

WATER ACT

BEING CHAPTER W-3 R.S.A. 2000 (the "Water Act")

ENFORCEMENT ORDER NO. WA-EO-2019/01-LAR

Municipal District of Bonnyville No. 87
4905 50 Avenue
Bag 1010
Bonnyville, AB
T9N 2J7

WHEREAS the Municipal District of Bonnyville No. 87 [the "Municipality"] owns and operates a right-of-way [the "ROW"] on the lands legally described as SE-20-62-5-W4M and SW-21-62-5-W4M located within the Municipal District of Bonnyville No. 87, Alberta [the "Lands"];

WHEREAS within the ROW is a manmade ditch [the "Ditch"] that conveys water along the ROW and eventually to the Beaver River;

WHEREAS the Beaver River [the "River"] transects the Lands in a meandering pattern in an east-west direction;

WHEREAS on April 7, 2017, Alberta Environment and Parks ["AEP"] received a call into the Coordination Information Center from a staff member with the Municipality that the Ditch was conveying high flows of water, eroding a hillside towards the River, and sediment was entering the River;

WHEREAS in 2008 and 2009, the Municipality did work on the ditch to manage water velocity by removing a cold mix surface and placing rocks and boulders to create a tiered effect;

WHEREAS on April 12, 2017, an AEP Environmental Protection Officer [the "EPO"] attended the Lands and observed:

- Water in the Ditch flowed along the ROW and onto manmade tiers of rocks, which descended towards the River.
- Near the end of the rock tiers, the slope steepened and the land was substantially eroded; water then began to flow underground.
- Further, down the slope, the water resurfaced and flowed into the River.
- There was an active sediment release and deposits of fluvial material in the River connected to the resurfaced water flow.

WHEREAS on September 13, 2017, AEP issued a Water Act Enforcement Order, WA-EO-2017/08-LAR, [the "Order"] to the Municipality to:

1. Hire a qualified wetland science practitioner [the "QWSP"] who has experience with preparing remedial plans.

2. Provide AEP with a written remedial plan [the "Plan"], which was to include remedial work to reduce the rate of channelized flow and minimize erosion of the banks of the River and siltation into the River and options to ensure the flow of water is equivalent to pre-disturbance flows.
3. Implement the Plan as approved.
4. Provide a final report signed by the approved QWSP.

WHEREAS on October 3, 2017, AEP received, correspondence from Green Plan Ltd. Environmental Consulting ["Green Plan"] stating that they were the primary environmental consultant for SE Designs and Consulting Inc.["SE Design"] who was the consulting engineering firm for the Municipality;

WHEREAS on October 16, 2017, AEP approved Dr. Kashif Sheikh with Green Plan as the QWSP on the Order;

WHEREAS on November 7, 2017, AEP issued Amendment 1 to the Order to extend the deadline for the Plan to be provided to AEP based on the Municipality advising of logistical concerns to complete modelling of the watershed catch basins;

WHEREAS on February 5, 2018, AEP issued Amendment 2 to the Order to extend the deadline to complete the remedial work by September 30, 2018 and the final report to be submitted on December 1, 2018. AEP was informed by the engineer hired by the Municipality, SE Design, that a longer timeframe was required to complete the earthwork and revegetate the Lands as required by the Order;

WHEREAS on February 5, 2018, AEP approved the Plan as submitted by SE Design on behalf of the Municipality. The Plan included:

1. Revised drainage evaluation design plans for the remedial works as prepared by SE Design;
2. Revised surface runoff assessment for the Ditch to the River as prepared by Northwest Hydraulic Consultants; and
3. Monitoring plan, temporary erosion control plan and comments as prepared by Green Plan.

WHEREAS on October 1, 2018, AEP issued Amendment 3 to the Order to extend the deadline to complete the remedial work to November 30, 2018, and the final report to be submitted to AEP on January 18, 2019 required by the Order. SE Design informed AEP that delays had occurred with the remedial efforts due to heavy precipitation in the area;

WHEREAS on November 1, 2018, EPOs conducted a joint inspection with the Municipality, SE Design and Green Plan of the remedial work required by the Order. EPOs were informed by SE Design that major earthwork and construction was completed, and only a few minor details were still required including more boulder size rock ["rip-rap"], mulching, removing the rig matting and installing an access gate. While at the Lands, EPOs observed the following:

- New culverts with stop gates installed at the discharge locations of the 2 catchments into the Ditch along the ROW;
- Exposed soil has been hydro-seeded with a grass mixture;
- A sediment catchment placed at the hill crescent with a manhole to check sediment depths and allow hydro vac access;
- Coconut matting headed down the bank with sediment bays lined with rip-rap;

- Rip rap along the Ditch;
- A third culvert with a stop gate at the bottom of the slope/bank with a manhole to check sediment depths and collect water samples; and
- Sedimentation fencing at the bottom of the slope to prevent sediment from entering the River.

WHEREAS on December 18, 2018, the EPO and the Municipality received an email from SE Design on behalf of Green Plan, which included a document labelled "Final Site Inspection".

This document stated the following:

- Green Plan conducted a site visit on November 1, 2018 to the assess progress of the remediation activities.
- *"To date, all proposed remedial activities have been completed as detailed in the proposed Remedial Plan."*
- *"As construction of the proposed control measures have been completed in full, the project specific Long-Term Monitoring Plan is to commence spring 2019 to determine the effectiveness of the installed measures."*
- Green Plan will provided reports detailing sample results and deficiencies and the Municipality will be required to address deficiencies as soon as possible.

WHEREAS on April 13, 2019, the EPO received correspondence from SE Design which stated the following:

- A couple of failures were observed at the bottom portion of the Ditch, which included undermining of the soil on the west side of the gorge and a complete failure of the berm in the lower sediment bay. *"This can be attributed to the fact that the work was not completed in the fall to meet the design"*.
- They ran out of riprap and could not complete the work.
- Photos provided, *"clearly shows that the work was incomplete and that the amount of rip rap placed was insufficient to prevent the berm from eroding under the flow conditions."*
- *"the outlet culvert was frozen (and not flowing) nor was the water flowing out the designed emergency outlet as it was not completed last year."*
- *"To correct these issues, the MD will simply have to complete the work that was intended and install the rip rap sufficiently guard against erosion of the sediment bay berms."*
- SE Design had spoken to the Municipality and plan to meet on site once work can commence this year to complete the project.

WHEREAS on April 13, 2019, the EPO and the Municipality received documents from Green Plan labelled "Field Visit_April 3 Field Visit" and "Beaver River Site Visit". In the documents, Green Plan identified and photographed several deficiencies in the remedial work required by the Order. These deficiencies included:

- Flow blocked by a frozen culvert near the River; the culvert was designed to direct flow through the final sediment bay. This was the result of failing to connect the warming mechanism in the culvert that was installed prior to freeze up 2018 which was intended to prevent freezing of the culvert.
- Undercutting of the bank and sluffing of bank material caused by *"the incomplete placement of rip-rap along the channel bed and armoring the bank as detailed in the remedial plan."*
- Erosion of a new channel through the berm near the River caused by the blockage of the frozen culvert *"a direct result of incomplete construction of the diversion berm (i.e., lack of sufficient amounts of rip-rap armor)."*

- *“sediment laden water entering the Beaver River through the old remediated channel”;*

WHEREAS on April 15, 2019, the EPO inspected the Lands and observed slumping banks past the installed rip-rap and sediment laden water entering the River;

WHEREAS on April 15, 2019, the EPO emailed SE Design, Green Plan and the Municipality requesting that the release of sediment to the River be called in to the Environmental Hotline and a detailed 7-day report for how the release will be managed be submitted to AEP;

WHEREAS on April 16, 2019, the Municipality reported the sediment release to the River to the Environmental Hotline;

WHEREAS on April 18, 2019, the EPO inspected the Lands and observed that sediment was still flowing into the River, controls to minimize the release were lacking and water was flowing under the sediment fencing;

WHEREAS on April 18, 2019, the EPO sent an email with video footage of the release to Green Plan, SE Design and the Municipality requesting immediate action to be taken to address the release;

WHEREAS on April 19, 2019, the EPO received an email from the Municipality that stated they had reinstalled the sedimentation fencing;

WHEREAS on April 29, 2019, the EPO received the 7-day report as requested. The report included steps taken by the Municipality to reduce the amount of sediment entering the River and the results of surface water quality samples collected on April 25, 2019;

WHEREAS on April 30, 2019, the EPO responded to the 7-day report inquiring if any surface water quality samples were taken during other spring field visits as stated in the monitoring plan approved under the Order;

WHEREAS on May 6, 2019, the EPO received correspondence from the Municipality stating that *“there was confusion on what the status of the Plan was, being either complete, or still in progress, and if the initiation of the long term monitoring plan was applicable at this time. The completed runoff management system designed by S.E. Designs, has failed, after receipt of the order, and the M.D. of Bonnyville is now working through solutions for stabilization and repair.”* The Municipality also stated they are drafting a request for proposal for engineering and environmental consulting services to re-engineer the Ditch and to amend the turbidity monitoring in the Plan;

WHEREAS the Municipality contravened the Order by not completing the remedial work in the Plan and failing to meet the November 30, 2018 deadline for completing the remedial work;

WHEREAS, Dean Litzenberger, AEP Compliance Manager, Lower Athabasca Region [the “Director”] has been designated as a Director for the purpose of issuing enforcement orders under the *Water Act*,

WHEREAS the Director is of the opinion that the Municipality has contravened the Order under the *Water Act*, which is an offence under section 142(1)(d) of the *Water Act*,

THEREFORE, I, Dean Litzenberger, Director, pursuant to Sections 135(1) and 136(1) of the *Water Act*, DO HEREBY ORDER THAT:

1. The Municipality shall immediately implement and maintain sediment and erosion control measures in and around the River as recommended by a Qualified Aquatic Environmental Specialist ["QAES"].
2. The Municipality shall submit to the Director, for the Director's approval, the name and qualifications of an engineer [the "Engineer"] who is a member in good standing with a Professional Regulatory Organizations, with experience in preparing a remedial plans and working in aquatic environments by July 2nd, 2019.
3. The Municipality shall submit to the Director, for the Director's approval, a written remedial plan [the "Remedial Plan"] signed and stamped by the Engineer by August 30th, 2019.
4. The Municipality shall include in the Remedial Plan, at least all of the following:
 - a. A review of the previous engineer reports and re-evaluation of the hydrology and hydraulics of watershed provided under the Order;
 - b. A detailed description of how the deficiencies with the remedial work required under the Order will be corrected;
 - c. A detailed description of the remedial work that will reduce the rate of channelized flow through the Ditch and minimize erosion of the banks of the River;
 - d. Options to permanently ensure the flow of water in the Ditch is equivalent to pre-disturbance flows in the local watershed;
 - e. A description of the measures that will be taken to minimize any further disturbance to, in or around the River while implementing the Remedial Plan;
 - f. A description of the type of equipment, methods, and materials that will be used in implementing the Remedial Plan;
 - g. A description of the long-term monitoring and maintenance measures recommended by a QAES that will be implemented such that the remedial measures remain effective in stabilizing the banks of the River and minimize ongoing erosion and sedimentation to the River; and
 - h. A schedule for implementing the Remedial Plan with a completion date no later than November 29th, 2019.
5. The Municipality shall implement the Plan as approved in writing by the Director in accordance with the schedule of implementation approved by the Director.
6. The Parties shall provide the Director with a minimum of 2 business days' notice by email prior to commencing any work under the Plan.

7. The Municipality shall submit to the Director a written Final Report prepared and signed by the approved Professional describing the work undertaken to comply with this order by February 28th, 2020.

DATED at the Town of Bonnyville in the Province of Alberta, this 11th day of June, 2019.



Dean Litzenberger
Compliance Manager
Lower Athabasca Region

Notwithstanding the above requirements, the Parties shall obtain all other necessary approvals from any regulatory agency (provincial or federal) in complying with this order.

Take notice that this enforcement order is a remedial tool only, and in no way precludes any enforcement proceedings being taken regarding this matter under this Act or any other legislation. Failure to comply with this order may result in further enforcement proceedings.

Section 115 of the *Water Act* may provide a right of appeal against this decision to the Alberta Environmental Appeals Board. There may be a strict time limit for filing such an appeal. For further information, please contact the Board Secretary at:

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