

R.M. OF BRITANNIA NO. 502

BYLAW NO. 28-2024

**A BYLAW FOR THE ENTERING INTO AN AGREEMENT WITH
THE CITY OF LLOYDMINSTER FOR THE ROAD CROSSING AND
MAINTENANCE ALONG THE NEALE EDMUNDS COMPLEX.**

The Council of the Rural Municipality of Britannia No. 502 in the Province of Saskatchewan enacts as follows:

1. The Rural Municipality of Britannia No. 502 is hereby authorized to enter into an agreement with The City of Lloydminster, the terms of which are set out in Exhibit 'A', which is attached hereto and forms part of this bylaw.
2. The Reeve and Chief Administrative Officer of the Rural Municipality of Britannia No. 502 are hereby authorized to sign and execute the said agreement with the City of Lloydminster, the terms of which are set out in Exhibit 'A' which is attached hereto and forms part of this bylaw.



[Redacted signature]

Reeve

[Redacted signature]

Chief Administrative Officer

Read a first time this 23 day of October, 2024.
Read a second time this 23 day of October, 2024.
Read a third time this 12 day of November, 2024

**Certified to be a true and correct copy
of Bylaw No. 28-2024 passed by
Resolution of Council on November 12/24
Administrator [Redacted]**

DEC 04 2024

THIS AGREEMENT made this date: _____

BETWEEN:

CITY OF LLOYDMINSTER

(hereinafter referred to as "City")

-and-

RURAL MUNICIPALITY OF BRITANNIA NO. 502

(hereinafter referred to as the "RM")

ROAD CROSSING OPERATION AND MAINTENANCE AGREEMENT

WHEREAS:

- A.** The City operates and maintains the Neale Edmunds Stormwater Complex (the "Complex") and has secured an easement on all lands along the drainage channel into the Complex (the "Easement");
- B.** The City discharges stormwater and treated effluent from the City's Wastewater Treatment Facility (WWTF) into RM infrastructure (channels and road crossings) within the Neale Edmunds Stormwater Complex;
- C.** Council of the RM approve the conveyance of water across and within the RM right-of-way (the "RM Right-of-Way") and grant approval to the extent that it can grant such permission under its authority, with the Road Crossing Operation and Maintenance Agreement being the agreed terms of the RM's approval (the "Sanction").
- D.** NOW THEREFORE in consideration of the mutual covenants and conditions herein contained, RM and the City agree as follows:

1 SCHEDULES

1.1 Schedules. The following Schedules are part of this Agreement:

- Schedule "A" The Map**
- Schedule "B" Operations and Maintenance Plan**

2 REPRESENTATIONS AND WARRANTIES

2.1 City Representations and Warranties. The City represents and warrants to the RM that:

- (a)** the City shall be responsible for the operations and inspection, maintenance, upgrade and repairs of all infrastructure and channels within private lands covered under the City's Easement.
- (b)** The City shall be responsible for the operations and maintenance of underground infrastructure on road crossings located on the RM's Right-of-Way (marked as RC #5, #3, #2, and #1 on the map attached to this Agreement as Schedule "A").
- (c)** the City holds all permits, licenses, consents, and authorities issued by any level of government or any agency of government, that are required by law to operate the Complex.



- (d) The City will operate the Neale Edmunds Complex in accordance with the City's Operations and Maintenance manuals, as amended from time to time to remain current with requirements and legislation.
- (e) The City will consult with the RM in the event that the City intends to make any material changes to the Operations and Maintenance manuals for the Neale Edmunds Complex.

2.2 RM Representations and Warranties. The RM represents and warrants to the City that:

- (a) The RM shall be solely responsible for all surface restoration, maintenance, upgrades, and repairs to any road surface within the RM Right-of-Way, and the City shall have no responsibility or liability in relation to the same unless the surface restoration, maintenance, upgrade or repair of the road surface, as the case may be, is required as result of City's need to complete maintenance, upgrades, repairs, capital improvement or major repairs of the underground infrastructure in which case the surface restoration, maintenance, upgrade or repair shall be shared 50/50 between the City and the RM.

3 COORDINATION, COMMUNICATION AND RESPONSE

3.1 Communication.

- (a) All communication will be classified as either non-urgent or emergency. Non-urgent issues are deemed as matters that pose no immediate threat to infrastructure or property. Emergency issues are deemed as problems that present an immediate threat to infrastructure or property.
- (b) In the event of a non-urgent issue, communication will be made to the following designated contacts:
 - (i) City of Lloydminster
Attn: Manager, Distribution and Collection
Phone: 780-874-3700 ext. 2773
Email: krushton@lloydminster.ca
 - (ii) RM of Britannia No. 502
Attn: Chief Administrative Officer, RM of Britannia
Phone: 306-825-2610
Email: cao@rmbritannia.com

The party to which a non-urgent communication is sent will make its best effort to respond within 2 business days.



3.2 Emergency Response.

- (a)** In the event of an emergency, such as severe weather conditions or potential damage to lands and infrastructure, communication will be made immediately to the following designated contacts:
 - (i)** RM of Britannia No. 502
Chief Administrative Officer
306-825-2610 or 306-821-0658
 - (ii)** RM of Britannia No. 502
Operations Manager
306-825-2610 or 306-830-6618
 - (iii)** City of Lloydminster
Manager, Distribution and Collection
780-874-3700 or 639-536-1266
 - (iv)** City of Lloydminster
Supervisor, Distribution and Collection
780-874-3700 or 306-515-4057

- (b)** In the event of an emergency, the City will dispatch a response team to the Complex within one (1) hour of notification to assess the concern. The City shall provide the RM with a response plan and mobilize a response team within one (1) Business Day of the initial notification.

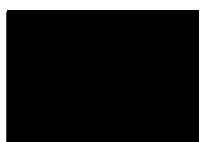
- (c)** The RM will dispatch a response team to mitigate and minimize impact at the direction of the City.

- (d)** The parties will coordinate efforts to promptly address the situation and mitigate any potentially resulting adverse impacts.

4 INSPECTIONS, MAINTENANCE AND REPAIRS

4.1 Inspections, Maintenance and Repairs

- (a)** The City shall be responsible for the operations and inspection, maintenance, upgrade and repair of all infrastructure and channels within private lands covered under the City's Easement.



Inspection and maintenance schedules and activities are detailed in the City's Operations and Maintenance Plan, as amended from time to time and attached as Schedule "B" to this Agreement.

- (b)** The City shall be responsible for the operations and routine inspection, maintenance and repair of underground infrastructure on road crossings located on the RM's Right-of-Way (marked as RC #5, #3, #2, and #1 on the map attached to this Agreement as Schedule "A").
- (c)** In case of upgrades, major repairs or capital improvements:
 - (i)** Where the upgrade, major repair or capital improvement of underground infrastructure is a result of the needs of the City:
 - (A)** The City shall be 100% responsible for the costs related to the upgrade, repair or capital improvement to the underground infrastructure; and
 - (B)** And in the event the upgrade, major repair or capital improvement impacts the road surface, the costs of surface restoration, maintenance, upgrade or repair of the road surface shall be shared 50/50 between the City and the RM; or
 - (ii)** Where the upgrade, major repair or capital improvement is to the road surface:
 - (A)** The RM shall be 100% responsible for the costs of surface restoration; and
 - (B)** The RM shall be 100% responsible for the costs of the capital improvement to the underground infrastructure that is required as a direct result of the road surface improvements (for example, if the culvert needs to be extended) except if the parties agree, in advance, to upgrade the underground infrastructure as part of the road surface project in which case the parties shall share the costs of the underground infrastructure upgrade 50/50.
- (d)** The RM or the City may take responsibility for project management of cost shared projects referenced in 4.1(c) provided that:
 - (i)** Both parties are provided an opportunity to review and provide input on design and specifications.
 - (ii)** The project is subject to procurement of qualified consultant and/or contractor as per the project managers procurement policies.
 - (iii)** Both parties will be provided relevant project documentation (ex: as-built drawings, QA/QC inspections, and progress reports).

4.2 The City is hereby granted authority to inspect, maintain and repair the underground infrastructure within the RM's Right-of-Ways.

4.3 Except in the case of an emergency, the City shall notify the RM, in writing, 48 hours in advance of any major maintenance, upgrades or repairs to the underground infrastructure. Major



maintenance is defined as any maintenance beyond the routine inspection and maintenance described in 2.2 Inspection and Maintenance of the Neale Edmonds Complex Operations and Maintenance Plan dated June 2024 which is attached as Schedule "B" to this agreement.

5 GENERAL TERMS AND CONDITIONS

5.1 Indemnity. The City and RM shall indemnify and save harmless the other party (including the payment of solicitor and client costs on a full indemnity basis) for any and all losses including all damages, costs, fees, losses, fines, levies, and penalties imposed on the party by any regulatory body for non-compliance with applicable standards by the City or the RM or anyone under their control or direction or as a result of any error, omission, or negligence on the part of the City or RM or anyone under their control or direction, in performing, or failing to perform, the City or the RM's obligations under this Agreement.

5.2 Force Majeure. Neither party shall be liable for any failure of or delay in performance of its obligations hereunder or be deemed to be in breach of this Agreement if such failure or delay arises from a force majeure event, nor shall the party be liable for costs and expenses arising relative to a force majeure event. For clarity, a force majeure event will include, without limitation, war, an act of God, a foreign enemy, civil war, earthquake, flood, fire or other natural physical disaster, pandemic, epidemic, a strike, a change in government policy or legislation or any other matter similar in nature and severity to the foregoing, that is beyond the reasonable control of the party. A force majeure event will merely suspend the contractual obligations impaired or affected by such cause and shall not bring this Agreement or any portion thereof to an end.

5.3 Approvals. With respect to Approvals:

- (a) the City shall maintain all required regulatory approvals for the operation of the Complex.
- (b) Both parties covenant to indemnify and save harmless the other from and against any and all liabilities, causes of action, expenses, damages, suits, fines, penalties or claims including legal costs on a solicitor and his own client basis arising out of any breach by them of their respective obligations under any applicable approvals.

5.4 Reciprocal Indemnities. The Parties covenant and agree as follows:

- (a) The City shall indemnify and hold harmless the RM and its elected and appointed officials, officers, employees and agents from and against all liability, claims, demands, damages, losses, costs, actions, cause of action, suits, proceedings and expenses, including costs on a solicitor and his own client basis and other professional fees and costs and disbursements on a full indemnity basis, whether arising directly or indirectly, from death, personal or bodily injury, sickness, disease, property loss, property damage or any other loss or damage whatsoever, which may result from or be connected with the operation or maintenance of the infrastructure within the Complex or the Easement or any breach or default of this



Agreement by the City or any wrongful act, error, omission or negligence of the City or its subcontractors, suppliers, employees, agents and others for whom the City is responsible in the execution of any of the City's obligations under this Agreement;

- (b) The RM shall indemnify and hold harmless the City and its officers, directors, employees and agents from and against all liability, claims, demands, damages, losses, costs, actions, cause of action, suits, proceedings and expenses, including costs on a solicitor and his own client basis and other professional fees and costs and disbursements on a full indemnity basis whether arising directly or indirectly, from death, personal or bodily injury, sickness, disease, property loss, property damage or any other loss or damage whatsoever which may result from or be connected with any breach or default of this Agreement by the RM or any wrongful act, error, omission or negligence of the RM or its employees, agents and others for whom the RM is responsible in the execution of any of the RM's obligations under this Agreement; and
- (c) these covenants of indemnities shall survive the expiration or termination of this Agreement.

6 CONFIDENTIALITY

6.1 Confidentiality. Both parties shall keep in confidence, subject to the applicable access to information and privacy legislation, all confidential information that is provided or acquired in connection with or as a result of performance of this Agreement.

6.2 The provisions of this Section shall survive the expiration or termination of this Agreement. Both parties acknowledges that information and records compiled or created under this Agreement are subject to the *Local Authority Freedom of Information and Protection of Privacy Act* (Saskatchewan).

7 DEFAULT AND TERMINATION

7.1 Term. The Term of this Agreement shall be during the time that the Neale Edmunds Complex is operational and maintained by the City of Lloydminster.

7.2 Termination by Mutual Agreement. This Agreement may be terminated at any time by mutual consent of the parties hereto, provided that such consent to terminate is in writing and is signed by all of the parties hereto.

8 MISCELLANEOUS

8.1 Notice. Any notice required by or affecting this Agreement may be served upon the Parties hereto by sending it by registered mail, fax or other electronic message which provide a hard copy, postage or charges prepaid addressed to:

- (a) in the case of the City: 4420 50 Avenue
Lloydminster, Alberta



T9V 0W2
Attention: Manager Distribution and Collection
Telephone No: 780-874-3700
Fax No: 780-874-8345

(b) in the case of the RM:

Physical Address: 50358 – Range Road 3281
PO Box 661
Lloydminster, Saskatchewan
S9V 0Y7
Attention: CAO, RM of Britannia
Telephone No: 306-825-2610
Fax No. 306-825-8894

Such addresses may be changed from time to time by either Party giving notice as provided herein. Any notice addressed by registered mail to either party pursuant to this Section shall be deemed to have been effectively given on the seventh (7th) Business Day following the date of mailing. In the event of any disruption of postal service, notices shall be personally served upon the Parties hereto by delivering same to the Chief Administrative Officer of either municipality.

8.2 No Implied Terms or Obligations. No implied terms or obligations of any kind on behalf of the City or the RM will arise from anything in this Agreement, and the express covenants and agreements herein contained and made by the City or the RM are the only covenants and agreements upon which any rights against the City and the RM are to be founded.

8.3 Exercise of Rights and Remedies. No exercise of any specific right or remedy of the City or the RM will prejudice or preclude the City or the RM, respectively, from exercising any other right or remedy provided by this Agreement or allowed at law or in equity. No right or remedy provided to the City or the RM by this Agreement or at law or in equity shall be exclusive or dependent upon any other such right or remedy, and the City or the RM, as the case may be, may from time to time exercise any one or more such rights or remedies independently or in combination.

8.4 Entire Agreement. This Agreement is the entire agreement between the Parties regarding its subject-matter and it supersedes all prior negotiations, representations or agreements, either written or oral and all other communication between the Parties.

8.5 Severability. If any term of this Agreement is held to be unenforceable by a court, that term is to be severed from this Agreement and the rest of this Agreement remains in force unaffected by the severance of that term.

8.6 Modification. This Agreement may not be modified except by an agreement between the Parties in writing.

8.7 Law of the Agreement. The law of the Province of Saskatchewan shall govern the interpretation of this Agreement and the Parties irrevocably attorn to the exclusive jurisdiction of the courts of Saskatchewan.

8.8 Rights and Remedies. The duties and obligations imposed by this Agreement and the rights and remedies available under this Agreement shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.



IN WITNESS WHEREOF, the Parties have signed this Agreement effective as of the date first above written.

RM BRITANNIA NO. 502)
) **C/S**
)
)

[Redacted Signature]

Authorized Signatory

REEVE

Position

[Redacted Signature]

Authorized Signatory

Administrator

Position



736/24

CITY OF LLOYDMINSTER

[Redacted Signature]

Authorized Signatory

Mayor

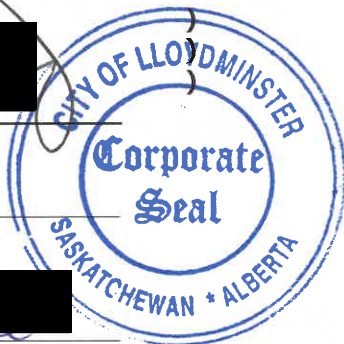
Position

[Redacted Signature]

Authorized Signatory

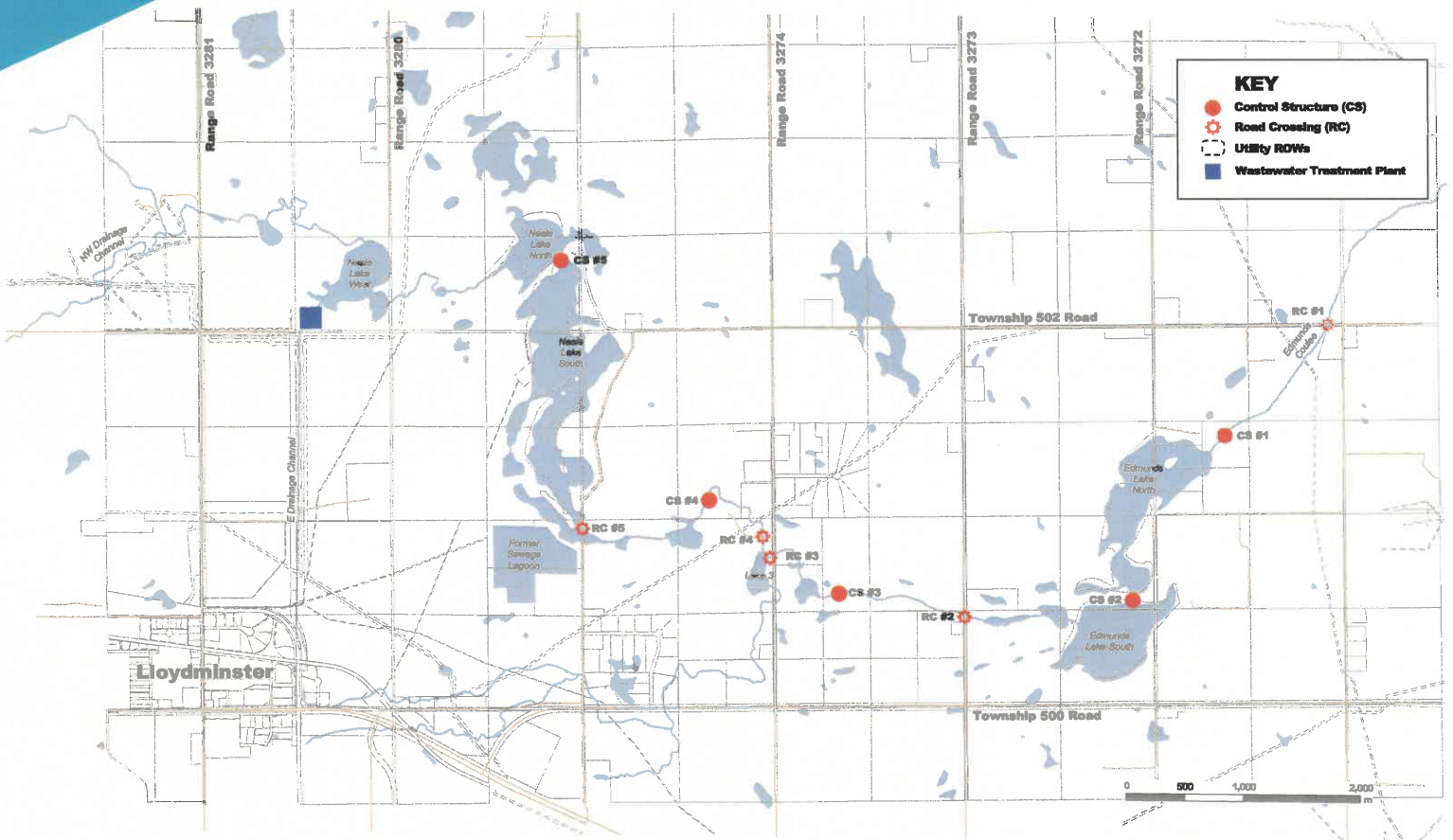
City Clerk

Position



Schedule "A" The Map

NEALE-EDMUNDS STORMWATER COMPLEX


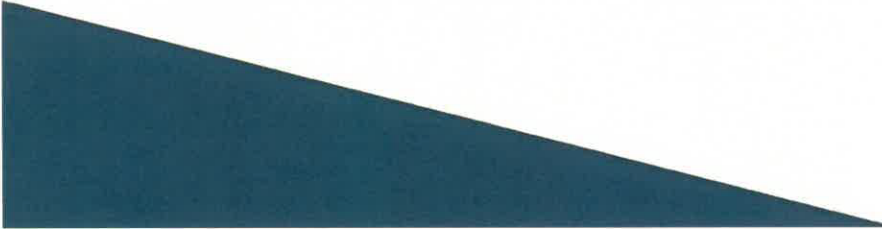


Schedule "B" Operations and Maintenance Plan



Neale Edmunds Complex Operations and Maintenance Plan

June 2024
Environmental Services



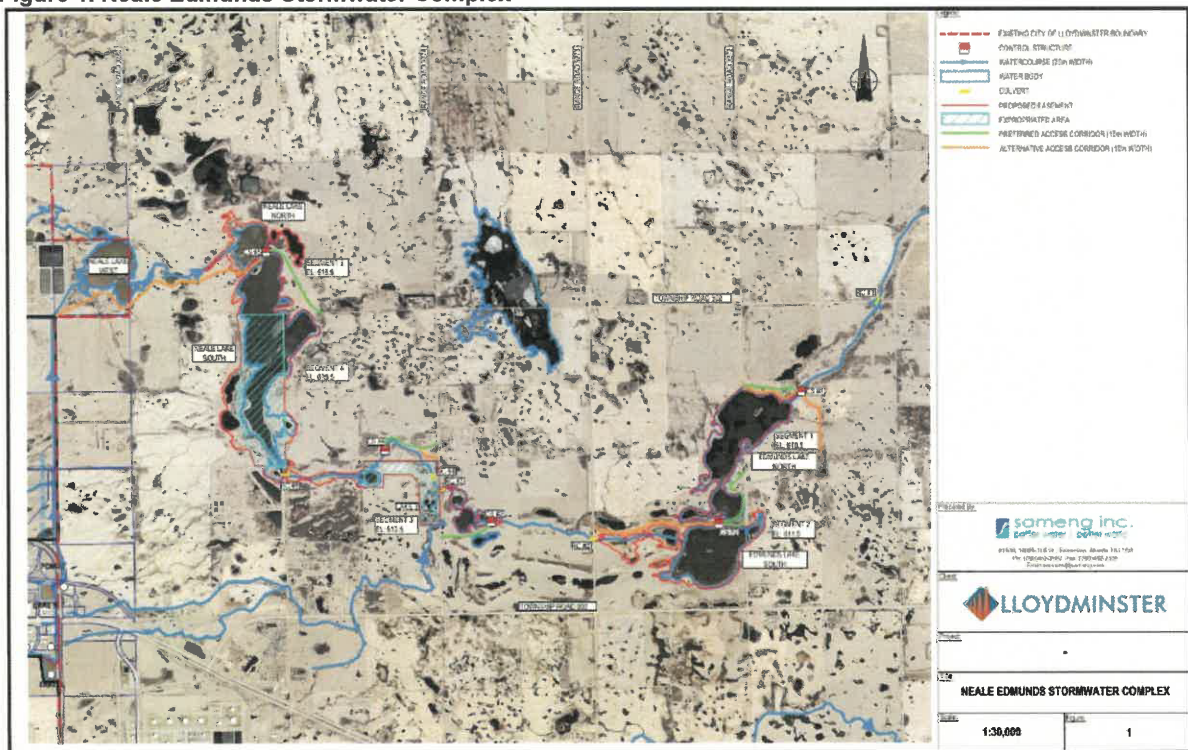
1 INTRODUCTION

The Neale Edmunds Complex (the Complex) is a critical component of the City's stormwater and wastewater systems. The Complex receives 93% of the City's stormwater discharge and conveys treated effluent from the City of Lloydminster Wastewater Treatment Facility (WWTF) to the North Saskatchewan River through the Big Gully Creek. The Operations and Maintenance Plan (O&M Plan) outlines procedures and protocols for managing and maintaining the Neale Edmunds Complex. The O&M Plan demonstrates the City's commitment to ensure that the Complex operates as intended, potential risks to property are mitigated, and the natural environment is protected.

1.1 Background

The Neale Edmunds Complex is a system of lakes, streams, and wetlands that receives natural drainage, treated wastewater effluent, and stormwater discharge from the City of Lloydminster and surrounding areas. The Complex consists of five control structures that regulate/stabilize the water levels in the main water bodies of the Complex. Weirs are set at each control structure to regulate the water level above the weir crest. The weirs of the control structure are composed of stop log bays that can be adjusted independently of each other. The Complex also includes five road crossings on private lands and on municipal road right of way that conveys water through the system.

Figure 1. Neale Edmunds Stormwater Complex



The Complex receives 93% of the City's stormwater discharge via the Northwest and East Drainage Channels. It also receives run-off from the RM of Britannia and RM of Wilton. The Complex serves as the City's primary conveyance for treated effluent from the City's Wastewater Treatment Facility to the North Saskatchewan River. Treated effluent is discharged through the outfall located at the stormwater channel east of the WWTF within City of Lloydminster boundary.

The City of Lloydminster has secured easements through drainage agreements from landowners along the Neale Edmunds Complex to allow the discharge of stormwater and treated effluent through the Complex. The easements

provide the City access to the Complex to conduct operation, maintenance, and repairs as needed. The City has obtained a Permit to Operate (PTO No. XXXX) from the Saskatchewan Water Security Agency authorizing the discharge stormwater and treated effluent through the Complex.

1.2 Objectives

The Neale Edmunds Complex is a critical component of the City's stormwater and wastewater system. The Operations and Maintenance Plan is intended to ensure that efficient operation of the Complex. In addition, the O&M Plan is intended to ensure that the Complex is maintained and operated in a manner that protects property, the environment, and the City's interest to maintain a viable discharge option for treated effluent.

1.3 Responsible Parties

The City of Lloydminster is responsible for the operation and maintenance of infrastructure and channels within private lands covered under the drainage agreements. This includes routine inspections, maintenance, repairs, and infrastructure upgrades.

The City of Lloydminster is responsible for the operations and maintenance of underground infrastructure on road crossings located on the RM of Britannia's road right of way (RC #5, #3, #2 and #1 on the map). Surface restoration, maintenance, and repairs to the road surface (e.g. sink hole on the road) is the responsibility of the RM of Britannia (RM). The City and the RM share the responsibility for capital improvements on road crossings located on the RM's road right of way.

The City is responsible for assessing the condition of the infrastructure and prioritizing necessary maintenance, repairs, and improvements to ensure the Complex operates as intended.

1.3.1 Key Personnel

The City of Lloydminster maintains a team of key personnel responsible for the operation and maintenance of the Neale Edmunds Complex. These individuals are tasked with ensuring efficient operation of the Complex, timely emergency response, and fostering strong relationships with stakeholders.

Table 1. City of Lloydminster Personnel

City of Lloydminster Personnel	Responsibility	Contact information
After-hours emergency number	<ul style="list-style-type: none"> After-hours contact 	Ph: 780-872-5418
Supervisor, Distribution and Collection	<ul style="list-style-type: none"> Responsible for day-to-day operations and maintenance of the Complex. Responsible for addressing immediate (operational) concerns from landowners. Responsible for coordination and mobilization of emergency response. 	Ph: 780-874-3700 ext. 2761 Cell: 306-515-4057
Manager, Distribution and Collection	<ul style="list-style-type: none"> Responsible for addressing landowner concerns. Responsible coordinating with the RM of Britannia on operational concerns, emergency response, and capital upgrades. Act as a liaison between the landowners and the City of Lloydminster. 	Ph: 780-874-3700 ext. 2773 Cell: 639-536-1266
Director, Environmental Services	<ul style="list-style-type: none"> Act as a liaison between the RM of Britannia and the City of Lloydminster. 	Ph: 780-874-3700 ext. 2760 Cell: 780-2141565

2 OPERATIONS AND MAINTENANCE ACTIVITIES

2.1 Operation

The Neale Edmunds Complex is an integral component of the City’s stormwater management system. The Complex is composed of a five stop-log control structures that controls the water levels on the main water bodies. Each control structure consists of a 2.7m high concrete head wall flanked on either side by 1.8m long wing walls. The headwall is divided into two, four, or five stop log bays with concrete culverts through which water from each basin is discharged. Water levels in each basin is controlled by adding or removing stop logs to maintain target water levels.

In general, the operations of the Neale Edmunds Complex involve operating at FSL (Full Service Level) in the fall and winter, and gradually lowering water levels in the spring and summer to create storage for spring run off and to avoid the presence of water in the culverts during winter. With the addition of treated effluent, operating procedures will be modified to maintain continuous downstream flow and storage capacity for spring runoff events. Current practice of increasing weir heights in the fall will be discontinued to allow treated effluent to flow more freely through the system during the winter season. Treated effluent is warmer than native winter flows and would be less susceptible to freezing.

Returning weirs to their current operating levels in the spring will assist to buffer peak flows during runoff periods. As there would be no increase in the amount of water retention from October 1 to March 30, the buffering would lower the risk of spring floods along the entire Complex.

The following are the recommended operating elevations:

Table 2. Operating Elevations

Control Structure	Date	Full Service Level (m)	Recommended Weir Elevation (m)	Number of stoplogs removed from each bay
1	March 1 to April 30	610.00	609.70	6
	May 1 to June 14		609.55	7
	June 15 to February 28		609.25	9
2	October 1 to October 1	610.00	610.5	4
3	March 1 to April 30	612.00	612.00	0
	May 1 to June 14		611.85	1
	June 15 to February 28		611.70	2
4	March 1 to April 30	615.00	614.95	0
	May 1 to June 14		614.80	1
	June 15 to February 28		614.65	2
5	October 1 to October 1	615.00	615.50	1

The City reserves the right to adjust operating levels based on current or anticipated weather conditions.

Additionally, sluice gates will be added to the control structures that would allow more fine control discharge rates from each lake. Sluice gates may also be less prone to freezing and blockage by debris. The sluice gates will be installed replacing one section of stop-logs and designed with a variable opening.

2.1.1 Wastewater Treatment Facility (WWTF) Operation

The WWTF will be operated to maintain a constant effluent discharge throughout the day, effectively preventing the water from freezing and creating ice dams during the winter months. Consistent effluent flows will also allow attenuation of flow during spring, helping manage the increased runoff volume and mitigate the risk of flooding.

The WWTF is equipped with two wet weather management ponds (i.e. Cells 2 and 3). During high flow events, influent flows will be directed to the wet weather management ponds until such time that the WWTF can accommodate the flows for treatment.

2.2 Inspection and Maintenance

2.2.1 Routine Inspection and Maintenance

The City of Lloydminster will conduct routine inspection and maintenance as per the Maintenance and Inspection Schedule indicated in Table 3.



Timing and inspection frequency may vary depending on weather conditions (e.g. early spring/run-off). The City will be responsible for determining whether conditions warrant additional inspections. The timing of such inspections may be pre-storm, during a storm event, or shortly after a storm event.

Table 3. Maintenance and Inspection Schedule

Location	Frequency	Inspection	Maintenance
Road Crossings (#1, #2, #3, #4, #5) and Channels	April 1-October 31 st	Check for: <ul style="list-style-type: none"> • Debris • Water level • Beaver dams • Blocked culverts 	Complete: <ul style="list-style-type: none"> • Debris clean-up • Install/remove beaver grates • Thaw frozen culverts
	November 1 – March 30	Check for: <ul style="list-style-type: none"> • Debris • Beaver dams • Water flow/freezing • Water level • Blocked/frozen culverts 	Complete: <ul style="list-style-type: none"> • Thaw frozen culverts
Control Structure #1, #2, #3, #4, #5	April 1 – October 31 st	Check for: <ul style="list-style-type: none"> • Water level • Blocked culverts • Damage to the structure • Stop log condition and operation • Debris 	Complete: <ul style="list-style-type: none"> • Debris clean-up • Thaw culverts • Plug holes between stop logs • Add/remove stop logs as needed to maintain operating water levels
	November 1 – March 30	Check for: <ul style="list-style-type: none"> • Water flow/freezing • Water leaking through stop logs • Debris blocking culverts • Damage to Structure • Snow dams in front of culverts 	Complete: <ul style="list-style-type: none"> • Debris clean-up • Thaw culverts • Plug holes between stop logs • Add/remove stop logs as needed to maintain operating water level

April 1-October 31st

- Inspections shall be conducted twice weekly. When heavy flows are observed due to weather inspections shall be conducted daily.

November 1st – March 30th

- Inspections shall be conducted daily including holidays and weekends.

2.2.2 Ice Management

To effectively address ice-related issues, it is crucial to maintain clear channels, control structures, and road crossings. This maintenance is on-going but begins during warmer climates between April 1 – October 31.

Between April 1 – October 31, the City will utilize drone technology weekly and visual inspections twice weekly to identify and remove debris. These inspections ensure that water flow remains unobstructed all year round, reducing the likelihood of ice damming and ensuring a steady stream even in cold climates.



In the winter, the City will complete visual inspections of the channels, control structures, and road crossings daily. This will ensure that mitigation and response measures can be implemented quickly to ensure flow remains unobstructed.

2.2.3 Sediment Management

Sediment management is critical for maintaining the efficiency of the Neale Edmunds Complex. Effective sediment management ensures that the Complex operates with optimum capacity thereby mitigating flooding and deterioration in water quality. The following are important aspects of sediment management:

Erosion control:

Maintaining natural vegetation in and around channels will prevent excessive erosion from occurring. Regular proactive inspections and maintenance will be completed to identify problems quickly. Maintenance activities include but are not limited to structural repairs (e.g. reinforcing or rebuilding berms and banks), installation erosion control products (eg. riprap, geotextile, or coconut fiber mat), and planting native vegetation.

Control structure management will ensure the right flow rate to decrease likelihood of ice dams in the winter, or erosion during the summer months.

Vegetated buffers:

Vegetation will be carefully monitored to ensure optimal balance allowing enough vegetation growth to stabilize the soil while preventing excessive vegetation that could contribute to sediment buildup or lower velocity flow rates.

In the event that excessive sedimentation is observed within or in sections of the channel, the City will complete dredging to restore the channel capacity and functionality.

2.2.4 Vegetation Management

Maintaining good vegetation management in storm channels is crucial for ensuring functionality and stability. Effective management involves balancing vegetation growth to control erosion, improve water quality, and ensuring that channels remain effective for stormwater and treated effluent conveyance.

If needed, excessive vegetation will be managed by mowing or trimming vegetation to maintain flow capacity and prevent blockages. Removal of excessive vegetation will be scheduled in the fall. Whenever possible, removed vegetation will be mulched and left onsite to decompose naturally. If mulching is not feasible, vegetation will be transported offsite for disposal.

2.3 Water Quality Monitoring

The City of Lloydminster shall conduct regular a sampling program to monitor water quality along the Neale Edmunds Complex. Six sampling locations were identified to ensure proper characterization of the City's discharge and contribution from other sources are thoroughly considered. The sampling frequency accounts for the seasonal variation of water quality along the Neale Edmunds Complex. At a minimum, samples are collected quarterly from all locations and will be tested for the following parameters:

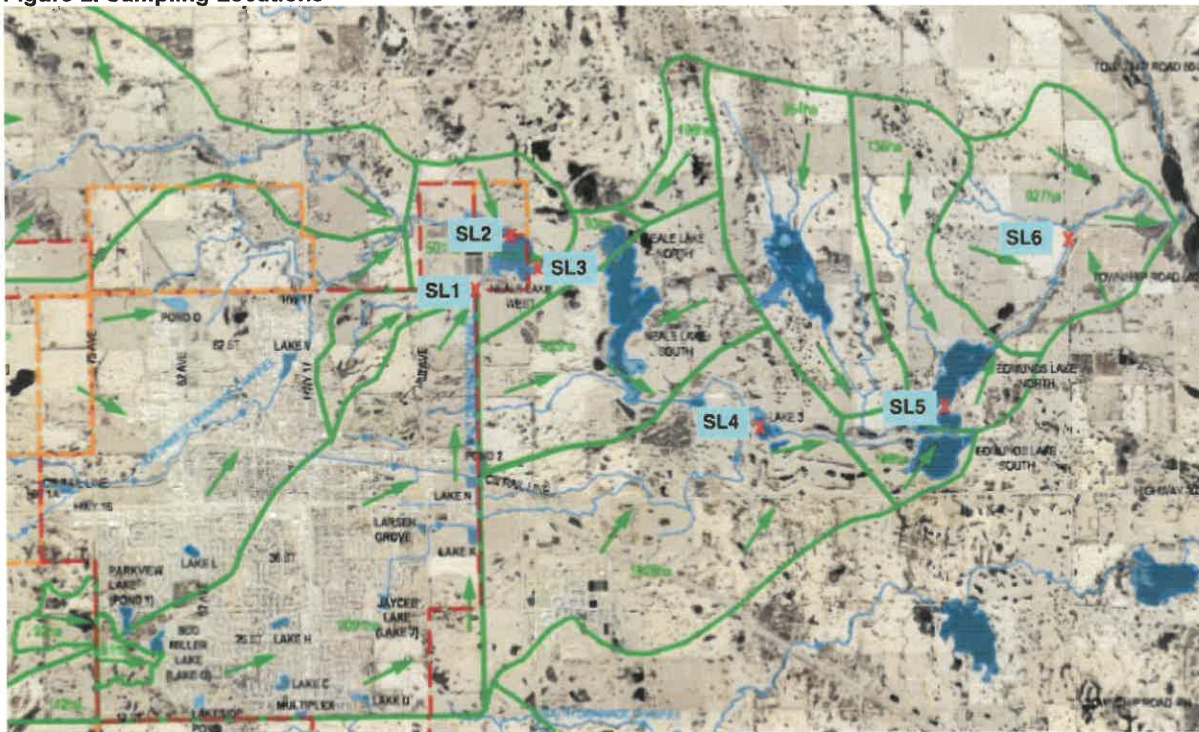
- Ammonia
- BOD
- COD
- E.Coli
- Fecal Coliforms
- Total Coliforms
- Phenols
- Total Kjeldahl Nitrogen
- Total Organic Carbon
- Phosphorus
- Total Suspended Solids
- Total Nitrogen
- Chloride
- Calcium



- Magnesium
- Potassium
- Sodium
- Fluoride
- Ion Balance
- Total Dissolved Solids
- Hardness
- Nitrate
- Nitrate and Nitrite
- Nitrite
- Sulfate

In the event that some locations cannot be sampled (e.g. dry or frozen), the City shall make a note of such conditions in the record/documentation.

Figure 2. Sampling Locations



2.4 Record Keeping and Reporting

The City shall document all inspections and maintenance activities conducted on the Neale Edmunds Complex.

The City shall maintain records of all communications with stakeholders along the Neale Edmunds Complex in accordance with the City's Records Management Policy. This includes but is not limited to requests for maintenance or service, emergency incidents, and any concerns raised pertaining to the operation of the Complex.

3 EMERGENCY RESPONSE

In the event of an emergency, such as severe weather conditions or potential damage to lands and infrastructure, the City will coordinate efforts to promptly address the situation and mitigate adverse impact. The City will dispatch a response team within one (1) hour of notification to assess the concern. The City shall provide response plan and mobilize a response team within one (1) business day. **The City will endeavor to provide a rapid response in the event of imminent damage to property or infrastructure.** Emergency response will be conducted based on the following protocol:

1. **Assessment:** Evaluate the extent of the emergency such as ice damming, flow issues, or potential risks such as flooding or damage to the complex control devices.
2. **Communication:** Alert key personnel such as landowners, regulators, and other stakeholders.
3. **Resource mobilization:** Deploy resources such as specialized equipment (e.g. hydrovac or steaming units), pumps, and heavy equipment to move ice and debris if needed.
4. **Implementation:** Implement strategies to mitigate the assessment concerns such as ice damming, or flow issues caused by beaver dams, or structure damages. This may require the support of contractors and multiple City of Lloydminster departments.
5. **Monitoring and adjustment:** Continuously monitor the effectiveness of the response plan actions. Adjust strategies as needed based on changing conditions or unforeseen challenges.
6. **Documentation and reporting:** Document all actions taken during the emergency response, including timelines, resources, and outcomes.
7. **Debriefing and evaluation:** Debrief during and after the emergency event with all stakeholders, including landowners, and key personnel. Note and identify key strengths and areas for improvement to enhance future response efforts.
8. **Follow-up:** In event of action items post emergency, follow up on all ongoing issues shall occur in a timely manner.

3.1.1 Emergency Organization and Responsibility

The Manager, Distribution and Collection is designated Incident Commander to manage emergency situations at the Neale Edmunds Complex. The Supervisor, Distribution and Collection is designated as the alternate.

The Manager, Distribution and Collection is designated Incident Commander for the duration of the emergency. This together with proper training of operating personnel, practice drills to test emergency response activities, and continual review and updating of the plan will be undertaken to ensure an efficient and effective response to any emergency that may occur.

3.1.2 Manager, Distribution and Collection Responsibility

The Manager, Distribution and Collection has the responsibility to:

- Respond to and investigate any reported emergency;
- Determine an appropriate response to the emergency;
- Ensure that all emergency response procedures are followed;
- Contact appropriate agencies/contractors/personnel and mobilize resources;
- Liaise with the agencies/contractors/personnel upon their arrival;
- Correct any potential emergency or unsafe situations;
- Complete necessary documentation with respect to emergencies

The Manager, Distribution and Collection will report any emergency or contingency situations to the Director, Environmental Services. The Manager, Distribution and Collection will contact appropriate agencies to report incidents related to environmental or health and safety issues related to the emergency or contingency activities.

3.1.3 Flooding

Prevention

- Regular Inspection and Maintenance

Response Plan

Action	Time Frame	Who?	Resources
Monitor weather forecast	On-going	<ul style="list-style-type: none"> Distribution and Collection Supervisor 	<ul style="list-style-type: none"> Weather monitoring systems Rain gauges
Assess site conditions for personal safety and safety of others, and take appropriate actions to secure unsafe areas	Immediately	<ul style="list-style-type: none"> Distribution and Collection Supervisor and/or Manager, Distribution and Collection 	<ul style="list-style-type: none"> COL employees Site Map
Mobilize crews and resources (i.e. equipment, contractors, etc.)	Within 4 hours of the assessment	<ul style="list-style-type: none"> Distribution and Collection Supervisor and/or Manager, Distribution and Collection 	<ul style="list-style-type: none"> COL and contractor employees COL and contractor equipment
If necessary, create a barrier between the channel and the property (e.g. sand bags)	Within 4 hours of the assessment	<ul style="list-style-type: none"> COL and contractor employees 	<ul style="list-style-type: none"> COL and contractor employees COL and contractor equipment
Divert treated effluent discharge to the effluent pipeline to North Saskatchewan River	Within 2 hours of the assessment	<ul style="list-style-type: none"> COL employees 	<ul style="list-style-type: none"> COL employees
Complete damage assessment	Within 48hrs post-flood	<ul style="list-style-type: none"> Manager, Distribution and Collection 	<ul style="list-style-type: none"> Technical team
Implement recovery and restoration	Within 4 weeks post-flood	<ul style="list-style-type: none"> Director, Environmental Services 	<ul style="list-style-type: none"> Technical team COL and contractor employees COL and contractor equipment

3.1.4 Ice Dam

Prevention

- Regular Inspection and Maintenance
- Proper operations of the Complex

Response Plan

Action	Time Frame	Who?	Resources
Assess site conditions for personal safety and safety of others, and take appropriate actions to secure unsafe areas	Immediately	<ul style="list-style-type: none"> Distribution and Collection Supervisor and/or Manager, Distribution and Collection 	<ul style="list-style-type: none"> Site employees Site Map



Action	Time Frame	Who?	Resources
Mobilize crews and resources (i.e. equipment, contractors, etc.)	Within 4 hours of the assessment	<ul style="list-style-type: none"> Distribution and Collection Supervisor and/or Manager, Distribution and Collection 	<ul style="list-style-type: none"> COL and contractor employees COL and contractor equipment
Break and remove ice blockage in the channel OR steam culverts	Within 2 hours of the assessment	<ul style="list-style-type: none"> COL and contractor employees 	<ul style="list-style-type: none"> COL and contractor employees COL and contractor equipment
Divert treated effluent discharge to the effluent pipeline to North Saskatchewan River	Within 2 hours of the assessment	<ul style="list-style-type: none"> COL employees 	<ul style="list-style-type: none"> COL employees
Complete damage assessment	Within 48hrs post-incident	<ul style="list-style-type: none"> Manager, Distribution and Collection 	<ul style="list-style-type: none"> Technical team
Implement recovery and restoration	Within 4 weeks post-incident	<ul style="list-style-type: none"> Director, Environmental Services 	<ul style="list-style-type: none"> Technical team COL and contractor employees COL and contractor equipment

4 STAKEHOLDER LIST

Name	Phone	Email
Rural Municipality of Britannia No. 502	306-825-2610	cao@rmbritannia.com
SK Water Security Agency	1-800-667-7525	Designated Environmental Protection Officer
Landowners	Neale Edmunds Complex Stakeholder List.docx	