

April 3, 2024

Mason Mantla, Chair  
Wek'èezhìi Land and Water Board  
#1-4905 48th St, Yellowknife, NT X1A 3S3

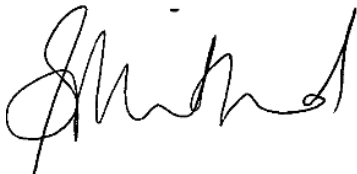
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**Snare Hydroelectric Facility – 2023 Annual Water Licence Report – W2014L4-0001**

The Northwest Territories Power Corporation (NTPC) submits to the Wek'èezhìi Land and Water Board (WLWB) the 2023 Annual Water Licence Report for the Snare Cascades Facility.

Should any questions, or if additional information is required, please do not hesitate to contact me.

Sincerely,



Belinda Whitford, CPA  
Chief Operating Officer  
Northwest Territories Power Corporation



# Water Licence Annual Report

2023

Northwest Territories Power Corporation  
Snare River Cascades Power Generation Facility

Water Licence no. W2014L4-0001

SUBMITTED TO:  
WEK'ĒEZHÌI LAND AND WATER BOARD ON BEHALF OF DOGRIB POWER CORP.

MARCH 2024



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## LIST OF ABBREVIATIONS

<b>Abbreviation</b>	<b>Definition</b>
CRP	Closure and Reclamation Plan
DSR	Dam Safety Review
ECC	Environment and Climate Change
ECCC	Environmental and Climate Change Canada
EPP	Emergency Preparedness Plan
GNWT	Government of Northwest Territories
IDF	intensity-duration-frequency
NTPC	Northwest Territories Power Corporation
OMS	Operations, Maintenance, and Surveillance
PMF	probable maximum flood
SCP	Spill Contingency Plan
WLWB	Wek'èezhii Land and Water Board
WMP	Waste Management Plan
WRRB	Wek'èezhii Renewable Resources Board

## UNITS

Km      Kilometers

## TABLE OF CONCORDANCE

The following table of concordance has been provided for Northwest Territories Power Corporation (NTPC) to track non-conformities for Water Licence W2014L4-0001 and how they were addressed in 2023.

Condition	Comment	Report Addressing Condition
Missing reports Part C, Item 5	Outstanding Water Management and Reservoir Operating Plans: <ul style="list-style-type: none"><li>December 2023</li></ul>	The December Water Management and Reservoir Operating Plans for 2023 remains outstanding. NTPC intends to file this plan by April 30, 2024.

## CONFORMITY TABLE

The following table shows conformity with Schedule 1 of the Water Licence.

Water Licence Annual Report Conditions	Section in this Report
1. a) A detailed record of Modifications and major maintenance work carried out on the Power Generation Facilities.	2
1. b) A list of any non-compliance events, and for each event, a brief explanation and a description of measures to prevent future non-compliance.	Table of Concordance, 9
1. c) A summary of revisions to the Emergency Preparedness Plan (Part E, Item 1), OMS Manual (Part C, Item 4), Spill Contingency Plan (Part E, Item 3), and the Closure and Reclamation Plan (Part F, Item 2) that were approved during the year being reported.	3.1, 3.2, 3.3, 3.5
1. d) A record of any geotechnical or maintenance work conducted as a result of inspections completed according to the OMS Manual referred to in Part C, Item 4 and the Dam Safety Reviews referred to in Part C, Item 6.	5
1. e) A status update on any outstanding issues that remain in the Implementation Plan resulting from the Dam Safety Reviews referred to in Part C, Item 6.	5.1
1. f) A summary of the progress of any studies or environmental effects monitoring being carried out.	6
1. g) An outline of any communications and spill training exercises carried out.	7.1
1. h) A list of all unauthorized discharges.	7.2
1. i) Any other details on water use, operating procedures, Modifications, maintenance work, or other topics, requested by the Board on or before November 1 of the year being reported.	9, 10



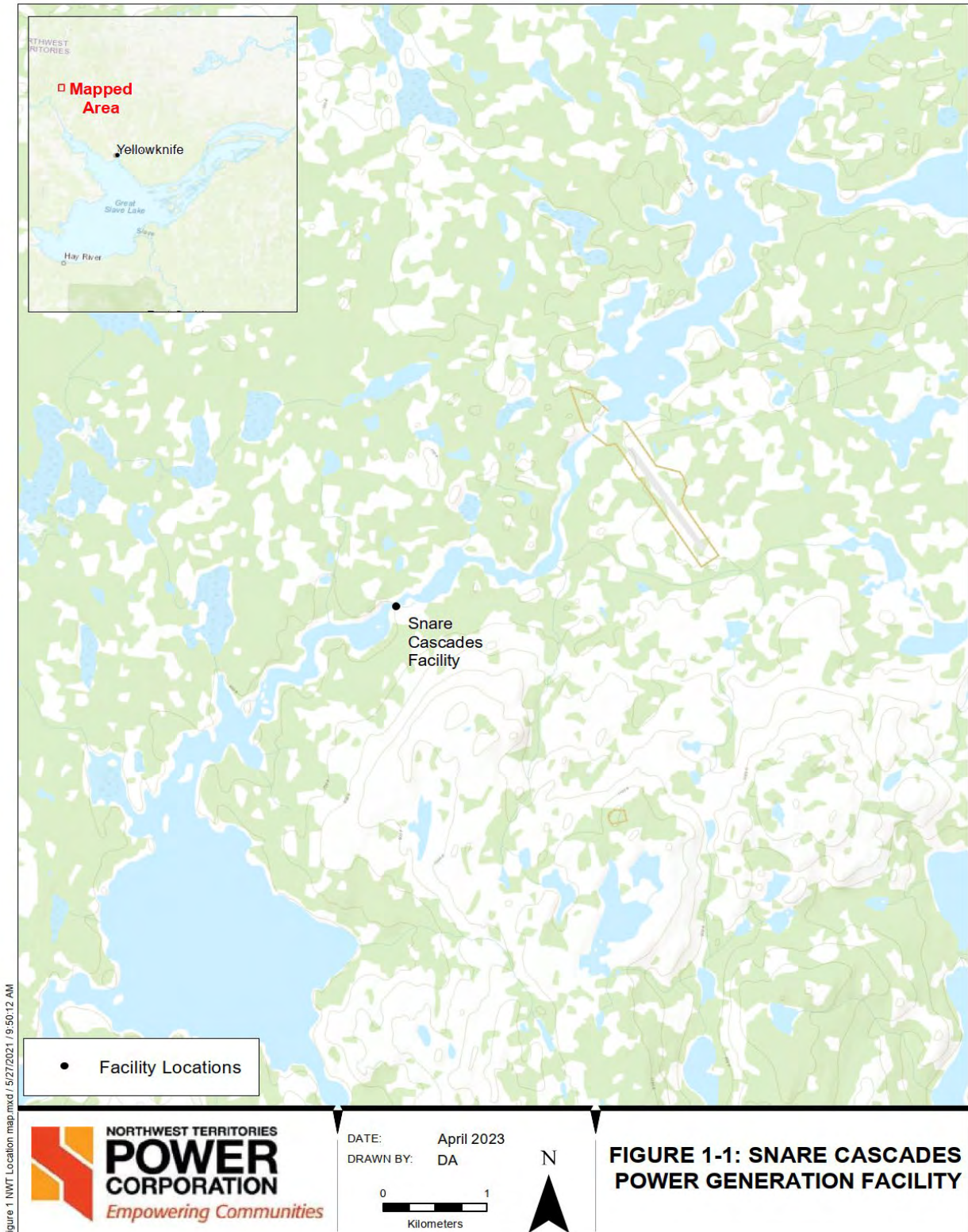
# 1 INTRODUCTION

This 2023 Annual Report has been prepared for submission by Northwest Territories Power Corporation (NTPC) to the Wek'èezhii Land and Water Board (WLWB), as one of the requirements of Water Licence no. W2014L4-0001 (the Water Licence) for the Snare River Cascades Power Generation facility (Snare Cascades facility). The Water Licence regulates the storage and diversion of water for hydroelectric power generation and associated uses for the Snare Cascades facility. The Water Licence has been in effect since September 5, 2014, and expires on May 29, 2024. An application to renew W2014L4-0001 and associated Water Licence N1L4-0150 (for the Snare Falls, Forks, and Rapids facility) was submitted in June 2023 (i.e., Water Licence W2023L4-0001).

The Snare Cascades facility was commissioned in 1996 and includes a labyrinth spillway, a power canal dyke, a sidehill dyke, and a powerhouse. The facility is located on the Snare River, approximately 5 km downstream from the Snare Falls Hydroelectric Generation Facility, and 150 km northeast of Yellowknife, NT (Figure 1-1).

The Snare Cascades facility also includes the Snare Cascades Dam, and there is a substation next to the flow-through spillway, located north of the facility, and is controlled by a fixed-elevation weir. The generator has a capacity of 4.3 megawatts. The Snare Cascades facility currently provides electricity to the City of Yellowknife, the communities of Ndilò, Dettah, and Behchokò.

Figure 1-1 Snare Cascades Power Generation Facility



## 2 MODIFICATIONS AND MAJOR MAINTENANCE WORK

Sections 2.1 and 2.2 outline the modifications and maintenance work completed at the Snare Cascades facility in 2023. Routine maintenance was performed, alongside 14-day facility checks and monthly facility and dam safety checks.

### 2.1 Snare Cascades Wall Raise Upgrade

Work on the Snare Cascades wall raise upgrade project was expected to occur in 2022, but it was not completed due to weather. Originally, additional concrete was going to be added to the existing berm. In 2022–2023, NTPC decided that it would be easier to manufacture an additional panel to install on top of the wall. This panel was constructed in 2022 and installed in the summer of 2023.

### 2.2 Snare Cascades Overhaul Study

NTPC had the unit inspected in May 2023. Conclusions from the asset assessments were that pending no significant change in asset condition or operations, a minor overhaul would likely be required in the next 5 to 7 years and a major overhaul in the next 10 to 15 years.

## 3 PLAN REVISIONS

As required in Schedule 1, Part B, Item 1c of the Water Licence, the following sections discuss revisions to the Emergency Preparedness Plan (EPP), Operations, Maintenance, and Surveillance (OMS) Manual, Spill Contingency Plan (SCP), Waste Management Plan (WMP), and Closure and Reclamation Plan (CRP) approved by the WLWB for the year 2023.

### 3.1 Emergency Preparedness Plan

The EPP contains procedures for dealing with emergencies at the dams or their associated facilities, including communication directories and maps showing upstream and downstream water levels and arrival times of floods. The EPP is reviewed annually, and updates are submitted to the WLWB for approval (Part B, Item 1f).

Under Part E, Item 4, NTPC is responsible for updating the EPP annually. On June 29, 2023, NTPC submitted Version 9.0 of the EPP<sup>1</sup> with the 2023 renewal application (i.e., Water Licence W2023L4-0001). Version 9.0 included revisions requested by the WLWB in the May 23, 2023, Reasons for Decision.<sup>2</sup> As a decision regarding Water Licence W2023L4-0001 has not been made, Version 9.0 has yet to be approved.

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<sup>1</sup> Northwest Territories Power Corporation (NTPC). 2023. Emergency Preparedness Plan – Version 9.0. [https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20Emergency%20Preparedness%20Plan%20-%20Version%209%20-%20Jul%2010\\_23.pdf](https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20Emergency%20Preparedness%20Plan%20-%20Version%209%20-%20Jul%2010_23.pdf)

<sup>2</sup> Wek'èezhii Land and Water Board (WLWB). N1L4-0150 - NTPC - EPP Version 8.0 and SCP Version 5.0 - Reasons for Decision - May 23\_23. 2023. [https://registry.mvlwb.ca/Documents/N1L4-0150/N1L4-0150%20-%20NTPC%20-%20EPP%20Version%208.0%20and%20SCP%20Version%205.0%20-%20Reasons%20for%20Decision%20-%20May%2023\\_23.pdf](https://registry.mvlwb.ca/Documents/N1L4-0150/N1L4-0150%20-%20NTPC%20-%20EPP%20Version%208.0%20and%20SCP%20Version%205.0%20-%20Reasons%20for%20Decision%20-%20May%2023_23.pdf)

### 3.2 Operations, Maintenance, and Surveillance Manual

On June 29, 2023, NTPC submitted Version 3.0 of the OMS Manual<sup>3</sup> with the renewal application (i.e., for Water Licence W2023L4-0001). Version 3.0 included revisions requested by the WLWB in the May 18, 2023, Reasons for Decision.<sup>4</sup> As a decision regarding Water Licence W2023L4-0001 has not been made, Version 3.0 has yet to be approved.

### 3.3 Spill Contingency Plan

The SCP includes emergency response for spills, following the Guidelines for Spill Contingency Planning,<sup>5</sup> identifying lines of authority and responsibility, and reporting procedures. The SCP is reviewed annually, and updates are submitted to the WLWB for approval (Part E, Item 4).

On June 29, 2023, NTPC submitted Version 6.0 of the SCP<sup>6</sup> with the renewal application (i.e., for Water Licence W2023L4-0001). Version 6.0 included revisions requested by the WLWB in the May 23, 2023, Reasons for Decision. As a decision regarding Water Licence W2023L4-0001 has not been made, Version 6.0 has yet to be approved.

### 3.4 Waste Management Plan

The WMP is reviewed annually, and updates are submitted to the WLWB for approval (Part F, Item 1). On June 29, 2023, NTPC submitted Version 5.0 of the WMP<sup>7</sup> with the renewal application (i.e., for Water Licence W2023L4-0001). Version 5.0 included revisions requested by the WLWB in the May 23, 2023, Reasons for Decision. As a decision regarding Water Licence W2023L4-0001 has not been made, Version 5.0 has yet to be approved.

### 3.5 Closure and Reclamation Plan

The CRP identifies progressive reclamation activities and is reviewed annually to reflect any changes in operation, technology, and schedule, or to make revisions as requested by the WLWB (Part F, Item 3 of Water Licence N1L4-0150).

On June 29, 2023, NTPC submitted a Closure and Reclamation Plan (V2.0)<sup>8</sup> for approval as part of its application for Water Licence W2023L4-001 renewal. As a decision regarding Water Licence W2023L4-0001 has not been made, Version 2.0 has yet to be approved.

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<sup>3</sup> NTPC. 2023. Operations, Maintenance, and Surveillance (OMS) Manual – Version 3.0. [https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20Operations,%20Maintenance,%20and%20Surveillance%20\(OMS\)%20Manual%20-%20Version%203.0%20-%20Jul%202010\\_23.pdf](https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20Operations,%20Maintenance,%20and%20Surveillance%20(OMS)%20Manual%20-%20Version%203.0%20-%20Jul%202010_23.pdf)

<sup>4</sup> WLWB. 2023. Decision from the Wek'èezhii Land and Water Board Meeting of May 18, 2023. [DPC - OMS Manual - Version 2.0 - Reasons for Decision - May 23\\_23.pdf \(mvlwb.ca\)](https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20DPC%20-%20OMS%20Manual%20-%20Version%202.0%20-%20Reasons%20for%20Decision%20-%20May%2023_23.pdf)

<sup>5</sup> Indian and Northern Affairs Canada (INAC). 2007. Guidelines for Spill Contingency Planning. [https://www.enr.gov.nt.ca/sites/enr/files/guidelines\\_for\\_spill\\_contingency\\_planning\\_2007.pdf](https://www.enr.gov.nt.ca/sites/enr/files/guidelines_for_spill_contingency_planning_2007.pdf)

<sup>6</sup> NTPC. 2023. Spill Contingency Plan – Version 6.0. [https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20Spill%20Contingency%20Plan%20-%20Version%206%20-%20Jul%202010\\_23.pdf](https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20Spill%20Contingency%20Plan%20-%20Version%206%20-%20Jul%202010_23.pdf)

<sup>7</sup> NTPC. 2023. Waste Management Plan – Version 5.0. [https://mvlwb.com/registry/w2023l4-0001?f%5B0%5D=authorization\\_document\\_type%3A6.%20Management%20Plans](https://mvlwb.com/registry/w2023l4-0001?f%5B0%5D=authorization_document_type%3A6.%20Management%20Plans)

<sup>8</sup> NTPC. 2023. Closure and Reclamation Plan – Version 2.0. [https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20Closure%20and%20Reclamation%20Plan%20-%20Version%202.0%20-%20Jul%202010\\_23.pdf](https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20Closure%20and%20Reclamation%20Plan%20-%20Version%202.0%20-%20Jul%202010_23.pdf)

## 4 STAKEHOLDER ENGAGEMENT

NTPC openly engages with potentially affected water users and the public regarding the North Slave electrical system by:

- Providing information about electricity generation, transmission, and distribution on the NTPC website ([www.ntpc.com](http://www.ntpc.com))
- Providing information about outages, safety, employment opportunities, community investments, and other matters through:
  - Facebook (<https://www.facebook.com/NTPC-Northwest-Territories-Power-Corporation-591764887576712/>)
  - Twitter ([https://twitter.com/ntpc\\_news?lang=en](https://twitter.com/ntpc_news?lang=en))
- Issuing news releases about significant issues
- Attending trade shows, conferences, and job fairs to engage directly with members of the public
- Placing paid advertising

In 2023, engagement activities for the renewal of Water Licence W2014L4-0001 occurred and an Engagement Log for the renewal application is available on the public registry.<sup>9</sup> Table 4-1 outlines all other stakeholder engagement activities for the Snare hydroelectric facilities in 2023.

**Table 4-1 Stakeholder Engagement Activities for the Snare Cascades Facility in 2023**

Date	Organization	Engagement Details
April 6	All Stakeholders	Engagement notification stating that NTPC has been completing stakeholder engagement for the Snare Hydroelectric Facility 2023 Type A Water Licence Renewal since late 2023 and notification letters and engagement meetings have been ongoing. NTPC requests that stakeholders review the attached document (Snare Hydroelectric Facility 2023 Type A Water Licence Renewal Information Package) for more information on the renewal. NTPC informs stakeholders that public meetings have been booked for April 25 in Behchokò and Yellowknife and that they will follow up with venues and timing closer to the events.
April 11	Jessica Smart (NSMA)	Jessica requests she be removed from the email chain as she is not the contact for this file and asks that Alan Alex and/or Noah Johnson are being emailed.
April 14	All Stakeholders	Notification email notifying all stakeholders that the Snare Winter Road, operated under W2021Q0011 is now closed for the season and travel is not permitted anywhere on the Snare Winter Road as of April 14, 2023.

<sup>9</sup> NTPC. 2023. Engagement Log for Water Licence Renewal - June 29, 2023. [https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20WL%20Renewal%20Application%20-%20Engagement%20Log%20-%20Jul%2010\\_23.pdf](https://registry.mvlwb.ca/Documents/W2023L4-0001/Snare%20Hydro%20-%20WL%20Renewal%20Application%20-%20Engagement%20Log%20-%20Jul%2010_23.pdf)

Date	Organization	Engagement Details
April 14	Laura Meinert (WRRB)	Email thanking Matt for the update provided on April 14.
April 27	Jessica Smart (NSMA)	Email replying to Jessica Smart's email on April 11th apologizing and stating she will be removed moving forward.
April 28	Jessica Smart (NSMA)	Email from Jessica saying thank you.
November 24	Kassandra DeFrancis and Anneli Jokela (WLWB)  Meaghan Macintyre-Newell (GNWT)	Engagement notification stating that NTPC owns and operates the Snare Hydroelectric Facility located on Snare River and providing information on their four hydro generation stations. NTPC explains how in 2014 and 2022 they experienced low-water levels for the Snare Basin and how NTPC was approved by the WLWB for an exception to the minimum water level in December 2023. NTPC attached the "Engagement Notification - Request for Exception to Minimum Water Levels for Snare Water Licence N1L4-0150" which includes more details regarding NTPC's request for exception to the minimum water levels for the Big Spruce Reservoir. NTPC requests if anyone is interested in being involved in the pre-submission engagement process to contact them.
December 9	Tłıchǫ Government	Engagement notification stating that NTPC owns and operates the Snare Hydroelectric Facility located on Snare River and providing information on their four hydro generation stations. NTPC explains how in fall 2021 NTPC applied for a site-wide Type A Land Use Permit that consolidated the three current LUP's for Snare into one to increase efficiencies for all regulatory undertaking related to land use at Snare Hydro, improving processes and interactions for all stakeholders moving forward. NTPC contacted the Prince of Wales Northern Heritage Centre Archaeology Program to verify the presence of any archaeological sites within the scope of operations for the permit and one location was identified, however the location was not provided until after LUP W2021Q0011 was issued on January 4, 2022. NTPC states they want to ensure that they can maintain the Snare Forks Spillway and access the road by proposing to amend Snare Hydroelectric Facility LUP W2021Q0011 Condition 34 (i.e., ARCHAEOLOGICAL BUFFER) to state "The Permittee shall not operate any vehicle or equipment within 150 metres of a known or suspected historical or archaeological site or burial ground, except site KhPm-1. With regard to KhPm-1 the Permittee shall not operate any vehicle or equipment as outlined in the KhPm-1 Updated Boundaries Figure." NTPC asks that anyone interested in being involved in the pre-submission engagement process to reach out.

## 5 DAM SAFETY REVIEWS

NTPC's Dam Safety program follows the Canadian Dam Association's Dam Safety Guidelines and incorporates plans and procedures, documentation, staff training, and the correction of deficiencies through scheduled operational, maintenance, and surveillance activities.

The following sections discuss the Comprehensive Dam Safety Review (DSR) inspections, the records of any work conducted as a result of the DSR inspections, and the status of any issues remaining in the implementation plan.

Dam safety activities affecting the Snare Cascades facility in 2023 included:

- Annual dam inspection, completed by Courage Projects and NTPC engineering staff<sup>10</sup>
- Monthly dam inspections, completed by NTPC operations staff
- Inspection of Cascades spillway by NTPC engineering and operations staff
- Cascades Core Wall Raise
- Snare Hydro Dam Safety Review

### 5.1 Comprehensive Dam Safety Reviews

Under Condition C.13 of the Water License, a Comprehensive Dam Safety Review (DSR) is required to be conducted every seven years by a Qualified Professional Engineer in accordance with the Canadian Dam Association Guidelines. Condition C.15 requires an annual dam inspection to be completed with an implementation plan submitted.

The following sections provide an update on the status of all outstanding recommendations from the 2011 and 2018 DSRs. Results and recommendations from the 2023 Annual Dam Inspection Report along with NTPC's responses to recommended actions in these reports (submitted to the WLWB on October 19, 2023), are also summarized.

The next DSR is ongoing and will be submitted in spring 2024.

#### 5.1.1 Status on 2011 Outstanding Items

One outstanding recommendation noted by NTPC in the 2011 DSR for the Snare Cascades canal dyke was completed in August 2023 (Table 5-1).

Table 5-1 Dam Safety Review Recommendations in 2011

Item	Recommendation	Update	Status
2	Raising the concrete core wall by 0.5 m for Cascades Power Canal	Rockfill covering the core wall was removed in summer 2022. The raise will be completed with steel panels; project is awarded and tentatively scheduled for construction in summer of 2023.	Completed

#### 5.1.2 Status on 2018 Outstanding Items

<sup>10</sup> Courage Projects Ltd. 2023. 2023 Annual Inspection Report NTPC Dams. [https://registry.mvlwb.ca/Documents/N1L4-0150/N1L4-0150%20-%20NTPC%20-%202023%20Annual%20Dam%20Inspection%20Report%20-%20Oct%2019\\_23.pdf](https://registry.mvlwb.ca/Documents/N1L4-0150/N1L4-0150%20-%20NTPC%20-%202023%20Annual%20Dam%20Inspection%20Report%20-%20Oct%2019_23.pdf)

Table 5-2 outlines the previously outstanding recommendations from the 2018 DSR. These items have been completed.

**Table 5-2 Dam Safety Review Recommendations in 2018**

Item	Description of Recommendation	NTPC Clarification/ Response	Future Action	Status
9	The uncertainties on the PMF may in turn result in an increase of up to 60% using the high estimate of the PMF. However, based on the results of the dam breach assessment, the incremental consequences would like not to exceed those previously calculated. For consistency and planning purposes, it would be recommended to conduct a detailed review of the PMF.	NTPC plans to complete a hydrology/flood routing review for the Snare Hydro Facility in 2020.	A review of PMF was completed for Snare in 2023. This study has been provided to the ongoing Snare DSR and will inform future planning and projects.	Complete
10	Once the IDF is confirmed through the PMF review it is recommended that the flood routing analyses be updated with current flood values and IDF.	NTPC plans to complete a hydrology/flood routing review for the Snare Hydro Facility in 2020.	A review of PMF was completed for Snare in 2023. This study has been provided to the ongoing Snare DSR and will inform future planning and projects.	Complete
11	It is recommended that an update to the freeboard analysis be conducted to consider the directionality of the wind events in the calculation. In addition to the freeboard requirements the results from this analysis would also be required to conduct a review of the adequacy of the erosion protection material on the upstream slopes of the water reading structures.	NTPC plans to complete a hydrology/flood routing review for the Snare Hydro Facility in 2020.	A review of PMF was completed for Snare in 2023. This study has been provided to the ongoing Snare DSR and will inform future planning and projects.	Complete
12	Based on the 2011 freeboard analysis and routing assessment Snare Falls Saddle Dam 1 and Snare Forks Dyke 1, 2, and 3 would be deficient and need to be raised to prevent over topping due to wind action. The potential for overtopping of the structures should be reviewed after update or review of the update or review of the IDF levels and freeboard requirements.	NTPC plans to complete a hydrology/flood routing review for the Snare Hydro Facility in 2020.	A review of PMF was completed for Snare in 2023. This study has been provided to the ongoing Snare DSR and will inform future planning and projects.	Complete



IDF -intensity-duration-frequency; PMF – probable maximum flood

## 5.2 Annual Dam Inspection Recommendations

Lloyd Courage, P. Geol., P.Eng., of Courage Projects Ltd. completed the annual inspection on the Snare Cascades facility in June 2023. The 2023 Annual Inspection Report was submitted to the WLWB on October 19, 2023, along with NTPC's responses to the recommended actions in these reports. The recommendations are summarized in Table 5-3. Items with an "ongoing" status are maintenance or surveillance activities that are presently being conducted on a recurring basis and will continue.

**Table 5-3 Annual Dam Inspection Recommendations in 2023**

Item	Recommendation	NTPC Clarification/Response	Future Action	Status
1	The crest of all dams should be surveyed the year before the next scheduled periodic DSR or more often depending on the results of visual inspections.	Surveys are completed on a schedule; Taltson and Bluefish dams were completed in 2021. Dam crest surveys were completed for all Snare dams in June 2022.	N/A	Ongoing
2	Clearing of brush and trees be carried out as required to permit full visual inspection of the dams, including clearing of a 3 m width along the toes.	Dam brushing is completed on a schedule.	The Snare Cascades facilities are in satisfactory condition in terms of vegetation.	Ongoing
3	Leakage should be monitored wherever it is present at each dam site.	Areas of leakage are documented for all NTPC dams as part of the Seepage Monitoring Program. This summer reservoir levels vs. observed seepage flow rates were plotted for the Snare Rapids powerhouse weir and tailrace outlet, Snare Forks Dyke 1 weir, Forks Dyke 2/3 road culvert, and Twin Gorges (North and South gorges), with plans to restore the seepage monitoring weir at 5B next summer.	NTPC will continue to monitor areas of seepage at sites where they are present.	Ongoing
20	It is recommended that the central Core Wall in	Project planned for summer 2022.	Project completed in August 2023.	Complete

Item	Recommendation	NTPC Clarification/Response	Future Action	Status
	the rockfill Dyke be raised from 184.5m to 185m to avoid overtopping in the event of the design flood.			
21	New guides at the powerhouse overhead door opening are recommended for stoplog containment to mitigate flooding of the powerhouse during high flow periods.	NTPC is going to evaluate this item and determine further details.	Materials delivered to site - plan to install in a future year though this is a low priority due to a berm already constructed between garage door and spillway channel as a mitigative measure.	In-progress
22	The Spillway was inspected and found in satisfactory condition.	Concrete appears in good condition and the 2017 repairs have held up well. Inspection of spillway will continue annually when flow is absent.	N/A	Complete
23	The top of the Dyke be surveyed to check design elevation. (Right spillway abutment dyke).	Survey was completed in July 2023.	N/A	Complete

## 6 STUDIES AND PROGRESS OF ENVIRONMENTAL EFFECTS MONITORING PROGRAM

NTPC has partnered with the GNWT, Environment and Climate Change Canada (ECCC) and several academic partners on environmental research projects that are ongoing in the Snare River basin. For example, ECCC has performed hydrometric readings for several years on water discharge and water levels at three points in the Snare River Basin. These readings are the basis for some annual report data for the Snare facilities.

## 7 SPILLS

The following sections provide an outline related to communications and spill training exercises, and a list of unauthorized discharges (as required in Schedule 1, Part B, Items 1g and 1h).

## 7.1 Spill Training Exercises

Spill training is mandatory and is completed by all new NTPC operatives. The training is completed in 3-hour blocks, is primarily online, and includes a description of the spill plan and its contents, spill response methods, and a quiz. Spill training covers the following topics:

- Facility site specifics
- Health and safety
- Spill response
- General spill cleanup

On October 17, 2023, 11 NTPC staff members received spill training.

## 7.2 Unauthorized Discharges

No unauthorized discharges occurred at the at the Snare hydroelectric facilities in 2023.

In the August 10, 2023, Water Licence inspection report,<sup>11</sup> the GNWT-ECC Inspector noted that there are currently three open spill files at the Snare hydroelectric facilities (i.e., file numbers 2010336, 2020456, and 2020406) from 2020 and 2010. NTPC will work with the Inspector to provide information including clean-up and remediation activities for these spills.

# 8 ANNUAL WATER LICENCE INSPECTION

The Water Licence inspection was completed on August 10, 2023, with GNWT – Environment and Climate Change (ECC) Water Resource Officer Meaghan MacIntyre-Newell. The inspections included all Snare hydroelectric facilities. The Inspector did not have any recommendations for the Snare Cascades Facility but noted that the Snare facilities did not have signage for SNP Stations. NTPC will place appropriate SNP signage in 2024.

# 9 NON-COMPLIANCE EVENTS

For a list of non-compliance events in 2023 and from previous years, please see the Table of Concordance. NTPC understands the importance of filing information as required under its water licences and is working within employee and contractor constraints to improve compliance with its regulatory submission deadlines.

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<sup>11</sup> GNWT-ECC. 2023. N1L4-0150 - NTPC - Water Licence Inspection Report - August 10 2023 - Sep 29\_23.  
[https://registry.mvlwb.ca/Documents/N1L4-0150/N1L4-0150%20-%20NTPC%20-%20Water%20Licence%20Inspection%20Report%20-%20August%2010%202023%20-%20Sep%2029\\_23.pdf](https://registry.mvlwb.ca/Documents/N1L4-0150/N1L4-0150%20-%20NTPC%20-%20Water%20Licence%20Inspection%20Report%20-%20August%2010%202023%20-%20Sep%2029_23.pdf)

## 10 OTHER BOARD REQUESTS

Besides the Board decisions for management plans described in Section 3.0, there were no other requests made by the WLWB on or before November 1, 2023.

Table 10-1 details discussions with the WLWB in 2023.

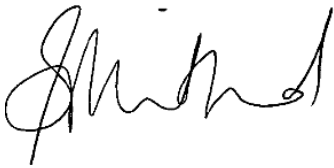
**Table 10-1 Communications with the WLWB in 2023**

Date	Organization	Engagement Details
January 16	Emily Finstad, Anneli Jokela (WLWB)  Clint Ambrose, Karine Gignac, Meg McCluskie (GNWT ECC)	NTPC sends an initial notification to request for an exception to the minimum water levels for Spruce Reservoir under Snare Hydro Type A Water Licence N1L4-0150. NTPC attached a descriptive cover letter of the request for exception to part C condition 2(a) of the Water Licence. NTPC also states they are currently updating the Water Management and Reservoir Operating Plan for the Snare River Watershed Power Generation Facilities and it will be sent in a follow up email to the Wek'èezhii Land and Water Board for review. NTPC says to contact Engagement@ntpc.com for questions or additional information.

## CLOSURE

This 2023 Annual Report for the Snare Cascades facility was prepared by the Northwest Territories Power Corporation, to meet the requirements of Water Licence no. W2014L4-0001.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Belinda Whitford', written in a cursive style.

Belinda Whitford, CPA  
Chief Operating Officer  
Northwest Territories Power Corporation