Where there is a discrepancy between the Application and this licence, then the conditions of this licence shall prevail.

PART C - DESIGN AND CONSTRUCTION

Minor Modification

- 3. Where site conditions require minor modifications to the designs submitted to the Board, including during construction, the Licensee shall notify the Board, a minimum of 10 days in advance, 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.
- 4. The Licensee shall submit to the Board, drawings of any Engineered Work to be completed on the wastewater treatment and discharge facilities 10 days in advance of the scheduled commencement of the work. The drawings shall be sealed by a Professional Engineer licensed to practice in Yukon.
- 5. The Licensee shall submit to the Board, as-built drawings of any Engineered Work completed on the wastewater facility, and any resulting revisions to the operations and maintenance documentation within 6 months of the completion of this work, as acknowledged by issuance of the Substantial Completion Certificate. The drawings shall be sealed by a Professional Engineer licensed to practice in Yukon.

PART D - OPERATING CONDITIONS

- 6. Within one month of the effective date of amendment 2, the Licensee shall submit to the Board, the Operating and Maintenance Plan complete with all Standard Operating Procedures for the wastewater treatment facility. The Licensee shall ensure the plan is consistent with the requirements of this licence. Any discrepancies between the water licence and the operating plan, the water licence shall prevail. The wastewater treatment facility shall be operated in accordance with that plan.
- 7. All wastewater treatment, wastewater discharge, and residual solids disposal systems shall be maintained in good repair, and operated in a manner which is consistent with the generally accepted municipal practices for wastewater treatment, wastewater discharge and residuals disposal systems in cold regions.
- 8. The classification of the wastewater treatment facility shall be established and maintained through the BC Environmental Operators Certification Program. Any changes to the facility classification shall be provided to the Board as part of the annual report.
- 9. The wastewater treatment facility shall be operated and maintained by personnel with the appropriate qualifications for the classification of the wastewater system being operated. The personnel shall be certified through the B.C. Environmental Operators Certification Program. Copies of the operators' certification shall be provided to the Board as part of the annual report.

Spills and Unauthorized Discharges

- 10. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon Spills Regulation, the Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244 and implement the Spill Contingency Plan. 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.
- 11. The Licensee shall apply the relevant procedures in the Spill Contingency Plan. The Licensee shall review the Spill Contingency Plan annually and shall provide a summary of that review, including any revisions to the plan, as a component of the annual report.
- 12. The Licensee shall maintain a log book of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the Yukon Spills Regulations. The log book shall be made available at the request of an Inspector. The log book shall include, but not necessarily be limited to:
 - a) date and time of the spill;
 - b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) distance between the spill or discharge and the nearest Watercourse; and
 - e) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.
- 13. The Licensee shall include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
- 14. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
- 15. The Spill Contingency Plan shall be posted on site for the duration of the operation.

Fuel Storage and Transfer

16. 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

17. The Licensee shall submit annual reports to the Board for the period of January 1 to December 31 of each year. The annual report shall be submitted to the Board on or before February 28 of the year following the year reported. The report shall include the information required by the Regulation including but not necessarily limited to:

- a) summaries of all data generated as a result of the monitoring and surveillance requirements in Parts E and F of this Licence, prepared by an individual qualified to do so, including at a minimum:
 - i. analysis and interpretation of the water data, and
 - ii. variances from baseline conditions or from previously collected data;
- b) a record of construction activities for the year reported;
- a detailed record of the operation of the wastewater treatment and disposal facilities, including operational difficulties;
- d) a copy of the engineer's report on the treatment facilities, discharge structures, and hydraulic control structures, as detailed in clause 28 of this Licence;
- e) details of any maintenance, repairs, or improvements to all physical works, including details of how recommendations from inspection reports have been addressed;
- f) results of the annual static water level testing required by clause 29 of this Licence;
- g) details and results of system integrity and leak detection monitoring and inspections of the treatment shafts, reporting, communications, and any response(s) implemented as part of the leak detection and prevention systems for the treatment shafts;
- h) continuous measure of effluent volume. The volume reported will form the basis of sampling frequency requirements for the following year, as described in Schedule A. The annual average daily volume of effluent deposited is the total volume, in cubic metres per day (m³/day), of effluent deposited via the final discharge point of wastewater system at Station DC-3, divided by the number of days in the calendar year;
- planning and/or conceptual design documents prepared for wastewater facility for the current year of the licence;
 - i) any changes to the operation and maintenance documentation; and
 - k) all work completed on the wastewater treatment facility.

Monthly Reports

18. Unless otherwise specified in this Licence, the Licensee shall forward to the Board a copy of all data collected as part of the monitoring and surveillance programs of this Licence on a monthly basis and no more than 30 days after the conclusion of the month in which that data was collected.

Reports and Plans

- 19. The Licensee shall provide to the Board, one unbound, single-sided, paper copy of all reports required by this licence. All reports must be reproducible by standard photocopier.
- 20. The Licensee shall upload electronic copies of all reports required by this licence to the Yukon Water Board's online licensing registry, Waterline. Electronic copies shall be submitted in one of the following formats: MS Word, MS Excel, or Adobe.pdf. Water quality results must be uploaded to Waterline in the format outline in the most recent version of Yukon's "Laboratory Data Submission Standards for Water Quality". This guide is available on the Yukon Water Board website.

PART E – EFFLUENT QUALITY STANDARDS

21. Effluent discharged from the wastewater treatment facility shall meet the following quality standards at monitoring station DC-3, as described in Schedule A of this licence:

Parameter	Maximum Authorized Concentration in a Grab Sample		
CBOD ₅ ¹	25 mg/L		
TSS	25 mg/L		
Un-ionized NH3, expressed as nitrogen (N)	1.25 mg/L @ 15°C ± 1°C		
pН	6-9		
Fecal Coliforms	1,000 cfu / 100 mL		
Acute Toxicity - 96-hr LCs02	Non-toxic at 100% concentration		

- Notes: 1. CBOD₅ Test Method 5 day BOD test with nitrification inhibition.
 - 2. Reference Method EPS1/RM/13 or EPS 1/RM/50 of Biological Test method; Reference for Determining Acute Lethality of Effluents to Rainbow Trout - Second Edition as amended from time to time.

PART F - MONITORING AND SURVEILLANCE

22. The Licensee shall comply with the monitoring program provided in Schedule A of this Licence.

Water Quality Monitoring

- 23. Samples collected as part of Schedule A shall be grab samples and shall be collected between the hours of 8:00 am and 8:00 pm local time.
- 24. Laboratory analyses shall be performed by a laboratory accredited under the International Organization for Standardization ISO/IEC 17025: 2005 standard, and the accreditation must include the actual tests being performed by the laboratory.
- 25. Laboratory analysis shall be conducted in accordance with the most recent edition of Standard Methods for the Examination of Water and Wastewater.
- 26. All data collection shall be conducted in accordance to a nationally recognized sampling protocol (e.g. CCME Protocols Manual for Water Quality Sampling in Canada, 2011).

Physical Inspections and Monitoring

27. Inspections of the wastewater treatment facility and discharge system shall be done in accordance with the Operations and Maintenance Plan. Any observations during the inspection that influence the performance of the facility or discharge system shall be reported to the Board within 15 days of the observation.

- 28. All treatment facilities, discharge structures, and hydraulic control structures shall be inspected annually, during the summer months, by a Professional Engineer licensed to practice in Yukon. The results of this inspection, including all problems identified, photographs taken, remedial measures proposed, and remedial measures implemented, shall be compiled in a report and submitted to the Board as part of the annual report.
- 29. A static water level test shall be performed on each of the aeration shafts in the wastewater treatment facility on an annual basis by a qualified professional. The results of the test shall be submitted to the Board as part of the annual report.

PART G – SITE DECOMMISSIONING AND RESTORATION

- The Licensee shall submit a decommissioning plan to the Board, a minimum of one year prior to commencing decommissioning activities.
- 31. The decommissioning plan shall include, but not be limited to:
 - a) Delineation of the wastewater system;
 - b) Delineation of all disturbed areas associated with the site and site facilities;
 - c) A drainage plan to manage surface water associated with the decommissioned site;
 - d) A plan showing the future use of the site;
 - e) A remediation plan for any contaminated areas of the site;
 - f) A plan and specification of any cover materials to be used in the site decommissioning;
 - g) A schedule for the site decommissioning and restoration.

PART H - GENERAL CONDITIONS

 The Licensee shall ensure a copy of this licence is maintained at the site during operations at all times.

Other Laws

- 33. No condition of the water use licence limits applicability of any statutory authority.
- 34. 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

- 35. 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 address identified on page 1 of this licence, 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; or

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

36. 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.

SCHEDULE A: MONITORING AND SURVEILLANCE TABLES

Table A1: Location of Sampling Stations

Sampling Station	Water Monitoring Location Description
DC-2	Influent to wastewater treatment facility
DC-3	Effluent from wastewater treatment facility at plant outlet
DC-4	Yukon River, 100 m downstream of effluent outfall
PW4N	Dawson City Community Drinking Water Well PW4N

Table A2: Water quality monitoring parameters and sampling frequency

Parameter	Station DC-2	Station DC-3	Station DC-4
Fecal Coliform	£ 1	M	M
Dissolved Oxygen (in-situ)	M	M	M
Temperature (in-situ)	M	M	M
Specific Conductance	M	M	M
CBOD ₅	M	M or BW	M
Total Suspended Solids	M	M or BW	M
pH (in-situ and lab)	M	M	M
Total Ammonia Nitrogen	M	M	M
Un-ionized NH3 as N	M	M or BW	M
Acute Lethality	-	M* or M*Q	(4)
TKN (ammonia & organic N)	М	M	М
Flow Rate	D	D	-

Table A3: Water quality monitoring parameters and sampling frequency for Integrity Monitoring (at PW4N)

Parameter	PW4N	
Fecal Coliform	M	
Total Coliform	M	
Dissolved Oxygen (in-situ)	M	
Temperature (in-situ)	M	
Specific Conductance	M	
pH (in-situ and lab)	M	
Total Ammonia Nitrogen	M	
TDS	M	
TSS	M	
Nitrate-N	M	
Nitrite-N	M	

Symbol Frequency D Daily M Monthly M or BW2,3 Monthly or Bi-weekly (twice monthly) Monthly from May 1 to September 30 M* only (during open water), sampling events at least two weeks apart Individual sampling event in March, at $M*O^{4,5}$ least 60 days apart from other Acute Lethality sampling Events (First Quarter): and Monthly from May 1 to September 30 only (during open water), sampling events at least two weeks apart; and Individual sampling event in December. at least 60 days apart from other Acute Lethality sampling Events (Fourth Quarter)

Table A4: Monitoring Schedule Frequency Legend

Notes:

- 1. Calendar year is defined as January to December for a given year.
- If the annual average daily volume of effluent deposited for the previous calendar year is ≤ 2,500 m³/day, sampling in the following calendar year for CBOD₅, Total Suspended Solids and Un-ionized NH₃ shall be conducted monthly.
- If the annual average daily volume of effluent deposited for the previous calendar year is >2,500 m³/day, sampling in the following calendar year for CBOD₅, Total Suspended Solids and Un-ionized NH₃ shall be conducted bi-weekly.
- If the annual average daily volume of effluent deposited for the previous calendar year is ≤ 2,500 m³/day, sampling in the following calendar year for Acute Lethality shall be conducted monthly from May 1 to September 30 only.
- 5. If the annual average daily volume of effluent deposited for the previous calendar year is >2,500 m³/day, sampling in the following calendar year for Acute Lethality shall be conducted monthly from May 1 to September 30, with one additional sampling event in March and one additional sampling even in December of the same calendar year.



Office des eaux du Yukon

December 19, 2011

Darrell Pasloski Minister Executive Council Office Government of Yukon Box 2703 Whitehorse YT Y1A 2C6

RE:

Application MN11-030 (renewal of MN99-027), Village of Haines Junction, Operation and Maintenance of the Potable Water System and the Wastewater Treatment Facility

The Yukon Water Board concluded its deliberations on application MN11-030 on December 7, 2011. The application is for a 10 year licence for the operation and maintenance of the Village of Haines Junction potable water system and wastewater treatment facility.

Should you be favourably inclined to grant the attached approval, pursuant to the requirements of the *Waters Act*, the Board will proceed to issue the renewal.

Yours truly,

Bruce Willis, Chairperson

Yukon Water Board

C: Register MN11-030, exhibit 10.1

Encl: Copy of licence MN11-030

YUKON WATER BOARD

Pursuant to the Waters Act and Waters Regulation, the Yukon Water Board hereby grants a Type A water licence for a municipal undertaking to:

Village of Haines Junction

Box 5339

Haines Junction YT Y0B 1L0

LICENCE NUMBER:

MN11-030

RENEWAL OF: MN99-027

LICENCE TYPE:

A

UNDERTAKING:

MUNICIPAL

WATER MANAGEMENT AREA: 3

LOCATION:

Dezadeash River at Village of Haines Junction and Water Wells #3

and #5 at the Village of Haines Junction

MAP CO-ORDINATES:

Wastewater treatment facility:

Latitude: 60° 45' 58" N Longitude: 137° 31' 56" W

Well #3 and pump house #1:

Latitude: 60° 44' 53" N Longitude: 137° 30' 30" W

Well #5: Latitude: 60° 45' 25" N Longitude: 137° 31' 44" W

Pump house #2 and water reservoir:

Latitude: 60° 45' 28" N Longitude: 137° 30' 30" W

PURPOSE:

To operate and maintain a municipal water facility and wastewater

treatment facility, and to discharge treated municipal wastewater

into the Dezadeash River.

EFFECTIVE DATE:

The effective date of this licence shall be January 30, 2012.

EXPIRY DATE:

January 29, 2022

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.

Approved this 20 day of Decem

Witness

Minister, Executive Council Office

Government of Yukon

00

day of

Chairperson

Yukon Water Board

PART A - DEFINITIONS

"Act" means Waters Act and any amendments thereto.

"Application" means Water Use Application MN11-030, 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 *Preliminary Spill Contingency Plan* that was submitted as part of the Application and included in Water Use Register MN11-030 as exhibit 1.6, 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 CONDITIONS

Other Laws

- 1. No condition of the water use licence limits applicability of any statutory authority.
- 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 or mailed by registered mail to the following address:

Village of Haines Junction Box 5339 Haines Junction YT YOB 1L0

and shall be deemed to have been given to the Licensee on the day it was delivered, 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

- 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.
 Spills and Unauthorized Discharges
- 5. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon Spills Regulations, the Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244 and implement the Spill Contingency Plan. 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.
- 6. The Licensee shall apply the relevant procedures in the Spill Contingency Plan. The Licensee shall review the Spill Contingency Plan annually and shall provide a summary of that review, including any revisions to the plan, as a component of the annual report.
- 7. The Licensee shall maintain a log book of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the Yukon Spills Regulations. The log book shall be made available at the request of an Inspector. The log book shall include, but not necessarily be limited to the:
 - a) date and time of the spill;
 - b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) distance between the spill or discharge and the nearest Watercourse; and
 - e) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.

- 8. The Licensee shall include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
- 9. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
- 10. Prior to the commencement of construction, the Licensee shall update the Spill Contingency Plan, as described in exhibit 1.6 of the Application, and provide the updated plan to the Board.
- 11. The Spill Contingency Plan shall be posted on site for the duration of the works.
- 12. 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.

Fuel Storage and Transfer

13. 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

- 14. 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;
 - b) the quantity of water used each day;
 - c) the hours of pumping for each day;
 - d) copies of all orders, directions and correspondence relating to drinking water sampling or analysis from the Medical Health Officer or from a Health Officer;
 - e) details of the methods, procedures and standards used in the data collection and sample testing;
 - f) the requirements outlined in Part E of this licence;
 - g) the results of all analyses required by the monitoring program as per the requirements of Schedule A of this licence;
 - b) the results of the sampling from stations HJ-1b, HJ-1d, HJ-3, HJ-4, HJ-5, HJ-6, and HJ-8;
 - i) the inspection results, including photographs, repairs or plans for modification required by the physical monitoring program;
 - j) a detailed record of any major maintenance work carried out or planned to be carried out that could have an impact on water; and,
 - k) summaries of all data generated as a result of the monitoring requirements of this licence, including analysis and interpretation by a qualified individual or firm and a discussion of any variances from baseline conditions or from previous years' data.

Reports

- 15. 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.
- 16. 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.
- 17. Electronic copies shall be Windows computer compatible in one of the following formats: Word 97 2003, Excel 97 2003 workbooks, or Adobe .pdf format. Water quality results must be presented in Excel 97-2003 .xis format.

Term of Licence

18. The term of this licence is for the period from the effective date to January 29, 2022.

PART C - OPERATING CONDITIONS

Description of Water Use and Deposit of Waste

- 19. The Licensee is hereby authorized to:
 - a) obtain, store, and distribute water for municipal purposes at a combined maximum rate of 2,198 m³/day from water wells #3 and #5 located in Haines Junction, YT;
 - b) collect, store and treat sewage at an existing wastewater treatment facility;
 - c) discharge treated effluent from the wastewater treatment facility to the Dezadeash River; and,
 - d) operate water supply, water distribution, sewage collection, and sewage treatment and disposal systems.

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.

- 20. Effluent shall only be discharged from the existing wastewater treatment facility through the outfall ditch from the facility, to the Dezadeash River wetlands.
- 21. The Licensee shall notify the Board no less than 10 days prior to the commencement of any effluent discharge.
- 22. The Licensee shall not commence discharge of effluent prior to August 1 of any year or ten weeks after the loss of ice cover on the wastewater treatment lagoons, whichever comes later.

- 23. No effluent discharge shall be allowed to occur when the water surface elevation in the Dezadeash River is such that a direct surface water connection exists between the river and the adjacent wetland into which the outfall ditch discharges.
- 24. Notification, including the name and phone number of the field supervisor, shall be provided to the Board, in writing, 10 days prior to the start of construction associated with maintenance.
- 25. The Licensee shall submit a sludge management plan for the wastewater treatment facility to the Board, in writing, within one year of the effective date of this licence.

PART D – EFFLUENT QUALITY STANDARDS

26. Any discharge from the wastewater treatment facility shall meet the following effluent quality standards at monitoring station HJ-4, as described in Schedule A of this licence:

Parameter	Maximum Concentration in a Grab Sample			
CBOD ₅	20 milligrams per litre			
Total Suspended Solids	25 milligrams per litre			
pH	6 – 9.5			
Oil and Grease	5 milligrams per litre			
Fecal Coliforms	400 counts / 100 millilitres			
Total Phosphorus	1 milligram per litre			
Bioassay* (LC ₅₀ static 96 hour	Non-toxic			
bioassay – 100% concentration)				
Unionized Ammonia	1.25 milligrams per litre @ 15°C ± 1°C			

^{*} bioassay using rainbow trout, pH non-adjusted.

27. The point of compliance at location HJ-4, as described in Schedule A of this licence, for the effluent quality standards included in this licence shall be the final point of control prior to discharging effluent to the environment.

PART E -- MONITORING AND SURVEILLANCE

- 28. The Licensee shall comply with the water quality monitoring program and surveillance network program contained in Schedule A of this licence.
- 29. All data collection and analyses shall be conducted in accordance with the most recent edition of *Standard Methods for the Examination of Water and Wastewater*, prepared and published by the American Water Works Association and the Water Pollution Control Federation.
- 30. Samples taken from HJ-4 and HJ-8, as described in Schedule A of this licence, shall be four-hour composite samples. All other samples shall be grab samples.
- 31. The effluent level in the lagoons shall be measured and recorded monthly.

- 32. The sludge levels in the lagoons shall be measured and recorded annually.
- 33. Annually, the Licensee shall carry out a physical inspection of the wastewater treatment and disposal facility. The inspection shall be carried out by a Professional Engineer licensed to practice in Yukon. The engineer shall submit a report assessing the condition and performance of the facility, and presenting recommendations for any necessary maintenance, repairs or modifications.

PART F - SITE DECOMMISSIONING AND RESTORATION

- 34. The Licensee shall develop a decommissioning plan for the closure of the municipal water facility and wastewater treatment facility, and submit the plan to the Board I year prior to the commencement of decommissioning activities. The plan shall include, but not necessarily be limited to a schedule and cost for completion of decommissioning and reclamation activities. As part of each annual report, the Licensee shall report on the status of the decommissioning plan.
- 35. During the term of the licence, the Licensee shall submit to the Board a plan for any well proposed to be decommissioned.
- 36. All disturbed ground surfaces shall be re-graded 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.
- 37. All construction materials, equipment, temporary structures and debris shall be removed from the site upon completion of the work.
- 38. Subject to any required assessments, authorizations or approvals, the Licensee shall implement the plan required by this section of this licence.

SCHEDULE A - MONITORING AND SURVEILLANCE REQUIREMENTS

1. LOCATIONS OF SAMPLING STATIONS

Sampling Station	Description
HJ-1b	Water supply from Well #3
HJ-1d	Water supply from Well #5
HJ-3	Influent to sewage treatment facility
HJ-4	Effluent from sewage treatment facility at the outlet of aerobic lagoon #3
HJ-5	Dezadeash River immediately upstream of outfall from sewage treatment facility
HJ-6	Dezadeash River 1000 metres downstream of outfall from sewage treatment facility (mid-
	channel)
HJ-8	Outlet of wetland treatment area or ponded water within wetland.

2. SAMPLING AND MONITORING FREQUENCY

Analysis	Station				//*		
	HJ-1b	IHJ-1d	НЈ-3	HJ-4	НЈ-5	НЈ-6	HJ-8
Fecal Coliform	THR	-		A**	BW*	BW*	BW*
Total Coliforms		-	-	— — — — — — — — — — — — — — — — — — —	-	BW*	BW*
Dissolved Oxygen	_		-	BW*	BW*	BW*	— — — — — — — — — — — — — — — — — — —
Specific Conductance	ш			BW*	BW*	BW*	_
Temperature	-			BW*	BW*	BW*	
BOD ₅	-	-	'm	BW*	A*	A*	BW*
Suspended Solids		-	-	BW*	BW*	BW*	BW*
pH	-	_		BW*	BW*	BW*	BW*
Oil and Grease	_	-	-	BW^*		A*	BW*
Ammonia	<u></u>	_	u.	BW*	BW*	BW*	BW*
Total Phosphorous	<u></u>	ш	_	BW*	BW*	BW*	BW*
Bioassay ¹		-	_	A**			-
(LC ₅₀ static 96 hour							
bioassay-100%)							
Flow Rate	D	D	D	D*	-	—	-
Water Surface	Q	M	-	-	7	-	THE STREET OF THE STREET OF THE STREET
Elevation	nanaran arawa an mana manaran arawa an ana an	Name (MIN AND AND AND AND AND AND AND AND AND AN	and control to be a market from the dealers thereon	Baranya and Ba	Valle to Address and Advanced Control of the Contro	Normalista e e esta socie e esta esta esta esta esta esta esta e	Start 1996 State State Submission Wheelers of the materials and

Note: T bioassay using rainbow trout, pH non-adjusted.

LEGEND

 $\overline{D = Daily}$, BW = Every two weeks, Q = Quarterly, A = Annually, M = Monthly

^{* =} When discharging, ** = Prior to discharge

YUKON WATER BOARD

Pursuant to the Waters Act and Waters Regulation, the Yukon Water Board hereby grants a Type A water licence for a municipal undertaking to:

Village of Haines Junction Box 5339 Haines Junction YT Y0B 1L0

APPLICATION: MN11-030-2 LICENCE TYPE: A

LICENCE NUMBER: MN11-030

AMENDMENT: This licence shall be deemed to be amendment 2 of licence number MN11-030.

UNDERTAKING: MUNICIPAL WATER MANAGEMENT AREA: 3

LOCATION: Dezadeash River at Village of Haines Junction and Water Wells #3 and #5 at

the Village of Haines Junction.

MAP CO-ORDINATES: Wastewater treatment facility: 60° 45' 58" N 137° 31' 56" W

Well #3 and pump house #1: 60° 44' 53" N 137° 30' 30" W Well #5: 60° 45' 25" N 137° 31' 44" W Pump house #2and reservoir: 60° 45' 28" N 137° 30' 30" W

PURPOSE: To operate and maintain a municipal water facility and wastewater treatment facility,

and to discharge treated municipal wastewater into the Dezadeash River.

EFFECTIVE DATE: The effective date of this licence is July 19, 2013.

EXPIRY DATE: January 29, 2022

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.

Approved this 2015 day of November , 2015 .

Misliantel

Witness

Issued this Omday of November, 2015.

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Witness Chairperson
Yukon Water Board

Minister, Executive Council Office

Government of Yukon

PART A - DEFINITIONS

"Act" means Waters Act and any amendments thereto.

"Application" means Water Use Application MN11-030, MN12-009, and MN11-030-2 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 Spill Prevention and Response Plan that was submitted as part of the Application and included in Water Use Register MN12-009 as exhibit 1.3 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 CONDITIONS

Other Laws

- 1. No condition of the water use licence limits applicability of any statutory authority.
- 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 or mailed by registered mail to the following address:

Village of Haines Junction Box 5339 Haines Junction YT Y0B 1L0

and shall be deemed to have been given to the Licensee on the day it was delivered, 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.

Spills and Unauthorized Discharges

- 5. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon Spills Regulations, the Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244 and implement the Spill Contingency Plan. 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.
- 6. The Licensee shall apply the relevant procedures in the Spill Contingency Plan. The Licensee shall review the Spill Contingency Plan annually and shall provide a summary of that review, including any revisions to the plan, as a component of the annual report.

- 7. The Licensee shall maintain a log book of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the Yukon Spills Regulations. The log book shall be made available at the request of an Inspector. The log book shall include, but not necessarily be limited to the:
 - a) date and time of the spill;
 - substance spilt or discharged;
 - approximate amount spilt or discharged;
 - d) distance between the spill or discharge and the nearest Watercourse; and
 - e) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.
- 8. The Licensee shall include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
- 9. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
- 10. Prior to the commencement of construction, the Licensee shall submit an additional Spill Contingency Plan, specific to construction activities, and provide the plan to the Board.
- 11. The Spill Contingency Plan shall be posted on site for the duration of the works.
- 12. 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.

Fuel Storage and Transfer

13. 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

- 14. 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;
 - b) the quantity of water used each day;
 - the hours of pumping for each day;
 - d) copies of all orders, directions and correspondence relating to drinking water sampling or analysis from the Medical Health Officer or from a Health Officer;

- e) details of the methods, procedures and standards used in the data collection and sample testing;
- f) the requirements outlined in Part E of this licence;
- g) the results of all analyses required by the monitoring program as per the requirements of Schedule A of this licence;
- h) the results of the sampling from stations HJ-1b, HJ-1d, HJ-3, HJ-4, HJ-5, HJ-6, and HJ-8;
- the inspection results, including photographs, repairs or plans for modification required by the physical monitoring program;
- j) a detailed record of any major maintenance work carried out or planned to be carried out that could have an impact on water, and
- k) summaries of all data generated as a result of the monitoring requirements of this licence, including analysis and interpretation by a qualified individual or firm and a discussion of any variances from baseline conditions or from previous years' data.

Reports

- 15. The Licensee shall provide to the Board one unbound, single-sided, paper copy of all reports required by this licence. All reports must be reproducible by standard photocopier.
- 16. The Licensee shall upload electronic copies of all reports required by this licence to the Yukon Water Board's online licensing registry, the WATERLINE. Electronic copies shall be submitted in one of the following formats: Word 97 2003, Excel 97 2003 workbooks, or Adobe .pdf format. Water quality results uploaded to the WATERLINE must be presented in Excel 97-2003.xls format.

PART C - OPERATING CONDITIONS

Description of Water Use and Deposit of Waste

- 17. The Licensee is hereby authorized to:
 - a) obtain, store, and distribute water for municipal purposes at a combined maximum rate of 2,198 m³/day from water wells #3 and #5 located in Haines Junction, YT;
 - b) collect, store and treat sewage at an existing wastewater treatment facility;
 - discharge treated effluent from the wastewater treatment facility to the Dezadeash River, and
 - d) operate and maintain water supply, water distribution, sewage collection, and sewage treatment and disposal systems,

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.

- 18. Effluent shall only be discharged from the existing wastewater treatment facility through the outfall ditch from the facility, to the Dezadeash River wetlands.
- The Licensee shall notify the Board no less than 10 days prior to the commencement of any effluent discharge.
- 20. The Licensee shall not commence discharge of effluent prior to August 1 of any year or ten weeks after the loss of ice cover on the wastewater treatment lagoons, whichever comes later.
- 21. No effluent discharge shall be allowed to occur when the water surface elevation in the Dezadeash River is such that a direct surface water connection exists between the river and the adjacent wetland into which the outfall ditch discharges.
- 22. Notification, including the name and phone number of the field supervisor, shall be provided to the Board, in writing, 10 days prior to the start of construction associated with maintenance.
- 23. The Licensee shall submit a sludge management plan for the wastewater treatment facility to the Board, in writing, within one year of the effective date of this licence.

PART D - DESIGN AND CONSTRUCTION

Design

- 24. Ten days prior to the commencement of construction, the Licensee shall submit to the Board final detailed design construction drawings for the water reservoir and associated infrastructure. 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.
- 25. Within 60 days of completion of the construction of the water reservoir and associated infrastructure, the Licensee shall submit to the Board, as-built design drawings of the water reservoir and associated infrastructure, sealed by a Professional Engineer licensed to practice in the Yukon.
- 26. Where site conditions require minor modifications to the designs submitted to the Board, the Licensee shall notify the Board, a minimum of 10 days in advance, 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

- 27. All works associated with the undertaking shall be maintained in good repair.
- 28. Construction and/or maintenance equipment shall be mechanically sound and free of leaks.
- 29. Granular bedding and backfill material shall consist of non-frozen material.
- 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, unless authorized by this licence.
- 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.

PART E – EFFLUENT QUALITY STANDARDS

33. Any discharge from the wastewater treatment facility shall meet the following effluent quality standards at monitoring station HJ-4, as described in Schedule A of this licence:

Parameter	Maximum Concentration in a Grab Sample		
CBOD ₅	20 milligrams per litre		
Total Suspended Solids	25 milligrams per litre		
pH	6 – 9.5		
Oil and Grease	5 milligrams per litre		
Fecal Coliforms	400 counts / 100 millilitres		
Total Phosphorus	1 milligram per litre		
Bioassay* (LC ₅₀ static 96 hour	Non-toxic		
bioassay – 100% concentration)			
Unionized Ammonia	1.25 milligrams per litre @ 15°C ± 1°C		

^{*} bioassay using rainbow trout, pH non-adjusted -reference method EPS 1/RM/13

- 34. The point of compliance at location HJ-4, as described in Schedule A of this licence, for the effluent quality standards included in this licence shall be the final point of control prior to discharging effluent to the environment.
- 35. All analyses must be performed by a laboratory accredited under the International Organization for Standardization ISO/IEC 17025: 2005 standard and the accreditation must include the actual tests being performed by the laboratory.

PART F - MONITORING AND SURVEILLANCE

- 36. The Licensee shall comply with the water quality monitoring program and surveillance network program contained in Schedule A of this licence.
- Samples taken from HJ-4 and HJ-8, as described in Schedule A of this licence, shall be four-hour composite samples. All other samples shall be grab samples.
- 38. The effluent level in the lagoons shall be measured and recorded monthly.
- The sludge levels in the lagoons shall be measured and recorded annually.
- 40. Annually, the Licensee shall carry out a physical inspection of the wastewater treatment and disposal facility. The inspection shall be carried out by a Professional Engineer licensed to practice in Yukon. The engineer shall submit a report assessing the condition and performance of the facility, and presenting recommendations for any necessary maintenance, repairs or modifications.

PART G - SITE DECOMMISSIONING AND RESTORATION

- 41. The Licensee shall develop a decommissioning plan for the closure of the municipal water facility and wastewater treatment facility, and submit the plan to the Board 1 year prior to the commencement of decommissioning activities. The plan shall include, but not necessarily be limited to a schedule and cost for completion of decommissioning and reclamation activities. As part of each annual report, the Licensee shall report on the status of the decommissioning plan.
- During the term of the licence, the Licensee shall submit to the Board a plan for any well proposed to be decommissioned.
- 43. All disturbed ground surfaces shall be re-graded 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 revegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.
- 44. All construction materials, equipment, temporary structures and debris shall be removed from the site upon completion of the work.
- Subject to any required assessments, authorizations or approvals, the Licensee shall implement the plan required by this section of this licence.

SCHEDULE A - MONITORING AND SURVEILLANCE REQUIREMENTS

1. LOCATIONS OF SAMPLING STATIONS

Sampling Station	Description				
HJ-1b	Water supply from Well #3				
HJ-1d	Water supply from Well #5				
HJ-3	Influent to sewage treatment facility				
HJ-4	Effluent from sewage treatment facility at the outlet of aerobic lagoon #3				
HJ-5	Dezadeash River immediately upstream of outfall from sewage treatment facility				
НЈ-6	Dezadeash River 1000 metres downstream of outfall from sewage treatment facility (mid- channel)				
HJ-8	Outlet of wetland treatment area or ponded water within wetland.				

2. SAMPLING AND MONITORING FREQUENCY

Analysis	Station						
	НЈ-1Ъ	HJ-1d	НЈ-3	НЈ-4	НЈ-5	НЈ-6	НЈ-8
Fecal Coliform	10-01		-	A**	BW*	BW*	BW*
Total Coliforms	14.74		- 2 - 1		1-12-1	BW*	BW*
Dissolved Oxygen	-			BW*	BW*	BW*	
Specific Conductance	1724	A	~	BW*	BW*	BW*	·
Temperature	11 10 - 1	-T-T-		BW*	BW*	BW*	
CBOD ₅				BW*	A*	A*	BW*
Suspended Solids			-	BW*	BW*	BW*	BW*
pH	119.	-	-	BW*	BW*	BW*	BW*
Oil and Grease	113	#£6-77		BW*		A*	BW*
Ammonia	111(-)	-	-2-	BW*	BW*	BW*	BW*
Total Phosphorous	in the second	-		BW*	BW*	BW*	BW*
Bioassay ¹ (LC ₅₀ static 96 hour bioassay-100%)		<u> </u>	-	A**			•
Flow Rate	D	D	D	D*	1 - 1-		
Water Surface Elevation	Q	М			N=		1.57

Note: 1 bioassay using rainbow trout, pH non-adjusted -reference method EPS 1/RM/13

LEGEND

D = Daily, BW = Every two weeks, Q = Quarterly, A = Annually, M = Monthly

* = When discharging, ** = Prior to discharge

YUKON WATER BOARD

Pursuant to the Waters Act and Waters Regulation, the Yukon Water Board hereby grants a Type A water licence for a municipal undertaking to:

> Village of Haines Junction Box 5339 Haines Junction YT Y0B 1L0

APPLICATION:

MN11-030-3

LICENCE TYPE: A

LICENCE NUMBER:

MN11-030

AMENDMENT:

This licence shall be deemed to be amendment 3 of MN11-030.

UNDERTAKING:

Municipal

WATER MANAGEMENT

AREA:

03 Alsek

WATER SOURCE:

Groundwater Wells # 3 and # 5.

MAXIMUM QUANTITY

OF WATER USE:

2,198 cubic meters per day

LOCATION:

Dezadeash River at Village of Haines Junction and Water Wells #3

and #5 at the Village of Haines Junction.

MAP CO-ORDINATES:

Wastewater treatment facility: 60° 45' 58" N 137° 31' 56" W Well #3 and pump house #1: 60° 44' 53" N 137° 30' 30" W Well #5: 60° 45' 25" N 137° 31' 44" W Pump house #2 and reservoir: 60° 45' 28" N 137° 30' 30" W

PURPOSE:

To operate and maintain a municipal water facility and wastewater treatment facility, and to discharge treated municipal wastewater

into the Dezadeash River.

ORIGINAL LICENCE

EFFECTIVE DATE:

January 9, 2012

AMENDMENT EFFECTIVE DATE:

The effective date of this amendment shall be the date on which the signature of the Chairperson of the Yukon Water Board is

affixed.

EXPIRY DATE:

January 29, 2022

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.

Approved this 3 day of July 2017

Witness

Minister, Executive Council Office Government of Yukon

Issued this 4th day of July 2017

Witness

Vice Chairperson Yukon Water Board

PART A - DEFINITIONS

- "Act" means Waters Act and any amendments thereto.
- "Application" means Water Use Application MN11-030, MN12-009, MN11-030-2, and MN11-030-3, 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 Spill Response Plan for Petroleum Products, Polymers and Sewage that was submitted as part of the Application and included in Register MN11-030-3 as exhibit 1.7 and the Spill Prevention and Response Plan that was submitted as part of the Application and included in Register MN12-009 as exhibit 1.3, and any subsequent revisions.
- "Waste" means any substance as defined in the Act.
- "Watercourse" means a natural watercourse, body of water or water supply, whether usually containing water or not, and includes groundwater, springs, swamps, and gulches.
- "Wetted Perimeter" means the horizontal extent of the present water level while the work is taking place.

PART B - GENERAL CONDITIONS

Other Laws

- No condition of this water licence limits the applicability of any statutory authority.
- 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.