio transmitter. Replacement costs shall include the costs for any Town employees required to complete the replacement, the costs for Town equipment, contracted services and goods purchased. The said charges shall be subject to the same penalties and are collectible by the same procedures as taxes levied by the Town.
- 4.11 Should any person claim a meter is not working properly and is over reading; said person shall deposit with the Town the sum as stated in the Town of Olds "Rates Bylaw". The meter will then be removed from service and sent to an independent company for testing.
- 4.12 Should the said meter be found to over read by more than one and a half percent (1.5%), the said person shall be refunded their deposit. Any meter which meets the requirements previously stated shall be considered adequate, and the said person shall forfeit the said deposit to the Town to cover costs of removal and test of said meter.
- 4.13 If a meter is found to be inaccurate, the accounts based upon the reading of that meter for the maximum of twelve (12) monthly bills preceding the date of such test shall be corrected in proportion to the error of the meter in excess of the above limits and the customer shall pay or shall be refunded payment.
- 4.14 No person shall interfere with, cut or remove the wire seal on a meter, valve, radio transmitter or outside readout.
- 4.15 No person shall disconnect a meter or do anything which may prevent or impede the flow of water through a meter or the recording of the flow of water through the meter, or which may affect the proper operation of the water meter.
- 4.16 To maintain an adequate water supply within the Town of Olds, the Town Council or Chief Administrative Officer or his/her designate, as the case may be, may impose restrictions on the use of water.
- 4.17 **WELLS AND OTHER SOURCES OF SUPPLY OF WATER**
No well or other source of water except the Town water mains shall be used in the Town without permission obtained from the Town.
- 4.18 All persons having charge of or being owners or occupiers of premises containing a well or other source of supply of water other than the water mains of the Town may apply to the Town for permission to use the water in such well or other source of supply of water other than the water mains of the Town. The Town may impose such conditions on the use of such well or source, as the Town deems necessary. These conditions shall not be able to be appealed to any group or organization.

Upon complying with the conditions prescribed, the applicant may be granted a permit to use the water in the said well or other source of supply of water.

No permits will be issued for new wells after the date this bylaw becomes effective.

- 4.19 If the use of any such well or other source of supply of water is continued contrary to the provisions of this Bylaw forty eight (48) hours after notice to discontinue the use of same has been given by the Chief Administrative Officer or his/her designate, to the owner or occupier of the premises on which it is situated, such well or other source of supply of water may be declared to be a nuisance and dangerous to the Public Health and Safety and shall be removed, plugged, filled up, or otherwise abated.
- 4.20 Any such permit as aforesaid may be withdrawn by order of the Council at anytime without notice, and no person shall use a well or other source of supply of water after a permit for use of same has been withdrawn.
- 4.21 Except as here-in-after provided, no persons other than authorized employees of the Town shall open, close, operate or interfere with any valve or hydrant to draw water for any purpose including but not limited to watering lawns, personal outdoor rinks, water fill stations, personal pools/hot tubs, fishponds or fountains.
- 4.22 The Chief of the Town Fire Department, his assistant, officers, and members of that Department, are authorized to use the hydrants for the purpose of extinguishing fires, or for making trial testing of hose pipe, or for fire protection.
- 4.23 No person shall in any manner obstruct the free access to any hydrant, valve or curb stop. No vehicle, building, rubbish, or any other matter which would cause such obstruction of the street in which the hydrant is located, may be within twenty feet (20') of the hydrant in a direction parallel with the said property line.
- 4.24 Any hydrant used for seasonal water use must use a hydrant meter supplied by the Town. All hydrant meters shall be removed as requested by the Town.
- 4.25 The town shall assume the full responsibility and costs for any water service line, which may be frozen between the water main and the *property line*. The owner of the property shall be responsible for any costs associated with thawing a water service between the *property line* and the *building*. Any costs incurred by the Town in thawing frozen lines on behalf of any person shall be recoverable and subject to the same penalties as taxes.
- 4.26 The Town shall assume the full responsibility and costs for the service line connected to the water main up to the property line. The owner shall assume the full responsibility and costs of the service line from the property line into the building. Any costs incurred by the Town to maintain, replace or repair the service line from the property line to the building shall be recoverable and subject to the same penalties as taxes.
- 4.27 The curb stop shall remain property of the Town. Any and all maintenance of the curb stop shall be the sole responsibility of the Town.



SECTION V – WASTEWATER

5.01 USE AND PROTECTION OF WASTEWATER

No person shall throw, deposit or leave in/or upon any Town sewer, or any trap, basin, grating, manhole, or other appurtenance of any Town sewer, any offal, garbage, litter, manure, rubbish, sweeping, sticks, stones, bricks, earth, gravel, dirt, mud, hay, straw, twigs, leaves, papers, rags, cinders, ashes or refuse matter of any kind, except feces, urine, the necessary closet paper, and wastewater properly discharged through a house sewer into a Town Wastewater system.

5.02 No person shall permit to be discharged into any sewer, any liquid or liquids which would prejudicially affect the wastewater, or the disposal of the sewage, or any matter of substance by which the free flow of the sewage may be interfered with, or any chemical refuse, or trade waste, or any waste stream, condensing water, heated water, or other liquids of a higher temperature than Seventy Seven (77) degrees Celsius.

5.03 No person shall make or cause to be made any connection with any Town wastewater line, or house drain, or appurtenance thereof for the purpose of conveying, or which may convey, into the same any inflammable or explosive material, storm water, roof drainage, cistern or tank overflow, condensing or cooling water.

5.04 DRAINAGE OF WEEPING TILE

(a) Foundation weeping tiles installed after the effective date of this Bylaw shall not be drained into any wastewater service but may be drained into storm sewer mains where the facility exists and the connection feasible.

(b) No roof drains shall be connected to weeping tiles.

(c) Sump pumps installed after the effective date of this bylaw shall not be drained into any wastewater service but may be drained overland or into the storm sewer mains where the facility exists.


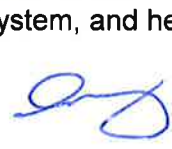
5.05 No person shall discharge the contents of any privy, vault, manure pit or cesspool, directly or indirectly, into the Town Wastewater System or house drain connected therewith.

5.06 No person shall turn, lift, remove, raise or tamper with the cover of any manhole, ventilator or other appurtenance of the Town Wastewater System, except duly authorized employees of the Town.

5.07 No person shall cut, break, pierce, or tap into the Town Wastewater System or appurtenance thereof, or introduce any pipe, tube, trough, or conduit into the Town Wastewater System, except duly authorized employees of the Town.

5.08 No person shall interfere with the free discharge of the Town Wastewater System, or part thereof, or do any act or thing which may impede or obstruct the flow or clog up the Town Wastewater System or appurtenance thereof.

5.09 An authorized Town of Olds employee shall have the right at all reasonable times to enter houses or other places which have been connected with Town Wastewater System, and facilities must be given to him to ascertain whether or not any improper material or liquid is being discharged into the Wastewater System, and he shall be



authorized to stop or prevent from discharging into the Wastewater system any private Wastewater or drain through which substance are discharged which are liable to injure the Wastewater or obstruct the flow of sewage.

5.10 INDUSTRIAL OR TRADE WASTES

No waste or discharge resulting from any trade, industrial or manufacturing process, shall be directly discharged to any Town Wastewater System without approval of the Town. As a condition of such approval, the Town may require such pre-treatment of the effluent as is deemed necessary. The pre-treatment facilities required shall be completely installed by the applicant, at his expense, prior to the construction of the wastewater connection, and thereafter shall be continuously maintained and operated by the applicant.

5.11 GREASE TRAPS

Grease traps of sufficient size and approved design shall be placed on the waste pipes from all hotels, restaurants, laundries and such other places as the Town may direct. Such traps shall be installed prior to any connection to the Town Wastewater System.

5.12 WASTEWATER CONNECTIONS

No person other than those authorized by the Town shall make any connection to/or shall cut or otherwise tamper in any way with the Town Wastewater System.

SECTION VI – WASTEWATER CONNECTIONS

6.01 Should any person claim that any wastewater service line is plugging or is plugged because it is not laid according to good practice the said person shall deposit with the Town the sum as specified in the Town of Olds "Rates Bylaw". The Chief Administrative Officer or his/her designate will then be authorized to open the said Wastewater Service Line by any method they consider necessary.

6.02 Should the said service line be found properly laid according to good work practices, the said person shall forfeit the said deposit and shall be liable to pay all costs incurred by the Town in opening the said Wastewater Service Line. The said costs so incurred shall be subject to the same penalties and are collectible by the same procedure as taxes levied by the Town.

6.03 The person occupying any premises connected to a street main by a Wastewater Service Line, shall be required to keep the said Wastewater Service Line in operating condition at all times and shall be fully responsible for the operation of the said Wastewater Service Line.

SECTION VII – WATER AND WASTEWATER CONNECTIONS

7.01 A private water connection cannot be made to the Town's WATER SYSEM until approval is granted by the Town. Permission can be obtained only after the owner or his agent have entered into an agreement with the Town that establishes standards for construction practices and materials. A fee as stated in the Town of Olds Rate Bylaw shall be paid to the Town to recover the cost of processing and reviewing each agreement.

- 7.02 A private Wastewater connection cannot be made to the Town's Wastewater System until approval is granted by the Town. Permission can be obtained only after the owner or his agent have entered into an agreement with the Town that establishes standards for construction practices and materials. A fee as stated in the Town of Olds Rate Bylaw shall be paid to the Town to recover the cost of processing and reviewing each agreement.
- 7.03 The Chief Administrative Officer or his/her designate may revoke or cancel any permit that may have been granted to connect with the Town Wastewater System if he shall find that any of the work is not being done in accordance with the provisions of this Bylaw, and the person or persons making such connections or their successors in interest, shall have no right to demand or claim any damages in consequence of such permits being revoked or canceled.
- 7.04 The rates as stated in the Town of Olds "Rates Bylaw" shall apply for Water and Wastewater service from the Town of Olds.

SECTION VIII – STORM SEWER

- 8.01 No person shall, without the Town's written consent, release matter of any kind listed below into or in land drainage works, private bench drains, or connections to any Storm Sewer System:
- a) Matter which because of its type, temperature, quantity or quality may:
 - i. Interfere with the proper operation of the Storm Sewer System;
 - ii. Result in a hazard to any person, animal, property or vegetation;
 - iii. Impair the quality of the water in any well, lake, river, pond, stream, reservoir or other water or water course; or
 - iv. Result in the contravention of any Federal, Provincial, or Municipal legislation including any approval, requirement, direction or other order issued by Alberta Environment or other enforcing agency with respect to the Storm Sewer System or its discharge;
 - b) Matter containing more than fifty (50) milligrams per litre of suspended solids;
 - c) Matter containing dyes or colouring material or which upon reaction with other matter will discolour the water in the Storm Sewer System;
 - d) Matter containing solvent, extractable matter of vegetable origin or mineral or synthetic origin which causes a visible film, machine or discoloration on the water surface;
 - e) Any matter which by itself or in combination with other substances is capable of causing or contributing to any explosion or supporting combustion;
 - f) Matter that is sewage.
- 8.02 Any person who release or causes or permits the release into any Storm Sewer System any matter contrary to Section 8.01 shall:
- a) Notify the Town immediately upon becoming aware of the release;
 - b) Provide the Town with information respecting the release, to the satisfaction of the Town;
 - c) Be liable for all costs incurred by the Town respecting the release for containment, sampling, testing, removal, clean-up, disposal and any other related activity.

SECTION IX – WATER CONSERVATION

- 9.01 That all Building Permit and Development Permit applications include a water conservation plan describing the mandatory and voluntary water conservation efforts that will be made.
- 9.02 That all Building Permit applications for multi-family housing replacing existing housing have conservation plans demonstrating the steps to be undertaken so that the wastewater system demands of the construction does not exceed the demands of the previous development.
- 9.03 That, effective January 01, 2007 all Building Permits issued for new construction, renovation or basement development projects for residential properties, including multi-unit residential buildings, will be required to have water efficient plumbing fixtures which meet the following mandatory minimum requirements:
- All flush toilets must be Dual-Flush Toilets or shall have an average flush of 4.5 liters or less
 - All flush toilet models must conform to certification by the Canadian Standards Association under section B45 and amendments thereto, at the time of installation
 - All showerheads must be rated not to exceed 7.6 lpm
 - All household lavatory faucets to be fitted with a tap aerator and to have a maximum flow rate of 5.7 lpm
 - All household kitchen faucets to be fitted with a tap aerator and to have a maximum flow rate of 5.7 lpm
 - All household hot water pipe runs of more than 8 meters must include recirculation systems (on new construction only)
- 9.04 That, effective January 01, 2007 all Building Permits issued for new construction, renovation or basement development projects for residential properties, including multi-unit residential buildings, will be asked to voluntarily institute the following Water Conservation Measures:
- Downspouts to be directed away from the foundation and be incorporated into landscaping plans such that rain water is maximized for trees, shrubs and lawns.
 - Installation of water-conserving Energy star certified washers.
 - Installation of Energy star certified dishwashers.
 - Underground irrigation systems to be equipped with a high flow shutoff valve.
 - Minimum 8 inches of topsoil for growth areas
 - Xeriscaping planning and implementation.
 - At least one rain barrel per home.
- 9.05 That, effective January 01, 2007 Building Permits and Development Permits issued for new construction, development, retrofitting or restoration of commercial, institutional, industrial, or municipal buildings will be required to meet the following water efficient requirements for plumbing and mechanical fixtures:
- All public restroom urinals to be waterless or to have a total water usage of no greater than 3.8 litres per flush
 - All flush toilets must be Dual-Flush Toilets or shall have an average flush of 4.5 liters or less.
 - All flush toilet models must conform to certification by the Canadian Standards Association under section B45 and amendments thereto, at the time of installation.



- d) All lavatory faucets to have a tap aerator and to have a maximum flow rate of 1.9 lpm
- e) No person shall install or allow the installation of any Once-Through Cooling Equipment connected to the Town of Olds potable water supply, in any construction, development, retrofitting or restoration project.

SECTION X – GENERAL

10.01 MONTHLY BILLING

A utility bill showing actual or estimated amounts for all service charges to the user shall be prepared and mailed monthly. The Water and Wastewater service charges and any other charges authorized by a bylaw of the Town of Olds may be combined on a single user bill, but each charge shall be shown separately.

10.02 Any customer may pay their bill in person at the Town of Olds office by cash, cheque, money order, bank draft, debit cards, Master Card and Visa. Payments can also be made at most financial institutions (on-line, in person or by phone). Cheques, money orders and bank drafts can also be mailed to the office with the applicable utility statement.

10.03 A customer may make application to the Town of Olds to have bills paid by pre-authorized debit. Payments being rejected by the bank are considered NSF and are subject to the same penalties as NSF cheques in the Town of Olds rate bylaw.

10.04 Non-receipt of a utility bill will not exempt the owner or occupant from payment for the service received.

10.05 In the case of non-use of services, each customer shall continue to pay the base rates as specified in the Town of Olds "Rates Bylaw".

10.06 Where the calculation of a utility billing is based on the consumption of water the quantity used shall be determined from the present and previous meter readings as recorded by the Town, or if an actual reading is not available, by an estimated consumption based on the consumption history of the service.

10.07 No reduction in rate or charges shall be made for any interruption in water or sewer services during a billing period.

SECTION XI – PENALTIES

11.01 A one and a half percent (1.5%) penalty shall be applied to any combined Water and Wastewater account which remains unpaid at the end of the month for which the account was rendered on the combined balance and that similar accumulated penalty shall be added for each month the account remains unpaid.

11.02 Should any combined Water and Wastewater account or portion thereof remain unpaid for more than thirty (30) days following the date of billing, the services may be disconnected.

- 11.03 Where it has becomes necessary to discontinue service for non-payment of an account, reconnection will not be made until all arrears and penalties have been paid in full and the reconnection charge as specified in the Town of Olds "Rates Bylaw" has been paid in advance. The account will only be opened in the name of the Owner, even if the account that was disconnected was in the name of an Occupant
- 11.04 In the case of default of payment for utility services, the Town of Olds may enforce payment by commencing an action in a court of competent jurisdiction.
- 11.05 In the case of default payment for utility services for an account in the name of an Owner, the Town of Olds may enforce payment of the utility account pursuant to the provisions of the *Municipal Government Act*, R.S.A. 2000, c M-26, as amended or repealed and replaced from time to time, including but not limited to, adding the costs to the tax roll for the property for which the utility account relates.
- 11.06 N.S.F. CHEQUES
An administrative fee as stated in the Town of Olds Rate Bylaw will be imposed on any customer issuing a N.S.F. cheque to the Town of Olds.
- 11.07 Any person who violates a provision of this Bylaw is guilty of an offense and liable upon summary conviction to a fine of not more than Two Thousand Five Hundred Dollars (\$2,500.00) and not less than Three Hundred Dollars (\$300.00) exclusive of costs, and in each and every case in default of payment said person shall be liable to imprisonment in the nearest common jail for a period not exceeding six (6) months, unless the fine and costs be sooner paid.

SECTION XII – ENFORCEMENT

- 12.01 Where a Peace Officer believes that a Person has contravened any provision of this Bylaw, that Peace Officer may serve that Person with a Violation Ticket in accordance with Part 2 of the Provincial Offences Procedure Act.
- 12.02 Notwithstanding section 12.01 of this Bylaw, where a Peace Officer believes that a Person has contravened any provision of this Bylaw, that Peace Officer may serve that Person with a Bylaw Violation Ticket, in a form approved by the Manager of Water and Wastewater, by personal service or by regular or registered mail.
- 12.03 A Bylaw Violation Ticket issued pursuant to section 12.02 of this Bylaw shall specify the minimum penalty payable as specified in section 11.07
- 12.04 A Person who has been issued a Bylaw Violation Ticket pursuant to section 12.02 of this Bylaw and has paid it to the Town prior to the date specified on that Bylaw Violation Ticket shall not be liable to prosecution for the subject contravention.
- 12.05 Nothing in this Bylaw shall prevent a Peace Officer from issuing a summons for the mandatory court appearance of any Person who the Peace Officer has reason to believe is committing, or has committed, a breach of any provision of this Bylaw, or from laying an information.

SECTION XIII – MISCELLANEOUS

13.1 This Bylaw repeals Town of Olds Bylaw 2014-10

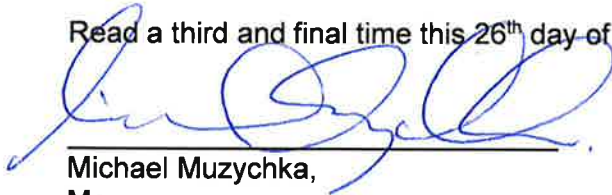
13.2 This Bylaw comes into full force and effect on January 1, 2019

Read a first time this 26th day of November, 2018.

Read a second this 26th day of November, 2018.

Unanimous consent given to present for third reading this 26th day of November, 2018

Read a third and final time this 26th day of November, 2018.



Michael Muzychka,
Mayor



Michael Merritt,
Chief Administrative Officer

Signed by the Chief Elected Officer and the Chief Administrative Officer this 27th day of November, 2018