

August 10, 2017

File: MV2011L4-0002

Honourable Robert C. McLeod  
Minister of Environment and Natural Resources  
Government of the Northwest Territories  
P.O. Box 1320  
YELLOWKNIFE NT X1A 2L9

Email: [Robert\\_C\\_McLeod@gov.nt.ca](mailto:Robert_C_McLeod@gov.nt.ca)

Dear Minister McLeod:

**Board Recommendation for Approval of Updated Type A Water Licence  
Taltson Twin Gorges Hydroelectric Generating Station, NT**

The Mackenzie Valley Land and Water Board (MVLWB or the Board) has completed its Re-Hearing process on the claim for compensation submitted by the Carter Family in relation to Type A Water Licence MV2011L4-0002 for the Taltson Twin Gorges Hydroelectric Generating Station, NT. A motion was passed at the August 10, 2017 Board meeting to forward for your approval the attached updated Licence and associated Reasons for Decision.

The MVLWB recommends your approval and signature of the attached updated Type A Water Licence.

Yours sincerely,

Mavis Cli-Michaud  
MVLWB, Chair

Copied to: Distribution List

Attached: Updated Water Licence  
Reasons for Decision



## Mackenzie Valley Land and Water Board Water Licence

Pursuant to the *Mackenzie Valley Resource Management Act* and Regulations, the Mackenzie Valley Land and Water Board, hereinafter referred to as the Board, hereby grants to:

Northwest Territories Power Corporation  
(Licensee)

of 4 Capital Drive, Hay River, NT X0E 1G2  
(mailing address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water subject to the restrictions and conditions contained in the *Waters Act* and Regulations made thereunder and subject to and in accordance with the conditions specified in this Licence.

Licence number:	MV2011L4-0002
Licence type:	A
Water management area:	Northwest Territories 01
Location:	Taltson River Basin, Northwest Territories 61°40'N, 109°56'W and 60°25'N, 110°24'W
Purpose:	Storage and Diversion of Water for Hydroelectric Generation Purposes
Description:	Class 4 Hydropower Generation
Effective date of licence:	August 31, 2012
Expiry date of licence:	August 30, 2027

This Licence issued and recorded at Yellowknife includes and is subject to the annexed conditions.

**Mackenzie Valley Land and Water Board**

A handwritten signature in blue ink, appearing to read "Mavis Cli-Michaud".

Mavis Cli-Michaud, Chair

A handwritten signature in black ink, appearing to read "Amanda Gauthier".

Amanda Gauthier, Witness

Approved by

Honourable Robert C. McLeod  
Minister Environment and Natural Resources

## Part A: Scope and Definitions

### Scope

- A.1 This Licence entitles the Northwest Territories Power Corporation (NTPC) to store and divert water for the hydroelectric power undertaking associated with the Twin Gorges Power Generation Facilities on the Taltson River, Northwest Territories within the area as defined by 61°40'N, 109°56'W and 60°25'N, 110°24'W.
- A.2 This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the *Waters Act*, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform to such Regulations.
- A.3 Compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with the requirements of all applicable federal, territorial, and municipal legislation.

### Definitions

In this Licence, MV2011L4-0002:

**"Act"** means the *Waters Act*.

**"Analyst"** means an Analyst designated by the Minister under subsection 65(1) of the Act.

**"Board"** means the Mackenzie Valley Land and Water Board established under Part 4 of the *Mackenzie Valley Resource Management Act*.

**"Canadian Dam Association (CDA) Safety Guidelines"** means the Canadian Dam Association's Dam Safety Guidelines (2007) or subsequently approved editions.

**"Dam Safety Review"** means a comprehensive formal review carried out at regular intervals to determine whether an existing dam is safe, and if not safe, to determine required safety improvements.

**"Emergency Preparedness Plan (EPP)"** means a document that contains procedures for dealing with emergencies at the dam or its associated facilities; and includes communication directories and inundation maps showing upstream and downstream water levels and arrival times of floods.

**"Engineered Structures"** means any constructed facility which was designed and approved by a professional Engineer registered with the Northwest Territories Association of Professional Engineers and Geoscientists.

**“Engineer”** means a professional Engineer registered to practice in the Northwest Territories in accordance with the *Engineering and Geoscience Professions Act*, S.N.W.T. 2006, c. 16 with the expertise to address specific components of the Power Generation Facilities.

**“Inspector”** means an Inspector designated by the Minister under subsection 65(1) of the Act.

**“Licensee”** means the holder of this Licence.

**“Minister”** means the Minister of Aboriginal Affairs and Northern Development Canada.

**“Modification”** means an alteration to a physical work that introduces a new structure or eliminates an existing structure but does not alter the purpose or function of the work nor include an expansion.

**“NTPC Datum at Nonacho Lake”** means an assumed elevation of 324.44 metres (1064.15 feet), which is assigned to the North-East Bolt head in the East Plate of the gate hoist on the main dam.

**“NPTC Datum at Twin Gorges (No.1)”** means an assumed elevation of 242.38 metres (795.00 feet), which is assigned to the concrete floor deck of the intake house.

**“Operation, Maintenance, and Surveillance Manual (OMS Manual)”** means a document outlining the procedures for safe operation, maintenance and surveillance of a dam; within the Taltson Power Generation Facilities.

**“Power Generation Facilities”** means the Nonacho Lake Reservoir and control structures, Twin Gorges (No.1) Dam and Reservoir, Trudel Creek, and the intake, penstock, Spillway, tailrace and powerhouse as indicated on figures three (3) through seven (7) in the report titled “Documentation in Support of the Taltson Water Licence Renewal, May 2011”.

**“Regulations”** means Regulations proclaimed pursuant to section 63 of the Act.

**“Spillway”** means an Engineered Structure to facilitate the release of water from the facility. The Spillway elevation is the elevation at which water begins to flow through the Spillway structure.

**“Waste(s)”** means Waste as defined by section 1 of the Act.

**“Wastewater”** means Water containing Waste.

**“Water(s)”** means any Waters as defined by section 1 of the Act.

## **Part B: General Conditions**

- B.1 The Licensee shall file an Annual Report with the Board not later than March 31 of the year following the calendar year being reported which shall contain the information as set out in Schedule 1, Item 1 attached to this Licence.
- B.2 The Licensee shall comply with the Surveillance Network Program annexed to this Licence and any amendment to the Surveillance Network Program as may be made from time to time pursuant to the conditions of this Licence.
- B.3 The Surveillance Network Program and compliance dates specified in the Licence may be modified at the discretion of the Board.
- B.4 Meters, devices, or other methods used for measuring the volumes of Water used and Waste discharged shall be installed, operated, and maintained by the Licensee to the satisfaction of an Inspector.
- B.5 The Licensee shall, within sixty (60) days of the issuance of this Licence, post the necessary signs, where possible, to identify the station(s) of the Surveillance Network Program. All postings shall be located and maintained to the satisfaction of an Inspector.
- B.6 The Licensee shall comply with the terms of any plans approved pursuant to the conditions of this Licence and with any amendments to the plans as may be made from time to time pursuant to the conditions of this Licence and as approved by the Board.
- B.7 The Licensee shall submit to the Board for approval a Public Engagement Plan (PEP) by September 30, 2012. The PEP shall describe how the Licensee will communicate with adversely affected parties from the Power Generation Facilities. The PEP shall include, but not be limited to:
  - a) Details on the Annual Report;
  - b) Details on the reporting of key activities, plans or changes to Power Generation Facilities during the life of the Power Generation Facilities with impacted individuals and communities;
  - c) NTPC's policy on the notification of Hunters and Trappers;
  - d) NTPC's policy on the preservation and reporting of Archaeological and Heritage Resources that shall conform to the Northwest Territories Archaeological Sites Regulations; and
  - e) Any other information as required by the Board.
- B.8 The Licensee shall implement the PEP as and when approved by the Board.
- B.9 If the PEP is not approved by the Board, the Licensee shall revise and resubmit the PEP to the Board for approval within thirty (30) days of receiving notification of the Board's decision.
- B.10 The Licensee shall modify the PEP as necessary to reflect changes in operations. Any proposed changes shall be submitted to the Board for approval.
- B.11 The attached Schedules and any compliance dates specified in this Licence may be amended at the discretion of the Board.

- B.12 The Licensee shall comply with the Schedules annexed to this Licence, and with any amendments to the Schedules as may be made from time to time pursuant to the conditions of this Licence and as approved by the Board.
- B.13 The Licensee shall ensure a copy of this Licence is maintained at the site of operation at all times.

**Part C: Conditions Applying to Operation**

- C.1 The Licensee shall store and divert water to generate electrical power from the Power Generation Facilities or the Facilities, as modified, under the authority of G.1.
- C.2 The Licensee shall operate the Power Generation Facilities in a manner such that:
- a) The Twin Gorges (No.1) Reservoir water levels do not fall below 238.9 metres (NTPC Datum). Exceptions to the minimum water level of 238.9 metres (NTPC Datum) may be made only after a written request is filed by the Licensee with the Board and the Licensee receives a letter of approval from the Board;
  - b) The Nonacho Lake Reservoir water levels do not exceed the maximum of 321.6 metres (NTPC Datum) or fall below the minimum of 319.3 metres (NTPC Datum). Exceptions to the minimum water level of 319.3 metres (NTPC Datum) and the maximum water level of 321.6 metres (NTPC Datum) can be made only after a written request is filed by the Licensee with the Board and the Licensee receives a letter of approval from the Board;
  - c) The control structure on the Nonacho Lake Reservoir is operated to comply with C.3, when the reservoir water level is below 320.3 metres (NTPC Datum) and,
  - d) The dams and respective Spillways defined in the "Power Generation Facilities" definition are maintained to the satisfaction of an Inspector.
- C.3 The minimum flow of 14 cubic metres per second shall be maintained in the river channel between the outflow of the control structure at Nonacho Lake Reservoir and the forebay of the Twin Gorges Power Facility. Exceptions to this limitation shall be made only after a written request is filed by the Licensee to the Board and a letter of approval is received from the Board.
- C.4 A minimum flow of 28 cubic metres per second shall be maintained below the Twin Gorges Power Generation Facility in the river channel at a point 100 metres below the confluence of Trudel Creek and the Taltson River. Exceptions to this limitation shall be made only after a written request is filed by the Licensee to the Board and the Licensee receives a letter of approval from the Board.
- C.5 The Licensee shall submit to the Board updated stage-discharge curves for the Spillway at Twin Gorges (No.1) Reservoir and for the control structure at Nonacho Lake Reservoir each time the stage-discharge curves are revised.
- C.6 The Licensee shall monitor and report flow volumes of the Taltson River between the Trudel Creek/Taltson River confluence and Tsu Lake to the Board in the Annual Water Licence Report, and shall adhere to current Water Survey of Canada operating procedures for hydrometric monitoring within the Northwest Territories. These procedures shall be submitted to the Board within thirty (30) days of the issuance of this Licence.

- C.7 If, during the period of this Licence, a failure to comply with conditions specified in C.2, C.3 or C.4 of this Licence occurs, or is foreseeable, the Licensee shall employ the Emergency Response Plan and submit to an Inspector and the Board a detailed report on each occurrence not later than thirty (30) days after initially reporting the event.
- C.8 The Licensee shall submit to the Board for approval by June 30, 2013, an updated Operation, Maintenance, and Surveillance Manual prepared in accordance with the Canadian Dam Association Guidelines. The Manual must include any provisions for routine inspections carried out by the Licensee.
- C.9 The Licensee shall implement the plan referred to in C.8 as and when approved by the Board.
- C.10 If not approved by the Board, the Operation, Maintenance, and Surveillance Manual referred to in C.8 shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.
- C.11 The Licensee shall modify the Operation, Maintenance, and Surveillance Manual as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.
- C.12 The Licensee shall have Dam Safety Reviews of the Power Generation Facilities conducted by a Professional Engineer in accordance with the Canadian Dam Association Guidelines. The initial Dam Safety Review shall be completed by August 1, 2015. The subsequent Reviews shall be completed every five years thereafter, at a time when the annual water levels in the Twin Gorges Forebay are high and the Taltson River is under normal operating conditions. The Engineer's report shall be submitted to the Board 60 days after the Dam Safety Review. If the Engineer has made recommendations, the Licensee shall also submit a covering letter to the Board with the Engineer's report that outlines how the Licensee will implement the Engineer's recommendations.

**Part D: Conditions Applying to Studies**

- D.1 The Licensee shall submit to the Board for approval the Terms of Reference for any studies deemed necessary by the Board during the term of the Licence.
- D.2 The Licensee shall carry out any studies required by the Board according to the terms of Reference referred in D.1 as and when approved by the Board.

**Part E: Conditions Applying to Waste Disposal**

- E.1 The Licensee shall submit to the Board for approval a Site Specific Waste Management Plan (WMP) within sixty (60) days of the issuance of this Licence. This plan shall conform to the Mackenzie Valley Land and Water Board Guidance Document, "Guideline for Developing a Waste Management Plan", March 31, 2011 and subsequent editions.
- E.2 The Licensee shall implement the plan referred to in E.1 as and when approved by the Board.

- E.3 If not approved by the Board, the WMP referred to in E.1 shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.
- E.4 The Licensee shall modify the WMP as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.
- E.5 The Licensee shall ensure that any unauthorized Wastes do not enter any Waters.

**Part F: Conditions Applying to Monitoring**

- F.1 The Licensee shall submit to the Board for approval within thirty (30) days of the issuance of this Licence the Terms of Reference for an Aquatic Effects Monitoring Plan (AEMP). In addition to the information contained in the Water Effects Monitoring Plan Terms of Reference dated May 2011, this plan shall also contain the information described in Schedule 2, Item 1, attached to this Licence.
- F.2 The Licensee shall submit a Final AEMP to the Board for approval prior to September 30, 2012. This plan shall contain the information described in Schedule 2, Item 1 attached to this Licence.
- F.3 The Licensee shall implement the Final AEMP referred to in F.2 as and when approved by the Board.
- F.4 If not approved by the Board, the Final AEMP referred to in F.2 shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.
- F.5 The Licensee shall modify the Final AEMP as necessary to reflect any proposed changes in operations and the Licensee shall submit a re-evaluation/redesign of the AEMP every three (3) years. Any proposed changes shall be submitted to the Board for approval.
- F.6 The Licensee shall submit to the Board on an annual basis by March 31 an Annual Aquatic Effects Monitoring Plan (AAEMP) Report summarizing the results of monitoring completed, including but not limited to the information identified in Schedule 2, Item 2, attached to this Licence.
- F.7 The Water Effects Monitoring Plan (WEMP) previously approved under Water Licence N1L4-0154 shall remain in effect until the Final AEMP described in F.2 is approved by the Board.
- F.8 The Licensee shall submit a Nonacho Lake and Trudel Creek Sediment and Erosion Management Plan (SEMP) to the Board for approval prior to September 30, 2012. The SEMF should contain a description of erosion sensitive areas, and for each area, photos and a description of relevant erosion prevention and mitigation procedures and practices.
- F.9 The Licensee shall implement the plan referred to in F.8 as and when approved by the Board.
- F.10 If not approved by the Board, the Nonacho Lake and Trudel Creek SEMF referred to in F.8 shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.



- F.11 The Licensee shall modify the Nonacho Lake and Trudel Creek SEMP as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.

#### **Part G: Conditions Applying to Modifications**

- G.1 The Licensee may, without written consent from the Board, carry out modifications to the Power Generation Facilities, provided that such modifications are consistent with the terms of this Licence and the following requirements are met:
- a) The Licensee has notified the Board in writing of such proposed modifications at least sixty (60) days prior to beginning the modifications;
  - b) Such modifications do not place the Licensee in contravention of either this Licence or the Act;
  - c) The Board has not, during the sixty (60) days following the notification of the proposed modifications, informed the Licensee that review of the proposal will require more than sixty (60) days and;
  - d) The Board has not rejected the proposed modifications.
- G.2 Modifications for which all the conditions referred to in G.1 have not been met, can be carried out only with the written consent of the Board.
- G.3 The Licensee shall submit to the Board, prior to carrying out any modifications, relevant design drawings stamped by a professional engineer, construction schedules and any other data requested by the Board for any modifications requiring Board approval as per G.2.
- G.4 The Licensee shall submit to the Board, within ninety (90) days of completing any modifications, as-built plans and drawings of the modifications referred to in G.2.

#### **Part H: Conditions Applying to Contingency Planning**

- H.1 The Licensee shall submit to the Board for approval within sixty (60) days of the issuance of this Licence, an updated Spill Contingency Plan (SCP) in accordance with Aboriginal Affairs and Northern Development Canada's 2007 "Guidelines for Spill Contingency Planning".
- H.2 The Licensee shall implement the plan referred to in H.1 as and when approved by the Board.
- H.3 If not approved by the Board, the SCP referred to in H.1 shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.
- H.4 The Licensee shall modify the SCP as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.
- H.5 The Licensee shall review the SCP annually and, if necessary, modify the plan to reflect changes in operation(s) and technology. An updated SCP shall be submitted to the Board for approval.
- H.6 The Licensee shall submit for approval within sixty (60) days of issuance of the Licence an Emergency Preparedness Plan (EPP) in accordance with the Canadian Dam Association Guidelines.

- H.7 The Licensee shall implement the plan referred to in H.6 as and when approved by the Board.
- H.8 If not approved by the Board, the EPP referred to in H.6 shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.
- H.9 The Licensee shall modify the EPP as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.
- H.10 The Licensee shall immediately implement the approved EPP and notify an Inspector and the Board immediately should a failure of any of the structures associated with the Power Generation Facilities occur, or seem likely to occur, which would result in an uncontrollable release of water.
- H.11 The Licensee shall provide the Board with detailed written reports of the occurrence of each event referred to in H.10. These reports shall be submitted to the Board not later than 30 days following the occurrence of the event.
- H.12 If, during the period of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
- a) Employ the SCP and/or the EPP;
  - b) Report the incident immediately via the 24-hour NWT Spill Report Line. Currently the number is (867) 920-8130; and
  - c) Submit to an Inspector a detailed report on each occurrence not later than thirty (30) days after initially reporting the event.

#### **Part I: Conditions Applying to Closure and Reclamation**

- I.1 The Licensee shall submit to the Board for approval within twelve (12) months of the issuance of this Licence an Interim Closure and Reclamation Plan (ICRP) in accordance with the Canadian Dam Association Guidelines.
- I.2 If not approved by the Board, the ICRP referred to in I.1 shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.
- I.3 The Licensee shall annually review the approved ICRP and modify it to reflect any changes in operation, technology, and schedule. Any proposed modifications shall be submitted to the Board for approval.
- I.4 The Licensee shall implement the ICRP as approved by the Board in accordance with the schedules and procedures specified in the Plan and carry out progressive reclamation of Power Generation Facility areas when applicable prior to closure of operations.
- I.5 The Licensee shall submit to the Board for approval a Final Closure and Reclamation Plan (Final CRP) in accordance with the Canadian Dam Association Guidelines at least twelve (12) months prior to the end of operations. The Final CRP shall be implemented as and when approved by the Board.

- I.6 If not approved by the Board, the Final CRP referred to in I.5 shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.
- I.7 The Licensee shall modify the Final CRP as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.

**Part J: Conditions Applying to Compensation**

- J.1 The Licensee shall pay compensation to the Carter Family as outlined in Schedule 3.

**Signed on behalf of the Mackenzie Valley Land and Water Board**



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**Mavis Cli-Michaud, Chair**



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**Amanda Gauthier, Witness**

## **Schedule 1: General Conditions**

1. The Annual Report referred to in B.1 shall include, but not be limited to, the following:
  - a) A record of mean daily use rate in cubic metres per second and daily water levels in metres above sea level of each reservoir (NTPC Datum);
  - b) A detailed record of modifications and major maintenance work carried out on the Power Generation Facilities;
  - c) A record of the gate operations at the outlet of the Nonacho Lake Reservoir control structure;
  - d) A summary of activities carried out by the Licensee under the approved Public Engagement Plan;
  - e) Revisions to the Spill Contingency Plan, and the Closure and Reclamation Plan;
  - f) A detailed record of any geotechnical work conducted as a result of the Dam Safety Review;
  - g) A summary of progress related to the Aquatic Effects Monitoring Program;
  - h) Tabular summaries of all data generated under the Surveillance Network Program annexed to this Licence;
  - i) Any revisions to the Public Engagement Plan;
  - j) Any revisions to the Emergency Preparedness Plan;
  - k) An outline of any spill training and communications exercises carried out;
  - l) A list of any unauthorized discharges;
  - m) Flow volumes of the Taltson River between the Trudel Creek/Taltson River confluence and Tsu Lake to the Board; and
  - n) Any other details on Water Use or Waste disposal requested by the Board by November 1 of the year being reported.

## Schedule 2: Conditions Applying to Monitoring

1. The Aquatic Effects Monitoring Plan (AEMP) referred to in the AEMP TOR and the AEMP referred to in F.1 and F.2 respectively shall include, but not be limited to, the following:
  - a) A description, including a rationale, of the type, frequency, and duration of monitoring required to achieve the objectives included in the AEMP;
  - b) A description of an Adaptive/Response Management Framework that allows potential environmental effects to be identified at an early stage, allowing the opportunity to address the issue in time to prevent impacts to the aquatic environment;
  - c) A review and a description of the application of Aboriginal Affairs and Northern Development Canada's (AANDC) *Guidelines for Designing and Implementing Aquatic Effects Monitoring Programs for Development Projects in the NWT* in the development of the Aquatic Monitoring Plan;
  - d) A description of the locations, type and frequency of mercury sampling needed to appropriately monitor the Power Generation Facilities;
  - e) Identification of sites of high potential for fish stranding in Trudel Creek and the Taltson River downstream of the tailrace;
  - f) In addition to the other species listed in the Water Effects Monitoring Program Review Analysis provided with the application, a study of the mercury levels in Northern Pike from Nonacho Lake;
  - g) A fish mortality assessment;
  - h) Riparian and Fish Usage Monitoring;
  - i) A description of how the monitoring required under the Surveillance Network Program can be incorporated into and help achieve the objectives of the AEMP;
  - j) A map and attached table or detailed legend illustrating monitoring and sampling locations;
  - k) A description of monitoring protocols, methodologies, and parameters specific to each monitoring type identified above;
  - l) A summary of relevant baseline data including:
    - i. Baseline data collected to date;
    - ii. Identification of baseline data gaps; and
    - iii. Description of methods to fill in baseline data gaps.
  - m) A description of quality assurance and quality control measures followed for each monitoring type;
  - n) Using the current data set and the Taltson Hec-ResSim Hydrologic Model, an analysis with rationale to confirm whether the water levels and flows identified in conditions C.2, C.3, and C.4 of this licence are appropriate; and
  - o) A description of how the data will be analyzed for each monitoring type.
2. The Annual Aquatic Effects Monitoring Plan (AAEMP) Report referred to in F.6 shall include, but not be limited to, the following information:

- a) A summary of monitoring activities conducted under the AEMP and the Surveillance Network Program;
- b) Summaries of all data and information generated under the AEMP in an electronic and printed format acceptable to the Board;
- c) An analysis and interpretation of the results;
- d) An evaluation of any identified environmental changes relative to baseline conditions that occurred as a result of the Power Generation Facilities;
- e) Recommendations for refining the AEMP to improve its effectiveness as required; and
- f) A description of any adaptive management measures that were or will be undertaken to address monitoring results.

### **Schedule 3 – Amount of Compensation Awarded to the Carter Family**

1. By December 29, 2017, the Licensee shall have paid the Carter Family \$100,000.00 pursuant to section 26(5)(b) of the *Waters Act*.



**MACKENZIE VALLEY LAND AND WATER BOARD  
SURVEILLANCE NETWORK PROGRAM**

**Licensee:** Northwest Territories Power Corporation

**Licence Number:** MV2011L4-0002

**Effective Date of Licence:** July 01, 2012

**Effective date of Surveillance Network Program (SNP):** July 01, 2012

**A. Location and Description of Surveillance Network Stations**

Station Number	Description
2-001	Station located at the powerhouse at Twin Gorges

**B. Sampling and Analysis Requirements**

1. The exact location of Surveillance Network Program monitoring station 2-001 shall be as approved by the Inspector.
2. Once determined, the Licensee shall notify the Board and submit GPS coordinates of the location of station 2-001.

**C. Flow and Volume Measurement Requirements**

1. The Licensee shall maintain and archive in an electronic format, hourly power projection at Station 2-0001, from which water flow rate data (in m<sup>3</sup>/s) can be calculated. Flow data shall be made available upon request by the Board.

**D. Reports**

1. The Licensee shall, when requested, submit to the Board all required data and information of the "Surveillance Network Program".

**Signed on behalf of the Mackenzie Valley Land and Water Board**

A handwritten signature in blue ink, appearing to read "Mavis Cli-Michaud".

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**Mavis Cli-Michaud, Chair**

A handwritten signature in black ink, appearing to read "Amanda Gauthier".

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**Amanda Gauthier, Witness**



## Annex A – Summary of Submission Schedule

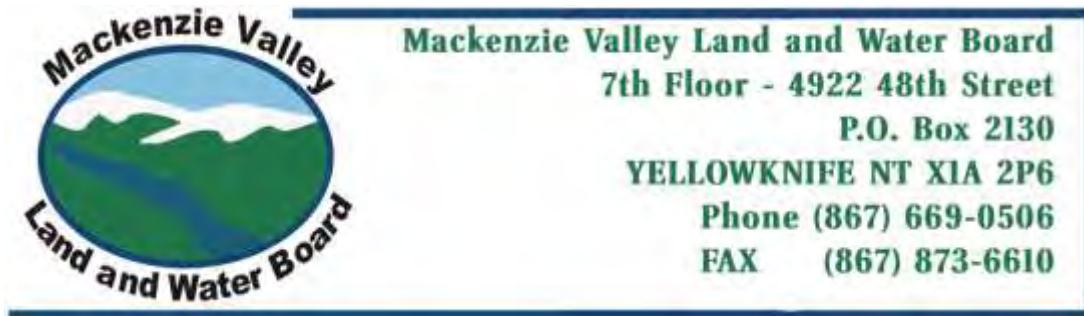
*Supplemental information to be submitted by the Licensee as required through the Water Licence Conditions*

<b>Licence Condition</b>	<b>Report Title/Action Required</b>	<b>Due Date</b>
B.1	Annual Report	March 31 of year following calendar year being reported
B.5	Post necessary signage	Within 60 days of WL issuance
B.7	Public Engagement Plan	September 30, 2012
C.5	Updated Stage-discharge curves	Each time they are revised
C.8	Updated Operation, Maintenance and Surveillance Manual	June 30, 2013
C.12	Dam Safety Review	August 1, 2015 and every 5 years thereafter
E.1	Site Specific Waste Management Plan (WMP)	Within 60 days of WL issuance
E.4	Modifications to the Waste Management Plan	Each time they are revised
F.1	Aquatic Effects Monitoring Plan (AEMP) Terms of Reference	One month after WL issuance
F.2	Final Aquatic Effects Monitoring Plan (AEMP)	September 30, 2012
F.5	Updates to AEMP	Every 3 years or when they are modified.
F.6	Annual Aquatic Effects Monitoring Plan Report	March 31, 2013 and annually thereafter
F.8	Nonacho Lake and Trudel Creek Sediment and Erosion Management Plan	September 30, 2012
F.11	Modification to the Nonacho Lake and Trudel Creek Sediment and Erosion Plan	Each time there is a change in operations.
H.1	Spill Contingency Plan	Within 60 days of WL issuance
H.5	Updates on Spill Contingency Plan	Each time they are revised
H.6	Emergency Preparedness Plan	Within 60 days of WL issuance
I.1	Updated Interim Closure and Reclamation Plan	12 months after WL issuance
I.5	Final Closure and Reclamation Plan	At least 12 months prior to the end of operations.
J.1	Payment of Compensation	December 29, 2017

## Annex B Revisions to Water Licence #MV2011L4-0002

*List of changes that have been made to the Water Licence since issuance*

Date	Location of Change	What has changed
August 10, 2017	Condition J.1 and Schedule 3	Amount of compensation and timing of compensation payment
August 10, 2017	Throughout	Updated references to the <i>Northwest Territories Waters Act</i> to the <i>Waters Act</i> to reflect jurisdictional changes resulting from Devolution.



## Reasons for Compensation Decision

Issued pursuant to section 54 of the *Waters Act*

Water Licence Application – Compensation	
Reference/File Number	MV2011L4-0002
Applicant	Northwest Territories Power Corporation
Project	Taltson Twin Gorges Hydroelectric Generating Station, NT

### Decision from Mackenzie Valley Land and Water Board Meeting of

July 11 and 13, 2017

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These Reasons for Decision set out the Mackenzie Valley Land and Water Board's (the Board or MVLWB) decision on a compensation claim submitted by the Carter family on an Application made by the Northwest Territories Power Corporation (NTPC), provided to the Board in June 2011 for Type A Water Licence Renewal (Licence) MV2011L4-0002. This Application was to continue NTPC's hydroelectric operations at the Taltson Twin Gorges Hydroelectric Generating Station (Taltson Hydro Facility). Licence MV2011L4-0002 was issued in August 2012 for a term of fifteen years.

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## **1.0 Project Description**

1. Between 1963 and 1968, the Taltson Twin Gorges Hydroelectric Generating Station (Taltson Hydro Facility) was built to provide power to the Pine Point Mine, which closed in 1986. Since 1986, the Taltson Hydro Facility has provided power to a number of communities in the Northwest Territories (NT), including Hay River, Hay River Reserve, Fort Smith, Fort Resolution, and Enterprise. The facility is located within the Taltson River watershed and contains the following main features:

- Main dam and powerhouse (Taltson Twin Gorges Generating Station);
- South Valley Spillway into Trudel Creek; and
- Nonacho Lake Reservoir, Control Structure and Spillway.

2. The Taltson Hydro Facility is located about mid-way between the Tazin-Taltson confluence and Tsu Lake. Any flows in the Taltson River not passing through the plant for power production are spilled over a 200-m long overflow concrete spillway constructed in a natural spill section called "South Valley", some 13 km northeast of the plant. The spill water re-enters the Taltson River via a 33-km long reach of Trudel Creek at a point 2 km below the Twin Gorges plant.<sup>1</sup>

3. In 1968, a storage dam and control structure was constructed at the outlet of Nonacho Lake to provide storage between a low supply level of 318.2 metres above sea level (masl) and a full supply level of 320.0 masl. The purpose of this storage reservoir was to regulate flow at the Taltson Hydro Facility in order to increase the firm energy output from the plant and to enhance its ability to meet the energy demands of the system. Flow regulation was achieved by storing a portion of the spring flow and releasing the stored water later during low flow periods to augment the natural flow. This storage dam consists of a rock fill dam control structure – including three 1.8 m by 1.8 m water passages controlled by upstream gates and an overflow spillway, known as the Tronka Chua gap, excavated in a rock barrier adjacent to the dam and having a width of 67 m and a crest elevation of about 320.0 m. The three manually-controlled gates may be periodically opened and closed as natural flows dictate. A fraction of the spill flow exits from Nonacho Lake through the Tronka Chua gap into Tronka Chua Lake, and eventually re-enters the Taltson River above the Twin Gorges. In addition, approximately 6.5 m<sup>3</sup>/s of water percolates through the dam.<sup>2</sup>

4. The current power production requirements at the Taltson Hydro Facility are considerably less than when previously used to operate the Pine Point Mine. Prior installed and licenced nominal capacity was 22 MW. Current nominal capacity is 18 MW, with 4 MW decommissioned. Flow on the Taltson River greatly exceeds the power production requirement for the communities being serviced by the Taltson Hydro Facility. As a result, there has been little to no flow regulation for power generation for 25 years.<sup>3</sup>

## **2.0 Regulatory Process**

### **2.1 Early Issuances**

5. The first Licence on file for the Taltson Hydro Facility is N1L5-0154, issued on June 15, 1976 to the Northern Canada Power Commission. This Licence was renewed on January 1, 1982 and again on January 1, 1987. On November 23, 1992, the first Water Licence application for hydroelectric power generation

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<sup>1</sup> [NTPC Water Licence Application MV2011L4-0002](#) – Documentation in Support of the Taltson Water Licence Renewal

<sup>2</sup> [NTPC Water Licence Application MV2011L4-0002](#) – Questionnaire

<sup>3</sup> [NTPC Water Licence Application MV2011L4-0002](#) – Application Form

was received for the Taltson Hydro Facility from NTPC. Licence N1L2-0154 was issued to NTPC on January 1, 1994 and renewed on January 1, 1997.

## **2.2 2011 Licence Renewal and Associated Claim for Compensation**

6. On June 3, 2011, NTPC applied to renew its Type A Water Licence in relation to the Taltson Hydro Facility, including the water control structure on Nonacho Lake. Reviewer comments on the Application were due on July 29, 2011 and a Technical Session was held on August 15, 2011. On September 2, 2011, the deadline for written interventions, the Carter family filed a Notice of Intervention/Claim for Compensation<sup>4</sup> for past and future economic losses. Public Hearings were held in Lutsel K'e and Fort Resolution on September 20 and 21, 2011. On November 29, 2011, the Board recommended approval of the Licence for the Taltson Hydro Facility to the Minister of Aboriginal Affairs and Northern Development Canada (AANDC). The associated Reasons for Decision indicated that NTPC would pay compensation in an amount to be determined through working with the claimants.<sup>5</sup> On December 12, 2011, the Minister of AANDC declined to approve the Licence without a specific decision on the amount of compensation.<sup>6</sup>

7. On December 20, 2011, the Board issued Information Requests for Claims of Compensation addressed to the Deninu Kue First Nation and the Carter family. On March 15, 2012, the Carter family Claim for Compensation was submitted to the Board.<sup>7</sup> NTPC responded to the Carter family Claim on April 23, 2012.<sup>8</sup> On April 27, 2012, the Carter family sought further opportunity to make submissions to the Board with respect to the compensation claim and the NTPC response. On May 3, 2012, the Board ruled against further dialogue. The Carter family argued its right to reply to the NTPC submissions on May 22, 2012, and on May 24, 2012 the Board re-iterated its decision of May 3, 2012 and again the Board recommended approval of Licence MV2011L4-0002 to the AANDC Minister, including the Board-ordered compensation for nuisance and inconvenience in the amount of \$62,500.<sup>9</sup>

8. On June 25, 2012, the Carter family filed for judicial review of the Board's decision and on July 26, 2012, the AANDC Minister approved Licence MV2011L4-0002.<sup>10</sup> On August 14, 2013, the judicial review of the Board's decision on compensation was heard at the Supreme Court of the Northwest Territories. The March 7, 2014 reasons filed by Justice Shaner with the Supreme Court of the Northwest Territories resulted in the portion of the Board's decision and Minister's approval dealing with compensation to be quashed and sent back to the Board for further consideration.<sup>11</sup>

## **2.3 Process Leading to the Claim for Compensation Re-Hearing**

9. As there is no established procedure for the conduct of a re-hearing to consider a single portion of a Licence following judicial review, the Board, in keeping with its Rules of Procedure<sup>12</sup>, ensured the process was open, transparent, efficient, and met the needs of the parties and the requirements of fairness. This

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<sup>4</sup> [Notice of Intervention and Claim for Compensation](#)

<sup>5</sup> [Board Recommendation to Minister](#) – November 29, 2011

<sup>6</sup> [Letter from Minister](#) – December 12, 2012

<sup>7</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>8</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>9</sup> [Board Recommendation to Minister](#) – May 24, 2012

<sup>10</sup> [Minister Approval of Licence MV2011L4-0002](#) – July 26, 2012

<sup>11</sup> [Judicial Review of the Decision of the Mackenzie Valley Land and Water Board](#) – March 7, 2014

<sup>12</sup> [MVLWB Rules of Procedure Including Public Hearings](#)

included, as required by the ruling of Justice Shaner, ensuring that the Carter family was given the opportunity to file rebuttal evidence in response to NTPC's response to the Carter family Claim for Compensation.

10. The final record for the Compensation Re-Hearing was agreed to by the parties (Carter family and NTPC) on November 26, 2016. Shortly thereafter, on January 24, 2017, a work plan for the Claim for Compensation Re-Hearing process was established and distributed to the Carter family and NTPC, as well as the complete Taltson distribution list. The Board acknowledges the input of the parties as the Re-Hearing work plan was developed.

11. The Carter family Expert Rebuttal Reports were submitted on February 17, 2017.<sup>13</sup> On March 17, 2017, following review of February 17, 2017 Carter family submissions, NTPC notified the Board about their wish to cross examine the Carter family witnesses during the Re-Hearing. The work plan established the Re-Hearing dates to be May 16 and 17, 2017. As such, and pursuant to section 44 of the *Waters Act* (Act), notice of the Re-Hearing was published in the News North newspaper on April 3, 2017, in addition to being sent to the complete Taltson distribution list.

12. Written Submissions in advance of the Re-Hearing were due and submitted by both parties to the Board on April 18, 2017<sup>14 15</sup>. A Pre-Hearing Conference was held between Board staff and legal counsel, the Carters and NTPC on May 3, 2017 to provide the two parties with a better understanding of the Re-Hearing process and to provide clarity on the issues to be discussed at the Re-Hearing. Several requests from the Carter family regarding the scope of evidence for the Re-Hearing, witnesses at the Re-Hearing, and the Re-Hearing Agenda were received between May 4 and May 16, 2017 and were addressed by the Board, keeping in mind procedural fairness and the purpose of the Re-Hearing specifically as well as that of the Board generally.

## **2.4 Claim for Compensation Re-Hearing**

13. On May 16 and 17, 2017, the Re-Hearing for the Carter family's claim for compensation was heard by the Board. Two Undertakings were issued during the Re-Hearing with regard to information obtained in 2014 and submitted by both parties late in the process. During the Re-Hearing, the Board allowed the late submission of a "Report on Samples of Lake Trout, Lake Whitefish and Northern Pike taken from Nonacho Lake, NWT, Summer 2014 and Analyzed for Mercury" by Dr. Bodaly.<sup>16</sup> The Board allowed additional time for each party to issue questions on the 'new' evidence, respond to the questions issued, and provide final written remarks limited to those submissions following the Re-Hearing. Questions on the evidence were due on May 26, 2017. Questions from NTPC were received on the Bodaly Report<sup>17</sup>. No questions were submitted by the Carter family. Responses were due and received on June 9, 2017<sup>18</sup>. Final

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<sup>13</sup> [Carter family Expert Rebuttal Report](#) and [KRP Rebuttal Report](#) – February 17, 2017

<sup>14</sup> [Carter family Written Submissions, Exhibits and Authorities](#) – April 18, 2017

<sup>15</sup> [NTPC Written Submissions](#) and attachments: [Tab A](#), [Tab B](#), [Tab C](#), [Tab D](#), and [Tab E](#) – April 18, 2017

<sup>16</sup> [Report on Samples of Lake Trout, Lake Whitefish and Northern Pike taken from Nonacho Lake, NWT, Summer 2014 and Analyzed for Mercury](#)

<sup>17</sup> [Undertaking 1 - Questions from NTPC on the Bodaly Report](#)

<sup>18</sup> [Undertaking 1 – Responses to NTPC Questions on the Bodaly Report](#)

written remarks on the ‘new’ evidence were due and received on June 16, 2017 from the Carter family<sup>19</sup> and on June 23, 2017 from NTPC.<sup>20</sup>

### **3.0 Procedural Requirements**

14. Pursuant to the decision of Justice Shaner in *Jean Carter et al. v. Northwest Territories Power Corporation and the Mackenzie Valley Land and Water Board* 2014 NWTSC 19<sup>21</sup> (“*Carter v. NTPC*”), the Board was required to:

1. Provide the Carter family with an opportunity to respond to NTPC’s April 23, 2012 submission that was in response to the December 20, 2011 Information Request from the Board; and
2. Include consideration of the response submission contemplated in item 1 and, through a re-hearing, consider and decide upon the matter of compensation as sought by the Carter family.

15. The compensation provisions for water licences on Territorial Lands are set out in subsections 26(5) and 26(6) of the Act<sup>22</sup>. Those that apply to this claim read:

26(5) If an application for a licence is made, the Board shall not issue a licence unless the applicant satisfies the Board that

(b) compensation that the Board considers appropriate has been or will be paid by the applicant to...

(i)... (ii) domestic users, (iii) in-stream users, (iv) authorized users, (v)... (vi)... (vii) owners of properties, (viii) occupiers of property, (ix) holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature who were such licensees, users, depositors, owners, occupiers or holders, whether in or outside the water management area to which the application relates, at the time when the applicant filed an application with the Board in accordance with the regulations made under paragraphs 63(1)(d) and (e), who would be adversely affected by the use of waters or deposit of waste proposed by the applicant, and who have notified the Board in response to the notice of the application given under subsection 43(1) and within the time period stipulated in that notice for making representations to the Board

16. In order to establish a right to compensation, a claimant must demonstrate that the Licence applicant’s activities will more likely than not cause a loss or damage or other adverse effect. Once the loss, damage or other adverse effect is established on a balance of probabilities, the Board will determine what value constitutes reasonable compensation by considering at least all five of the statutory factors contained in subsection 26(6):

26(6) In determining the compensation that is appropriate for the purpose of paragraph (5)(b), the Board shall consider all relevant factors, including, but not limited to,

- (a) provable loss or damage;
- (b) potential loss or damage;
- (c) the extent and duration of the adverse effect, including the incremental adverse effect;
- (d) the extent of the use of waters by persons who would be adversely affected; and
- (e) nuisance, inconvenience and noise.

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<sup>19</sup> [Carter family Final Written Remarks](#) – June 16, 2017

<sup>20</sup> [NTPC Final Written Remarks](#) – June 23, 2017

<sup>21</sup> [Judicial Review of the Decision of the Mackenzie Valley Land and Water Board](#) – March 7, 2014 *Carter v. Northwest Territories Power Corp.*, 2014 NWTSC 19

<sup>22</sup> Formerly subsections 14(4) and (5) of the *NWT Waters Act*.



17. The guiding principle for the Re-Hearing process was to ensure procedural fairness, in keeping with the Board's Rules of Procedure<sup>23</sup>, and the directions of Justice Shaner in *Carter v. NTPC*. Other general principles included completing the process in a timely manner; having regard to the protection of the environment; and maintaining consistency in the process and approach.

18. Notice of the Re-Hearing was sent to the complete Taltson distribution list and advertised in News North. As established in the work plan, the Re-hearing was open to the public to attend and observe; however, comment was limited to the issue of compensation involving only NTPC and the Carter family.

### **3.1 Interpretation of Legislation**

19. A claimant for compensation bears the burden of proving that the damages alleged have or will be caused by the Applicant on the civil standard of proof. The civil standard is often expressed as evidence sufficient to prove that alleged damages are "more likely than not" or by saying that the preponderance of evidence supports an allegation. The same standard of proof applies to any valuation of damages, costs or other compensation claimed.

20. Based on paragraph 26(5)(b), the Carter family must prove on a balance of probabilities that it would be adversely affected by the use of waters or deposit of waste proposed by NTPC under its Water Licence MV2011L4-0002. In this case, the Carter family claim is about the impact or the cumulative effects of the Taltson Hydro Facility on the Carter's ability to continue their use of Nonacho Lake for personal and professional endeavors.

21. As part of considering any matter before it, including compensation, the Board must consider its purpose to balance conservation and development for the benefit of the residents of the Mackenzie Valley and Canada. As acknowledged by Justice Shaner:

[123] In considering an application for a licence under the *Northwest Territories Waters Act* [now *Waters Act*], the Board has a number of remedial tools at its disposal to meet its objectives and balance the competing interests embodied in each of conservation, development and utilization of land and water. One of these is to award compensation for adverse effects that will flow from the proposed use. Another is to impose conditions to actually mitigate adverse effects of the proposed use under s. 15 [now s. 27]. In this case, for example, the Board imposed a requirement that the water level of Nonacho Lake remain within a certain range and a requirement that NTPC monitor this and other expected effects on the water over the course of the licence.

22. The option to amend conditions of the Licence to further mitigate against ongoing effects remains available to the Board under section 47.

23. The Board can only order compensation if the existence of adverse effects is proven at the time of the application. If adverse effects are discovered later, particularly in the case of cumulative adverse effects, then a party adversely affected may seek compensation through a civil remedy as provided under section 60 of the Act or ask the Board to reopen the Licence for possible amendment. Subject to reaching a compensation agreement, the Carter family continues to enjoy the benefits of section 60 of the Act which

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<sup>23</sup> [MVLWB Rules of Procedure Including Public Hearings](#)

allows a person adversely affected by the issuance of a licence to sue for compensation in a court of competent jurisdiction.

24. As decided by Justice Shaner in March 2014, the Board's authority in respect of compensation is prospective only. It does not have the authority to offer redress for past damages.<sup>24</sup>

### **3.1.1 Provable Loss or Damage**

25. Provable loss or damage refers to those losses and damages that, on a balance of probabilities, will occur as a result of activities proposed in the Licence. Such losses or damages in this case may be proven, for example, through an analysis of what impact the prescribed water level fluctuation might have.

### **3.1.2 Potential Loss or Damage**

26. Potential loss or damage refers to those losses and damages that are likely to occur as indicated through evidence or argument. These can be supported, for example, through evidence of how the anticipated uses described in the Licence renewal could impact the surrounding environment.

### **3.1.3 Extent and Duration of Adverse and Incremental Effects**

27. In order to determine the extent and duration of adverse and incremental effects claimed by the Carter family, the Board asked itself a series of questions while analyzing the evidence provided by both parties:

- Over what duration of time might the 2012 Licence renewal create impacts?
- Over what duration of time is the 2012 Licence likely to extend or increase these impacts, if any?
- How widespread would any adverse impacts potentially be?
- Are there impacts from the previous Licence period that are likely to be extended or increased as a result of the continuation of the Licence to 2027?

28. The parties' arguments on the meaning of incremental are conflicting. NTPC maintains that the 2011 Licence application is the baseline and that only adverse effects that *begin* at this point in time should be considered. The Carter family argued that to impose a baseline on environmental effects that are not easily measured by reference to a point in time but derive from an accumulation over time is arbitrary and artificial. The Carter family emphasized that the Board should broadly determine whether there are or will be adverse impacts, including the overall magnitude of any such effects, which will include what they term "persistent" effects.

29. The fundamental principle of modern statutory interpretation is that "the words of a statute be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act and the intention of the legislature."<sup>25</sup>

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<sup>24</sup> [Judicial Review of the Decision of the Mackenzie Valley Land and Water Board](#) – March 7, 2014 *Carter v. Northwest Territories Power Corp.*, 2014 NWTSC 19 at paragraphs 118 to 128.

<sup>25</sup> *Rizzo & Rizzo Shoes Ltd. (Re)*, [1998] 1 SCR 27 at para 21 and following

30. In reviewing the words of the section and the Act as a whole, the Board was mindful of basic drafting presumptions including:

- Ambiguity or conflict should be resolved so as to best achieve the law's purpose;
- There is a reason a law is drafted as it is;
- Unless expressly so designed, laws generally do not have retroactive application;
- No word is superfluous; and
- English and French versions should be identical in substance.

31. The Board notes that the French version uses the word “cumulatifs” (cumulative), where the English version uses the word “incremental”. The grammatical and ordinary sense of both “incremental” and “cumulative” were considered. The Merriam-Webster Dictionary definitions are as follows:

Incremental: of, relating to, being, or occurring in especially small [increments](#).

Cumulative: made up of accumulated parts increasing by [successive](#) additions; formed by the addition of new material of the same kind.

32. These words were then examined within section 26 as a whole. This section's purpose is to establish the class of persons or entities who may be eligible to claim compensation and to then delineate how the amount of compensation should be determined. The equivalent to this section under the then-*Northwest Territories Waters Act* was analyzed in detail by Justice Shaner during the judicial review. In dealing with whether compensation could be awarded for past adverse effects, Justice Shaner addressed the express words used in then subsections 14(4) and 14(5), now found in subsections 26(5) and 26(6):

As a condition of granting a licence, the Board must be satisfied that appropriate compensation has been or will be paid to a party who “would be” adversely affected by what is “proposed.” Both “would be” and “proposed” are expressions of something that will happen in the future. In this context, “provable” and “potential” losses could just as easily be interpreted to mean losses or damages that will *definitely* occur and those which *might* occur, respectively.

... the wording supports the conclusion that the Board may award compensation only for losses or damages that will or might occur as a result of the use proposed by the licensee.<sup>26</sup>

33. The wording of section 26 was held to be prospective only and therefore that the adverse effects that are to be addressed through compensation are, likewise, prospective only.<sup>27</sup>

34. The Board still needs to consider whether “the incremental adverse effect” has any residual content that might be something other than purely prospective.

35. The Board also compared the language used in section 26 against that in section 30. Section 30 addresses the factors that must be considered by the Nunavut Water Board to determine compensation,

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<sup>26</sup> [Judicial Review of the Decision of the Mackenzie Valley Land and Water Board](#) – March 7, 2014 *Carter v. Northwest Territories Power Corp.*, 2014 NWTSC 19 at paragraphs 117 to 118.

<sup>27</sup> [Judicial Review of the Decision of the Mackenzie Valley Land and Water Board](#) – March 7, 2014 *Carter v. Northwest Territories Power Corp.*, 2014 NWTSC 19

which include similar but not identical provisions. The requirement to consider ongoing adverse effects is as follows: “The cumulative adverse effects of the alteration *and of any existing uses* of waters and deposits of waste.”<sup>28</sup> (emphasis added).

36. The Board has no present role to interpret this provision but observes that this language at least appears to contemplate consideration of an *existing* situation and not only a prospective future situation. At the least, the fact of different language confirms that if the cumulative impact of a *pre-existing* adverse effect was to form part of the basis for compensation then the wording of the provision could say so.

37. The Board also considered the compensation factors within the broader legislative scheme. Again, the legislative framework is prospective in nature, aimed at mitigating losses or damages that may occur in the future as a result of a proposed use while still permitting development.<sup>29</sup>

38. The purpose of the legislation can be found in part under the objectives for the Board that are established in the *Mackenzie Valley Resource Management Act* (MVRMA) as follows:

to provide for the conservation development and utilization of land and water resources in a manner that will provide the optimum benefit generally for all Canadians and in particular for residents of the Mackenzie Valley.<sup>30</sup>

39. Also in support of the conclusion that the provision in question is prospective in nature, Justice Shaner pointed to the fact that the Board’s potential remedial tools apply “in the context of an application for a licence that *may* be granted, not one that has been granted already.” Similarly, Justice Shaner observed that the fact that each application for a licence is a separate proceeding supports the prospective nature of these provisions. A consecutively granted licence is not a continuation of a former licence. Based on her analysis, Justice Shaner concluded:

... the framework created by the *Mackenzie Valley Resource Management Act* and the *Northwest Territories Waters Act* does not include the authority, either express or by necessary implication, for the Board to award compensation for loss and damage incurred under previous licences. The overall tenor of the legislation is “forward looking.” The Board’s powers are there so it may balance conservation and development by, among other things, addressing adverse effects expected to occur in the future as a result of the licenced use. Authority to award compensation for past adverse effects is not necessary to enable the Board to achieve its objectives or carry out its mandate, nor is it required to achieve the broader objectives of the licencing framework.<sup>31</sup>

40. The Board finds that the incremental adverse effects are, like the rest of section 26 and the Act as a whole, prospective in nature. The incremental adverse effects are those adverse effects resulting from

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<sup>28</sup> [Waters Act](#)

<sup>29</sup> [Judicial Review of the Decision of the Mackenzie Valley Land and Water Board](#) – March 7, 2014 *Carter v. Northwest Territories Power Corp.*, 2014 NWTSC 19 at paragraph 121.

<sup>30</sup> [Mackenzie Valley Resource Management Act](#) s. 101.1

<sup>31</sup> [Judicial Review of the Decision of the Mackenzie Valley Land and Water Board](#) – March 7, 2014 *Carter v. Northwest Territories Power Corp.*, 2014 NWTSC 19 at paragraph 124, 127 and 128.

or likely to result from the proposed activities under the Licence that is being sought and which accumulate over time.

### **3.1.4 Nuisance, Inconvenience and Noise**

41. The definition of nuisance as a cause of action in litigation is an interference with another person's use or enjoyment of land that is both substantial and unreasonable. It includes not only physical interference but also impacts on the health, comfort or convenience of the owner or occupier of the property. Noise is one possible form of nuisance.

42. The content of "nuisance, inconvenience and noise" as a factor that must be considered by the Board when determining compensation does not necessarily conform exactly to the definition developed in civil litigation proceedings. First, the opportunity for a claimant to file a civil claim is separately preserved by section 60 of the *Waters Act*. Second, the factor itself lists both inconvenience (an element of the definition of nuisance) and noise (an example of a nuisance) as elements to be individually considered. Consequently, while the Board may consider the definition above, it is not bound to the confines of this definition and must continue to interpret this factor in a manner that best suits the objectives and purpose of section 26 and the Act as a whole.

## **4.0 Board Decision and Reasons for Decision**

43. After carefully reviewing the evidence available on the record and the written submissions from the Carter family and NTPC, and having due regard to the facts, circumstances, and the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the *Waters Act* and the regulations made thereunder, the Board has determined that part of the Carter family claim for compensation has merit and that an appropriate amount is \$100,000. The Board's determination and reasons for its decision are set out below.

### **4.1 Carter Family Eligibility and Extent of Use**

44. In accordance with paragraph 26(5)(b), Jean Carter (and formerly Merlyn Carter) was the owner and operator of Nonacho Lake Lodge at the time of Licence application. Nonacho Lake Lodge holds lease No.: 79 F/12-4-9, Nonacho Lake, NT and has held leases on the property since 1962. Jean Carter, Kandee Froese, Dean Carter, and Myles Carter have held the current lease since April 1, 2012. Nonacho Lake Lodge operates as a commercial sport fishing lodge under the lease.<sup>32</sup> The Carter family's ownership and operation of the Nonacho Lake Fishing Camp, plus its ownership of three leases relating to property adjacent to Nonacho Lake, puts it under the purview of "holders of other rights of a similar nature." They are also recognized by the Board as domestic users, in-stream users, authorized users, owners of properties, and occupiers of property.

45. Based on the above, Jean Carter and the Carter family (including Kandee Froese, Dean Carter, and Myles Carter) qualify to submit a claim for compensation under paragraph 26(5)(b) of the Act. They also provided the appropriate notification to the Board of their intentions to claim for compensation through comments on the renewal Application dated July 29, 2011, interventions submitted September 2, 2011,

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<sup>32</sup> [Carter family Claim for Compensation](#) – March 15, 2012

and a full Claim for Compensation submitted on March 15, 2012, as required under subparagraph (26)(5)(b)(ix) of the Act.

46. The extent of the Carter family use of Nonacho Lake was discussed by the Board as required by paragraph 26(6)(d). The Board accepts that the Carter family has used, and continues to use, the lake to support personal and professional (sport) fishing ventures, for domestic purposes, to sustain a tourism-based business, and to build a family legacy. Evidence supporting past use for personal and professional purposes, including sport fishing and domestic water use include the long-standing (commercial) leases held by the family, the presence of the lodge and all associated infrastructure, photos, familiarity, memories of the family on the lake, knowledge regarding the numbers and types of fish caught, evidence of past patrons using the lodge and its facilities (records and letters), and financial statements dating back to the 1980s.

47. The water uses of the Carter family contemplated by paragraph 26(5)(b) were identified as ongoing at the time of Licence renewal (2011-2012) and are expected to remain consistent, to varying degrees, during the life of the Licence. Though average patronage has declined since a peak in the late 1980s and early 1990s, and misgivings about the future success of the Nonacho Lake Lodge business have been expressed by members of the Carter family, Jean Carter stated that she has no intentions of relinquishing the leases at Nonacho Lake or allowing the leases to lapse.<sup>33</sup> It is evident through the Carter family's ability to articulate their concerns about the lake and its shoreline that their knowledge and use of Nonacho Lake extends beyond the geographic extent of their immediate leases and includes the entire lake system.

48. In accordance with subparagraph (26)(5)(b)(ix), the Carter family claims that they and their business at the Nonacho Lake Lodge will be adversely affected by the use of waters proposed by the Taltson Hydro Facility under Water Licence MV2011L4-0002. The Board's analysis of this claim is discussed in greater detail below.

## **4.2 Adverse Effects**

49. For the Board to make a determination that compensation should be awarded, the Carter family must be found to be adversely affected by the use of waters or deposit of waste proposed by the applicant under Licence MV2011L4-0002.

50. The Board carefully reviewed the evidence available on the record and the submissions of the parties before making its decision. Ultimately, it is the responsibility of the claimant to demonstrate on a balance of probabilities that they experience or will experience adverse effects and, if so, the nature of those adverse effects as they related to claimed compensation.

## **4.3 General Position of the Parties**

### **4.3.1 Carter Family**

51. Throughout the course of the proceedings, the Carter family and their expert witnesses provided evidence to support their claims that provable and potential losses and damages experienced by the family and their business are related to the operations of the Taltson Hydro Facility. Claims for ongoing future

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<sup>33</sup> [Re-Hearing Transcripts – Day 2](#)

losses by the Carter family are based upon decades of impacts that have “little by little, adversely affected the value of their property, the value of their business interests, and their enjoyment of life...The value of the leasehold interests has decreased because of the depreciation of the prime fishing opportunities and the general environmental damage to the lakeshore area.”<sup>34</sup>

52. The Carter family makes claims for future losses to 2027 (end of the Licence), five years following the expiry of their existing lease in 2022. Despite the business losses experienced on the lease, the Carter family has no intentions of letting the lease lapse at the end of the current agreement. This was made clear by Jean Carter during the Re-Hearing.<sup>35</sup>

#### **4.3.2 NTPC**

53. NTPC argued that, in general, the issues brought forward by the Carter family are associated with the original flooding of the lake and water fluctuations that occurred prior to the application for the current Water Licence. In NTPC’s submission, all losses and damages experienced by the Carter family are not associated with the Water Licence renewal or operating conditions under the existing Water Licence. NTPC argued that the environmental conditions and the Carter’s economic circumstances as of 2011 are the applicable “baseline” for this compensation claim, as those were the conditions and circumstances immediately preceding NTPC’s operations under the current Licence. Accordingly, the fact that NTPC has been operating under the Licence since the beginning of 2012 provides evidence of the actual (provable) impacts, or lack of impacts, to the Carter family under this Licence.

54. NTPC also argued that the Nonacho Lake Lodge lease applies only until 2022 and, as such, any claims should not assume the continuation of that lease.<sup>36</sup>

#### **4.4 Impacts Claimed by the Carter Family**

55. The Carter family argued that the ongoing impacts from water level fluctuations, increased erosion, and the resulting impacts on mercury concentrations in fish, lake safety and aesthetics, destruction of lodge infrastructure, fish habitat, and the decline in fish health and species survival in Nonacho Lake have all impacted their family and their family business at Nonacho Lake Lodge.

##### **4.4.1 Fluctuating Water Levels and Erosion**

###### Carter Family Position

56. The Carter family argued that the ongoing effects of raised and fluctuating water levels are a continuing threat to their business on Nonacho Lake. From the data provided from Water Survey of Canada, the waters on Nonacho Lake have fluctuated between 319.982 masl to 321.594 masl over the past 25 years, showing a fluctuation of over 1.6 m.<sup>37</sup> The Carter family provided a history of water levels to illustrate the extent and duration of ongoing impacts as a result of impoundment. Following construction of the dam on Nonacho Lake, water levels were raised between 0.3 and 1.8 m above historical levels, with the highest water levels being in the fall and the lowest in early spring, following winter drawdown.<sup>38</sup> The

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<sup>34</sup> [Notice of Intervention and Claim for Compensation](#)

<sup>35</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>36</sup> [NTPC Written Submissions](#) – April 18, 2017

<sup>37</sup> [Carter family Response to Information Requests](#) – November 9, 2011

<sup>38</sup> [D.B. Stewart Report \(1999\)](#). Referenced by the [Carter family Claim for Compensation](#) – March 15, 2012



difference between the average low elevation during the post-Pine Point period was about 0.4 m as compared to about 1 m under natural conditions.<sup>39</sup>

57. The Carter family provided the Board with videos, photographs and personal testimony to demonstrate that erosion is an ongoing issue along the shores of Nonacho Lake. The eroding shorelines result in the collapse of trees that contribute to unsightly conditions throughout the lake and cause boat safety issues (further discussed below). They also claimed that water level changes have impacted lodge infrastructure and the family's ability to access their leases. According to the Carter family, these factors all contribute to a decline in client experience at the lake, the inability to market the lodge as an eco-tourism destination, and a loss in the aesthetic value of the area.<sup>40</sup>

58. The Carter family also argued that the impacts of changing and fluctuating water levels contribute to the loss of fish and fish habitat in Nonacho Lake due to the impacts of erosion, flooded wetlands, and reduction in trout spawning habitat. To support their observations, the Carter family provided letters from past patrons,<sup>41</sup> an analysis of trout spawning habitat locations,<sup>42</sup> and referenced a recent NTPC Report<sup>43</sup> which concluded that:

- erosion associated with esker deposits exposed to waves are eroding at measurable rates and will continue to erode for the foreseeable future;
- wetland areas in sheltered environments continue to adapt to the raised water levels;
- there is a potential risk to fish eggs, juvenile and adult fish, invertebrates and algae;
- the effects of suspended sediments could have devastating impacts on fish populations including the alteration of fish movement and migration, disease resistance, impacts to fish health, and impacts to fish eggs;
- the effect of changing water levels and water movements on water temperatures and dissolved chemical cues impact the movements of fish to appropriate habitats to successfully carry out life history functions such as feeding, overwintering and reproduction; and
- once these life functions are disrupted, the fish population begins to suffer, resulting in less spawning and older fish populations.

59. According to the Carter family, these consequences are already being observed in Nonacho Lake. Older fish are more likely to have high mercury concentrations, which reduces the number of fish that the Lodge's patrons are willing or able to catch. The Carter family highlighted the importance of Nonacho Lake's young, healthy fish in order to sustain the fish population and in order to sustain the recreational sport fishery business operated by them.<sup>44</sup>

#### NTPC Position

60. Due to much lower energy demands, NTPC has repeatedly stated that the Taltson Hydro Facility is being managed as a run-of-river facility with little to no flow regulation at Nonacho Lake. As such, they

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<sup>39</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>40</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>41</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>42</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>43</sup> [Northwest Hydraulic Consultants Report, dated March 22, 2016, being part of the 2015 AEMP and SEMP Report](#). Referenced in [NTPC Written Submissions](#) – April 18, 2017

<sup>44</sup> [Carter family Written Submissions](#) – April 18, 2017



claim that water surface elevation trends over the last 15 years of operation follow a similar pattern as observed in the limited pre-development dataset.<sup>45</sup> NTPC provided evidence to show that over the last 25 years (1986-2010) water levels within Nonacho Lake have fluctuated between 320.5 masl to 321.5 masl. The regulation of flow that has occurred has been primarily conducted, purportedly in consultation with the Carter family, to alleviate potential impacts of high water levels on the Nonacho Lake Lodge.<sup>46</sup> When water levels reach a certain point, NTPC flies out to the Nonacho Lake dam and opens the gates. The gates at the Nonacho Lake dam have not been adjusted since 2014.<sup>47</sup>

61. NTPC argued that events such as the death and submergence of trees and changes to the shoreline of Nonacho Lake and all effects resulting therefrom are associated with the original flooding of the lake and water fluctuations prior to the conditions of the current Water Licence. They further argued that water surface elevations in all lake systems naturally fluctuate and both erosion and sedimentation processes occur naturally and are critical to ensure a healthy aquatic ecosystem (e.g. nutrient exchange).<sup>48</sup> NTPC also referenced the results of its 3 Year Summary Report (Aquatic Effects Monitoring Plan (AEMP) and Sediment and Erosion Monitoring Program (SEMP))<sup>49</sup> to support their claim that:

- areas with elevated rates of erosion cover only a small portion of the overall lakeshore;
- erosion is episodic and occurs only during large wave or current conditions, or very high lake levels; and
- erosion is not generally occurring at the landscape level.

62. With regard to impacts on fish and fish habitat, NTPC reminded the Board that water levels and water fluctuation patterns under this Licence are not anticipated to be altered from the last 15 years of operation.<sup>50</sup>

63. NTPC claimed that ongoing erosion rates are generally within the range of pre-project rates and that prior to the raising of the lake level, erosion would have also occurred at esker deposits during high water and high wave conditions; thus, the general timing and cause of erosion is consistent with pre-project conditions. The Carter family, however, questioned how these conclusions can be reached by NTPC when pre-project erosion rates are not actually known.<sup>51</sup>

#### Board Decision

64. The Board carefully considered all evidence provided by both the Carter family and NTPC. The Board accepts that following the impoundment associated with the original construction of the Nonacho Lake dam, water levels in the lake significantly increased, impacting the Nonacho Lake ecosystem. There is no doubt that the flooding event and subsequent changes to water patterns in Nonacho Lake have had major impacts on shoreline erosion, travel safety, resident fish species, fish health, and general lake aesthetics. It is also probable that these changes, over time, could adversely impact the Carter family business by gradually impacting patron experiences at the lake. The Board agrees with the Carter family that there have been incremental effects on Nonacho Lake that affect them and their business as a result

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<sup>45</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>46</sup> [NTPC Response to Information Request](#) – November 2, 2011

<sup>47</sup> [NTPC Written Submissions](#) and attachment: [Tab B](#) – April 18, 2017

<sup>48</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>49</sup> [2015 AEMP and SEMP Report](#). Referenced in [NTPC Written Submissions](#) – April 18, 2017

<sup>50</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>51</sup> [Re-Hearing Transcripts – Day 2](#)

of dam construction. That said, the Board cannot find any evidence to indicate that these effects will be exacerbated or prolonged as a specific result of the issuance of Licence MV2011L4-0002.

65. During the Re-Hearing, Dr. Bodaly agreed that, though the impacts of changes in Nonacho Lake from the original flooding continue to evolve in a persistent way: “whether NTPC generates power at Twin Gorges or not, the lake levels on Nonacho Lake will be little affected.”<sup>52</sup>

66. Having due consideration to the evidence and facts brought to the Board throughout the course of the proceedings, as well as “all relevant factors” as set out in subsection 26(6) of the Act, the Board finds there is insufficient evidence to support the claim that the issuance of Water Licence MV2011L4-0002 will result in proven or potential losses or adverse effects to the Carter family or the Nonacho Lake Lodge from fluctuating water levels. While there is uncertainty about the pre-construction rates of erosion on Nonacho Lake, evidence submitted during the proceedings did not convince the Board that erosion rates from 2012 to 2027 will occur beyond a range that has become the ‘new normal’ in response to natural wind and weather patterns. The renewed Water Licence restricts water levels in Nonacho Lake from rising above the previous high water mark and no further changes in water level fluctuations or rates of erosion in response to ongoing Facility operations are likely.

#### **4.4.2 Mercury and Public Perception**

##### Carter Family Position

67. The Carter family claimed there are ongoing impacts of high mercury levels due to the flooding of Nonacho Lake which result in negative public perception and detrimental effects on their recreational fishery business. According to the Carter family, these impacts have come about and persisted since the initial flooding. On June 28, 2011, the Government of the Northwest Territories Department of Health and Social Services issued a public health advisory, warning the public to reduce its consumption of Lake Trout from Nonacho Lake. According to the Carter family, this impacts their ability to market their lodge and negatively impacts the experience of patrons and the prospective decisions of potential patrons.<sup>53</sup> To this end, they provided the Board with letters and repeated feedback from tradeshow guests and former guest fishermen who were acutely aware of mercury as a potential human health concern.<sup>54</sup> Because older fish tend to have higher concentrations of mercury than younger fish, less fishing pressure and an increased rate of release of larger fish could be a factor in keeping mercury in Lake Trout high.<sup>55</sup>

68. Dr. Bodaly, an expert witness for the Carter family, presented data on mercury concentrations in fish that suggest that mercury levels, after an initial post-flooding reduction, have remained consistently high with occasional increases noted in Lake Trout (2010 and 2014).<sup>56</sup> Given these results, the Carter family argued that “high mercury levels from NTPC’s continued operations continue to present a persistent and significant harm to the aquatic environment at Nonacho Lake.”<sup>57</sup> They argued it is likely that the mercury levels in Nonacho Lake will, at best, remain the same; prohibiting the human consumption of fish and

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<sup>52</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>53</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>54</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>55</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>56</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>57</sup> [Carter family Written Submissions](#) – April 18, 2017

potentially interfering with the reproduction and survival of fish and wildlife on which the Carter family depend.<sup>58</sup>

69. In their final written submissions to the Board, the Carter family stated:

Under NTPC's approach, no compensation would be awarded in circumstances such as these where the nature and extent of the adverse effects is not discovered until a later time. In particular, the mercury health advisory was not issued until 2011. Under NTPC's approach, the Carter family is not entitled to compensation for the ongoing adverse effects that they will experience during the term of the Licence, because there were also high mercury levels in the year prior to issuance of the Licence. If this approach is applied, then the only time that the Carter family could have been compensated for the adverse effects related to high levels of mercury in the fish is when they had no knowledge of the high mercury levels in Nonacho Lake.<sup>59</sup>

#### NTPC Position

70. NTPC argued that no new flooding or release of mercury into the aquatic environment will occur during the continued operation of the Taltson Hydro Facility under the term of the Licence and that other factors may lead to increased mercury that are out of the control of NTPC (e.g. global warming).<sup>60</sup> NTPC presented evidence to suggest that mercury levels in fish are high in lakes throughout the Northwest Territories and are not unique to Nonacho Lake.<sup>61</sup> NTPC also provided the Board with information suggesting that the Northwest Territories mercury concentrations in sediments and fish have been documented to steadily increase over the last five years and that there have been numerous cases where lakes and rivers with no anthropogenic activities are experiencing large spikes in mercury levels. No references to support these statements were provided; however, NTPC suggested that monitoring programs under the Licence to record changes in mercury concentrations within Nonacho Lake would ensure further effects are identified, if present.<sup>62</sup>

71. With regard to the evidence of a rise in mercury levels presented by the Carter family, NTPC's expert witness suggested that the trends show a stabilization of mercury levels rather than ongoing fluctuations of increased mercury levels.<sup>63</sup>

72. During the Re-Hearing, NTPC also made a point of highlighting the fact that the public advisory about the consumption of fish on Nonacho Lake due to high mercury levels was issued by the Government of the Northwest Territories and not NTPC, suggesting that any problems with public perception are not the fault of NTPC or related to activities associated with the current Licence.<sup>64</sup>

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<sup>58</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>59</sup> [Carter family Final Written Remarks](#) – June 16, 2017

<sup>60</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>61</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>62</sup> [NTPC Response to Interventions](#) – September 9, 2011

<sup>63</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>64</sup> [Re-Hearing Transcripts – Day 2](#)

### Board Decision

73. The Board carefully considered all the evidence provided by both the Carter family and NTPC. The Board accepts that, following the construction of the Nonacho Lake dam, mercury levels in the resident Lake Trout population significantly increased. There was no contrary evidence that the flooding event and subsequent changes to water chemistry in Nonacho Lake have had major impacts on the documented levels of mercury in Lake Trout (and potentially Northern Pike). It is also probable that the associated public health advisory has influenced potential and current patron decision-making regarding the use of the Carter family lodge on Nonacho Lake. The Board agrees with the Carter family that there have likely been incremental effects on Nonacho Lake that have affected them and their business as a result of dam construction. Regardless, the Board cannot find any evidence to indicate that these effects will be exacerbated or prolonged as a result of the issuance of Licence MV2011L4-0002.

74. While there is uncertainty about the pre-construction mercury concentrations in Nonacho Lake Lake Trout, evidence submitted during the proceedings does not convince the Board that mercury concentrations, from 2012 to 2027, will occur beyond a range that has become the 'new normal'. Mercury levels in Lake Trout in Nonacho Lake were shown to be below the Health Canada guidance for commercial consumption; therefore, at concentrations that are considered safe for consumption at a rate that would be consistent with the temporary use of Nonacho Lake Lodge by potential patrons.<sup>65</sup> During the Re-Hearing, the Carter family and NTPC expert witnesses (Dr. Bodaly for the Carter family and Mr. Cote for NTPC) agreed that mercury levels appeared to be stabilizing:<sup>66</sup>

Bodaly: After a flooding episode has happened on Nonacho Lake, mercury levels tend to decrease and stabilize approximately twenty-five (25) to thirty (30) years after flooding. And you can see in that right-hand graph that since about the late – early 2000s, that mercury in lake trout does appear to have stabilized, it goes up and down a little bit from year to year as is often the case in these kinds of datasets. Now, that we have the benefit of recent data from 2013 and recent data from 2014, I -- I think it's apparent that the levels are not continuing to go down, are not going up, they're -- they're probably staying about the same, and, as I said, this is expected.<sup>67</sup>

75. They further agreed that if the Twin Gorges station was to be shut down, no change would be observed at Nonacho Lake:

Cote: ... is it fair to say that operation and use of the water at the Twin Gorges facility is not impacting mercury levels in fish at Nonacho, at least for the term of the water licence?

Bodaly: ... I agree with you... I would say that for mercury the original flooding has run its course and -- and the system has come down to some new baseline.<sup>68</sup>

76. The Government of the Northwest Territories posted a public health advisory about mercury levels in fish in Nonacho Lake and this likely has some impact on public awareness and perceptions of mercury in the lake. Any activities or operations that may have resulted in increased mercury levels, whether natural or because of flooding, occurred before MV2011L4-0002. The presence or absence of MV2011L4-

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<sup>65</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>66</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>67</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>68</sup> [Re-Hearing Transcripts – Day 2](#)

0002 would not, in the Board's opinion, impact on future mercury levels or the government's decision whether to issue or update an advisory.

77. Having due consideration to the evidence and facts brought to the Board throughout the course of the proceedings, as well as "all relevant factors" as set out in subsection 26(6) of the Act, the Board finds there is insufficient evidence to support the claim that the issuance of Water Licence MV2011L4-0002 will result in proven or potential losses or adverse effects to the Carter family or the Nonacho Lake Lodge from mercury concentrations in fish. The renewed Water Licence restricts any uses that would result in water levels in Nonacho Lake rising above the previous high water mark. It is, therefore, not likely that any new flood event could result from the renewed Licence. The renewed Licence does not allow for any other changes in water level fluctuations. Finally, it is unlikely that Facility operations under the renewed Licence will adversely affect rates of erosion in a manner that could be expected to result in increased mercury levels in the water or in fish in Nonacho Lake.

#### **4.4.3 Fish Health and Population**

##### Carter Family Position

78. The Carter family argued that the resulting impacts of ongoing erosion are manifested in the declining health and populations of fish in Nonacho Lake. Dr. Bodaly, the expert witness for the Carter family, suggested that the unnatural fluctuations and water levels may be impacting Lake Trout, Lake Whitefish, and Northern Pike spawning success. The maximum drawdown of 1.6 m (including a presumed 1 m of ice cover) is quite close to the shallowest observed depth for Lake Trout spawning in Nonacho Lake. The Carter family went on to suggest that similar effects could be the cause of the old Lake Whitefish population sampled in Nonacho Lake – a population noted to have few individuals less than 10 years of age, especially compared to other lakes sampled. The Carter family said these results could be explained by poor conditions for reproduction for Lake Whitefish in Nonacho Lake, as compared to other lakes.<sup>69</sup>

79. The Carter family argued that loss of habitat and reduced or degraded food sources have decreased the diversity of fish species in Nonacho Lake and have produced fish that are smaller and "skinnier" than their Great Slave Lake relatives, having more cysts than previously recorded. Evidence provided by Elder Boucher at the Re-Hearing<sup>70</sup> and results of a DFO Study<sup>71</sup> were provided to support the Carter family's assertion that the presence of cysts has increased and that notable differences in fish flesh quality have been observed over time. The Carter family argued that the change in Nonacho Lake from a natural lake to a reservoir has created an environment that is systematically different than its natural state and that the biological response to the physical change is cumulative and has varied over time.<sup>72</sup> They provided evidence showing that the introduction of the rock dam on Nonacho Lake impounded the Taltson River flowing between Nonacho and Gray lakes and claim that this impact has likely destroyed the natural habitat of the Arctic Grayling which has not been seen in the area for 35 years. Several other fish species, as identified by the Carter family, including Inconnu, Walleye, and Longnose and White Sucker have all but disappeared and will likely never again be seen in Nonacho Lake.<sup>73</sup> Traditional Knowledge provided by Elder Boucher at the Re-Hearing,<sup>74</sup> documented catches from the commercial fishery, and letters from

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<sup>69</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>70</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>71</sup> [D.B. Stewart Report \(1999\)](#). Referenced by the [Carter family Claim for Compensation](#) – March 15, 2012

<sup>72</sup> [D.B. Stewart Report \(1999\)](#). Referenced by the [Carter family Claim for Compensation](#) – March 15, 2012

<sup>73</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>74</sup> [Re-Hearing Transcripts – Day 2](#)

former patrons provided by the Carter family<sup>75</sup> support the observations put forth by the Carter family throughout the course of the Compensation Claim Re-Hearing Process.

80. The Carter family suggested that the loss of sport fishing species makes their business hard to market to sport fishers and that the Licence renewal granted to NTPC assures that the deterioration of Nonacho Lake will continue, further eroding the fish stocks and the Carter's client base.

#### NTPC Position

81. In response to concerns raised about spawning Lake Trout, NTPC argued that the total seasonal fluctuations plus an expected ice thickness of 1 m has not brought lake levels below 1.6 m, suggesting that there would be no impact associated with the continued operations of the Taltson Hydro Facility on average spawning depths of 2.2 m, as suggested by the Carter family.<sup>76</sup>

82. With regard to the comparison of fish health to that of Great Slave Lake, NTPC argued that it is more appropriate to compare the fish in Nonacho Lake to similar adjacent lakes such as Gagnon Lake and Rutledge Lake, whose ecological characteristics more closely compare to Nonacho Lake, rather than Great Slave Lake which has significantly different features. NTPC also argued that referenced materials used by the Carter family to support their observations about fish health do not come to any conclusions that the Taltson Hydro Facility is responsible for the loss of habitat, degraded food sources, or poor fish health in Nonacho Lake.<sup>77</sup> Instead, NTPC argued that the data show that Nonacho Lake actually has by far the lowest incidence of parasites compared to other water bodies tested in the area, that species composition in Nonacho Lake is similar to vicinity lakes, and that catch-per-unit effort is higher in Nonacho Lake than vicinity lakes.<sup>78 79</sup>

83. NTPC also argued that the continued operation of the Taltson Hydro Facility would not result in further impacts to species in Nonacho Lake and that any claims related to extirpated species relate to past operations and are not applicable at this time or to the operations under the current Licence. They also suggested that the Carter family's assertion that reduced stocks have caused economic business losses is not supported by the evidence since there is little or no correlation between reduced species caught and the number of patrons visiting Nonacho Lake Lodge.<sup>80</sup>

84. NTPC concluded that through the completion of the AEMP and SEMP, no significant impacts associated with the continued operation of the Taltson Hydro Facility have been identified.<sup>81</sup>

#### Board Decision

85. The Board carefully considered all evidence provided by both the Carter family and NTPC. It is almost certain that, following the construction of the Nonacho Lake dam, fish health and fish populations in Nonacho Lake were affected. There is no doubt that the changes to lake characteristics caused by the

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<sup>75</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>76</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>77</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>78</sup> [D.B. Stewart Report \(1999\)](#). Referenced by the [Carter family Claim for Compensation](#) – March 15, 2012

<sup>79</sup> [Taltson Hydro Project 2004 Water Effects Monitoring Program](#)

<sup>80</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>81</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

dam and subsequent flooding on Nonacho Lake have had major impacts on species composition in the Lake. The Board agrees with the Carter family that there have likely been changes in fish populations in Nonacho Lake as a result of dam construction that have affected them and their business over time. That said, the Board did not find any evidence to indicate that these effects will be exacerbated or prolonged as a result of the issuance of Licence MV2011L4-0002.

86. The impact of lost fish species on patronage at the Nonacho Lake Lodge is not well demonstrated by the evidence provided by the Carter family. There was an insufficiently clear link between the Nonacho Lake dam and the appearance of cysts and parasites in Nonacho Lake fish populations. The Nonacho Lake dam was built in 1968 and evidence provided shows that in 1990 cysts were rarely recorded.<sup>82</sup> By 2003, however, many more cysts were documented.<sup>83</sup> The cause of this change is not clear. The increased presence of cysts is an adverse environmental effect but the Board is unable to conclude on a balance of probabilities that this effect is caused by the dam or the ongoing operations of the Taltson Hydro Facility. While there is uncertainty about the degree of change in fish health and populations that the construction of the dam is responsible for, evidence submitted during the course of the proceedings does not convince the Board that any further declines in fish health and populations, from 2012 to 2027, will occur as a result of operations under Licence MV2011L4-0002 or that the declines already observed will worsen as a result of this Licence.

87. The renewed Water Licence restricts water levels in Nonacho Lake from rising above the previous high water mark and no further changes in water level fluctuations or rates of erosion as a result of ongoing Facility operations are expected. Having due consideration to the evidence brought to the Board throughout the course of the proceedings, as well as “all relevant factors” as set out in subsection 26(6) of the Act, the Board finds there is insufficient evidence to support the claim that the issuance of Water Licence MV2011L4-0002 will result in proven or potential losses or adverse effects to the Carter family or the Nonacho Lake Lodge from changes in fish health and populations.

#### **4.4.4 Safety and Aesthetics**

##### **Carter Family Position**

88. The Carter family claimed that the results of ongoing erosion such as dead trees scattered across the waters and the continued existence of the dam on Nonacho Lake create both a safety concern and an aesthetic blight that negatively impacts the natural beauty of the area for themselves and for patrons of the lodge.<sup>84</sup> To support these claims, the Carter family provided the Board with testimonials of personal experience, photographs, and videos that show the impacts of raised water levels and ongoing erosion on Nonacho Lake shorelines which has led to unsightly beaches, flooded wetlands, and standing and fallen dead trees that litter the lake.<sup>85 86</sup>

89. Due to the changing landscape, the Carter family argued that they have lost their ability to promote their business as an “eco-tourism” experience<sup>87</sup> and that it inhibits their ability to provide patrons

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<sup>82</sup> [D.B. Stewart Report \(1999\)](#). Referenced by the [Carter family Claim for Compensation](#) – March 15, 2012

<sup>83</sup> [Taltson Hydro Project 2004 Water Effects Monitoring Program](#)

<sup>84</sup> [Carter family Written Submissions](#) – April 18, 2017

<sup>85</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>86</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>87</sup> [Carter family Claim for Compensation](#) – March 15, 2012



with the “pristine wilderness experience” sport fishers expect.<sup>88</sup> This, they suspect, must be impacting the quality of the experience of guests to the Nonacho Lake Lodge.<sup>89</sup>

90. The presence of dead trees and changing lake characteristics have also been identified as safety issues by the Carter family and Lutsel K’e Elder, Mr. Boucher.<sup>90</sup> The Carters argued that the lake shoreline has changed so drastically that maps of the area are no longer reliable and that, consequently, at least one guest each season becomes lost on the lake, requiring significant time to locate. ‘Dead heads’ and floating dead trees are a threat to boat motors and propellers, while changing currents, reefs, and sandbars are a threat to both boat safety and winter travel on ice. The Carter family claimed a cost of \$1,500/year to cover the inconvenience of having to repair or replace boat motors more frequently than they would otherwise have to during the life of the Licence.<sup>91 92</sup>

#### NTPC Position

91. NTPC did not directly address the issue of aesthetics through its submissions to the Board but did argue that events such as the death and submergence of trees and changes to the shoreline of Nonacho Lake and all effects resulting therefrom are associated with the original flooding of the lake and water fluctuations prior to the conditions of the current Water Licence. NTPC claimed that inconveniences identified by the Carter family, such as replacing boat motors, searching for lost guests, or finding new fishing ‘hot spots’ are tasks associated with the type of operation and services offered by the Nonacho Lake Lodge, and not the responsibility of NTPC.<sup>93</sup>

#### Board Decision

92. The only evidence presented to the Board with regard to the impacts of Licence MV2011L4-0002 on lake aesthetics is that provided by the Carter family. The Board accepts that the changes to lake characteristics caused by the dam and subsequent flooding on Nonacho Lake have had major impacts on the physical appearance of the lake and travel safety. The Board agrees with the Carter family that the construction of the dam likely resulted in changes to the lakeshore that may have impacted patron experiences over time. Those adverse effects are likely to continue into the future. That said, the Board cannot find any evidence to indicate that these effects will be exacerbated or prolonged as a result of the issuance of Licence MV2011L4-0002.

93. Having due consideration to the evidence and facts brought to the Board throughout the course of the proceedings, as well as “all relevant factors” as set out in subsection 26(6) of the Act, the Board finds there is insufficient evidence to support the claim that the issuance of Water Licence MV2011L4-0002 will result in proven or potential losses or adverse effects to the Carter family or the Nonacho Lake Lodge from deteriorating lake aesthetics. The current Water Licence restricts water levels in Nonacho Lake from rising above the previous high water mark and no further changes in water level fluctuations or rates of erosion in response exclusively to ongoing Facility operations have been proven.

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<sup>88</sup> [Carter family Written Submissions](#) – April 18, 2017

<sup>89</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>90</sup> [Re-Hearing Transcripts – Day 2](#)

<sup>91</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>92</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>93</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012



#### **4.4.5 Lost Revenue**

##### Carter Family Position

94. The Carter family compensation claim includes \$2,069,461 for future lost revenue as a result of declining patronage at the Nonacho Lake Lodge. This amount was arrived at by comparing historical patron numbers (average annual number of 218 patrons between 1979 and 1996) to more recent patronage (average annual number of 53 patrons between 1997 and 2010). The resulting assumed loss of 165 patrons each year was then multiplied by the average revenue per patron from 1997 to 2010 (\$2,461) with some net discount factors and contingency added in. The Carter family argued that lost patronage is a direct result of the Taltson Hydro Facility operations and the associated changing lake conditions previously discussed (i.e. mercury in fish, changes in species health and populations, lake aesthetics and safety).<sup>94</sup> Evidence to support these claims included letters from former patrons who identify these changing conditions as reasons for not returning to the Nonacho Lake Lodge.<sup>95</sup>

##### NTPC Position

95. NTPC did not disagree that there appears to be a decline in patronage at the Nonacho Lake Lodge over the years but they did disagree with the methods put forth by the Carter family to come up with the average loss of 165 patrons per year and the implication that all of the Nonacho Lake Lodge revenue losses are attributable to the current operations of the Taltson Hydro Facility. NTPC argued that the Carter family exaggerated the success of the business by choosing a time, two licences ago, when the industry was thriving and there was less competition, to establish losses that will be experienced by the Lodge for the current Licence period.<sup>96</sup> In its response to the Carter family Claim for Compensation<sup>97</sup>, NTPC provided an analysis of the KRP Report submitted by the Carter family<sup>98</sup> and presented its own calculations for potential lost revenues derived from industry standards and benchmarks.<sup>99</sup> NTPC identified its calculations as the “best reasonable expectation” of Nonacho Lake Lodge future losses, with a caveat that the Board would also need to consider other likely contributing factors to patron decline over the years that are not associated with the Taltson Hydro Facility (i.e. declining trends in the sport fishery industry).<sup>100</sup>

##### Board Decision

96. The Board carefully considered all evidence provided by both the Carter family and NTPC. The Board accepts that there appears to be a general decline in the number of patrons visiting the Nonacho Lake Lodge. The Board agrees with the Carter family that some percentage of this decline is likely attributable to changes experienced at Nonacho Lake since the construction of the dam. That said, in line with the Board’s findings on the likely cause of ongoing or future environmental impacts on Nonacho Lake, the Board finds it is unlikely that the issuance of Licence MV2011L4-0002 will itself exacerbate any decline in patronage. Having due consideration to the evidence and facts brought to the Board throughout the course of the proceedings, as well as “all relevant factors” as set out in subsection 26(6) of the Act, the Board finds there is insufficient evidence to support the claim that the issuance of Water Licence

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<sup>94</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>95</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>96</sup> [Re-Hearing Transcripts – Day 1](#)

<sup>97</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>98</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>99</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>100</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

MV2011L4-0002 will itself result in proven or potential losses or adverse effects to the Carter family or the Nonacho Lake Lodge from declining patronage.

#### ***4.4.6 Loss of Assets and Out-of-Pocket Costs***

##### Carter Family Position

97. The Carter family compensation claim includes \$905,113 for future lost assets and out-of-pocket costs, including the value of lodge infrastructure, equipment, costs of transportation, and costs associated with ongoing clean-up and repairs.<sup>101</sup> The Carter family attributed these costs to the construction and continuing operation of the Taltson Hydro Facility.<sup>102</sup> This number was achieved based on Jean Carter's estimates of the value of the lodge assets and quotes provided for various replacement and clean-up projects. The total amount took into consideration some net discount factors and discount rates. The claim for lost assets by the Carter family is based on the assumption that by the end of the family's current lease (2022) the lodge will no longer remain a viable business and therefore most of the assets will be worthless.<sup>103</sup>

##### NTPC Position

98. NTPC argued that there was no effort by the economic analyst for the Carter family to verify the calculated value of assets associated with the Nonacho Lake Lodge and that any costs associated with reclamation of the leases, including the removal of infrastructure and equipment are the sole responsibility of the lease holders, regardless of the existence of the Taltson Hydro Facility or Licence MV2011L4-0002.<sup>104</sup> At best, NTPC suggested that the fair market value of the lodge (estimated to be between \$50,000 and \$150,000) would be the most reasonable calculation for losses, if any are considered (and before consideration of the reclamation costs).<sup>105</sup>

##### Board Decision

99. Both parties challenged the economic experts on the propriety and accuracy of the techniques used to calculate potential business losses. The Carter family argued that the use of industry benchmarks was an inaccurate method to evaluate a unique business and failed to take into consideration factors relevant to their operation. NTPC argued that the Carter family's estimates of their assets and business value were unverified and their approach failed to account for business factors unrelated to the Taltson Hydro Facility.

100. The Board notes that the Carter family rescinded their claim for the costs of reclamation.<sup>106</sup> Additionally, the Board notes that Jean Carter confirmed during the Re-Hearing that the family has no intention of relinquishing the leases in the foreseeable future.<sup>107</sup>

101. The Board accepts that there is an increased likelihood that the Carter family business has and could experience adverse impacts as a result of the adverse environmental impacts that may have resulted,

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<sup>101</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>102</sup> [Re-Hearing Transcripts – Day 1](#)

<sup>103</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>104</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>105</sup> [NTPC Response to the Carter family Claim](#) – April 23, 2012

<sup>106</sup> [Carter family Expert Rebuttal Report](#) – February 17, 2017

<sup>107</sup> [Re-Hearing Transcripts – Day 2](#)

at least in part, from activities allowed under past licences. The Board carefully considered all evidence provided by both the Carter family and NTPC and have concluded there are no adverse effects on the Carter family business resulting from Water Licence MV2011L4-0002.

102. Having due consideration to the evidence and facts brought to the Board throughout the course of the proceedings, as well as “all relevant factors” as set out in subsection 26(6) of the Act, the Board finds it is unlikely that the issuance of Water Licence MV2011L4-0002 will itself result in proven or potential losses or adverse effects to the Carter family or the Nonacho Lake Lodge from loss of assets or increases in operational costs. As determined above, the activities permitted under Water Licence MV2011L4-0002 are unlikely to impact the existing infrastructure, equipment and supplies owned by the Carter family and are unlikely to be the primary driver of any future increase in operational costs of the Nonacho Lake Lodge.

#### ***4.4.7 Nuisance, Inconvenience and Family Legacy***

##### **Carter Family Position**

103. There are two aspects to the Carter family argument under this heading: 1) specific nuisances and inconveniences that they maintain will be ongoing throughout the term of Licence MV2011L4-0002 and for which they claimed \$250,000; and 2) a loss of lifestyle and damage to their “family legacy” including the loss of reputation in the tourism industry for which they claimed a further \$250,000. They compare this latter loss to that for which the Champagne and Aishihik First Nations were compensated \$250,000 by the Yukon Water Board.

104. The Carter family compensation claim includes \$250,000 for “unreasonable and substantial” interference with their use and enjoyment of the land and waters at Nonacho Lake. Included in this claim are inconveniences attributed to the Taltson Hydro Facility operations and associated with changing lake conditions that have impacted:

- their ability to access their dock;
- their ability to travel without a preponderance of dead trees;
- the reliability of maps, which results in lost guests;
- their ability to enjoy fresh fish out of the lake due to mercury concerns;
- lodge infrastructure, which results in the need to carry out renovations; and
- the need to carry out reclamation activities.

105. The Carter family also claimed an additional \$250,000 to compensate for the loss of the family legacy at Nonacho Lake that they say is being destroyed by NTPC:

The Carters are struggling to accept that their beloved second home will not be there for future Carter generations, as Merlyn and Jean had planned. The loss to them is priceless. As such, the Carters submit that they are entitled to compensation of not less than \$250,000.00, the amount awarded to the [Champagne and Aishihik First Nations], for loss of lifestyle.<sup>108</sup>

The Carter family claimed they are entitled to compensation for the loss of their ability to pass on their lifestyle and family legacy to future generations.<sup>109</sup>

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<sup>108</sup> [Carter family Claim for Compensation](#) – March 15, 2012

<sup>109</sup> [Carter family Written Submissions](#) – April 18, 2017

### NTPC Position

106. NTPC seeks to dismiss the Carter family claims for nuisance and inconvenience in part because the claim includes compensation for combined past and future losses (with past losses not being recognized under the Act). The NTPC also argues the nuisances and inconveniences claimed by the Carter family are not “unreasonable and substantial” but normal experiences associated with running a fishing camp in a remote location. Specific arguments the NTPC makes against the inconveniences identified by the Carter family are similar to those provided above with regard to environmental impacts of the initial flooding:

- water level fluctuations have been relatively consistent for the last 25 years and should no longer affect dock access;
- tree mortality was caused by the initial flooding event and therefore constitutes a past loss, which is not compensable;
- searching for lost guests is a task all fishing camp owners must undertake;
- mercury levels have stabilized and will not be affected by future Taltson Hydro Facility operations;
- moving facilities to avoid flooding the camp has been necessitated by the Carter family’s own actions and result from non-compliance with the terms of their lease; and
- any costs associated with reclamation are an inevitable consequence of the lease and this obligation is in no way related to the operation of the Taltson Facility.

107. With regard to the family legacy claim, NTPC argued that the circumstances of the decision of the Yukon Water Board in response to the claim by the Champagne and Aishihik First Nations is not analogous to the Carter family claim. The Yukon decision involved a First Nations group with constitutionally protected claims to the land. NTPC stated that although it is unfortunate that the expectations held by the Carter family to run the Nonacho Lake Lodge for many more years may not be fulfilled, this outcome did not result from operation of the Taltson Facility or, in particular, from the use of waters under Licence MV2011L4-0002.<sup>110</sup>

### Board Decision

108. The Board finds that the issuance of Water Licence MV2011L4-0002 will not, on a balance of probabilities, result in the specific nuisance and inconvenience claims presented by the Carter family being created, exacerbated or prolonged.

109. The Board considered each of the Carter family claims for nuisance and inconvenience in detail. The following summarizes those discussions:

- The inabilities to access the dock are documented from past experiences. The Board accepts it is likely that recent water level fluctuations have been more consistent and therefore any potential future difficulties are unlikely to be related to Taltson Hydro Facility operations. Regular maintenance of this type of infrastructure would be required regardless of NTPC operations and is not influenced by operations proposed under Licence MV2011L4-0002 itself.

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<sup>110</sup> [NTPC Written Submissions](#) – April 18, 2017

- The dead trees in and around Nonacho Lake are a relic of the initial flooding event and early water level fluctuations. No significant water level fluctuations beyond the previous high water mark are allowed under Licence MV2011L4-0002.
- It is unlikely that lost guests or any associated nuisance or inconvenience is attributable to NTPC operations under Licence MV2011L4-0002 specifically.
- Mercury concentrations in fish do not ban the ability of the Carter family or its patrons to consume fish. Mercury concentrations are not anticipated to increase as a result of operations under Licence MV2011L4-0002.
- Licence MV2011L4-0002 limits water levels to the historic high water mark and, as such, additional flooding of lands should not occur.

110. Having due consideration to the evidence and facts brought to the Board throughout the course of the proceedings, as well as “all relevant factors” as set out in subsection 26(6) of the Act, the Board finds it is unlikely that the issuance of Water Licence MV2011L4-0002 itself results in unreasonable and substantial nuisance or inconvenience in the specific uses of the water described by the Carter family.

111. Regarding the Carter family claim for a loss of lifestyle, the Board finds that any comparison between the nuisance or inconvenience experienced by one family who lease property on a lake to the rights of the Champagne and Aishihik First Nations is unsustainable. The Champagne and Aishihik First Nations are communities with constitutionally protected rights to the land and for the protection of their culture. To argue that a family, any family, has an analogous right either over extends the definition of “lifestyle” or under values the place of Canada’s First Nations.

112. The argument that the Carter family should receive “*not less*” than the amount for which an entire First Nations community was compensated<sup>111</sup> is not accepted. On the contrary, the fact that the compensation awarded to the Champagne and Aishihik First Nations was for the disruption to their community, culture, and lifestyle suggests that only a lesser value would be appropriate compensation to a family whose access to their family business and leisure property is disturbed. The Carter’s argument also fails to account for the fact that the Yukon compensation award was in fact \$200,000 for the construction of a heritage camp; \$50,000 for programming at the camp; and \$20,000 to support the community’s potable water system. Individual members of the community received between approximately \$1,000 to \$3,000 in compensation for the nuisance and inconvenience of extra or longer boat trips due to the presence of the facility on the lake.<sup>112</sup>

113. The Board observes that the Carter family managed to build an impressive family legacy and reputation even with the construction of the dam in the 1970s and the active control of the water to generate power throughout the 1980s. The Board does not find that Water Licence MV2011L4-0002 would itself diminish that legacy or reputation.

114. The Board finds no evidence to suggest that NTPC operations under Water Licence MV2011L4-0002 are forcing the family from the lake. On the contrary, the Carter family has no intention of relinquishing the leases held in the area and, despite the long-standing presence of NTPC, the Carter family has continued to invest in their business. The Board also notes that the Carter family legacy on Nonacho

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<sup>111</sup> Carter family submissions, March 15, 2012 at p 16

<sup>112</sup> Conditions of Water Licence HY00-011, Yukon Territory Water Board, Clauses 21a, b, c and 22

Lake has developed notwithstanding, and at the same time as, the presence and operations of the Taltson Hydro Facility.

115. Finally, the Board considered the Carter's claim of a loss of lifestyle and the family members' associated emotions resulting from the continued presence of NTPC on the lake and water system. The Board accepts that Jean and Merlyn Carter and their immediate descendants have spent significant time at their family fishing lodge. The Board accepts that the Carter family members feel a deep personal connection to the lodge and lake and that their experiences and lifestyle there likely serve to define who they are as a family and as individuals. The Board also accepts the Carter family's evidence about their emotional turmoil and disappointment at the continued presence of the dam and the Taltson Hydro Facility generally. Several family members described both in their written submissions and during the oral hearing the tremendous sense of loss, anger, depression and disappointment over NTPC's application for a 25-year licence for ongoing operations on Nonacho Lake and the associated water system.

116. NTPC disputed whether these feelings are at all impacted by their application for a Licence renewal or arise solely from activities under past Licences. However, NTPC did not contradict the individual or collective family evidence regarding the adverse impact of the Licence on their individual or family psychological or emotional well being. The Board accepts the sincerity of the Carter evidence in this regard and the shared family belief that they will not be able to use their lodge or access areas across the lake without adverse emotional effects knowing that the NTPC operations remain ongoing.

117. This kind of multifaceted emotional, personal and professional connection between a single family and a lake system might not be unique to the Carter family and Nonacho Lake but it is likely very rare. The Board accepts that the emotional impacts on members of the Carter family that arise from the presence of the Taltson Hydro Facility are a significant nuisance and inconvenience. In addition, the adverse impact to their family legacy and lifestyle may also qualify as a relevant consideration under the non-exclusive list of factors that the Board must consider in subsection 26(6) of the Act.

118. In balancing the competing interests of conservation, development and utilization of land and water, the Board recognizes that Water Licence MV2011L4-0002 continues and promulgates activities that negatively impact the Carter's ongoing use of the water. The Board has discretion to determine appropriate compensation for this type of impact under subsection 26(6), and is satisfied that some compensation is warranted. The amount cannot be determined using principles of business loss, whether for increased costs or decreased value. The quantification of an emotional loss is difficult to do with precision and requires an exercise of judgment, taking into consideration all of the evidence and submissions by the parties.

119. The Board considered the large extent and wide use of the waters by the Carter family and the evidence of their expected ongoing use throughout the duration of the Licence MV2011L4-0002. Upon consideration of these factors, the Board has determined that each of the four named claimants is entitled to \$25,000 to reflect the ongoing impact on them for the duration of the Licence, for a total of \$100,000. The amount takes into consideration the fact that the Carter family has chosen to maintain their presence on Nonacho Lake despite NTPC operations and that the adverse impacts are far from life threatening. The amount awarded also considers the seasonal use of the lake and the fact that the Nonacho Lake Lodge was established to earn revenue and continues to do so.

## 5.0 Conclusion

120. In issuing Water Licence MV2011L4-0002 and in respect of the Claim for Compensation made by the Carter family that it would be adversely affected by the issuance of Water Licence MV2011L4-0002, the Board has an obligation under subsection 27(2) of the Act to fix the term and conditions for the Water Licence which will minimize any adverse effects on the Carter family. The Board set out the term and conditions of the Water Licence in a way that would, in its view, minimize the impacts of the licenced development on the Carter family. Provided that compliance with the Licence conditions continues, including the limitation set on water fluctuations and the continuation of monitoring programs on the aquatic environment, the Board finds that potential impacts of the Taltson Hydro Facility under Licence MV2011L4-0002 are largely mitigated.

121. After carefully reviewing the evidence available on the record and the written submissions from the Carter family and NTPC, and having due regard to the facts, circumstances, and the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the *Waters Act* and the regulations made thereunder, the Board has determined that the Carter family Claim for Compensation due to adverse effects on their individual and family lifestyle resulting from Licence MV2011L4-0002 has merit. The Carter family claimants, individually and as a family, experience and will continue to experience adverse impacts on their lifestyle and use of the waters from the continued presence of the NTPC operations on Nonacho Lake and the water system. For them this will be a significant nuisance and inconvenience. Appropriate compensation is determined to be \$100,000.

### SIGNATURE

Mackenzie Valley Land and Water Board



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Mavis Cli-Michaud, Chair

August 10, 2017

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Date

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**Date:** Friday, August 11, 2017 2:51:14 PM  
**Attachments:** [MV2011L4-0002 - Northwest Territories Power Corp. - Board Recommendation for Approval - Update to Type A Water Licence - Compensation.pdf](#)

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Good day,

Please see the attached document regarding the Mackenzie Valley Land and Water Board's recommendation for approval of the update to Type A Water Licence MV2011L4-0002 – Northwest Territories Power Corporation – Taltson Hydro Facility.

if you have any questions, please contact our office at (867) 669-0506

Regards,

Amanda Gauthier

Executive Coordinator

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