

YUKON WATER BOARD

Pursuant to the *Waters Act* and *Waters Regulation*, the Yukon Water Board hereby grants a Type B water licence for a Miscellaneous undertaking to: Replace a culvert and to perform regular creek maintenance.

Government of Yukon
P.O. Box 2703
Whitehorse, YT Y1A 2C6

LICENCE NUMBER: MS09-282

LICENCE TYPE: B **UNDERTAKING:** MISCELLANEOUS

LOCATION: Ten Mile Creek, at Km 342.9, Klondike Highway

MAP CO-ORDINATES: Northing: 6872792.5 Easting: 436188

PURPOSE: Culvert replacement and channel maintenance at km 342.9, Klondike Highway

EFFECTIVE DATE: The effective date of this Licence shall be the date on which the signature of the Chairperson of the Yukon Water Board is affixed.

EXPIRY DATE: August 7, 2034

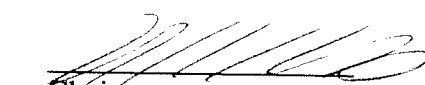
This Licence shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and the *Waters Regulation* made thereunder.

Dated this 7 day of

August, 2009.

Witness

Approved by:


Chairperson
YUKON WATER BOARD

PART A - DEFINITIONS

“Act” means *Waters Act* and any amendments thereto.

“Application” means Water Use Application MS09-282, including any additional submissions and/or revisions submitted to the Yukon Water Board by the Licensee, up to the date of the Board’s decision.

“Board” means the Yukon Water Board.

“Inspector” means any person designated as an Inspector under the Act.

“Natural Boundary” means the visible high water mark of any lake, river, stream or other body of water where the presence and action of water is so common and usual and so long continued as to mark upon the soil of the bed of the lake, river, stream or other body of water a character distinct from that of the banks thereof, both in respect to vegetation and in respect to the nature of the soil itself. In addition, the best estimates of the edge of dormant or old side channels and marsh areas are considered to be Natural Boundaries.

“Regulation” means the *Waters Regulation* made under the Act.

“Spill Contingency Plan” means the Oil/Fuel Handling & Spill Contingency Plan that was submitted as part of the Application and included in Water Use Register #MS09-282 as exhibit #1.3.4, and any subsequent revisions.

“Waste” means any substance as defined in the Act.

“Watercourse” means any stream, lake, pond, river, creek, spring, ravine or swamp whether ordinarily containing water or not.

“Wetted Perimeter” means the horizontal extent of the present water level while the work is taking place.

PART B - GENERAL CONDITIONSOther Laws

1. No condition of this licence limits the application of any other federal, territorial, first nation or municipal legislation.
2. All construction or installation of works authorized by this licence shall occur on property that the Licensee has the right to enter upon and use for that purpose.

Correspondence

3. Where any direction, notice, order or report under this licence is required to be in writing, it shall be given:
 - a) To the Licensee, if delivered, faxed or mailed by registered mail to the following address:

Government of Yukon
Department of Highways and Public Works
Transportation and Engineering Branch
461 Range Road
Whitehorse, YT Y1A 3A4
Fax: (867) 393-6447

and shall be deemed to have been given to the Licensee on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- b) To the Board, if delivered, faxed or mailed by registered mail to the following address:

Yukon Water Board
Suite 106, 419 Range Road
Whitehorse, YT Y1A 3V1
Fax: (867) 456-3890

and shall be deemed to have been given to the Board on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- c) The Board or the Licensee may, by notice in writing, change its address for delivery.

Non-Compliance

4. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, subject to the Act, cancel the licence.

Other Uses

5. If, subsequent to the issuing of this licence, the Licensee uses water and/or deposits Waste in one or more ways not authorized in this licence, and the combined effect of those uses and/or deposits of Wastes, as determined by an Inspector:
 - a) has no potential for significant adverse environmental effects; and
 - b) does not interfere with existing rights of other water users or Waste depositors; and
 - c) satisfies the criteria set out in column 2 of Schedule 9 of the Regulation,

no amendment to this licence will be required for that use of water and/or deposit of Waste.

Spills and Unauthorized Discharges

6. The Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244, and implement the Spill Contingency Plan should a spill or an unauthorized discharge occur. A detailed written report on any such event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations, shall be submitted to the Board not later than 10 days after the occurrence.
7. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
8. Ten days prior to construction, the Licensee shall submit material safety data sheets to the Board for all petroleum products and/or hazardous materials that are to be present during this undertaking.
9. The Spill Contingency Plan shall be posted on site for the duration of the works.

Fuel Storage and Transfer

10. Fuel, lubricants, hydraulic fluids, coolants and similar substances shall be stored and/or transferred a minimum of 30 metres from the Natural Boundary of any Watercourse, in such a way that said substances are not deposited in or allowed to be deposited in waters.

Annual Reports

11. On or before the anniversary of the date of issuance of this licence, and for each year during which this licence is in effect, the Licensee shall submit an annual report to the Board. The report shall include the information required by the Regulation including, but not necessarily limited to:
 - a) a description of the water use operations carried out during the year reported; and
 - b) the quantity of water used each day; and
 - e) the quantity and size of rip-rap used; and

- f) any reclamation to the site; and
- g) any inspection reports regarding the slope stability; and
- j) the results of all analyses required by the monitoring program; and
- l) any inspection results, including photographs, repairs or plans for modifications as required by this Licence; and
- m) a detailed record of any major maintenance work carried out or planned to be carried out that could have an impact on water; and
- n) details of any work carried out or planned to be carried out under the (insert name of plan).

Reports

- 12. All reports required to be submitted to the Board will be unbound and reproducible by standard photocopier, accompanied by one electronic copy on a CD/DVD.
- 13. The Licensee shall provide to the Board 5 additional copies of all reports. The additional copies may be either 5 bound paper copies or 5 electronic copies on individual CDs/DVDs.
- 14. Electronic copies shall be IBM compatible in one of the following formats: Word 97 - 2003, Excel 97 - 2003 workbooks, or Adobe pdf format.

Term of Licence

- 15. The term of this licence is for the period from the effective date to August 7, 2034.

PART C - OPERATING CONDITIONS

Description of Water Use

- 16. The Licensee is hereby authorized to:
 - a) Replace the culvert on Ten Mile Creek and Km 342.9, Klondike Highway, as required; and
 - b) Divert Ten Mile Creek; and
 - b) Perform Channel Maintenance on Ten Mile Creek, this includes the cleaning and re-shaping of the Ten Mile as required; and
 - d) Construct earthworks and erosion protection.

as described in the Application, and subject to the conditions of this licence. Where there is a discrepancy between the Application and this licence, the conditions of this licence shall prevail.

- 17. Notification, including the name and phone number of the field supervisor, shall be provided to the Board and an Inspector, in writing, prior to the start of any construction and/or maintenance.

PART D – DESIGN, CONSTRUCTION AND MAINTENANCEDesign

18. Ten days prior to the commencement of construction, the Licensee shall submit to the Board final detailed design construction drawings for the bed and bank modifications. The final detailed design drawings must be consistent with the drawings which were submitted as part of the Application and sealed by a Professional Engineer licensed to practice in Yukon. All construction shall be carried out in accordance with the final design drawings.
19. Within 60 days of placement across Ten Mile Creek, the Licensee shall submit to the Board, as-built design drawings of the culvert structure, sealed by a Professional Engineer licensed to practice in the Yukon.
20. Where site conditions require minor modifications to the designs submitted to the Board, the Licensee shall notify the Board and an Inspector, prior to any modification, of the details of the modifications or variations from final detailed design, specifications and quality assurance/quality control procedures previously submitted to the Board, provide a detailed construction schedule and the name and contact number(s) of the construction superintendent. The notice shall be in writing and must include an explanation of the reasons for the change and an assessment of the potential impact on the performance of the works. The notice shall be sealed by a Professional Engineer licensed to practice in Yukon.

Construction and Maintenance

21. When conducting any instream works, creek flow must be diverted around the work areas.
22. All works associated with the undertaking shall be maintained in good repair.
23. Construction and/or maintenance equipment shall be mechanically sound and free of leaks.
24. The wheels and/or tracks of all heavy equipment is prohibited within the Wetted Perimeter of the Ten Mile Creek.
25. Granular bedding and backfill material shall consist of non-frozen material.
26. All water withdrawn from the abutment excavation shall be deposited into a constructed sump and/or a natural depression.
27. For the excavation of the abutments, the Licensee shall install or construct non-erodible cofferdams, silt barriers, or other suitable methods to control siltation downstream of the work area.
28. Excavated material from the stream shall be deposited a minimum of 10 horizontal metres beyond the Natural Boundary of Ten Mile Creek.

29. Material excavated from the creek must be deposited in the waste disposal area in such a manner as to remain in a stable condition.
30. Waste substances shall be used, transported, stored or disposed of in such a manner that they are not deposited, or allowed to be deposited, into any Watercourse or on any surrounding land.
31. Except as authorized by this licence, no Waste shall enter any Watercourse as a result of any operation carried out by the Licensee.
32. All disturbed ground surfaces shall be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.

Culvert Removal

33. When removing the culvert, the following procedures shall be followed:
 - a) schedule removal of the culvert so as to avoid concentrations of fish if such concentrations exist; and
 - b) install or construct non-erodible cofferdams, silt barriers or other suitable methods to control siltation downstream of the work area; and
 - c) reshape site to conform to grade of adjacent stream bank following removal of the culvert; and
 - d) use rip-rap or other suitable methods, if required, to stabilize the bank at the work site; and
 - e) remove all silt controls following completion of work and ensure the grade of the drainage course is restored.
34. Culvert placement and channel excavation shall be done in the dry, with the exception of connecting the existing channel to the diversion channel.

Water Pumps

35. The Licensee shall provide barriers consisting of fish guards, screens, coverings or nets on all water intakes as follows:
 - a) Screens or nets shall have a minimum of 3.5 openings per centimetre and openings no greater than 3.2 millimetres along any given side.
 - b) If a punch plate or similar material is used, openings shall be no greater than 3.2 millimetres in length or width.
 - c) There shall be no less than 929 square centimetres of open screen for every 205 litres per minute being withdrawn.

- d) The barriers shall be monitored and maintained to ensure that they function effectively at all times when water is being withdrawn.
- e) The barriers shall be designed and installed in such a manner that the screen is submerged and a uniform flow distribution is maintained through the total screen area.
- f) Water shall not be withdrawn when the barrier is removed for renewal, repair or inspection.
- g) The Licensee shall cease pumping or decanting and take remedial action if there is alteration to the bed or bank of the water channel.

Rip-rap

36. Rip-rap shall be hard, dense, angular, non acid-generating quarry stone or boulders, free of seams, cracks, structural defects and contaminants, freeze-thaw resistant, non-slaking and free of fine-grained materials including silt and sand. Rip-rap gradation will conform to the specifications provided in the Application.

Geotextile

37. Specifications of the geotextile material shall comply with those described in the Application.

PART E - SITE DECOMMISSIONING AND RESTORATION

38. All disturbed ground surfaces shall be regraded in a manner which is consistent with the topography of the site and which prevents erosion and surface runoff from carrying sediment into any Watercourse. Where soil conditions permit, disturbed areas shall be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.
39. All construction materials, equipment, temporary structures and debris shall be removed from the site upon completion of the work.
-