KEEYASK TRANSMISSION PROJECT WATERCOURSE CROSSINGS

POST-CONSTRUCTION MONITORING REPORT – 2019

May 2020

Prepared for:

Manitoba Hydro

By:

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EXECUTIVE SUMMARY

As outlined in *The Environment Act* Licence for the Keeyask Transmission Project (Licence No. 3106), construction, operation, and maintenance of the Project will adhere to mitigation found within the EIS and supporting materials, as well as Environmental Protection Plans (EnvPP). Included in the Project EnvPP is an obligation to monitor the effectiveness of mitigation measures. This report provides documentation of site visits conducted at 39 watercourse crossing sites located along the four 138 kV AC Unit Transmission lines (seven sites), and three 138 kV AC Generation Outlet Transmission lines (32 sites) during spring 2019.

The stage of construction varied between each component. The Construction Power Line (KN36), temporary Construction Power Line (KR1T) and all three Generation Outlet Transmission lines (KR) were complete at the time of monitoring. Towers and lines were completed for the majority of the four Unit Transmission Lines (KE) with the exception of the four towers on both the north and south sides of the Nelson River. On both banks tower footings were present and towers were being assembled.

Of the 39 crossing sites assessed, no mitigation measures were deemed to be not in compliance with prescribed mitigation. KR2-Aqua-128, KR3-Aqua-129 and KR1-Aqua-130 had been identified in 2015 because the riparian buffer zone had been cleared to ground level. The site has therefore been closely assessed each monitoring year, including in 2019, in order to track re-vegetation and erosion. Re-vegetation is occurring, albeit slowly, with forbes and shrubs observed growing along the stream banks and no active sedimentation of the stream has been noted since being identified in 2015. As determined in previous monitoring years, due to naturally occurring re-vegetation and the marginal nature of the stream to fish, no further remediation is recommended.

With the completion of the Keeyask Generation Outlet Transmission lines (KR1, KR2, and KR3) the 2019 study year will be the final year of monitoring for the KR1, KR2 and KR3 lines. Monitoring of the Unit Transmission lines (KE1, KE2, KE3, and KE4) will occur in spring 2020.

ACKNOWLEDGEMENTS

Manitoba Hydro is thanked for the opportunity to conduct this project.

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1.0 INTRODUCTION

As outlined in *The Environment Act* Licence for the Keeyask Transmission Project (Licence No. 3106), construction, operation, and maintenance of the Project will adhere to mitigation found within the EIS and supporting materials as well as Environmental Protection Plan (EnvPP). Included in the Project EnvPP is an obligation to monitor the effectiveness of mitigation measures. Stream crossing monitoring consists of a minimum of one site visit to each identified stream crossing in the first spring and/or summer following construction and subsequent site visits as required. This report provides documentation of site visits conducted at 39 watercourse crossings located along the three 138 kV AC Generation Outlet Transmission lines and four 138 kV Unit Transmission lines during spring 2019 (Maps 1-3).

2.0 STUDY AREA

The Keeyask Transmission Project Study Area (approximately 600 km^2) is found within the Nelson River watershed basin and the Lower Nelson River sub-basin. It includes the Nelson River from Gull Rapids and the southern shore of Stephens Lake east to the Kettle Generating Station. In addition, the study area includes the land south of these waterbodies to and beyond Butnau Lake.

The land bordering Stephens Lake includes areas of poor, moderate and well-drained soils, dominated by black spruce forest in upland areas and black spruce bogs, peatland and fens in low lying areas. Sand, gravel, cobble, and areas of organic material dominate the shoreline, with much of the shoreline being prone to erosion. Riparian vegetation typically includes willow and alder, black spruce, tamarack, and scattered stands of trembling aspen typically found where there is well drained soil. Typical of the Lower Nelson River sub-basin the study area consists of a large number of small round lakes, marsh and bog areas and numerous ephemeral and perennial tributaries.

Of the Project components, the Unit Transmission lines and the Construction Power Line cross the Nelson River at the base of Gull Rapids. Fish habitat sensitivity was assigned 'moderate/high'; numerous forage fish species and larger bodied species such as Freshwater Drum, Goldeye, Lake Sturgeon, Lake Whitefish, Longnose Sucker, Mooneye, Northern Pike, Sauger, Walleye, White Sucker and Yellow Perch have been documented in this region.

Two medium-sized perennial rivers are present within the study area; the Butnau and the Kettle rivers. The Butnau River was diverted away from Stephens Lake through Cache Lake and into the Kettle River when the Kettle Generating Station was constructed. Similar to the smaller creeks in the area, habitat in the upper reaches of the Butnau and Kettle rivers are characterized by low water velocities, soft substrates, and abundant cover. Lower reaches of the Kettle River and the Butnau River Diversion Channel are shallow, with moderate water velocity, and rocky substrate.

Fish habitat within the Butnau and Kettle rivers is considered to be of ‘moderate’ and ‘moderate/high’ sensitivity, respectively. Both rivers were found to be used extensively by Northern Pike for various life stages including spawning. Relatively uncommon, Walleye occur in both rivers and suitable spawning habitat is present in the Butnau River Diversion Channel and the lower Kettle River. White and Longnose sucker are also known to spawn in both rivers. Although documented in the Kettle/Butnau river system, Lake Whitefish were found to be uncommon.

The Generation Outlet Transmission lines and Construction Power Line each cross the Butnau River once. The Kettle River is crossed at three locations by the three Generation Outlet Transmission lines.

3.0 METHODS

Stream crossing sites were evaluated using Manitoba Hydro's Daily Inspection Reports and site visits in the spring of 2019 to assess the adherence to prescribed mitigation. Mitigation measures included those prescribed in the Keeyask Transmission Project Aquatic Environment Technical Report (2012) and the Keeyask Transmission Project Construction Environmental Protection Plan (2014) for the Construction Power, Generation Outlet, and Unit Transmission Lines and Stations.

Daily Inspection Reports on Manitoba Hydro's Environmental Protection Information Management System (EPIMS) were reviewed to identify where mitigation compliance was documented during construction and to focus field studies.

Field studies consisted of aerial reconnaissance at each site along the Generation Outlet and Unit transmission lines. If a stream crossing site was identified to be in non-compliance it was evaluated further. Stability of stream banks and floodplain was visually evaluated from the air and rutting, slumping, or other damage to the ground noted. The presence of slash or disturbed sediment within the buffer was noted, as well as any evidence of erosion. If landing was necessary, buffer widths from the stream or floodplain were visually evaluated and compared to the width prescribed, as well as evaluating the amount of vegetation left in the buffer and the clearing method used. Any erosion and sedimentation observed within the watercourse was documented and measured using an Analite NEP-160 turbidity meter (McVan Instruments Pty Ltd. Scoresby, Australia).

Vehicle crossings were evaluated for appropriate grade and angle across the stream, and the presence of any organic debris remaining from temporary bridge crossings. If any erosion control measures were in place (blankets, silt fences) their effectiveness was evaluated. Tower locations were assessed to determine if they adhered to prescribed mitigation. Photos of sites were taken to capture the overall state of the sites as well as any particular concerns. Any further reclamation needed to meet the prescribed mitigation was noted as well as the requirement for a follow-up site visit for further monitoring of reclamation.

4.0 RESULTS

Manitoba Hydro is currently constructing several components of the Keeyask Transmission Project. This report focuses on two of the components. Once the Keeyask Generating Station is completed, three 138 kV AC KR lines (KR lines formerly named KGOT) will transmit power from the new Keeyask Switching Station to the existing Radisson Converter Station over a distance of 38 km in a single corridor approximately 200 m wide. The KR lines cross ten watercourses, including the Kettle and Butnau rivers, and consist of 32 crossing sites. To transmit power from the Keeyask Generating Station to the new Keeyask Switching Station four 138 kV AC Unit Transmission Lines (KE) will be erected in a single corridor 4 km long and 265 m wide, across two watercourses and includes seven crossing sites in total. The completed 138 kV Construction Power Transmission Line (KN36) extends from the existing 138 kV KN36 transmission line in the south to the new construction power station located north of the Keeyask Generating Station. This line is approximately 21 km long, with a RoW 60 m wide along most of its length (except for the locations where the line shares the RoW with KR lines), crosses five watercourses and includes five distinct crossing sites. Monitoring of the KN36 line was completed in 2018 and is not discussed in this report.

Site visits to stream crossings were conducted on June 17, 2019. The stage of construction varied between components (Appendix 1). At the time of monitoring, all three KR lines were completed and towers were complete with conductors on all of the four KE lines with the exception of the span crossing the Nelson River.

Site Visits

Aerial surveys were conducted at 39 stream crossing sites and no ground surveys were required in 2019. Construction at all stream crossings was compliant with prescribed mitigation where applicable, depending on the stage of construction. A summary of compliance with mitigation for all sites is available in Appendix 1.

KR Lines

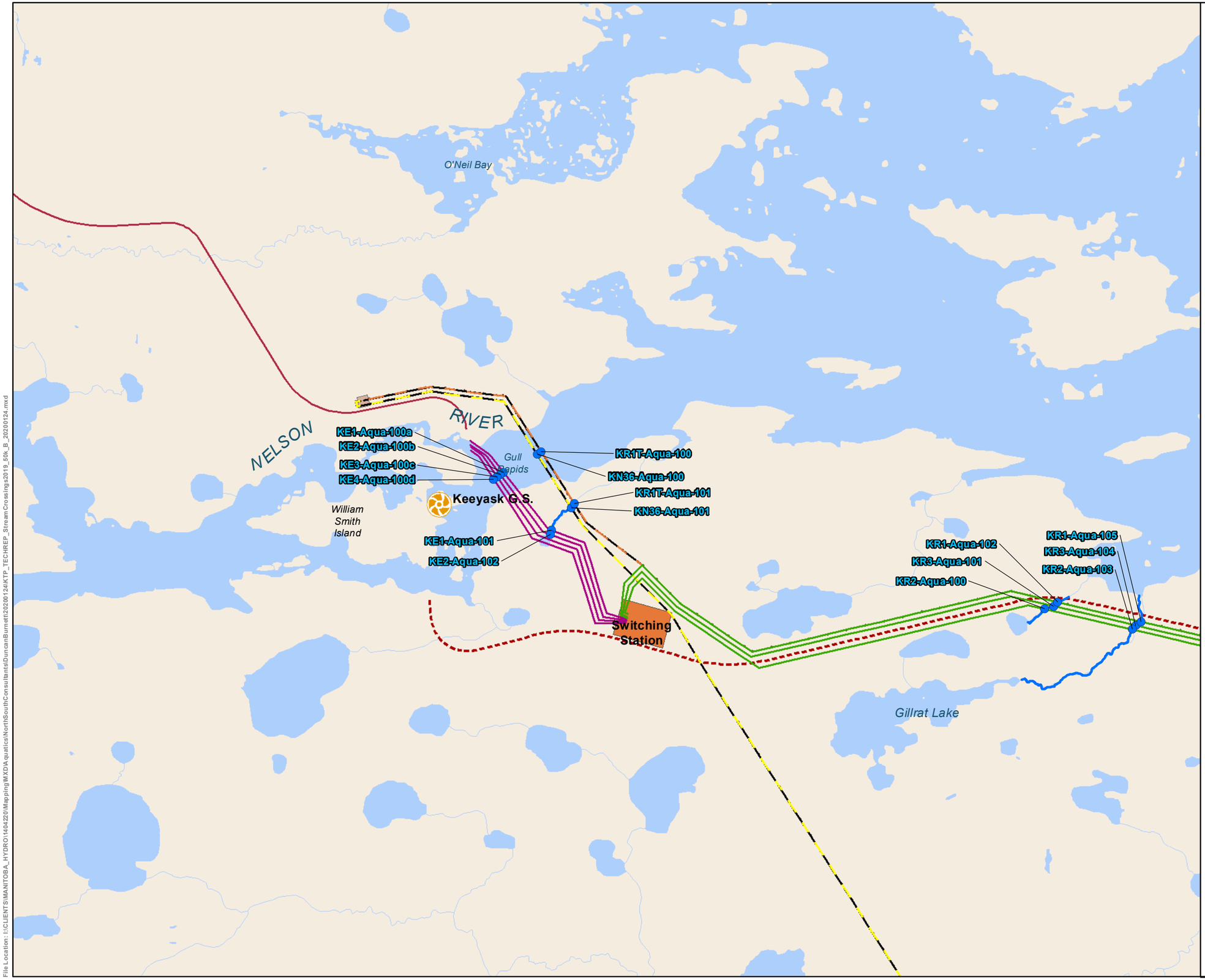
Thirty-two sites at ten watercourse crossings were evaluated along the KR line. Non-compliance with respect to the prescribed mitigation was not observed at any of the 32 sites.

In 2015 a riparian buffer was not established during clearing at KR1-Aqua-128, KR3-Aqua-129, and KR2-Aqua-130 resulting in erosion and sedimentation of the stream. No mitigation measures have been implemented since 2015 but re-vegetation is occurring naturally, albeit slowly (Photo 1). Small shrubs and forbes were observed growing along the banks of the stream and no sedimentation was observed during the aerial survey in 2019 (Photo 1). It is expected the vegetation will continue to grow and stabilize the banks and riparian zone. No further remediation is recommended (Appendix 1).

KE Lines

The seven watercourse crossing sites along the 4 km long Unit Transmission Line were evaluated in 2019 and non-compliance with respect to the prescribed mitigation was not observed (Appendix 1).

5.0 MAPS



Manitoba Hydro

Keeyask Transmission Project

Project Infrastructure
- G.S. Unit Lines (KE1, KE2, KE3, KE4)
- Generation Outlet Lines (KR1, KR2, KR3)
- Construction Power Line (Temporary)
- Construction Power Line (KN36)
- North Access Road
- South Access Road (Proposed)
- Construction Power Site
- Switching Station

Infrastructure
- Generating Station (Proposed)
- Generating Station
- Electrical Station
- Bipole I and II
- Transmission Line
- Converter Station

Stream Crossing Compliance Monitoring 2019
- Watercourse Crossing
- Watercourse Crossing

Landbase
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: January 24, 2020

N

0 1 2 Kilometres
0 0.5 1 Mile

1:50,000

Stream Crossing Compliance Monitoring 2019

Map 1

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Joslin Lake

KN36-Aqua-102

KN36-Aqua-103

KN36-Aqua-104

Manitoba Hydro

Keeyask Transmission Project

Project Infrastructure

- G.S. Unit Lines (KE1, KE2, KE3, KE4)
- Generation Outlet Lines (KR1, KR2, KR3)
- Construction Power Line (Temporary)
- Construction Power Line (KN36)
- North Access Road
- South Access Road (Proposed)
- Construction Power Site
- Switching Station

Infrastructure

- Generating Station (Proposed)
- Generating Station
- Electrical Station
- Bipole I and II
- Transmission Line
- Converter Station

Stream Crossing Compliance Monitoring 2019

- Watercourse Crossing
- Watercourse Crossing

Landbase

- Active Rail
- City / Town
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: January 24, 2020

N

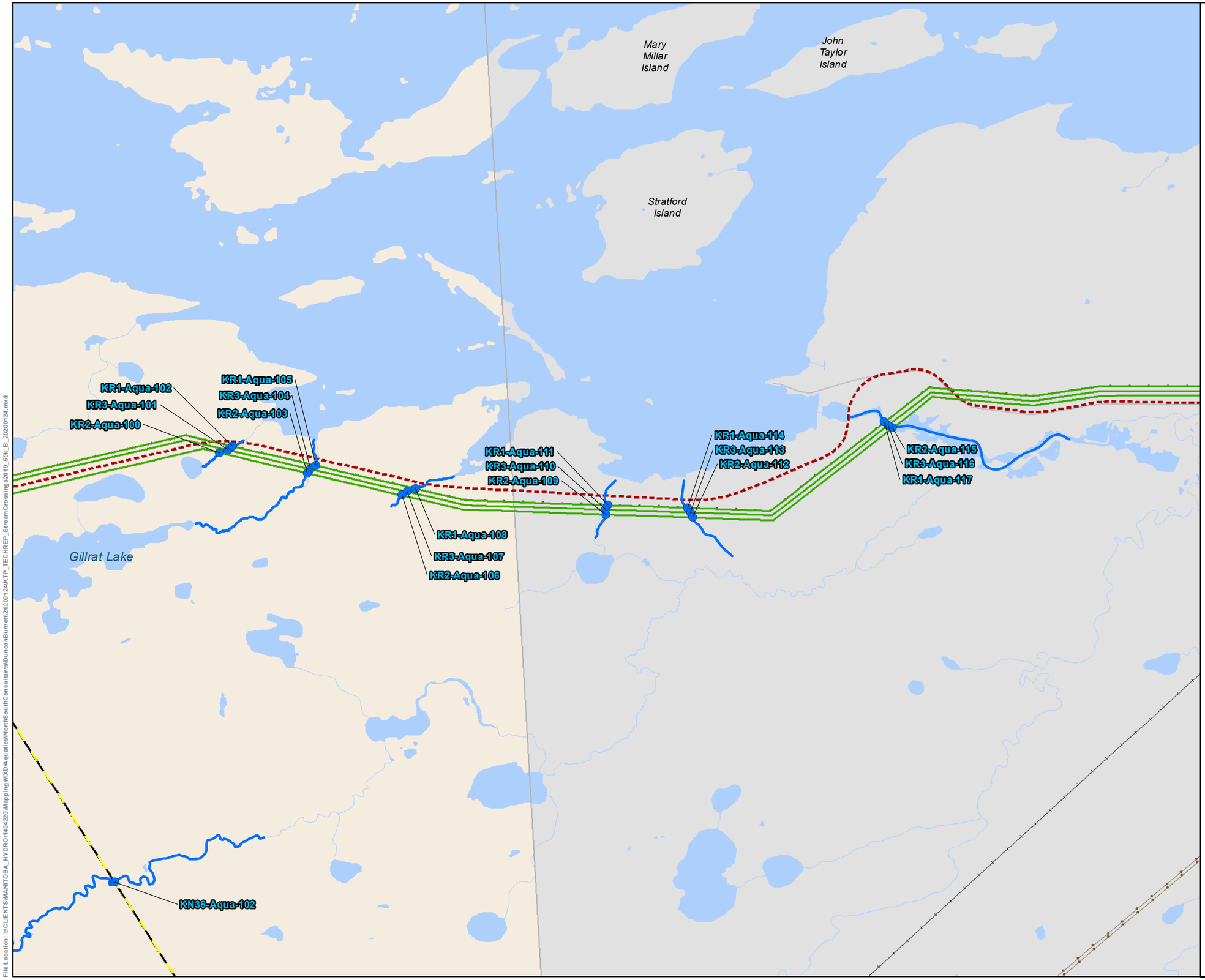
0 1 2 Kilometres
0 0.5 1 Mile

1:50,000

Stream Crossing Compliance Monitoring
2019

Map 2

File Location: I:\CLIENTS\MANITOBA_HYDRO\1404220\Mapping\MXD\Aquatics\NorthSouthConsultants\DuncanBurnett\20200124\KTP_TECHREP_StreamCrossings2019_50k_B_20200124.mxd



Manitoba Hydro

Keeyask Transmission Project

Project Infrastructure

- G.S. Unit Lines (KE1, KE2, KE3, KE4)
- Generation Outlet Lines (KR1, KR2, KR3)
- Construction Power Line (Temporary)
- Construction Power Line (KN36)
- North Access Road
- South Access Road (Proposed)
- Construction Power Site
- Switching Station

Infrastructure

- Generating Station (Proposed)
- Generating Station
- Electrical Station
- Bipole I and II
- Transmission Line
- Converter Station

Stream Crossing Compliance Monitoring 2019

- Watercourse Crossing
- Watercourse Crossing

Landbase

- Road (Other)
- Active Rail
- City / Town
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: January 24, 2020

N

0 1 2 Kilometres
0 0.5 1 Mile

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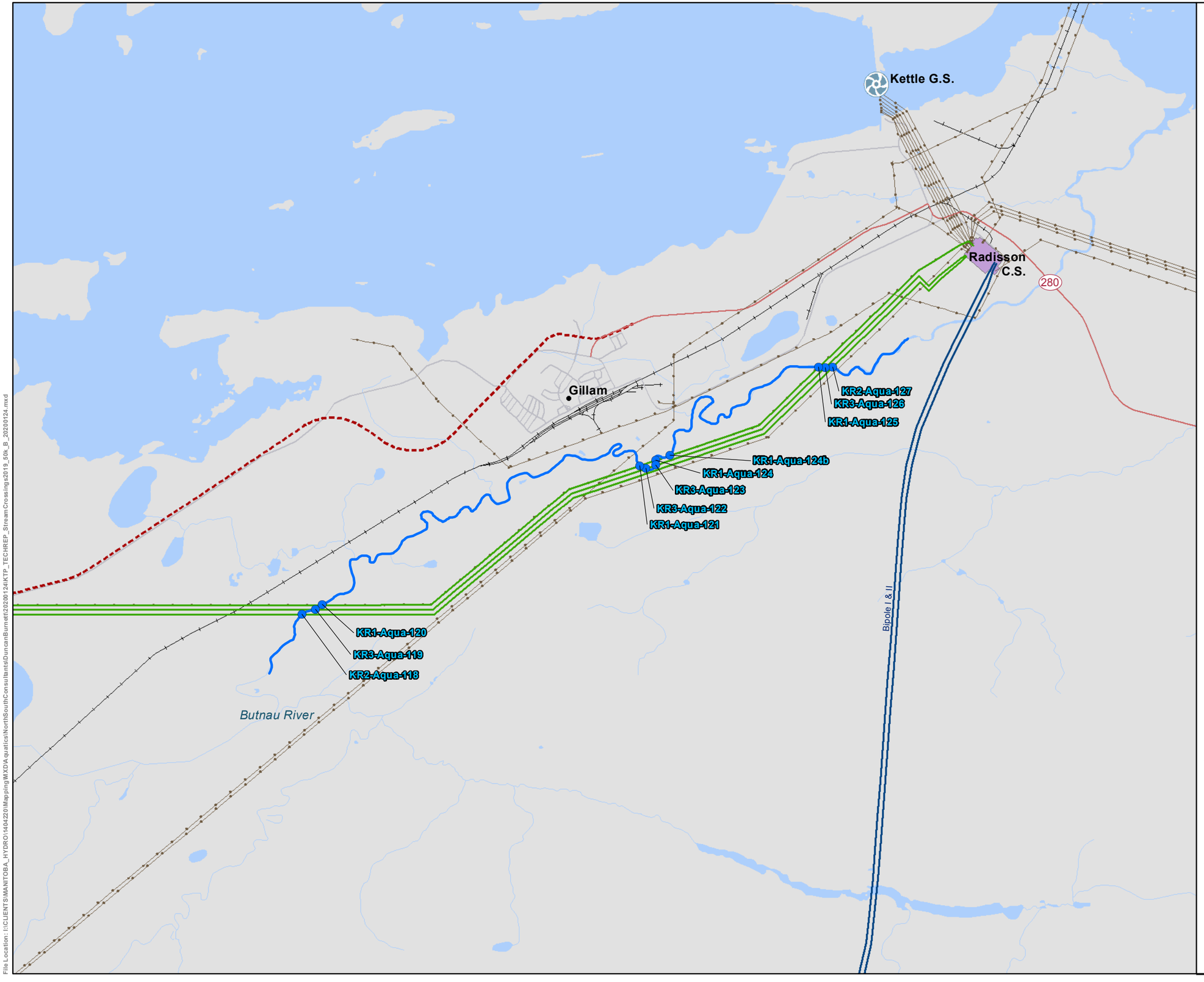
Stream Crossing Compliance Monitoring 2019

Map 3

File Location: I:\CLIENTS\MANITOBA_HYDRO\1404220\Mapping\MXD\AquaticsNorthSouthConsultants\DuncanBurnett\20200124\KTP_TECHREP_StreamCrossings2019_50k_B_20200124.mxd



Manitoba Hydro

Keeyask Transmission Project

Project Infrastructure
- G.S. Unit Lines (KE1, KE2, KE3, KE4)
- Generation Outlet Lines (KR1, KR2, KR3)
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- South Access Road (Proposed)
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- Switching Station

Infrastructure
- Generating Station (Proposed)
- Generating Station
- Electrical Station
- Bipole I and II
- Transmission Line
- Converter Station

Stream Crossing Compliance Monitoring 2019
- Watercourse Crossing
- Watercourse Crossing

Landbase
- Community
- Provincial Road
- Road (Other)
- Active Rail
- City / Town
- First Nation
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: January 24, 2020

N

0 1 2 Kilometres
0 0.5 1 Mile

1:50,000

Stream Crossing Compliance Monitoring
2019

Map 4

File Location: I:\CLIENTS\MANITOBA_HYDRO\1404220\Mapping\MXD\Aquatics\NorthSouthConsultants\DuncanBurnett\20200124\KTP_TECHREP_StreamCrossings2019_50k_B_20200124.mxd

6.0 PHOTOS

Photo 1. KR1-Aqua-128, KR3-Aqua-129, and KR2-Aqua-130 (trib. of the Butnau River). Un-mitigated stream crossing on June 25, 2018 (top) and June 17, 2019 (bottom).

7.0 APPENDIX 1: STREAM CROSSING COMPLIANCE SUMMARY

Table A1. Compliance with 21 mitigation measures for stream crossings on the 138 kV Generation Outlet (KR) and Unit Transmission lines (KE), June 2019.

ESS	Name	Construction Status 2019	Cross Perpendicular to Channel	Structures Above Tree Line	Riparian Ground Cover Remain	Machine Free Zone 7 m	Riparian Buffer 30 m	Clearing Limits Marked	Construction on Frozen Ground	Riparian Vegetation Intact	Slash Above the Tree Line	Revegate Disturbed Areas	Erosion Sediment Control Implemented	Temp. Crossings Only As Needed	Appropriate Temp.Crossing Design	Existing Access Used	Temp. Crossings Perpendicular	Clean Material for Temp. Crossing Removed	One-time Fording	Timing Window for Instream Work	Fording Under Acceptable Conditions	Stream Bank Protection	Temp. Bridge As Needed	Follow-up Site Inspection 2020
Watercourse Crossings of the three 138 kV AC Generation Outlet Transmission Lines																								
KR2-Aqua-100	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-101	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-102	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR2-Aqua-103	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-104	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-105	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR2-Aqua-106	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-107	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-108	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR2-Aqua-109	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-110	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-111	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR2-Aqua-112	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-113	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-114	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR2-Aqua-115	Butnau R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N

Table A1. Continued.

ESS	Name	Construction Status 2019	Cross Perpendicular to Channel	Structures Above Tree Line	Riparian Ground Cover Remain	Machine Free Zone 7 m	Riparian Buffer 30 m	Clearing Limits Marked	Construction on Frozen Ground	Riparian Vegetation Roots Intact	Slash Above the Tree Line	Revegate Disturbed Areas	Erosion Sediment Control Implemented	Temp. Crossings Only As Needed	Appropriate Temp.Crossing Design	Existing Access Used	Temp. Crossings Perpendicular	Clean Material for Temp. Crossing Removed	One-time Fording	Timing Window for Instream Work	Fording Under Acceptable Conditions	Stream Bank Protection	Temp. Bridge As Needed	Follow-up Site Inspection 2020
KR3-Aqua-116	Butnau R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-117	Butnau R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR2-Aqua-118	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-119	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-120	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-121	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-122	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-123	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-124	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-124b	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-125	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-126	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR2-Aqua-127	Kettle R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR1-Aqua-128	Unnamed Trib. To the Butnau R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR3-Aqua-129	Unnamed Trib. To the Butnau R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KR2-Aqua-130	Unnamed Trib. To the Butnau R.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N

Table A1. Continued.

ESS	Name	Construction Status 2019	Cross Perpendicular to Channel	Structures Above Tree Line	Riparian Ground Cover Remain	Machine Free Zone 7 m	Riparian Buffer 30 m	Clearing Limits Marked	Construction on Frozen Ground	Riparian Vegetation Roots Intact	Slash Above the Tree Line	Revegate Disturbed Areas	Erosion Sediment Control Implemented	Temp. Crossings Only As Needed	Appropriate Temp.Crossing Design	Existing Access Used	Temp. Crossings Perpendicular	Clean Material for Temp. Crossing Removed	One-time Fording	Timing Window for Instream Work	Fording Under Acceptable Conditions	Stream Bank Protection	Temp. Bridge As Needed	Follow-up Site Inspection 2020
Watercourse Crossings of the four Unit Transmission Lines																								
KE-Aqua-100	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KE1-Aqua-101	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KE2-Aqua-102	Unnamed Trib.	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KE1-Aqua-100a	Nelson R.	TA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KE2-Aqua-100b	Nelson R.	TA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KE3-Aqua-100c	Nelson R.	TA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N
KE4-Aqua-100d	Nelson R.	TA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y	Y	Y	NA	Y	Y	U	Y	N

Compliance: Y- compliant; N - non-compliant; NA - not applicable; U - uncertain
Contstruction Status 2019: NC - no clearing; CL - center line only cleared; RI - riparian buffer incomplete; RC -RoW clearing complete; TF- tower footprint cleared; TA - tower anchors installed; TW - towers complete; C - construction complete
Other: R. - river; Temp. - temporary; Trib. - tributary