



FINAL REPORT

3rd Party Environmental Audit Report

Keeyask Generation Project - 2023 Audit

Submitted to:

Manitoba Hydro

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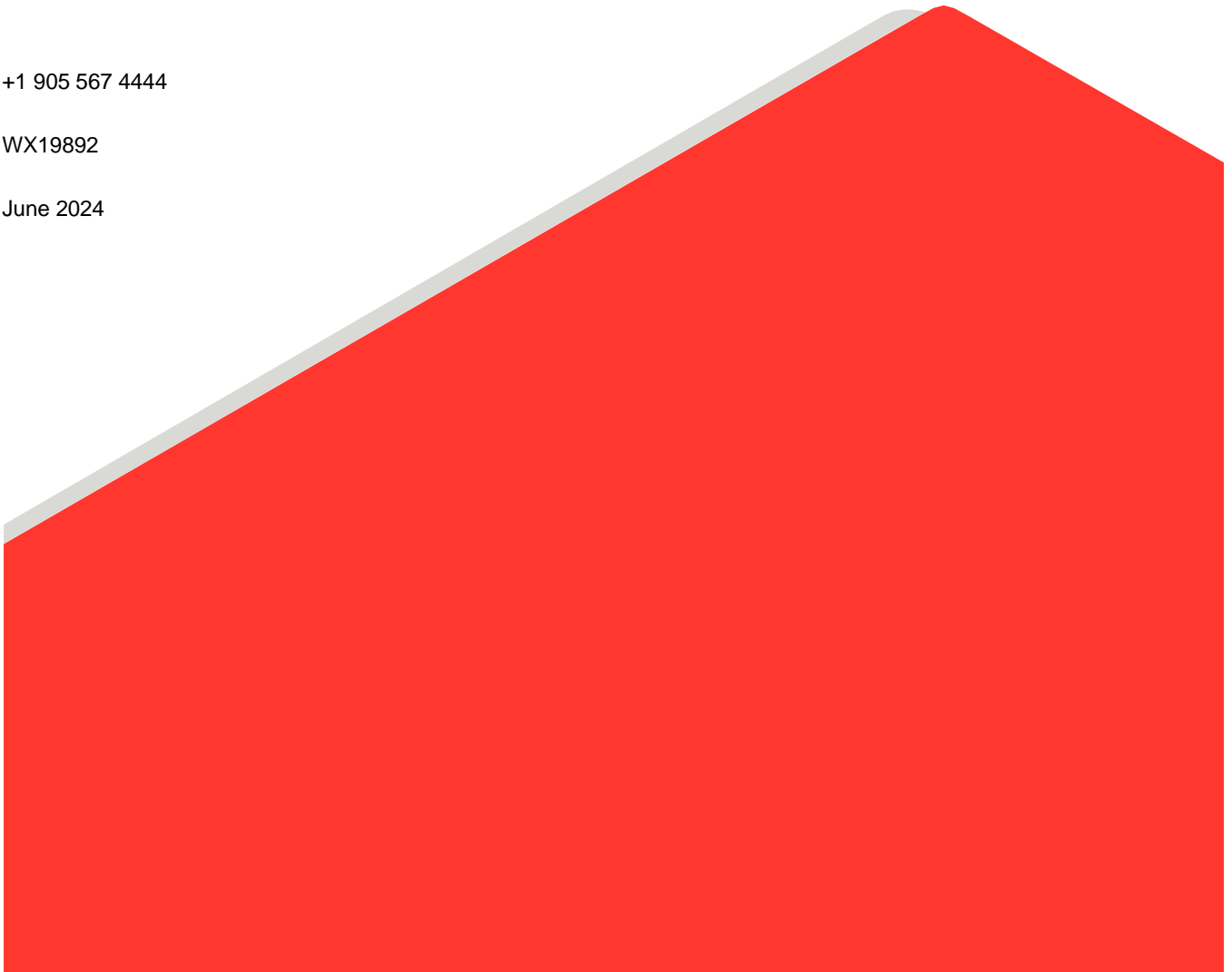
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Distribution List

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Executive Summary

WSP Canada Inc. was retained by Manitoba Hydro to conduct an Environmental Audit (“Audit”) of the Keeyask Generation Project (“Project”). The purpose of the Audit was to assess whether commitments the Keeyask Hydropower Limited Partnership (KHLP) provided in its Keeyask Generation Project Environmental Impact Statement (EIS) filed under the *Environment Act, 1988* and supporting information were met during the construction phase of the Project; and to assess the accuracy of the assumptions and predictions made in the EIS and supporting information. All work was performed in accordance with the scope of work outlined in WSP’s proposal # WPG2023.327 submitted on July 4, 2023.

Critical components of the audit process were direct engagement with key internal Manitoba Hydro employees and an inspection of the Project site and study area, and review of documents limited to the Environmental Impact Statement, supplementary filings, supporting documents, environmental monitoring plans, environmental management plans, and environmental protection plans. The WSP auditors participated in interviews with several members of Manitoba Hydro that were responsible for implementing environmental commitments on behalf of the KHLP during the construction phase of the Project.

Based on the audit process being executed, WSP has identified one audit finding^[1] within its 3rd Party Environmental Audit report. The design of the audit findings and observations were based on a detailed review and analysis of all audit documentation and evidence collected, as well as interviews and Project site observations.

Table 1: Total Audit Findings & Definitions

AUDIT FINDINGS	MAJOR	MINOR	OPPORTUNITY FOR IMPROVEMENT (OFI)
Number of Findings	0	0	1
Audit Definition	A major non-conformity is one which raises significant doubts as to whether the environmental performance will achieve programmed targets.	A minor non-conformance represents a non-conformance that is administrative in nature or reflect a less critical element for overall environmental management.	OFIs are not deviations from a regulation or permit provision. Rather, these observations identify areas that may pose risk issues if not addressed or are suggestions to improve operational effectiveness and efficiencies

^[1] *Results of the evaluation of the collected audit evidence against audit criteria, Audit findings indicate conformity or nonconformity. - ISO 19011:2018 - Guidelines for auditing management systems – International Organization of Standards.

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1.0 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Manitoba Hydro to complete a third-party independent Environmental Audit with the following general objectives:

- To assess whether commitments the Keeyask Hydropower Limited Partnership (KHLP) provided in its Keeyask Generation Project Environmental Impact Statement (EIS) filed under the *Environment Act, 1988* and supporting information, were met; and
- To assess the accuracy of the assumptions and predictions made in the EIS and supporting information.

This report provides a description of the Audit activities, documents the associated findings, and is intended to be the first of two audits to satisfy clause #67 of Manitoba *Environment Act* Licence No. 3107 for the Keeyask Generation Project issued 2 July 2014 (the “Licence”).

2.0 PROJECT SITE DESCRIPTION

The Keeyask Generation Project is a 695 megawatt (MW) hydroelectric generating station and associated facilities at Gull Rapids on the lower Nelson River in northern Manitoba, immediately upstream of Stephens Lake. The Project is located within the Split Lake Resource Management Area and located approximately 30 km west of Gillam. Construction of the Keeyask Generation Project began in July 2014 and the seven generating units were all in-service in March 2022. Manitoba Hydro was given authority by the KHLP to construct the Project on behalf of the KHLP.

The Project consists of four principal structures and supporting infrastructure. The principal structures consist of:

- Powerhouse and service bay complex;
- Spillway;
- Dams; and
- Dykes.

Supporting infrastructure consists of temporary facilities required only to construct the principal structures and permanent facilities required to construct and operate the Project.

Temporary infrastructure consists of:

- Roads;
- Borrow sources;
- Camps and work areas;
- Safety and security facilities;
- Communication tower;
- Explosive magazine,
- Cofferdams;
- Rock groins;
- Temporary construction boat launches; and
- Ice boom and safety booms.

Permanent infrastructure consists of:

- Roads;
- Communication tower;
- Portion of some cofferdams and groins;
- Tower spur;
- Barge landings, boat launches, portage; and
- Safety and security facilities

3.0 AUDIT OBJECTIVES

The objective of the Audit was to assess whether commitments made by the KHLP in the Environmental Impact Statement (EIS) and supporting information were met; and to assess the accuracy of the assumptions and predictions in these documents.

The Audit report will be submitted to the Director of the Environmental Approvals Branch of Manitoba Environment and Climate Change (MECC).

4.0 AUDIT SCOPE

The audit scope was determined through discussions with key Manitoba Hydro staff and a review of documented information related to the Keeyask Generation Project.

The physical scope of the Audit included the Keeyask Generation Project construction footprint in addition to study and monitoring areas identified in the EIS. It is understood that despite Manitoba Hydro's use of contractors, it is Manitoba Hydro that is ultimately responsible for commitment implementation and as such, the Audit scope did not include investigation/auditing of contractors. The Audit scope considered the primary EIS commitments incorporated within *Environment Act* Licence No.3107 as well as other notable commitments within the EIS itself. The scope also included reviewing commitments, assumptions and predictions outlined in the following documents:

- EIS and supplementary filings and supporting documents.
- Manitoba Hydro's Environmental Protection Program, including documentation, inspection and business processes and procedures for implementation.

4.1 Spatial Extent

The spatial extent of the Audit was consistent with all components (and associated activities) included as part of the Project site in the Project description from the EIS, and their associated potential environmental effects. This includes the Keeyask Generation Project footprint in addition to study and monitoring areas identified in the EIS.

4.2 Temporal Extent

The time frame for activities subject to this Audit commenced from the issuance date of the *Environment Act* Licence on 2 July 2014 to 15 June 2022, which coincides with the construction period and fulfillment of mandatory reporting requirements related to the construction phase for the Project.

5.0 AUDIT CRITERIA

For the purposes of the Audit, the evaluation criteria are the requirements against which audit evidence is compared. For the purpose of this Audit, the commitments, assumptions, and predictions contained in the EIS and supporting documents were defined as potential Audit criteria.

WSP applied an evidence based¹ approach to identifying the EIS commitments to be audited (i.e., Audit Criteria) to ensure the Audit sample size was adequate and representative and to ensure the overall Audit objective was met. An Evidence-based approach, as per International Organization of Standards (ISO) 19011:2018 Guidelines for auditing management systems, is an approach which establishes a rational method for reaching reliable and reproducible audit conclusions in a systematic audit process. This evidence-based approach was achieved through the establishment of clear evidence thresholds that included documented records, interviews and observations that substantiate adherence to the commitments that were audited. In other words, WSP reviewed EIS commitments to determine commitments that could be audited based on the availability of evidence and those evidence based commitments formed the audit criteria. Risk assessment was part of the evidence based approach to assist with determining audit criteria and considered a variety of factors including: significance determinations as documented in the EIS; input gained from key Manitoba Hydro staff; the probability and potential impact level (low, medium, high) associated with identified potential environmental effects; and the list of suggested key commitments is based off the six identified groupings of Valued Environmental Components (VECs) Project and other supporting topics found within the EIS.

WSP identified a comprehensive list of potential Audit criteria by reviewing relevant sections within the EIS and supporting documents, which were then tabulated into the Audit Protocol. WSP further reviewed the Keeyask Generation Project Commitments Table, which outlined the mitigation measures that were identified in the EIS and the supporting Environmental Protection Program documents for the Project. The Keeyask Generation Project Commitments Table was used to inform the Audit Protocol in cases where the commitments outlined in the table provided a clear line of sight to the commitments, assumptions, and predictions contained in the EIS and supporting documents.

5.1 Audit of Commitments

Numerous commitments were established by the KHLP for this Project. The Commitments Table for the Project provided by Manitoba Hydro included 656 mitigation commitments alone. Auditing every commitment was impractical. In recognition of this challenge, WSP streamlined the process to efficiently manage the verification of commitments. The Commitment Table was used to assist in developing the Audit Protocol and the auditors identified commitments that had a clear line of sight to the requirements outlined in the EIS and supporting documents to develop the Audit Protocol. The Audit Protocol was used as tool during the audit and the evidence collected was compared to establish whether specific commitments were met. WSP auditors consistently encountered easily accessible evidence supporting fulfilment of commitments. The Audit observations and findings were documented by the audit team. Both evidence and professional judgement played a role in the development of Audit findings.

¹ Evidence-based approach: the rational method for reaching reliable and reproducible audit conclusions in a systematic audit process - ISO 19011:2018 - Guidelines for auditing management systems – International Organization of Standards.

6.0 AUDIT METHODOLOGY

The Audit was conducted in accordance with the Canadian Standards Association Z773-17 Environmental Compliance Auditing and ISO 19011:2018 Guidelines for Auditing Management Systems standards and used an evidence-based approach to reach reliable and reproducible audit conclusions in a systematic audit process.

Audit activities consisted of several discrete tasks. Planning of the Audit, including preparation of an Audit Protocol, Audit Plan (See **Appendix B**) and coordination with Manitoba Hydro representatives regarding the timing of the Audit. The Audit activities, included:

- Audit completed by Lead Auditor, Mr. Adam Forrest, B.Sc., EP, and team auditors Jamie Ziegler, B.Sc. and Christa DeBlaere, B.A., C.E.T. This included a Project site tour covering a portion of the Project site on October 25, 2023, followed by a review of Project site layout plans and pictures to become familiar with the extent of Project site activities to date.
- Interviews with key Project representatives between October 31 to November 1, 2023. A listing of all personnel interviewed is provided below.
- Review of relevant Project information including readily available and relevant documents, and through information requests to Manitoba Hydro.
- Opening and closing meetings attended by Manitoba Hydro and WSP representatives.
- A debrief was provided to Manitoba Hydro staff following the audit.

7.0 AUDIT DATA

7.1 Audit Protocol

The Audit Protocol, developed specifically for Manitoba Hydro, was used as the primary Audit performance tool. A copy of the Audit Protocol is included in Appendix A. Copies of all other audit documentation, field notes and other reviewed documents will be retained by WSP at its Winnipeg office.

The Keeyask Generation Project Audit protocol was designed with the following audit criteria elements, including: Tracking number, Valued Environmental Components/Supporting Topics, and Document Title.

The Audit Protocol was categorized in accordance with a variety of attributes including:

- 1) VECs – the Audit was divided into previously identified groupings of VECs for the Project. These are grouped as follows:
 - Physical Environment;
 - Aquatic;
 - Terrestrial;
 - Socio-Economic;
 - Resource Use; and
 - Heritage Resources

- 2) Additional attributes were incorporated into the Audit Protocol to ensure a comprehensive assessment of safety measures, compliance, and readiness for an unforeseen event, which included:
 - Access
 - Emergency Response and Preparedness (including spill response)
 - Accidents and Malfunctions.
- 3) Evidence Type – The type of evidence required to conduct the Audit was determined. The gathering of evidence involved the use of either document reviews, or interviews.

7.2 Site Visit

The Project site visit, conducted by WSP Auditors (Jamie Ziegler and Christa DeBlaere) on October 25, 2023, included the following activities:

- Orientation and meeting with Manitoba Hydro staff.
- Chartered flight from Winnipeg, Manitoba to Gilliam Airport.
- Helicopter flight from Gilliam Airport to fly over study area and the Generating Station.
- Ground tour of Project site, from Gilliam Airport down the South Access Road towards the Generation Station, including the north side of the Generation Station; areas viewed included areas of revegetation, borrow pits, boat launches, construction camp, and future wetland area.

At the time of the Project site visit, weather conditions were clear with periods of snow fall and cloud cover. Areas of snow cover were observed which inhibited a clear view of the soil/ground surface within the Project area. Audit evidence was gathered in support of the Audit Protocol for the following categories: aquatic environment, terrestrial environment, resource use, socio-economic, heritage resources, physical environment, access, emergency response and preparedness and accidents and malfunctions.

7.3 Interviews

The Audit interviews were conducted by the WSP audit team including Adam Forrest and Jamie Ziegler. Manitoba Hydro representatives participating in the Audit and the general topics of discussion are listed in the table below.

Representative	General Topics of Discussion
Ms. Carolyn Northover	Aquatic Aspects
Ms. Rachel Boone	Terrestrial Aspects
Mr. Wil DeWit	Physical Aspects
Mr. Russ Schmidt	Physical Aspects
Ms. Sarah Wakelin	Aquatic Aspects
Ms. Monica West	Socio-Economic
Ms. Kaela Mae Rose	Socio-Economic

Representative	General Topics of Discussion
Ms. Angela Heese	Heritage Resources
Ms. Jodine MacDuff	Emergency Response and Preparedness (including spill response) Accidents and Malfunctions
Ms. Rachelle Budge	Emergency Response and Preparedness (including spill response) Accidents and Malfunctions

The Manitoba Hydro personnel are hereinafter collectively referred to as the “Site Representatives.” Interviewees were available for discussions in person during the on-Site Audit or virtually via Teams meetings.

7.4 Documentation Reviewed

Prior to the interviews, WSP reviewed publicly available documents from both the Keeyask website and the MECC public registry. A list of general documentation reviewed during the Audit is provided in **Appendix C**. All requested documentation was made available for review.

During and following the interviews, information requests were submitted to Manitoba Hydro to collect additional documentation pertaining to the commitments, assumptions, or predictions for which insufficient evidence had been gathered. Site Representatives were able to provide additional documentation via e-mail to the Lead Auditor.

8.0 REPORT FORMAT

A summary of observations made during the Audit has been included in **Section 9.0 – Audit Observations**. The Audit results as presented in **Section 10.0 - Audit Findings** are organized according to the nature of the evaluation criteria (Non-Compliance or Opportunity for Improvement).

The nature of any auditing/review process is that it tends to search for deficiencies and focus on the negative. Although there were many good practices in place at the Project, the current report does not outline these activities, with some exceptions. This report should be reviewed as a document that can provide continual improvement with an implicit understanding that the positive elements of the operations have not been highlighted. This is an exception-based report. Only findings observed at the time of completion of the checklist during the Audit are presented herein.

Reporting of findings identified during the Audit. Findings have been organized within this report into Table 1 to clearly identify the nature of the findings. The findings as a result of the Audit will be organized into the following categories, outlined as follows:

- **Major - Non-Conformance**

A major non-conformity is one which raises significant doubts as to whether the environmental performance will achieve programmed targets.

- **Minor Non-Conformance**

A minor non-conformance represents a non-conformance that is administrative in nature or reflect a less critical element for overall environmental management.

- **Opportunities for Improvement (OFI)**

OFIs are not deviations from a regulation or permit provisions. Rather, these observations identify areas that may pose risk issues if not addressed or are suggestions to improve operation effectiveness and efficiencies. These findings are raised where there is no relevant or applicable regulatory requirement, where there is an accepted industry best management practice that should be considered or where observations suggest that compliance status may change due to changing rules or circumstances. The adoption of an OFI is not considered critical for the effective environmental management.

- **Positive Findings – Major Conformance**

Significant System Evidence was produced to indicate conformance with audit criteria.

9.0 AUDIT FINDINGS

This section provides an overview of the findings from the Environmental Audit. The Audit findings are related the audit criteria outlined in section 5.0.

The Environmental Audit has not identified any Major or Minor non-conformance findings. One opportunity for improvement was identified that is presented in Table 2.

Table 2: Findings

Criteria	Classification	Finding	Recommendation
<p>Keyask Generating Station Environmental Protection Plan</p> <p>7.5.5 (1) There will be no refueling of machinery, vehicles and equipment within 100 metres of a watercourse/body. If 100 metres cannot be attained, machinery, vehicles and equipment will be refueled in an approved fuelling area, in a contained manner, as approved by the Site Environmental Lead</p>	<p>Opportunity for Improvement</p>	<p>During interviews with Manitoba Hydro staff, it was noted that at times fuelling occurred closer than 100 metres of a water body or cofferdam. It was reported that fuelling was done using smaller portable fuel tanks or by using slip tanks in vehicles. While there was no evidence of a non-compliance, the spill containment measures used during the transfer could not be confirmed. Those measures included having spill containment equipment in the area and at all connection points during transfer and using fuel nozzles without filling lock flaps. In addition, it could not be confirmed if portable storage containers were removed from the back of vehicles and placed in a spill pad for filling. It should be noted that site-specific procedures for construction staff refuelling within 100 m of a watercourse/body were developed and provided to the Auditor.</p>	<p>It is recommended that spill containment measures be documented during construction where fueling operations are occurring and especially when close to a waterbody. This could include pictures of fueling operations where fueling was occurring within 100m of a waterbody that show spill containment measures and available spill response materials.</p>

9.1 Evaluation of Assumptions and Predictions

The evaluation of assumptions and predictions made in the EIS was part of the environmental audit and the Audit Protocol was developed to reduce the number of predictions and commitments to a manageable number to be audited. The detailed examination of every prediction made in the EIS was not feasible in this audit due to time constraints and since many assumptions and predictions are still to be realized. The following section highlights some of the assumptions and predictions made in the EIS and the outcome or accuracy of those predictions. Continued evaluation of the assumptions and predictions from the EIS during subsequent audits, particularly in the context of a more extended timeframe, such as after 10 years, is necessary to assess some of the predictions that aren't realized until the Project is in operation for many years.

Caribou Construction Effects and Mitigation

Keeyask Generation Project. Environmental Impact Statement. Chapter 6: Environmental Effects Assessment.

WSP conducted a review of Section 6.5.8.1 (Caribou) and its subsection 6.5.8.1.1 (Construction Effects and Mitigation), providing a summary of the construction effects.

- Predicted effects on caribou included the loss or alteration of winter and calving habitat and a reduction in habitat intactness. A loss of effective habitat due to sensory disturbance was anticipated during Project construction. Caribou was expected to temporarily avoid or less frequently use otherwise suitable habitat near construction sites due to sensory disturbance.
 - Based on data, no significant decrease in caribou calving and calf-rearing activity during construction was observed. It was reported by Ms. Boone that caribou calving was observed on newly formed, Project-affected islands in the reservoir.

Lake Sturgeon

Keeyask Generation Project. Environmental Impact Statement. Chapter 6: Environmental Effects Assessment.

WSP conducted a review of Section 6.4.6.2 (Lake Sturgeon) and its subsection 6.4.6.2.1 (Construction Effects and Mitigation).

- As water levels in Gull Lake increase during construction, lake sturgeon may move upstream or potentially downstream in response to changes in water flows. This movement may result in a small increase in the number of lake sturgeon in Split Lake and/or Stephens Lake, and a decrease in adult and sub-adult lake sturgeon in the Keeyask reservoir.
 - Based on a review of the 2022 Adult Lake Sturgeon Population Monitoring Report, the 2021 population estimate in Stephens Lake was significantly higher than the 2016 and 2018 estimates. As in the Keeyask reservoir, the overall abundance estimates calculated between 2001 and 2012 also show a significant increasing trend over time.

Mercury

Keeyask Generation Project. Environmental Impact Statement. Chapter 6: Environmental Effects Assessment.

WSP conducted a review of Section 6.4.7.1 (Mercury) and its subsection 6.4.7.1.2 (Operation Effects and Mitigation).

- Mercury concentration in pickerel, jackfish, and whitefish were expected to increase by three to five times in Gull Lake and by two times in Stephens Lake.

- Mercury concentrations in jackfish, pickerel, and whitefish caught from the Keeyask reservoir in 2022 have increased and were higher than values measured since 1999. Concentrations in jackfish and pickerel from the Keeyask reservoir in 2022 were below the predicted peak, and concentrations in whitefish were slightly higher than the predicted peak. Results in 2022 show there has been no measurable change to mercury concentrations in Stephens and Split lakes caused by the Keeyask Project to date.
- Mercury concentrations in wildlife (moose, beaver, muskrat, snowshoe hare) and plants were expected to remain low, with the exception of river otter.
 - 2022 TEMP annual report indicated mercury concentrations in aquatic furbearers sampled remained low, consistent with the EIS prediction, with the exception of river otter, however, this was predicted as river otter consumes fish.

9.2 Positive Audit Findings - General Observations

Based on WSP's review of available documents and interviews, the overall outcome of the audit was positive and Manitoba Hydro was able to meet the numerous environmental commitments during the Project construction. Manitoba Hydro's commitment to providing quality results and demonstrating a level of effort has contributed to the overall success of the Project. The following positive findings underscores Manitoba Hydro's dedication and proactive approach to fulfilling their commitments, as set forth in the EIS:

- The majority of documentation related to environmental commitments was well organized and readily available on the Keeyask Project website
- A cultural heritage handbook was created for workers on the project for easy identification of heritage resources. The handbook was easy to understand and pocket sized so it could be carried with workers while working on the project.
- Overall, less terrestrial habitat loss was observed than was anticipated in EIS.
- The adult Lake Sturgeon population in Stephens Lake increased significantly during the construction period which was not predicted in the EIS.
- During the interview, it was indicated by Mr. DeWit and Mr. Schmidt that Manitoba Hydro had installed and operated automated water level records at various monitoring sites. Various parameters were monitored, including turbidity, total organic compound, dissolved organic compound, and particulate organic compound.
- Documentation from the 2021-2022 Environmental Protection Plan Annual Report indicates that raptor stick nests were not relocated as part of the Project. Five bald eagle nest platforms were built and installed to replace the nests that were removed.
- According to Manitoba Hydro personnel, the Project Archaeologist established and maintained a record of discovered/disturbed heritage objects. Additionally, the Keeyask Heritage Archaeological Guidebook was developed, showcasing a collection of archaeological sites and artifacts gathered between 2001 and 2019, and posted on the Keeyask website.
- Documentation from the 2021-2022 Environmental Protection Plan Annual Report states that fish salvage activities occurred during open-water periods each year between 2014 and 2019. In total, a reported approximately 82,000 fish were rescued, with an estimated 95% or greater survival rate.

The Project site visit was completed on October 25, 2023, by Jamie Ziegler and Christa DeBlaere from WSP. The Project site visit included a tour of select areas by helicopter and vehicle.

During the site visit, several observations were made that indicates that Manitoba Hydro has made progress in fulfilling its commitments or is actively in the process of meeting its commitments. The following are general observations/positive findings that relate to the Project site visit:

- Visual observation of on-going revegetation efforts within temporary Project footprint. Native plants were observed and reported to be used. According to Site representatives, a total of 1,065,040 trees have been planted over an area of 87 hectares, on areas that were no longer required for construction, since 2016.
- Visual observation of the development of a cemetery for reburial of human remains found during Project studies and development.
- Visual observation of area of future wetland development. However, construction had not started at the time of the site visit.
- Visual observation of boat launch with rest area.
- Visual observations of Keeyask communication products; Safe Catch signage (mercury-level guide to eating fish from Stephens Lake; fish consumption recommendations) were installed at the Stephens Lake boat launch area.
- Visual observation of a constructed island (for colonial waterbirds) developed in the new reservoir in relatively close proximity to the Generating Station.
- Decommissioning of temporary project structures were observed, which included the removal of equipment, construction camp, fuel tanks, although this was reported to be on-going. A number of areas have been decommissioned, areas included, but not limited to the remediation of Work Area C (Area 51, Service Bay Laydown).

10.0 SUMMARY AND CONCLUSIONS

Based on the observations and findings of the 2023 Environmental Audit, and with regard to the objectives of the audit, we offer the following conclusions:

- 1) The 2023 Environmental Audit has not identified any major or minor non-conformance findings and identified one opportunity for improvement and several positive findings.

11.0 QUALIFICATIONS OF THE AUDITORS AND PROJECT TEAM

Adam Forrest, B.Sc., EP – Lead Auditor

Mr. Forrest is a Senior EHS Compliance Auditor located in WSP's Mississauga Ontario office specializing in environmental, health and safety compliance, environmental emergency planning and EHS program development. Adam has over 13 years of experience providing environmental and health and safety consulting services to various sectors including automotive, pharmaceutical, aerospace, food and beverage and waste management. With a focus on industrial and manufacturing sectors, Adam has a great deal of experience identifying and solving compliance issues over a range of areas such as wastewater effluent, storage tanks, air approvals and permitting, hazardous waste management, transportation of dangerous goods, chemical storage, and spill control.

Adam has completed more than 100 environmental and health and safety compliance audits while working in the consulting industry. These audits varied in size and complexity and involved a combination of site and desktop evaluation. Leading and supporting audit teams are Adam's primary responsibility as he has the ability to identify and help solve unique environmental and health and safety compliance issues. Adam is a certified ISO 14001 lead auditor and certified Environmental Practitioner (EP).

Hemant Agnani, EP(EMSLA), SCR, SEA, CSRP – Technical Reviewer

Mr. Agnani is a GRI certified Sustainability Professional and certified Environmental Professional with specialization as an Environmental Management System (EMS) Lead Auditor [EP (EMSLA)] under ECO Canada and has more than sixteen years of Canadian and international Environmental, Health, Safety (EHS) and Sustainability experience. Mr. Agnani is passionate about providing EHS/ESG assurance/consulting services & building client's capacity to manage sustainability risks and opportunities. Mr. Agnani has been involved in guiding his clients identify material EHS and sustainability issues impacting various stakeholders, during the life cycle of various projects and developing project KPIs for reporting to the project stakeholders.

Mr. Agnani is involved in building relationships with internal and external interested parties for business development opportunities and assessing client satisfaction, leading implementation of various assurance programmes based on ISO 9001, ISO14001 and ISO 45001 standards, training team members and clients, and reviewing project deliverables for the Americas, Europe, and China as well.

Doug McNeil – Senior Technical Reviewer

Doug is a senior level consultant with more than 25 years of experience in strategizing and managing Environmental, Health, Safety (EHS) and Environment Social Governance (ESG) programs and projects. Doug has established a tested and trusted ability to design and implement systems that provide organizations with a level of assurance that risks and obligations are managed efficiently.

Doug has led numerous national & international EHS/ESG compliance audits, due diligence engagements, permitting projects and risk assessments pursuant to legal requirements and various standards, including ISO 14001 & 45000, Canadian Labour Codes, Equator Principles, International Finance Corporation Performance Standards and World Bank Safeguard Policies. Mr. McNeil has extensive experience in the extractive, metals, government, health care, pharmaceutical, manufacturing, energy, transportation, and infrastructure sectors.

Jamie Zeigler – Audit Technical Support

Jamie Ziegler is an Environmental Scientist with 13 years of environmental experience. She received a Bachelor of Science with a double major in Physical Geography and Environmental Sciences at the University of Winnipeg. Jamie has professional consulting experience in the environmental assessment process (federal, provincial, and municipal) and various projects, including socio-economic analysis, land-use planning, and environmental management with clients in a variety of sectors, including hydro-electric, agriculture and government. She has been a key contributor to socio-economic baseline reports, technical reports, and environmental impact assessments.

Jamie is experienced in the interpretation and application of various provincial and federal environmental acts and regulatory criteria/guidelines for assessing water and soil quality. Jamie has over eight years' experience performing Phase I Environmental Site Assessments for clients throughout Manitoba, Ontario, and Saskatchewan.

Christa Deblaere – Audit Technical Support

Christa is an environmental technologist and project manager with over fourteen years experience in environmental consulting and five years experience as an Environmental Specialist with the Winnipeg Airports Authority. Under her direction, environmental site assessments have been conducted at numerous sites across Manitoba, northwestern Ontario, and Yellowknife, Northwest Territories.

Projects directed by Christa have included Phase I, II, and III Environmental Site Assessments and the remediation of commercial properties. She has supervised assessments of numerous sites with various contaminants and also has experience with regulatory requirements that pertain to environmental components of the aviation industry and permitting of federal and provincial projects.

12.0 LIMITATIONS

This report was prepared for the exclusive use of Manitoba Hydro, the KHLP, and the Province of Manitoba. It is intended to provide the results of WSPs review of compliance with commitments related to the Keeyask Generation Project. It is based on information obtained and interviews conducted from October 31, 2023, to November 2, 2023, including discussions with project personnel, as described in this report. WSP has relied in good faith on information provided by individuals noted in this report. We assumed that the information provided is factual and accurate. Except where noted, WSP did not undertake independent confirmation of such information. We accept no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third parties. Should additional parties require reliance on this report, written authorization from WSP will be required. This letter report, which includes appendices, must be considered in its entirety.

The agreed to scope of work is prescribed in WSP's proposal to conduct the Environmental Audit (WSP Ref. # WPG2023.327), approved by Manitoba Hydro on September 26, 2023. By its very nature, the findings of an assessment like this are limited based on the selection of an audit sample and the evaluation of the sample results. As such, it is quite possible that not every issue of non-compliance or potential non-compliance has been identified by this review. Sample selection was based on the auditor's sound and seasoned judgment. No soil, water, liquid, gas, product, building material or chemical sampling and analytical testing at or in the vicinity of the

subject property was conducted as part of this assessment. The scope of WSP's review is outlined in this report. The review does not constitute a full environmental regulatory compliance audit or management system audit.

WSP disclaims responsibility for any real or perceived consequential effects related to: the ability to obtain financing; the ability to sell assets; any reduction in the asset value or the ability to obtain approvals of any kind and/or any inability to use the assets for any purpose as a result of reporting the information contained in this report. WSP will also not be responsible for any requirements for follow-up actions and costs.

The findings of this report are based exclusively on conditions observed at the time of the Project site visit, interviews and/or on information supplied by Manitoba Hydro, as described in this report.

Signature Page

WSP Canada Inc.

Prepared by



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APPENDIX A

Audit Protocol

Keeyask Audit Protocol

Track #	Environmental Component and Other Topics	Valued Environmental Component or Supporting Topic	Document Title	Location (Page Section)	Criteria (Regulatory, PLAA) Commitment / Assumption / Prediction
1	Physical Environment	Surface Water	Physical Environment Monitoring Plan	2.0: Surface Water and Ice Regimes 2.1.1: Water Levels 2.2.1.1: Monitoring Methods 2.2.1.2 Location, Frequency and Duration	Manitoba Hydro will install and operate automated water level recorders at the monitoring Sites listed below to obtain hourly water level data throughout the year during construction. Water levels will be monitored continuously throughout the year during the construction period at the following locations: <ul style="list-style-type: none"> • Clark Lake (upstream of outlet), • downstream of Clark Lake outlet, • upstream of Birthday Rapids, • downstream of Birthday Rapids, • upstream end of Gull Lake, and • upstream of Gull Rapids.
2	Physical Environment	Ice Regime	Physical Environment Monitoring Plan	2.0: Surface Water and Ice Regimes 2.2.4: Ice Regime 2.2.4.1: Monitoring Methods	The spatial extents of the ice cover will be visually identified from satellite imagery that is freely available from internet databases (e.g., Landsat). Satellite imagery will be supplemented with visual observations (photographs) from the Project area.
3	Physical Environment	Shoreline Erosion Process	Physical Environment Monitoring Plan	3.0: Shoreline Erosion and Reservoir Expansion 3.2: Construction Period 3.2.1.1: Monitoring Methods	The PEMP monitoring of shoreline erosion during construction will consist of mapping the shoreline position (edge of peat for peat shorelines, top-of-bluff for mineral banks) prior to the start of construction and before full impoundment of the reservoir. High-resolution satellite imagery to be obtained before construction and impoundment will be used to identify the shoreline position at each time. The pre-construction and pre-impoundment shorelines will be compared to determine if any substantial changes in shoreline positions occurred during construction prior to impoundment.
4	Physical Environment	Sedimentation	Physical Environment Monitoring Plan	4.0: Sedimentation 4.2.1: Continuous Turbidity Monitoring 4.2.1.1: Monitoring Methods	Turbidity will be monitored continuously in addition to discrete turbidity and suspended sediment sampling to provide a more complete picture of the range of variation in water transparency over an extended period. Where possible, discrete (in-situ) water samples will be obtained at the 20% and 80% depth locations in the water column as measured from the surface. Samples will be shipped to an accredited lab to test for: <ul style="list-style-type: none"> • TSS, and • Grain size distribution of suspended sediment. The construction period monitoring will include measuring the following parameters to provide additional pre-impoundment data: <ul style="list-style-type: none"> • total organic carbon (TOC), • dissolved organic carbon (DOC), • particulate organic carbon (POC),
5	Physical Environment	Sedimentation	Physical Environment Monitoring Plan	4.0: Sedimentation 4.2.3: Bed-Load Monitoring 4.2.3.1: Monitoring Methods 4.2.3.2: Location, Frequency and Duration	Bed-load monitoring will be performed along a transect perpendicular to the main flow at two locations (Map 4-1): <ul style="list-style-type: none"> • near the entrance to Gull Lake, and • near the entrance to Stephens Lake. During construction two types of monitoring methodologies will be used consistent with the methodologies employed during Keeyask baseline monitoring, which include: <ul style="list-style-type: none"> • measuring partial pressures of carbon dioxide (pCO₂) and methane (pCH₄) in surface water, and • directly measuring the flux (release) of CO₂ and CH₄ from surface water to the atmosphere. These measurement techniques provide multiple lines of evidence for documenting aquatic GHG emissions prior to flooding and creating the Keeyask reservoir.
6	Physical Environment	Climate Air Quality	Physical Environment Monitoring Plan	5.0: Greenhouse Gas 5.2: Construction Period 5.2.1: Monitoring Methods	During construction two types of monitoring methodologies will be used consistent with the methodologies employed during Keeyask baseline monitoring, which include: <ul style="list-style-type: none"> • measuring partial pressures of carbon dioxide (pCO₂) and methane (pCH₄) in surface water, and • directly measuring the flux (release) of CO₂ and CH₄ from surface water to the atmosphere. These measurement techniques provide multiple lines of evidence for documenting aquatic GHG emissions prior to flooding and creating the Keeyask reservoir.
7	Resource Use	Domestic Fishing Domestic Hunting and Gathering	Resource Use Monitoring Plan	2.0: Monitoring Activities 2.1: Methods	Determine if the workforce is hunting, fishing or gathering resources within or outside the Project site and to an extent that would adversely affect domestic resource use. Regular construction phase monitoring will document resource harvest conducted by the Project workforce. A survey will be developed to document fishing, hunting, and plant gathering activities that may be conducted by the workforce.
8	Resource Use	Domestic Hunting and Gathering	Resource Use Monitoring Plan	2.0: Monitoring Activities 2.1: Methods	Document any changes to moose and caribou licence demand, harvest patterns, and, if feasible, quantify harvest data. To document any changes to demand for moose and caribou licences, changes in hunting patterns and harvest, data collection will occur during three periods: <ul style="list-style-type: none"> • Once in the first year of construction; • Biennially during construction; and "... an interview will be conducted with MCWS (now MEC) Northeast Region Wildlife Manager... which will update information on existing demand for resident, non-resident, and foreign resident moose licenses and demand for resident caribou licences in the region."

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9	Resource Use	Domestic Fishing	Resource Use Monitoring Plan	2.0: Monitoring Activities 2.1: Methods	Document any changes to licensed fish harvest patterns and fishing intensity. Data collection will occur during three periods: •Once in the first year of construction; •Biennially during construction; and "... an interview will be conducted with the MCWS Northeast Region Fisheries Manager. The first interview will update information on existing licensed fishing location and harvest (if available). Interviews conducted during the construction phase will seek information on changing locations of licensed fishing and harvest (if available)."
10	Resource Use	Domestic Hunting and Gathering	Resource Use Monitoring Plan	2.0: Monitoring Activities 2.1: Methods	"Objective 4: To summarize resource use access requests and collect voluntary harvest information from authorized resource harvesters. Resource use requests will be documented on a monthly basis by the Keeyask Generating Station site liaison officer and provided annually for use in this RUMP. Voluntary harvest information will be requested at the gate from the authorized resource harvester as they exit the Project site and included in the monthly reports."
11	Socio-Economic	Employment Opportunities	Socio-Economic Effects Monitoring Plan	2.0: Economy 2.1: Employment and Training Opportunities 2.1.1.1: Construction	The majority of available Project employment will occur during the construction period. Monitoring, through Manitoba Hydro's existing tracking systems, will include the following: • Track total opportunity available, including the amount (e.g., total person years) and type (e.g., job classification) of work available, and the total number of hires and total number of employees. Data will be broken down by KCNs, CBN region, Aboriginal, non-Aboriginal, northern, and Manitoban. ☑ Track both on-site construction employment and direct Project-related community-based employment (e.g., for community-based job referral employment). ☑ Track rates of turnover for site employees during the Project construction phase. • Collect trainee status of site contractor employees, including information on trainee participation in HNTI pre-project training, trainee designation and apprenticeship level at the point of hire, at the point of separation and at any point during employment when reclassification occurs.
12	Socio-Economic	Business Opportunities	Socio-Economic Effects Monitoring Plan	2.0: Economy 2.2: Business Opportunities 2.2.2.1: Construction	Monitoring will include the following: • Track purchases made by the Partnership through Manitoba Hydro's existing accounting and tracking systems. ☑ Data will be collected on the value of purchases made, as well as the breakdown of those purchases between KCNs, Aboriginal, northern and other businesses.
13	Socio-Economic	Business Opportunities	Socio-Economic Effects Monitoring Plan	2.0: Economy 2.2: Business Opportunities 2.2.2.1: Construction	A KPI program of key participants involved in management of the DNCs will also be undertaken to understand the role of KCNs businesses in implementing the DNCs and how the DNCs contribute to building KCNs business capacity.
14	Socio-Economic	Income	Socio-Economic Effects Monitoring Plan	2.0: Economy 2.3: Income 2.3.2.1: Construction	Monitoring, through Manitoba Hydro's existing accounting and tracking systems, will provide an estimate of the labour income generated by the Project for on-site workers based on person-hours of employment generated by the Project and applicable wage rates. Labour income will be broken down by the KCNs, CBN region, Aboriginal, non-Aboriginal, northern, Manitoban, and non-Manitoban workers.
15	Terrestrial Environment	Priority Plants	Terrestrial Effects Monitoring Plan	1.5: TEMP Components and Related Programs 1.5.1.2: Terrestrial Plants	Pre-clearing rare plant surveys will be conducted in areas within the Project Footprint that were not previously surveyed to determine the presence or absence of provincially rare to very rare species.
16	Terrestrial Environment	Priority Plants	Terrestrial Effects Monitoring Plan	1.5: TEMP Components and Related Programs 1.5.1.2: Terrestrial Plants	During construction, monitoring of the introduction and spread of invasive plants will be undertaken to verify implementation of mitigation measures, and evaluate the need for further control measures.
17	Terrestrial Environment	Ecosystem Diversity Intactness	Vegetation Rehabilitation Plan	2.0: Goals, Objectives and Commitments 2.3: Rehabilitation Commitments	Rehabilitation will be planned and implemented to fulfill the commitments and EAL requirements. The KHLP made the following commitments related to rehabilitation with respect to the Projects: • Reclamation (decommissioning & site preparation) measures and vegetation species selection will be undertaken as determined by regulatory requirements, site conditions and management objectives. Consideration will be given to feasibility, practicality, effectiveness and management requirements; • Rehabilitation measures will give preference to rehabilitating the most affected priority habitats using approaches that "go with nature"; • Construction areas that are not required for operation will be decommissioned and rehabilitated, where practicable; • Revegetation efforts will commence in an area when it is confirmed that it is no longer needed for construction; • As soon as is practicable, permanent access road slopes and disturbed areas will be seeded to produce low vegetation ground cover; • Except for existing resource-use trails, Project-related cutlines and trails will be blocked where they intersect the Project Footprint, and the portions of these features within 100m of the Project footprint will be revegetated to minimize the risk of invasive plants, accidental fire and other access-related effects; • Reclamation and re-vegetation programs will be initiated for the vacated sites and borrow sites to control/prevent erosion, re-establish wildlife habitat, and create buffer zones; • Tree and tall shrub propagules used for rehabilitation will be of local provenance. Most other propagules will also likely be of local provenance since the majority will come from stockpiled materials that are later spread; • Where seeding is used as a rehabilitation or erosion control measure, the seed mixture will only contain native species and/or non-invasive introduced plant species; • Access road slopes and disturbed areas will be rehabilitated with native plants with low quality food value for caribou, black bear, moose, and small mammals, where practicable, to minimize attraction and the risk of collisions and harvest opportunities; • Temporarily cleared areas and excavated materials placement areas will be rehabilitated to native habitat types, where feasible, to improve caribou and small mammal habitat; • With consideration of other planned rehabilitation measures (e.g. revegetation efforts within temporary Project footprint components), some areas of open and flat habitat will be retained at locations deemed to be suitable nesting habitat for common nighthawks; and • Temporary Project footprints will be rehabilitated to provide enhanced prey availability to raptors inhabiting the Keeyask Area.

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18	Terrestrial Environment	Ecosystem Diversity Wetland Function	Vegetation Rehabilitation Plan	2.0: Terrestrial Plants, Habitat and Ecosystem 2.1: Wetland Development 2.1.3: Mitigation Details 2.1.3.1: Location	The future dewatered area, located downstream of the south dam, at the outfall of Gull Rapids Creek, was selected to develop the wetland habitat. Developing the marsh wetland in the future dewatered area was noted to provide the greatest functional use as an educational area for local communities due to the high level of accessibility. Development of the marsh wetland in this area was also identified to reduce the overall Project footprint (as it would need to be rehabilitated following Project construction, and using this area would prevent additional disturbance of other existing wetland habitats that were assessed for potential enhancement) and was the most technically feasible, cost-effective location.
19	Terrestrial Environment	Amphibians	Terrestrial Mitigation Implementation Plan	3.0: Amphibian Mitigation 3.1: Retention of Woody Debris 3.1.3: Mitigation Details 3.1.3.1: Location	Slash piles and woody debris will be placed in areas having potential to support amphibians. Potential areas identified for slash pile mitigation include decommissioned borrow areas and rock quarries located outside of the future reservoir area. These areas will be selected after their potential to retain water (i.e., forming amphibian breeding habitat over the long-term) is ascertained. Identification of potential areas will be done through the construction-phase amphibian monitoring program under the TEMP.
20	Terrestrial Environment	Gulls & Terns	Terrestrial Mitigation Implementation Plan	4.0: Bird Mitigation 4.1: Colonial Waterbird Habitat 4.1.2: Project Effects and Mitigation	The following measures will be implemented to offset the loss of colonial waterbird nesting habitat during the construction phase: • Artificial nesting platforms for terns; and • Development of new gull nesting habitat. The following measures will be implemented during the construction phase to offset the loss of colonial waterbird nesting habitat during the operations phase: • Building up an existing island so it provides a suitable nesting island following reservoir impoundment; and • Clearing of vegetation on an existing treed island near Birthday Rapids, to provide a suitable nesting island.
21	Terrestrial Environment	Bald Eagle	Terrestrial Mitigation Implementation Plan	4.0: Bird Mitigation 4.3: Raptor Habitat Replacement 4.3.3.2: Project Effects and Mitigation	Land clearing for the development of the Project will result in the loss of some potential raptor perching and/or nesting habitat. It is anticipated that Project clearing will require the removal of up to eight raptor nests located along the shores of the Nelson River (Map 7). The exact number and location will be verified by an aerial nesting survey conducted annually in July during each year that Project clearing occurs. As nests are removed by Project development, alternate sites for nest replacement will be identified.
22	Terrestrial Environment	Bald Eagle	Terrestrial Mitigation Implementation Plan	4.0: Bird Mitigation 4.3: Raptor Habitat Replacement 4.3.3: Mitigation Details 4.3.3.2: Nest Platforms	All raptor nests that are observed to be active in a given year through annual summer aerial surveys (done through the TEMP), and are subsequently removed by Project development, will be replaced with artificial nest platforms in appropriate sites along the Nelson River shorelines. Sites for replacement nests will be determined in consultation with Manitoba Conservation and Water Stewardship (MCWS).
23	Terrestrial Environment	Olive Sided Flycatcher	Terrestrial Mitigation Implementation Plan	4.0: Bird Mitigation 4.4: Olive-Sided Flycatcher Habitat Replacement 4.4.3: Mitigation Details	Perching structures will be installed in open, decommissioned Project areas such as borrow or quarry areas that have permanent ponding present within them. Between 5 and 10 perching poles will initially be installed, and monitoring will help to determine whether any additional structures should be added throughout the construction phase. The design of the perching poles will include sizing the platform in a manner such that raptors are unlikely to use them (i.e., smaller in size).
24	Terrestrial Environment	Olive Sided Flycatcher	Terrestrial Mitigation Implementation Plan	4.0: Bird Mitigation 4.4: Olive-Sided Flycatcher Habitat Replacement 4.4.3: Mitigation Details	Once borrow and quarry areas are no longer required for the Project, they will be reviewed for their potential suitability for the installation of perching structures. Use of the structures by olive-sided flycatcher, as well as any newly created olive-sided flycatcher habitat in the Project area, will be monitored and documented through the TEMP; if this measure is observed to be beneficial to olive-sided flycatcher, it may be expanded to other areas within the Project footprint. There is no planned maintenance for these structures.
25	Terrestrial Environment	Common Nighthawk	Terrestrial Mitigation Implementation Plan	4.0: Bird Mitigation 4.5: Common Nighthawk Habitat Replacement 4.5.3.2: Construction and Installation	Delineating areas for common nighthawk habitat restoration will occur following borrow area and quarry decommissioning. At this time, location and layout of areas retained for nighthawk habitat will be determined in conjunction with the Project bird biologist, with consideration of other borrow area mitigation measures, including revegetation plans for these areas. Any areas identified for common nighthawk habitat restoration will be clearly identified in the overall revegetation strategy, as outlined in the Keeyask Generation Project Vegetation Rehabilitation Plan (VRP).
26	Socio-Economic	Community Health Mercury and Human Health	Mercury and Human Health Risk Management Plan	2.0: Goals 3.0: Engagement in Preparing the Risk Management Plan 3.1.1: Mercury and Human Health Technical Working Group 4.3.2: Preparation of Consumption Advice, Risk Information and Information about Benefits of Wild Foods	The KHL has identified the following overall goals for the Plan: • Mercury levels in individuals' bodies are maintained at appropriate levels (within a range considered 'safe' by federal and provincial agencies and for those who wish to participate, verified through hair monitoring); and • To support discussion and build understanding around mercury and fish that allows individuals and families to confidently assess and manage the benefits and risks associated with eating wild fish in the Project area. To support and enhance local practices of fishing for sharing, and eating wild-caught fish at levels that are healthy for all community members. The Technical Working Group had the following objectives: • To answer the Partner First Nations communities' and Manitoba Hydro's questions about mercury and human health in today's environment (i.e., pre-impoundment of Keeyask); • To answer the Partner First Nations communities' and Manitoba Hydro's questions about future mercury effects on human health if the Keeyask Generation Project were developed (i.e., post-impoundment), and ways to reduce those effects; and • To develop ways to effectively communicate with communities about what has been learned. The KHL is committed to communicating mercury risk to potentially affected people, and developing effective communication strategy and products that promote the safe consumption of wild food.
27	Socio-Economic	Community Health Mercury and Human Health	Mercury and Human Health Risk Management Plan	4.0: Risk Management Procedure 4.1.1: Monitoring of Mercury in Wild Foods 4.1.1.1: Monitoring of Mercury in Fish	Monitoring of mercury in wild food includes monitoring of fish through the Aquatic Environment Monitoring Plan. Other wild foods are monitored through the Terrestrial Environment Monitoring Plan as well as through a voluntary sampling program. The goal in monitoring mercury in wild foods is: • To understand the level of mercury in wild foods consumed by people in the Gull Lake and Stephens Lake areas as well fish obtained from offset lakes. Monitoring of mercury levels in fish will be undertaken at regular intervals from now through to the time that mercury concentrations are at their peak in Gull Lake and Stephens Lake (expected to occur three to seven years after impoundment in 2019) and until mercury levels return to pre-project levels or are considered stable at a new background level (anticipated to be 20 to 30 years).

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28	Socio-Economic	Community Health Mercury and Human Health	Mercury and Human Health Risk Management Plan	4.1.3: Mercury Hair Monitoring	The KHLP will make available voluntary mercury hair sampling in Partner First Nation communities during pre-and post-impoundment periods. The goals of hair monitoring are: <ul style="list-style-type: none"> • For individuals who wish to participate, to understand, and be able to confidently respond to mercury levels in their bodies (through hair sampling), now and after impoundment. • For the community as a whole, to understand mercury levels in participating community Members (through representative hair sampling), pre- and post-impoundment. • To have confidential hair monitoring results provided to individuals in a reasonable timeframe, in conjunction with education and nutrition counselling regarding what the results mean, and what to do if they are above safe levels (particularly for women of child-bearing age). • To act as one tool in the mercury and health “tool kit” to provide greater understanding of mercury in people today and after impoundment.
29	Heritage Resources	Heritage Resources Culture and Spirituality	Construction Heritage Resources Protection Plan	3.0: Reporting and Follow up	The Project Archaeologist will establish and maintain a record of report for each discovered or disturbed heritage object and of all human remains that will include the provenience, as well as a conservation and/or identification plan for the heritage resource or resources associated with each record. This is a requirement of The Heritage Resources Act.
30	Physical Environment	Debris	Reservoir Clearing Plan	2.0: Pre-Impoundment 2.1: Where to Clear 2.1.1: Reservoir Flooded Area	Reservoir clearing will involve the removal of specified vegetation from the area that will be inundated between the existing Nelson River shoreline and the location of the initial reservoir shoreline following impoundment. Two general boundaries were used to delineate the area in which clearing will be required and a clearing buffer around this area was defined, as described in Section 2.1.2.
31	Physical Environment	Debris	Reservoir Clearing Plan	2.0: Pre-Impoundment 2.2: What to Clear 2.2.1: Vegetation to be Cleared	Within the initial reservoir shoreline, all: a) standing dead and living trees 1.5 metres (5 feet) tall or taller, b) standing dead and living shrubs 1.5 metres (5 feet) tall or taller, c) fallen trees 1.5 metres (5 feet) or more in length with a diameter of 15 centimeters (6 inches) or greater at its largest point, and Within the reservoir clearing buffer area, all: d) standing dead and living trees 1.5 metres (5 feet) tall or taller. The preferred method for disposing of material is burning on site as clearing occurs for immediate disposal, although some material may be designated for salvage where practical.
32	Aquatic Environment	Water Quality	Sediment Management Plan for In-Stream Construction	3.0: Setiment Real-Time Monitoring Program	A detailed in-stream real-time TSS monitoring program will be implemented by the Manitoba Hydro construction management team throughout the course of construction to monitor the magnitude, spatial, and temporal changes in TSS increases in the Nelson River during in-stream construction activities. The monitoring program design is based on the modeling of construction effects on the sedimentation regime in the river, and recent experience by Manitoba Hydro on other hydroelectric construction projects. Overall, the design is based on an upstream and downstream approach to capture effects in the initial mixing zone as well as the effects downstream in the fully mixed area.
33	Heritage Resources Socio-Economic	Heritage Resources Travel Access & Safety	Waterways Management Plan	4.0: Program Activities 4.1: Program Activities: Phase 1	In each year of the four (4) year period after construction start and before impoundment, two (2) boat patrols, four (4) persons in total employed as Hydro seasonal employees, supplemented as required with local labour, including two (2) persons required for a winter ice trail crew, hired on a short-term basis through a local KCN Business, will: (a) operate a multi-purpose boat patrol, monitor waterway activities and liaise with individuals and groups using the Nelson River; (b) stabilize shoreline at sensitive streams using low impact techniques; (c) plan and implement protection and preservation measures using low impact techniques at high priority, spiritually and culturally significant, historical or heritage sites from Gull Rapids to Split Lake; (d) assist with the relocation of graves to sites not affected by Keeyask, in cooperation with involved Members; (e) construct and maintain a safety cabin; (f) cut and maintain trails and portages; and (g) install and monitor regularly the condition of safe ice trails and the nature and extent of their use.
34	Aquatic Environment	Fish Community	Fisheries Offsetting and Mitigation Plan	3.0: Design and Mitigation Measures 3.2: Mitigation Measures and Expected Effectiveness 3.2.1.2: Fish Salvage	Fish salvages will be conducted to mitigate effects associated with fish stranding in areas isolated by cofferdams. The number of fish that would be susceptible to stranding will be minimized by avoiding instream work during the spring and fall spawning periods, where practical. During construction, fish could also become trapped in isolated pools in the south channel after spilling ceases. When such an event occurs, a fish salvage operation will be conducted to catch and release any stranded fish back into the Nelson River.
35	Aquatic Environment	Fish Community	Fisheries Offsetting and Mitigation Plan	3.0: Design and Mitigation Measures 3.2: Mitigation Measures and Expected Effectiveness 3.2.2: Temporary Causeways to Borrow Sites	During construction, culverts with low internal water velocities (0.0–0.1 m/s) will be installed in the causeway to N-5 borrow area as mitigation to prevent the causeway from becoming a barrier to fish movements between Stephens Lake and the pond near Looking Back Creek. The G-3 causeway was also fitted with culverts that will be adequately sized to allow fish passage prior to construction of the causeway, to mitigate stranding fish in the confined/isolated portion of the bay to the west of the causeway.
36	Aquatic Environment	Walleye (and other fish)	Fisheries Offsetting and Mitigation Plan	4.0: Offsetting Plan 4.1.1: Downstream of Keeyask GS-Rocky Shoals at Causeway Locations	To offset the temporary loss of 0.21 ha of fish habitat at the N-5 causeway location, approximately 80% of the Class C1 rockfill material will be removed when access to N-5 is no longer required. The remaining 20% (approximately 2,200 m3) will be spread out locally over approximately 0.4 ha to create shallow rocky habitat for fish and other aquatic species. The newly created habitat will improve diversity at this otherwise low diversity, bedrock substrate habitat.
37	Aquatic Environment	Walleye (and other fish)	Fisheries Offsetting and Mitigation Plan	4.0: Offsetting Plan 4.1.1: Downstream of Keeyask GS-Rocky Shoals at Causeway Locations	Similarly, the temporary loss of 0.81 ha of fish habitat at the G-3 causeway location, once it is no longer required, will be offset by using approximately 20% of the Class C1 rockfill (approximately 6,340 m3) to create approximately 1.3 ha of shallow rocky habitat for fish and other aquatic species. The newly created habitat will provide habitat diversity in an area that is comprised mostly of low-diversity, silty substrate habitat.
38	Aquatic Environment	Lake Whitefish Walleye	Fisheries Offsetting and Mitigation Plan	4.0: Offsetting Plan 4.1.2: Keeyask Reservoir - Spawning Shoals Page 33 - 34	The construction of rocky shoals within lacustrine portions of the reservoir would increase the certainty that Lake Whitefish and Walleye spawning habitat is available early in the development of the reservoir environment. The creation of boulder/cobble/gravel habitat would, in addition to providing spawning habitat, also provide rearing and foraging habitat, thereby improving habitat diversity within the newly-formed reservoir. Rocky shoals will be developed to provide 3 ha of spawning habitat for Walleye and Lake Whitefish on the preferred sites shown on Map 4 - B of the Fisheries Offsetting and Mitigation Plan.

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39	Aquatic Environment	Lake Sturgeon	Fisheries Offsetting and Mitigation Plan	4.0: Offsetting Plan 4.1.3: Keeyask Reservoir - Hydraulic Features Near Birthday Rapids 4.1.3.1.1: Contingency Measures and Associated Monitoring	Monitoring will be implemented to determine the success of Lake Sturgeon spawning in the reach of the Nelson River between Long Rapids and Birthday Rapids. This monitoring is described in detail in the AEMP.
40	Aquatic Environment	Lake Sturgeon	Fisheries Offsetting and Mitigation Plan	4.0: Offsetting Plan 4.1.5: Downstream of the Keeyask GS - Tailrace Spawning Shoal	Phase 1 Lake Sturgeon spawning habitat will be constructed below the powerhouse during construction of the generating station. The proposed location of the constructed spawning habitat is shown on Map 4 - D of the Fisheries Offsetting and Mitigation Plan. Key features to this spawning habitat are a minimum substrate thickness of 0.6 m (with 0.1–0.6 m diameter rock) and water depths of 1–10 m. Under this initiative, micro spawning sites will be created by placing three (1 m to 2 m diameter) boulders in V-shape (upstream chevron) clusters. Construction of Phase 1 habitat would occur “in-the-dry” to avoid many of the potential serious effects to fish that are associated with instream construction.
41	Aquatic Environment	Lake Sturgeon	Fisheries Offsetting and Mitigation Plan	4.0: Offsetting Plan 4.1.7: Stocking Lake Sturgeon	The initial phase of the stocking plan described in this document began in 2013/2014 and will occur over a ten year period. At present, it is anticipated that stocking will occur for at least one full generation (25 years) to restore the historically depleted population and may continue longer, until a self-sustaining population is achieved. It should be noted that the Environment Act Licence issued for the Project requires that a stocking plan be developed for 50 years or until a self-sustaining population is proven to be re-established, with the provision to resume stocking at any time if the Lake Sturgeon population declines as a result of the Project until the Project is decommissioned, or as otherwise approved by the Director of the Manitoba Conservation and Water Stewardship Environmental Approvals Branch. The KHLP has committed to continue to stock until a self-sustaining population is achieved; however, at this time it is not possible to provide a detailed description of activities in the future since the appropriate approach will depend on results obtained in the first ten years. Specific stocking activities will be determined annually and will reflect results from previous years and conditions for that year. The KFRRC(Keeyask Fisheries Regulatory Review Committee) (which will undertake the role of the Lake Sturgeon Advisory Committee described in the Environment Act Licence) may decide to modify this plan. Annual spawn collection and release of fish will be determined with MCWS based on Live Fish Handling permits issued by MCWS.
42	Aquatic Environment	Lake Sturgeon	Fisheries Offsetting and Mitigation Plan	4.0: Offsetting Plan 4.1.7: Stocking Lake Sturgeon 4.1.7.1: Stocking Areas and Frequency	Stocking will be conducted in three general areas: 1. Upper Split Lake Area: which includes the Burntwood River between First Rapids and Split Lake; the Nelson River between the Kelsey GS and Split Lake; and the Grass River between Witchai Lake Falls and the Nelson River; 2. Keeyask reservoir: presently the reach of the Nelson River between Clark Lake and the Keeyask GS; and 3. Stephens Lake: the area between the Keeyask GS and the Kettle GS. Suitable habitat for juvenile sturgeon is currently present in all three areas. It is predicted that suitable habitat will be present after Project construction; in the event that it is not present, contingency plans have been developed for its creation (Keeyask reservoir).
43	Terrestrial Environment	Birds	Avian Management Plan	2.0: Proposed Avian Mitigation Measures 2.1: General Avian Mitigation Measures	• Implement avian awareness training for Project workers;
44	Terrestrial Environment	Birds	Avian Management Plan	2.0: Proposed Avian Mitigation Measures 2.1: General Avian Mitigation Measures	• Discuss avian issues at construction meetings as issues arise;
45	Emergency Response & Preparedness Accidents & Malfunctions		Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	5.0: Contractor Developed Environmental Plans 5.1: Spill Response Plans	Prior to construction, the contractor will prepare a Project-specific spill response plan including prevention planning and response for hazardous material spills. The contractor is responsible for all spills in their work areas. All spills will be reported to the Construction Manager or delegate and regulators as required. The contractor will appoint a Spill Response Coordinator for their work areas. Site clean-up and disposal of contaminated material will be managed as stated in the contractor's Spill Response Plan and Waste Management Plan in consultation with the Site Environmental Lead and the Construction Manager or delegate.
46	Emergency Response & Preparedness		Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	5.0: Contractor Developed Environmental Plans 5.2: Waste Management Plan	Inventories of all solid waste exiting the site for final disposal must be kept. Confirmation of final destination must be recorded on inventory sheets, along with the date and amounts. These records must be provided to the Construction Manager or delegate on a monthly basis.
47	Terrestrial Environment	Bald Eagle	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.0: Environmental Protection Measures 7.2: Fish, Wildlife and Terrestrial Habitat Protection	A plan for how raptor's nests will be relocated will be developed on a case by case basis by the Environmental Licensing and Protection Department for approval by the Conservation Officer (Manitoba Sustainable Development, Regional Wildlife Manager (Manitoba Sustainable Development)).
48	Terrestrial Environment	Mammals	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.0: Environmental Protection Measures 7.2: Fish, Wildlife and Terrestrial Habitat Protection	The presence of black bear, gray wolf and wolverine dens (either occupied or unoccupied) encountered during Project construction will be reported to the Site Environmental Lead, who will report the information to the regional Conservation Officer (Manitoba Sustainable Development), Regional Wildlife Manager (Manitoba Sustainable Development) and the Environmental Licensing and Protection Department. Where practicable, 100 metre buffers will be established around active gray wolf, black bear and wolverine dens within the Construction Phase Project Footprint to minimize the disturbance of animals. If a 100m buffer is not achievable an alternate plan will be provided to and discussed with Manitoba Sustainable Development on a case by case basis.
49	Terrestrial Environment	Caribou	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.0: Environmental Protection Measures 7.2: Fish, Wildlife and Terrestrial Habitat Protection	Caribou calving islands greater than 0.5 hectares in the reservoir area will be marked and left undisturbed from clearing activities. (These will remain above the water after flooding.)
50	Aquatic Environment Accidents & Malfunctions Emergency Response & Preparedness	Water Quality	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.5: Hazardous materials and Petroleum Products 7.5.2: Storage	1. All chemicals, fuels, and other harmful materials will be stored a minimum of 100 metres from a watercourse/body.

Track #	Environmental Component and Other Topics	Valued Environmental Component or Supporting Topic	Document Title	Location (Page Section)	Criteria (Regulatory, PLAA) Commitment / Assumption / Prediction
51	Aquatic Environment Accidents & Malfunctions Emergency Response & Preparedness	Water Quality	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.5: Hazardous materials and Petroleum Products 7.5.5: Refueling and Fuel Transfer	1. There will be no refueling of machinery, vehicles and equipment within 100 metres of a watercourse/body. If 100 metres cannot be attained, machinery, vehicles and equipment will be refueled in an approved fuelling area, in a contained manner, as approved by the Site Environmental Lead.
52	Aquatic Environment Accidents & Malfunctions Emergency Response & Preparedness		Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.5: Hazardous materials and Petroleum Products 7.5.6: Petroleum Product Tanks 5000 L (or greater)	1. Tanks will consist of all above ground double-walled tanks. 2. Tanks will be registered with Manitoba Sustainable Development. 3. Tanks will meet all standards and codes outlined in The Storage and Handling of Petroleum Products and Allied Products Manitoba Regulation, 188/2001. 4. The contractor will provide all valid documentation to the Construction Manager or delegate for all tanks. 5. Tanks will have a valid operating permit issued by Manitoba Sustainable Development. 6. The installation or removal of petroleum product storage tank systems identified in Manitoba Regulation, 188/2001 will only occur under the supervision of a registered licensed petroleum technician.
53	Terrestrial Environment Aquatic Environment	Wetland Function	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.9: Erosion and Sediment Control	3. Where construction activity occurs near open watercourses, erosion and sedimentation protection will be installed to limit erosion and sedimentation into waterbodies. 5. A 100 m setback will be left to any off-system marsh that is outside the Construction Phase Project Footprint. If the 100 m buffer cannot be achieved, a physical barrier such as clean fill and rock or a sediment (silt) fence to protect against erosion, siltation and hydrological alteration during construction will be implemented. 13. Stockpiled material will be located at least 100 metres from any watercourse/body or wetland, where practicable and will be surrounded by a berm if it contains a high fines content. 14. Borrow areas and excavated material placement areas located within 100 m of high quality wetlands will be fortified with erosion and sediment control measures to prevent damage to those features.
54	Accidents & Malfunctions Emergency Response & Preparedness	Water Quality	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.14: Staging Areas (for Equipment, Vehicles and Machinery)	1. All staging areas will be located at least 100 metres from any watercourse/body. 2. Staging areas will be sited (where practicable) on soils with a high weight bearing capacity and low permeability. 3. Equipment servicing will only be permitted in specified areas. Drip pans will be placed under machinery, vehicles and equipment during maintenance. 4. Spill containment equipment must be available at all refuelling and service areas within the staging area. 5. All machinery, vehicle and equipment washing will take place in a contained area within the staging area. Wash water will be either pumped into the settling pond(s), directed away from watercourses/bodies through dense vegetation or through filter cloths/bags and/or velocity dispersion devices.
55	Socio-Economic	The Way the Landscape Looks (Aesthetics)	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.25: Decommissioning and Rehabilitation	Construction areas that are not required for Project operations will be decommissioned and rehabilitated, where practicable. This includes borrow areas and quarries not required for operation of the station or access roads constructed for the Project.
56	Terrestrial Environment	The Way the Landscape Looks (Aesthetics)	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.25: Decommissioning and Rehabilitation	A full decommissioning and rehabilitation plan will be developed for review and approval by regulators prior to the end of construction. The plan will take into consideration the KCNs and provincial interests regarding the level of decommissioning, potential future use for the site(s) and revegetation.
57	Terrestrial Environment	The Way the Landscape Looks (Aesthetics)	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.25: Decommissioning and Rehabilitation	With respect to borrow pits and quarries, closure plans will be forwarded to Manitoba Mineral Resources and Manitoba Sustainable Development, as required.
58	Terrestrial Environment	The Way the Landscape Looks (Aesthetics)	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.25: Decommissioning and Rehabilitation	"With respect to decommissioning, it will include (but is not limited to): <ul style="list-style-type: none"> • Removal of equipment, fuel, chemicals, etc; • Removal of all Project structures, including roads, buildings, underground tanks, stockpiles and other features not required for site operation; • Blocking trails built for construction; • Collection and disposal of any remaining wastes, recyclables and hazardous materials; • Removal and disposal of survey tapes, stakes, and other markers; • Removal and disposal of temporary erosion and sediment control devices if they are no longer required; • Cleaning up areas of contaminated soils/sediment; • Closure of the landfill (if one is required); • Capping drinking water wells; • Removal and recycling of fire hydrants and above ground water mains/forcemain; • Cutting off buried watermains, forcemains and effluent discharge pipes, if not used for long-term operation, below the surface and sealing; • Removal of the mechanical sewage treatment facility and holding/septic tanks; and • Closing borrow areas and/or quarries not required for GS operations. "

Track #	Environmental Component and Other Topics	Valued Environmental Component or Supporting Topic	Document Title	Location (Page Section)	Criteria (Regulatory, PLAA) Commitment / Assumption / Prediction
59	Terrestrial Environment	The Way the Landscape Looks (Aesthetics)	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.25: Decommissioning and Rehabilitation	<p>With respect to rehabilitation, it may include:</p> <ul style="list-style-type: none"> • Rehabilitating temporary stream crossings to pre-existing condition; • Leaving borrow area walls at a maximum slope of 4:1, unless otherwise approved by Manitoba Hydro; • Spreading organic material, topsoil and subsoil that was stripped and piled separately from areas required for construction over decommissioned areas; • Placing barricades at access points to rehabilitated areas to promote rehabilitation success; • Areas that require seeding to assist rehabilitation will be seeded with a mixture that only contains native and/or non-invasive introduced plant species (e.g., will not contain sweet clover, alfalfa or other invasive species), and of low quality food value for mammals; • Seed mixes selected for revegetation efforts will be approved by Manitoba Hydro prior to use; and • Seed mixtures used for rehabilitation will be obtained from commercial suppliers and will meet the requirements of the Canada Seeds Act for Certified Canada #1 seed for certified cultivars or Canada Common #1 for common cultivars. Commercial seed suppliers will provide seed analysis certificates verifying that the number of noxious seeds will not exceed the following limits per 25 grams for species listed by the Weed Seeds Order: 0 prohibited weeds, 0 primary noxious weeds, 1 secondary noxious weed, 25 total noxious weeds. • Landscaping borrow areas and/or quarries, where practicable, and depending on the planned future use for the site and the size of the excavation, to promote drainage and revegetation;
60	Terrestrial Environment	Ecosystem and Habitat	Generating Station Environmental Protection Plan South Access Road Environmental Protection Plan	7.25: Decommissioning and Rehabilitation	<ul style="list-style-type: none"> • Spreading organic material/seeding/planting tree seedlings in other appropriate areas; • The excavated material placement areas outside of the dyke lines will be gently sloped; • Site preparation, if necessary, to re-establish vegetation. These activities may consist of scarification, grading and/or contouring (to stabilize slopes) and fertilizing;
61	Physical Environment	Debris	EIS	Part 3a of 7 Chapter 4: Project Description 4.3.3.1 Measures in Joint Keeyask Development Agreement	Reservoir Clearing and Waterways Management: In early negotiations with Manitoba Hydro, TCN insisted that the reservoir be cleared of timber. This principle became a plan in the JKDA and together with the Waterways Management Program, these were developed with KCNs to address issues around travel, access and human safety resulting from floating debris. Clearing the reservoir also addresses other issues including improving the aesthetics of the environment, encouraging fishing with nets and reducing the production of methylmercury. KCNs Members will be involved in boat patrols to manage floating debris, monitoring safe ice trails and liaising with users of the waterway.
62	Socio-Economic	Travel, Access and Safety	EIS	Part 3a of 7 Chapter 4: Project Description 4.3.3.2: Biophysical and Socio-Economic Mitigation Measures 4.3.3.2.4: Socio-Economic Environment	Upstream and downstream boat launches, including portages, will be developed around the generating station (addresses travel safety), as discussed in Section 4.6.13 and 4.7.8.
63	Heritage Resources	Heritage Resources	EIS	Part 3a of 7 Chapter 4: Project Description 4.3.3.2: Biophysical and Socio-Economic Mitigation Measures 4.3.3.2.6: Heritage Resources	Heritage resources that may be disturbed by the Project will be salvaged to enable long-term preservation of tangible heritage and to enhance public and local awareness through education kits, interpretive displays and other forms of culturalmedia
64	Heritage Resources	Heritage Resources	EIS	Part 3a of 7 Chapter 4: Project Description 4.3.3.2: Biophysical and Socio-Economic Mitigation Measures 4.3.3.2.6: Heritage Resources	A cemetery, prepared and consecrated for the reburial of human remains found during construction and operation of the Project, including a memorial marker, will be developed in an area selected by TCN, in consultation with other Project partners
65	Socio-Economic	Employment Opportunities	EIS	Chapter 4: Project Description 4.6.17.1: Employment, Hiring and Training	<p>The construction phase of the Project will provide employment opportunities for KCNs Members, residents of the Churchill, Burntwood and Nelson (CBN)1 area, northern Aboriginal residents, and other candidates.</p> <p>Total northern Aboriginal employment (including KCNs and CBN employment) is estimated (Socio-economic SV Section 3.4.1) to be in the range of 550 and 1,700 persons years of employment depending on the influence of factors such as a attraction to project jobs, availability for project employment and qualifications for meeting job requirements.</p>

APPENDIX B

Audit Plan

MANITOBA HYDRO

PROJECT NO. CA0013093.0565

2023 AUDIT PLAN FOR ENVIRONMENTAL COMPLIANCE AUDIT KEYYASK GENERATING STATION

CONFIDENTIAL



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PROJECT NO. CA0013093.056

2023 ENVIRONMENTAL AUDIT PLAN KEYYASK GENERATING STATION

REVISION HISTORY

FIRST DRAFT ISSUE	OCTOBER 18, 2023
SECOND DRAFT ISSUE	N/A
Prepared by Adam Forrest, B.Sc., EP Senior EHS Compliance Auditor	Reviewed and approved by Hemant Agnani, EP(EMSLA), SEA, CSRP Senior EHS Management Systems and Compliance Auditor

SIGNATURES

PREPARED BY



Adam Forrest, B.Sc., EP
Senior EHS Compliance Auditor

October 18, 2023



Hemant Agnani, EP(EMSLA)
Senior EHS Management Systems and
Compliance Auditor

October 18, 2023

WSP prepared this report solely for the use of the intended recipient, Manitoba Hydro in accordance with the professional services agreement. The intended recipient is solely responsible for the disclosure of any information contained in this report. The content and opinions contained in the present report are based on the observations and/or information available to WSP at the time of preparation. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. WSP does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report. This limitations statement is considered an integral part of this report.

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1 INTRODUCTION

WSP Canada Inc. (WSP) is pleased to present this audit plan to Manitoba Hydro for the execution of a third-party environmental audit of the Keeyask Generating Station Project to assess whether commitments made in the Environmental Impact Statement (EIS) and supporting information were met and to assess the accuracy of the assumptions and predictions in these documents.

2 AUDIT SCOPE

The physical scope of the Audit will include the Keeyask Generating Station Project footprint in addition to study and monitoring areas identified in the EIS. The period of time being audited is expected to be from approximately July 2014 to June 2022 which coincides with the construction period and completion of mandatory reporting requirements related to the construction phase for the Project. It is understood that despite Manitoba Hydro's extensive use of contractors, it is Manitoba Hydro that is ultimately responsible for commitment implementation and as such, the Audit scope will not include investigation/auditing of contractors. It is expected that the Audit scope will consider the primary the EIS commitments contained within Environment Act Licence No.3017 as well as other notable commitments within the EIS itself. The scope is expected to also include reviewing commitments, assumptions and predictions outlined in the following documents:

- Manitoba Environment Act Licence No. 3017
- CEAA (now Impact Assessment Agency of Canada) Public Registry
- EIS and supplementary filings and supporting documents
- Manitoba Hydro's Environmental Protection Plans, including documentation, inspection and business processes and procedures for implementation.

3 AUDIT CRITERIA AND OBJECTIVES

The objective of the Audit is to assess whether commitments made by Manitoba Hydro in the Environmental Impact Statement (EIS) and supporting information were met; and to assess the accuracy of the assumptions and predictions in these documents. review the relevant environmental aspects associated with Site operations, the legislative and regulatory requirements associated with these issues, and the apparent degree of compliance of Site operations with these requirements including current environmental licences and permits.

The review of documentation identified in Section 2 will form the basis of the audit protocol and checklists that will be used as Audit Criteria. The Audit Criteria will focus on key environmental commitments associated with Manitoba Environment Act Licence #3017, including commitments, assumptions and predictions that have been made within the EIS and supporting information. WSP will apply a risk assessment approach to identifying the EIS commitments to be audited (i.e., Audit Criteria) to ensure the Audit sample size is adequate and representative and to ensure the overall Audit Objective is met. It is expected that the audit will be divided into previously identified groupings of Valued Environmental Components (VECs) for the Project and other areas found within the EIS. These are grouped as follows:

- Physical Components
- Aquatics
- Terrestrial
- Socio-Economic

- Resource Use
- Heritage Resources
- Access
- Emergency Response and Preparedness (including spill response)
- Accidents and Malfunctions

4 STANDARD TO BE APPLIED TO THE AUDIT

The Audit will be conducted in accordance with the Canadian Standards Association Z773-17 *Environmental Compliance Auditing and ISO 19011:2018 Guidelines for Auditing Management Systems*, and will use an evidence-based approach to reach reliable and reproducible audit conclusions in a systematic audit process.

5 AUDIT METHODS

The Audit will be conducted in accordance with the approved Audit Plan. WSP will use an audit sample size that is representative of the total audit evidence available and that is proportional to the significance of the potential for and effect of noncompliance. Evidence collection and sample size will vary, as appropriate, based on the aspect audited. The Audit will be conducted and reported in English.

Specific tasks to be accomplished under this workplan include:

- Pre-audit/Site Visit Conference call/correspondence with Manitoba Hydro to confirm Site visit details including identification of key Manitoba Hydro personnel required for interviews and the logistics for travel to the audit sites;
- Review of background information and audit documentation to inform the audit criteria and assist with development of audit protocol and checklists;
- Development of Site-specific audit protocols and checklists;
- Field investigation of key facilities and project areas;
- Conduct the Site visit portion of the Audit with Manitoba Hydro's team, including:
 - opening meeting with key staff to discuss logistics and review objectives;
 - observations and interviews;
 - documentation review
- Evaluation of audit evidence to generate findings;
- Closing meeting with Manitoba Hydro to discuss the audit results and present a summary of the audit findings;
- Preparation and submission to Manitoba Hydro of a Draft Audit Report;

- Preparation and submission to Manitoba Hydro of a Final Audit Report.

The audit report will be exception-based, in that the report will only identify how project activities, as defined by the evidence provided, at the site deviate from the audit criteria. The audit report will include audit objectives and scope, audit criteria and methodology, listing of interviews conducted, listing of records reviewed, audit conclusions, summary tables of observation, findings and evidence and appendices. The audit report will outline the findings in a tabular format with clear and concise language indicating a description of the observation and referencing the applicable license, EIS or regulatory requirement related to the finding. The findings will be grouped into Major or Minor Non-conformances or Opportunities for Improvement. Audit findings will be accompanied by the necessary information for Manitoba Hydro to complete a root-cause analysis to determine required actions and the appropriate responsible party to address them. With respect to non-compliance issues, WSP will make reference to the applicable and relevant Audit Criterion (including document reference and section / sub-section reference).

6 AUDIT SCHEDULE

A field visit of the Project Area is expected to occur on October 25, 2023 with interviews to be conducted during the week of October 30, 2023. A general Audit Schedule has been provided in **Appendix A**. This Audit Schedule outlines the expected level of effort, time, and duration for major Audit activities. This Audit Schedule should be viewed only as a guideline for each day’s Audit activities.

Opening and closing meetings will be held with Manitoba Hydro as indicated in the Audit Schedule. Regular update meetings will be held with the Site’s environmental team at the end of each audit day. A pre-closing meeting will be held with the Site’s environmental team on the final audit day prior to the official closing meeting. The Audit team will hold a meeting with Manitoba Hydro to present a technical summary of the audit findings to ensure that the factual basis of the findings is clearly understood. This Closing Meeting will be held by conference call prior to the development of the Draft Audit Report. The Closing Meeting is expected to occur in November 2023.

7 TEAM OVERVIEW

WSP has assembled a highly qualified team for this audit. These individuals have extensive experience in consulting on a variety of compliance-related tasks for the industrial facilities. We have consistently demonstrated that we have the capabilities to perform this type of work for national and international firms in an efficient and cost-effective manner. To complete this Audit, we propose the following Team:

<i>Name</i>	<i>Audit Team Role</i>
Allyson Desgroseilliers	Project Manager/Client Liaison
Doug McNeil	Senior Auditor/Technical Reviewer
Adam Forrest	Lead Auditor
Hemant Agnani	Auditor
Jamie Ziegler	Auditor
Christa DeBlaere	Auditor

8 PROJECT TEAM AUDITEE AND INTERVIEWEE RESPONSIBILITIES

Responsibilities of Manitoba Hydro and interviewees include the following:

- Arrangement of right of access to and visitation of applicable Manitoba Hydro Sites and Keeyask Generating Station Project Area.
- Assisting with identifying interviewees pursuant to the subject areas identified in section 3.0 of this Audit Plan.
- Ensuring interviewees knowledgeable to the subject areas are made available to the Auditor.
- Arranging interview meetings.
- Providing the Auditor with documented information, as required, in a timely fashion.

9 STATEMENT OF CONFIDENTIALITY

WSP will always act professionally and keep confidential any information shared during the Audit. All documents shared with WSP will be destroyed after the conclusion of the Audit and acceptance of the final audit reports by Manitoba Hydro.

10 PROJECT SCHEDULE AND DELIVERABLES

WSP has provided the following schedule related to the scope of work.

Deliverable/Task	Proposed Date	Assumption
Project Award	30 July 2023	Assumed based on a submission date of 5 July, MH has a 3 week review of bids to award contract as per RFP Section 4 Part A procurement schedule.
Initial Project Meeting	26 September 2023	Contract signed and awarded. Introductory meeting to confirm expectations/deliverables.
Audit Plan and Budget – draft for submission to MH	11 October 2023	Two weeks from initial Project meeting. Assumes that once submitted to MH, one week review period for MH and any fine tuning during that time to ensure all items are adequately captured.
Documentation Review/ Analysis	18 October to 8 November 2023 [Can be extended if site visit scheduled during this time]	Document review and analysis of Keeyask documents and preparation for site visit.
Audit Site Visit/Fieldwork	October 25, 2023 Interviews: week of October 30, 2023	Travel days for field personnel to get to Winnipeg Monday and Friday. Site visit would be a day trip either Tuesday/Wednesday as required. Other days will be in Winnipeg conducting interviews and document review. This schedule will be further refined within the audit workplan.
Audit Close out Meeting	November 15, 2023	Presentation of findings to MH.
Submission of Draft Audit Report	December 15, 2023	Assumes a two-week review period for MH personnel.

Deliverable/Task	Proposed Date	Assumption
Revised Draft	January 5, 2024	Revised draft within one week of receiving comments from MH.
Final Report	January 31, 2024	Assumes one week for the revised draft to be reviewed by MH and one week for WSP to finalize final report.
Submission of Final Report	TBD	Final report in format for submission to regulators.

11 CLOSURE

We trust that this Audit plan meets your current requirements. Should you have any questions, please contact the undersigned.

WSP Canada Inc.



Prepared by:

Adam Forrest, B.Sc., EP)
*Senior EHS Compliance Auditor
Auditor*



Reviewed by:

Hemant Agnani, EP(EMSLA)
Senior EHS Management Systems and Compliance

APPENDIX A
Audit Schedule

Manitoba Hydro - Environmental Audit Schedule
Audit Dates: Field Investigation - October 25, 2023 (1 Auditor x 1 day)
Site Visit and Interviews – October 31, November 1-2
Lead Auditor: Adam Forrest
Team Auditor: Jamie Ziegler

October 25, 2023 – Field Investigation

<u>Time (Central Time)</u>	<u>Auditor</u>	<u>Activity</u>	<u>Site Personnel</u>
8:00 a.m.	Jamie Ziegler/Christa DeBlaere	Audit Team leaves for Gillam	
10:00 a.m.	Jamie Ziegler/Christa DeBlaere	<ul style="list-style-type: none"> • Auditor Arrival at Gillam and Safety Orientation • Opening Meeting to discuss the audit agenda 	Site Representative/management
10:15 a.m.	Jamie Ziegler/Christa DeBlaere	Helicopter-based site observations	Site Representative
12:00 pm	Jamie Ziegler/Christa DeBlaere	Lunch (Kettle Camp)	All
1:00 p.m.	Jamie Ziegler/Christa DeBlaere	<ul style="list-style-type: none"> • Head down the South Access Road towards Keeyask Generating Station. • Site observations from the station deck 	Site Representative
2:30 p.m.	Jamie Ziegler/Christa DeBlaere	Documented information review and interviews	Site Representative
4:00 p.m.	Jamie Ziegler/Christa DeBlaere	Debrief Time for Auditors	Auditors' only
4:30 p.m.	Jamie Ziegler/Christa DeBlaere	Debrief Meeting	Site Management
5:00 p.m.	Jamie Ziegler/Christa DeBlaere	End of field visit/ Departure from Gillam	

October 31, 2023 – Site Visit and Interviews

<u>Time (Central Time)</u>	<u>Auditor</u>	<u>Activity</u>	<u>Site Personnel</u>
9:00 a.m.	Adam Forrest / Jamie Ziegler	Auditor Arrival, Safety Orientation, On-Site Setup	Site Representative
9:15 a.m.	Adam Forrest / Jamie Ziegler	Opening Meeting with Site Management	Site Management
9:45 a.m.	Adam Forrest / Jamie Ziegler	Audit of Physical Components	Site Representative
12:30 p.m.	Adam Forrest / Jamie Ziegler	Lunch (On-Site)	All
1:00 p.m.	Adam Forrest / Jamie Ziegler	Audit of Aquatic Aspects	Site Representative
2:30 p.m.	Adam Forrest	Audit of Terrestrial Aspects	Site Representative
4:00 p.m.	Adam Forrest / Jamie Ziegler	Debrief Time for Auditors	Auditors' only
4:30 p.m.	Adam Forrest / Jamie Ziegler	Debrief Meeting	Site Representative
5:00 p.m.	Adam Forrest / Jamie Ziegler	End of Day 1 Audit	

November 1, 2023 - Site Visit and Interviews

<u>Time (Central Time)</u>	<u>Auditor</u>	<u>Activity</u>	<u>Site Personnel</u>
9:00 a.m.	Adam Forrest / Jamie Ziegler	Auditor Arrival, Safety Orientation, On-Site Setup	Site Representative
9:15 a.m.	Adam Forrest / Jamie Ziegler	Opening Meeting with Site Management	Site Management
9:45 a.m.	Adam Forrest / Jamie Ziegler	Audit of Socio-Economic Aspects	Site Representative
12:30 p.m.	Adam Forrest / Jamie Ziegler	Lunch (On-Site)	All
1:00 p.m.	Adam Forrest / Jamie Ziegler	Audit of Resource Use	Site Representative
2:30 p.m.	Adam Forrest	Audit of Heritage Resources	Site Representative
4:00 p.m.	Adam Forrest / Jamie Ziegler	Debrief Time for Auditors	Auditors' only
4:30 p.m.	Adam Forrest / Jamie Ziegler	Debrief Meeting	Site Representative
5:00 p.m.	Adam Forrest / Jamie Ziegler	End of Day 2 Audit	

November 2, 2023 - Site Visit and Interviews

<u>Time (Central Time)</u>	<u>Auditor</u>	<u>Activity</u>	<u>Site Personnel</u>
9:00 a.m.	Adam Forrest / Jamie Ziegler	Auditor Arrival, Safety Orientation, On-Site Setup	Site Representative
9:15 a.m.	Adam Forrest / Jamie Ziegler	Opening Meeting with Site Management	Site Management
9:45 a.m.	Adam Forrest / Jamie Ziegler	Audit of Access	Site Representative
12:30 p.m.	Adam Forrest / Jamie Ziegler	Lunch (On-Site)	All
1:00 p.m.	Adam Forrest / Jamie Ziegler	Audit of Emergency Response and Preparedness (including spill response)	Site Representative
2:30 p.m.	Adam Forrest	Audit of Accidents and Malfunctions	Site Representative
4:00 p.m.	Adam Forrest / Jamie Ziegler	Debrief Time for Auditors	Auditors' only
4:30 p.m.	Adam Forrest / Jamie Ziegler	Debrief Meeting/Pre-closing Meeting	Site Representative
5:00 p.m.	Adam Forrest / Jamie Ziegler	End of Day 3 Audit	

November 15, 2023 – Audit Closing Meeting

<u>Time (Central Time)</u>	<u>Auditor</u>	<u>Activity</u>	<u>Site Personnel</u>
To be decided	WSP Team	Closing Meeting with Manitoba Hydro management to present the findings.	Manitoba Hydro Management

ADDITIONAL INFORMATION:

1. Audit Times and sequence may be adjusted in the light of findings and audit needs.
2. Interviewees will be confirmed prior to the on-site visit or during the opening meeting/Day 1 of the Audit.
3. Manitoba Hydro is requested to provide guides/site representatives to accompany the auditors during the visit. The guides/site representatives should be authorized to confirm audit findings on behalf of the Manitoba Hydro.
4. Manitoba Hydro is requested to make available a suitable workspace for the auditor's administration.

APPENDIX C

Documentation Reviewed

Documents Reviewed during the Audit

- Keeyask Generation Project Environmental Impact Statement
- Keeyask Generation Project Environmental Impact Statement. Supporting Volume Physical Environment.
- Keeyask Generation Project Environmental Impact Statement. Supporting Volume Aquatic Environment.
- Keeyask Generation Project Environmental Impact Statement. Supporting Volume Terrestrial Environment.
- Keeyask Generation Project Environmental Impact Statement. Supporting Volume Socio-Economic Environment, Resource Use and Heritage Resources.
- Physical Environment Monitoring Plan
- Aquatic Effects Monitoring Plan
- Terrestrial Effects Monitoring Plan
- Socio-Economic Effects Monitoring Plan
- Resource Use Monitoring Plan
- Zebra Mussel Monitoring Plan
- Sediment Management Plan for In-Stream Construction
- Fisheries Offsetting and Mitigation Plan
- Construction Access Management Plan
- Vegetation Rehabilitation Plan
- Terrestrial Mitigation Implementation Plan
- Waterways Management Plan
- Reservoir Clearing Plan
- Mercury and Human Health Risk Management Plan
- Avian Management Plan
- Construction Heritage Resources Protection Plan
- Generating Station Environmental Protection Plan
- South Access Road Environmental Protection Plan
- Environmental Protection Plan Annual Reports from 2014-2022
- 2014-2023 Annual Reports (various reports reviewed from different years with examples below)
 - Habitat Loss and Disturbance Monitoring Report
 - Priority Habitat Loss Monitoring Report
 - Habitat Rehabilitation Implementation and Success Monitoring Report
 - Invasive Plant Spread and Control Monitoring Report
 - Colonial Waterbird Habitat Effects Monitoring Report
 - Mercury in Fish Flesh from the Keeyask Reservoir, Stephens Lake, and Split Lake Report
 - Mercury in Wildlife Monitoring Report
 - Lake Sturgeon Production and Stocking Report
 - Physical Environmental Monitoring Report
 - Socio-Economic Monitoring Report
 - Caribou Sensory Disturbance Monitoring Report
 - Colonial Waterbird Habitat Effects Monitoring Report
 - Zebra Mussels Monitoring Report

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- Keeyask Disposal of Solid Waste Documentation
 - Weight bill for EIR1645 & 1655 (
 - Weight bill for EIR 2766
 - Monthly Status Report Section 11 – Appendix (pg. 17: listing of what waste was shipped off-Site.)
 - BBE Hydro Constructors LP – Environmental Incident Report. Report No.: EIR-6955
- Keeyask Generation Project – Weekly Environmental Inspection Report.
- Figure 1: Keeyask Generating Station. EMPA D16. Erosion and Sediment Control Plan and Section. Date: 2020-04-07. Drawing Number 1-00195-DE-21230-0005 001
- PowerPoint Presentation. Keeyask Wastewater Treatment Plan

- Excel Document. Adult Lake Sturgeon population estimation and biological metric monitoring (Keeyask Area). Juvenile Lake Sturgeon population and year-class strength monitoring.
- Keeyask Fisheries Regulatory Review Meeting. April 24, 2019. Meeting Notes.
- Keeyask Environmental Mitigation and Monitoring. What's Been Done & What Has Been Learned.
- Letter to MECC dated June 15, 2022. Regulatory Submission of the annual reports on monitoring and mitigation activities.
- Heritage Resources Monitoring Program Field Guidebook.
- Keeyask Generation Project Invasive Plant Photo Guide.

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