KEEYASK GENERATION PROJECT ERRATA SUPPLEMENTAL FILING

Prepared by

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1.0 SCOPE OF ERRATA SUPPLEMENTAL FILING

The errata correct or clarify errors that were in the Keeyask Generation Project EIS filed July 6, 2012. Corrections include typographical errors as well as clarifications and corrections regarding specific information contained in the Response to EIS Guidelines and Supporting Volumes.



1.1 RESPONSE TO EIS GUIDELINES

Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 1	1B-1	"Town Centre Complex Project"	"Keeyask Generation Project"
Chapter 6	6-84	"inland edge and inland (Photo 6-1)."	"inland edge and inland (Photo <u>6-</u> <u>12</u>)."
Chapter 6	6-84	"The TE SV Section 2.4.6 describes the fire regime."	"The TE SV Section <u>2.5</u> describes the fire regime."
Chapter 6	6-87	"land area combined; Map 6-28)."	"land area combined; Map <u>6-</u> <u>29</u>)."
Chapter 6	6-87	"(Table 6-2)"	"(Table <u>6-7</u>)"
Chapter 6	6-87	"described in the wetland function section (Section 6.2.3.4.5)."	"described under the wetland function heading of this section."
Chapter 6	6-92	"these was very uneven (Map 6-29; TE SV Table 2.6-1, Table 2.7-2)."	"these was very uneven (Map 6-29; TE SV <u>Table 2-30, Table 2-33</u>)."
Chapter 6	6-92	"(TE SV Table 2.7-2)"	"(TE SV Table <u>2-33</u>)"
Chapter 6	6-92	"The detailed habitat mapping (Section 6.2.3.4.1)"	"The detailed habitat mapping (see Terrestrial Habitat in this section)"
Chapter 6	6-92	"shoreline wetland habitat types (Section 6.2.3.4.5)."	"shoreline wetland habitat types (see Wetland Function in this section)."
Chapter 6	6-93	"The TE SV Section 3.2.4 provides"	"The TE SV Section 2.4 provides"
Chapter 6	6-96	"between segments of the Nelson River (Section 4.3)."	"between segments of the Nelson River (<u>TE SV Section 2.8.3.2</u>)."
Chapter 6	6-97	"(Section 6.2.3.4.1)"	"(Section <u>6.2.3.4.2</u>)"
Chapter 6	6-97	"(see Section 6.2.3.4.1 for rationale)"	"(see Section <u>6.2.3.4.2</u> for rationale)"
Chapter 6	6-97	"As noted in Section 6.2.3.4.1,"	"As noted in Section <u>6.2.3.4.2</u> ,"
Chapter 6	6-100	"Ongoing shoreline erosion (TE SV Section 2.2.4)"	"Ongoing shoreline erosion (TE SV Section <u>2.3.3</u>)"
Chapter 6	6-102	", green alder (Alnus viridis),"	", green alder (<u>Alnus viridis ssp.</u> <u>crispa</u>),"



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 6	6-103	"See TE SV Section 3 Table 3.7-20 for the species list"	"See TE SV Section 3 Table <u>3E-2</u> for the species list"
Chapter 6	6-104	"northern Labrador tea (<i>Ledum</i> palustre ssp. decumbens)"	"northern Labrador tea (<i>Rhododendron tomentosum</i>)"
Chapter 6	6-104	"Exceptions are ginger root and northern Labrador tea. Ginger root was not found during field studies."	"Exceptions are <u>sweet flag</u> and northern Labrador tea. <u>Sweet flag</u> was not found during field studies."
Chapter 6	1-106	"Between 2001 and 2011, 124 different species were observed during the ground-based, boatbased and helicopter-based bird surveys (further detail on methods used to gather bird-related information is provided in the TE SV, Appendix 6.10.1)."	"Between 2001 and 2011, 129 different species were observed during the ground-based, boatbased and helicopter-based bird surveys (further detail on methods used to gather bird-related information is provided in the TE SV, Section 6.5)."
Chapter 6	6-107	"as well as other priority birds (<i>i.e.</i> , species highly sensitive to human features and/or favoured for use by local people; Section 6.2.3.4)."	"as well as other priority birds (<i>i.e.</i> , species highly sensitive to human features and/or favoured for use by local people; Section 6.2.3.4.1)."
Chapter 6	6-107	"Twenty-six priority bird species have been identified and are discussed within their respective bird groups."	"Twenty-nine priority bird species have been identified and are discussed within their respective bird groups."
Chapter 6	6-107	"Seven species of colonial waterbirds occur within the Regional Study Area"	" <u>Eight</u> species of colonial waterbirds occur within the Regional Study Area"
Chapter 6	6-108	"Waterfowl observed in the Regional Study Area include 23 species of ducks"	"Waterfowl observed in the Regional Study Area include <u>22</u> species of ducks"
Chapter 6	6-111	"Approximately 178 bird species were observed in the Regional Study Area."	"Approximately 178 bird species potentially occur within the Regional Study Area."
Chapter 6	6-111	"Six of the 27 priority birds met the criteria to be selected as VECs"	"Six of the <u>29</u> priority birds met the criteria to be selected as VECs"
Chapter 6	6-308	"The TE SV Section 2.3.4 provides a detailed"	"The TE SV Section <u>2.6</u> provides a detailed"
Chapter 6	6-309	"(Table 6-20)"	"(Table <u>6-24</u>)"



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 6	6-309	"(Table 6-21)"	"(Table <u>6-25</u>)"
Chapter 6	6-309	"(Section 4.2.3)"	"(Section <u>4.3.3</u>)"
Chapter 6	6-310	"(Sections 6.5.3.4 and 6.5.3.5)"	"(Sections <u>6.5.3.2 and 6.5.3.4</u>)"
Chapter 6	6-311	"(Section 6.4.2)"	"(Section <u>6.3.7</u>)"
Chapter 6	6-315	"(Section 6.4.2)"	"(Section <u>6.3.7</u>)"
Chapter 6	6-315	"(Section 6.4.2)"	"(Section <u>6.3.7</u>)"
Chapter 6	6-316	"(Sections 6.5.3.4 and 6.5.3.5)"	"(Sections <u>6.5.3.2 and 6.5.3.4</u>)"
Chapter 6	6-318	"The TE SV Section 2.4.3 provides"	"The TE SV Section 2.7.4 provides"
Chapter 6	6-319	"(black spruce mixture on mineral increases from 20.3% to 20.5%)."	"(black spruce dominant on thin peatland decreases from 32.3% to 32.1%)."
Chapter 6	6-319	"(see TE SV Table 2.7-5)."	"(see TE SV Table <u>2-36</u>)."
Chapter 6	6-319	"(see Section 4.2.3)."	"(see Section <u>4.3.3</u>)."
Chapter 6	6-320	"(Section 6.5.3.5)"	"(Section <u>6.5.3.4</u>)"
Chapter 6	6-324	"(Section 4.2.3)"	"(Section <u>4.3.3</u>)"
Chapter 6	6-327	"(see Section 4.2.3)."	."(see Section <u>4.3.3</u>)."
Chapter 6	6-332	"the Project could remove, later or indirectly affect up to 8,870 ha of terrestrial habitat"	"the Project could remove, later or indirectly affect up to 8,870 ha of terrestrial habitat (after mitigation)"
Chapter 6	6-335	"(Sections 2.4.6 and 3.4.2 in the TE SV)"	"(Sections <u>2.4.4 and 3.4.2</u> in the TE SV)"
Chapter 6	6-342	"Of the more than 172 bird species"	"Of the 178 bird species"
Chapter 6	6-358	"and occur within the range of natural variability for rails if they occur in the Regional Study Area."	"and occur within the range of natural variability for populations inhabiting the Regional Study Area."
Chapter 6	6-358	"The small residual effects of Project construction on short-eared owl are expected to be positive and occur within the range of natural variability for rails if they occur in the Regional Study Area."	"The small residual effects of Project construction on short-eared owl are expected to be positive and occur within the range of natural variability for short-eared owls if they occur in the Regional Study Area."



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 6	6-392	"Firearms will be prohibited in camps and at work sites, and a "no shooting" buffer zone of 300 m will be designated on either side of the access roads and around the Project work site to reduce mortality due to hunting during construction: and"	"Firearms will be prohibited in camps and at work sites; and"
Chapter 7	Map 7A-1		The "Hydro Development in Northern Manitoba, Map 7A-1 in appendix 7A had several rivers labeled in error as altered waterways. • Weir River not altered by both CRD and LWR • Limestone River not altered by both CRD and LWR • Belanger River not altered by LWR • Nanowin River not altered by LWR • Mukutawa River not altered by LWR
Chapter 8	8-21	Amphibians: "Annually during the first three years of operation and periodically until shoreline wetland habitat re-establishes."	 "Annually during construction. Annually during the first three years of operation and periodically until shoreline wetland habitat reestablishes."
Chapter 8	8-22	Bald eagle: "Annually during the first three years of operation."	"Annually during construction and the first three years of operation."
Chapter 8	8-22	Colonial waterbirds: "Annually during the first three years of operation."	 "Annually during construction. Annually during the first three years of operation"

1.1.1 Corrected Tables and Figures

Since filing the EIS, there have been revisions to how some of the aquatic study reports are characterized in the Environmental Study Report List. For reference purposes, the entire Environmental Study Report List has been reproduced below. Changes are in bold and underlined text or otherwise noted.



Report Number	Report Title	Status	Date Completed		
Physical Environment					
GN-9.1.1	Manitoba Hydro, 2009. Existing and Project Environment Flow Files. Keeyask Project Environmental Studies Program Report. 32 pp.	Completed	9/1/2012		
GN-9.1.2	Manitoba Hydro, 2009. Sensitivity of Water Regime Products to Inflows. Keeyask Project Environmental Studies Program Report. 42 pp.	Completed	9/1/2012		
GN-9.1.3	Manitoba Hydro, 2009. Existing and Project Environment Shoreline & Depth Effects Assessment. Keeyask Project Environmental Studies Program Report. 17 pp.	Completed	9/1/2012		
GN-9.1.4	Manitoba Hydro, 2009. Existing and Project Environment Velocity Regime Effects Assessment. Keeyask Project Environmental Studies Program Report. 17 pp.	Completed	9/1/2012		
GN-9.1.5	Manitoba Hydro, 2009. Existing and Project Environment Digital Terrain Models. Keeyask Project Environmental Studies Program Report. 20 pp.	Completed	9/1/2012		
GN-9.1.6	KGS Acres Ltd., 2011. Existing Environment Ice Processes. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro.	Completed	3/24/2011		
GN-9.1.7	KGS Acres Ltd., 2011. Project Environment Ice Processes and Effects Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro.	Completed	3/24/2011		
GN-9.1.8	Manitoba Hydro, 2009. Existing Environment Water Regime - Key Sites. Keeyask Project Environmental Studies Program Report. 305 pp.	Completed	9/1/2012		
GN-9.1.12	Manitoba Hydro, 2009. Project Environment - Water Level and Flow Regime at Key Sites and Effects Assessment. Keeyask Project Environmental Studies Program. 66 pp.	Completed	9/1/2012		
GN-9.1.13	Manitoba Hydro, 2009. Existing and Project Environment Water Surface Profiles Effects Assessment. Keeyask Project Environmental Studies Program Report. 19 pp.	Completed	9/1/2012		
GN-9.1.14	Manitoba Hydro, 2009. Existing and Project Environment Creek Hydraulics Effects Assessment. Keeyask Project Environmental Studies Program Report. 33 pp.	Completed	9/1/2012		
GN-9.1.15	Manitoba Hydro, 2009. Existing and Project Environment Creek Hydrology. Keeyask Project Environmental Studies Program Report. 33 pp.	Completed	9/1/2012		



Report Number	Report Title	Status	Date Completed
GN-9.1.16	KGS Acres Ltd., 2011. Ice Processes and Their Potential Link to Erosion – Existing Environment, Nelson River Outlet of Split Lake to Stephens Lake. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro.	Completed	3/24/2011
GN-9.1.17	KGS Acres Ltd., 2011. Post-Impoundment Velocity and Shear Stress Distributions. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro.	Completed	3/21/2011
GN-9.2.1	Ecostem Ltd., 2009. Composition and Distribution of Shoreline and Inland Peatlands in the Keeyask Forebay Area and Historical Trends in Peatland Disintegration. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 99 pp.	Completed	9/18/2011
GN-9.2.2	J.D. Mollard and Associates Ltd. and KGS Acres Ltd., 2008. Existing Environment Mineral Erosion. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 72 pp.	Completed	2/16/2012
GN-9.2.3	KGS Acres Ltd., 2011. Existing Environment Sedimentation. Draft report prepared for Manitoba Hydro by KGS Acres Ltd. and the University of Ottawa. 89 pp.	Completed	6/10/2011
GN-9.2.4	Ecostem Ltd., 2009. Projected Future Peatland Disintegration in the Proposed Keeyask Reservoir Area Without the Keeyask Project. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. pp. <i>Draft</i> .	Completed	3/7/2012
GN-9.2.5	J.D. Mollard and Associates Ltd., 2008. Projected Future Mineral Erosion Without the Keeyask GS. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 19 pp.	Completed	2/16/2012
GN-9.2.6	KGS Acres Ltd., 2011. Projected Future Sedimentation Without the Keeyask Project. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 15 pp.	Completed	3/11/2011
GN-9.2.7	Ecostem Ltd., 2009. Peatland Disintegration in the Proposed Keeyask Reservoir Area: Model Development and Post-Project Predictions. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 195 pp.	Completed	12/29/2012
GN-9.2.8	J.D. Mollard and Associates Ltd., 2011. Project Environment Mineral Erosion and Effects Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. pp.	Completed	12/21/2011



Report Number	Report Title	Status	Date Completed
GN-9.2.9	KGS Acres Ltd., 2009. Project Environment Sedimentation and Effects Assessment. Project Environmental Studies Program Report prepared for Manitoba Hydro. 99 pp.	Completed	8/17/2012
GN-9.2.10	Manitoba Hydro, 2009. Estimate of Shoreline Erosion During Construction. Keeyask Project Environmental Studies Program Report. pp. <i>Draft</i> .	Completed	3/15/2013
GN-9.2.11	KGS Acres Ltd., 2011. Estimate of Sedimentation in Stephens Lake During Construction. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 82 pp.	Completed	12/7/2012
GN-9.2.13	Ecostem Ltd., 2007. Study of Physical Properties of Peat: Lab Results – Particle Size Distribution and Specific Gravity. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. pp.	Completed	07/11/2011
GN-9.2.14	KGS Acres Ltd., 2011. Study of Erosion Potential of Disposal Material. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro.	Completed	10/7/2011
GN-9.2.16	KGS Acres Ltd., 2012. Relationship of Total Suspended Solids and Turbidity in the Lower Nelson River near the Proposed Keeyask Generating Station. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. pp.	Completed	10/24/2012
GN-9.2.17	KGS Acres Ltd., 2012. Cofferdam Erosion During Construction. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro.	Completed	4/9/2012
GN-9.2.18	KGS Acres Ltd., 2011. Peat Transport and Deposition Modelling. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro.	Completed	4/12/2011
GN-9.2.21	J.D. Mollard and Associates Ltd., 2010. Classification of Sediment Gradations Within Areas That Will Be Inundated During Staged Construction of the Keeyask GS. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. pp.	Completed	2/24/2012
GN-9.2.22	Ecostem Ltd., 2011. Laboratory Estimation of Organic Sediment Settling Rates. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. pp.	Completed	3/2/2011



Report Number	Report Title	Status	Date Completed
GN-9.2.23	Tetr <i>ES</i> Consultants Inc., 2012. Estimation of Potential Organic Total Suspended Solids – Future With Project. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. pp.	Completed	11/19/2012
GN-9.3.1	Tetr <i>ES</i> Consultants Inc., 2008. Keeyask Existing Environment Groundwater Regime. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. pp.	Completed	8/9/2012
GN-9.3.2	Tetr <i>ES</i> Consultants Inc., 2008. Keeyask Predicted Future Groundwater Regime Without the Keeyask GS. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 37 pp.	Completed	8/9/2012
GN-9.3.3	Tetr <i>ES</i> Consultants Inc., 2008. Keeyask Predicted Future Groundwater Regime With the Keeyask GS. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 90 pp.	Completed	8/9/2012
GN-9.4.1	Tetr <i>ES</i> Consultants Inc., 2009. Water Temperature & Dissolved Oxygen Study – Existing Conditions. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 119 pp.	Completed	10/9/2012
GN-9.4.2	Tetr <i>ES</i> Consultants Inc., North/South Consultants Inc. and Manitoba Hydro, 2009. Water Temperature & Dissolved Oxygen Study – Future Without Project. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 10 pp.	Completed	8/21/2012
GN-9.4.3	Tetr <i>ES</i> Consultants Inc., North/South Consultants Inc. and Manitoba Hydro, 2011. Water Temperature & Dissolved Oxygen Study – Project Effects. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 100 pp.	Completed	11/19/2012
GN-9.5.1	Manitoba Hydro, 2009. Historical Climate Analysis. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 29 pp.	Completed	2/29/2012
GN-9.5.2	Manitoba Hydro, 2011. Future Climate Scenarios. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 66 pp.	Completed	2/29/2012
GN-9.5.5	The Pembina Institute, 2012. A Life Cycle Assessment of Greenhouse Gases and Select Criteria Air Contaminants. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 89 pp.	Completed	02/16/2012



Report Number	Report Title	Status	Date Completed
GN-9.5.6	Environnement Illimité Inc., 2012. Keeyask Environmental Impact Statement – Reservoir Greenhyouse Gases Technical Memo. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro.	Completed	03/08/2012
GN-9.5.7	Manitoba Hydro, 2008. Historical Flow Trend Analysis. Keeyask Project Environmental Studies Program.	In preparation	
AQUATIC EN	VIRONMENT		
99-01	Remnant, R.A. and C.C. Barth. 2003. Results of Experimental Gillnetting on the Nelson River between Birthday and Gull Rapids, Manitoba, Fall 1999. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 75 pp. <i>Draft</i> .	Completed	12/2003
99-02	Zrum, L. and C.L. Bezte. 2003. Water Chemistry, Phytoplankton, Benthic Invertebrate, and Sediment Data for Gull Lake and the Nelson River between Birthday Rapids and Gull Rapids, Manitoba, Fall, 1999. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 66 pp. <i>Draft</i> .	Completed	12/2003
01-01	Zrum, L. and T.J. Kroeker. 2003. Benthic Invertebrate and Sediment Data from Split Lake and Assean Lake, Manitoba, Winter, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 78 pp. <i>Draft</i> .	Completed	12/2003
01-02	Barth, C.C., R.L. Bretecher, and J. Holm. 2004. Floy-tag Application and Recapture Information from the (Gull) Keeyask Study Area, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 88 pp. <i>Draft</i> .	Completed	11/2004
01-03	Barth, C.C., D.L. Neufeld, and R.L. Bretcher. 2003. Results of Fisheries Investigations Conducted in Tributaries of the Nelson River Between Birthday Rapids and Gull Rapids, Manitoba, Spring, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 53 pp. <i>Draft</i> .	Completed	12/2003
01-04	Juliano, K.M. and L. Zrum. 2003. Zooplankton Data from Split, Clark, Gull, Stephens, and Assean Lakes, Manitoba, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 59 pp. <i>Draft</i> .	Completed	12/2003
01-05	Dunmall, K.M., J. Holm, and R.L. Bretcher. 2003. Results of Index Gillnetting Studies Conducted in Assean Lake, Manitoba, Summer 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 70 pp. <i>Draft</i> .	Completed	12/2003



Report Number	Report Title	Status	Date Completed
01-06	Dolce, L.T. and M.A. Sotiropoulos. 2004. Aquatic Macrophyte and Associated Epiphytic Invertebrate Data Collected in Gull Lake and Portions of the Nelson River Between Birthday Rapids and Gull Rapids, Manitoba, Fall 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 56 pp. <i>Draft</i> .	Completed	1/2004
01-07	Dunmall, K.M., J.E. MacDonald, and R.L. Bretecher. 2004. Results of Summer Index Gillnetting Studies Conducted in Split Lake and Clark Lake, and Spring Investigations of Adult and Larval Fish Populations in Portions of the Burntwood River, Grass River, and Nelson River flowing into Split Lake, Manitoba, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 116 pp. <i>Draft</i> .	Completed	2/2004
01-08	Remnant, R.A., N.J. Mochnacz, and J.E. MacDonald. 2004. Results of Fisheries Investigations Conducted in the Assean River Watershed, Manitoba, Spring and Fall, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 106 pp. <i>Draft</i> .	Completed	10/2004
01-10	Pisiak, D.J., T. Kroeker, and R.A. Remnant. 2004. Results of Summer Index Gillnetting Studies in Stephens Lake, Manitoba, and Seasonal Investigations of Adult and Larval Fish Communities in the Reach of the Nelson River between Gull Rapids and Stephens Lake, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 110 pp. <i>Draft</i> .	Completed	10/2004
01-11	Sotiropoulos, M.A. and L.J. Neufeld. 2004. Benthic Invertebrate, Sediment, and Drifting Invertebrate Data Collected from the Gull (Keeyask) Study Area, Manitoba, Spring - Fall 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 138 pp. <i>Draft</i> .	Completed	10/2004
01-13	Remnant, R.A., C.R. Parks, and J.E. MacDonald. 2004. Results of Fisheries Investigations Conducted in the Reach of the Nelson River between Clark Lake and Gull Rapids (Including Gull Lake), 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 154 pp. <i>Draft</i> .	Completed	10/2004
01-14	Barth, C.C. and N.J. Mochnacz. 2004. Lake Sturgeon Investigations in the Gull (Keeyask) Study Area, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 146 pp. <i>Draft</i> .	Completed	10/2004



Report Number	Report Title	Status	Date Completed
01-15	Badiou, P.H., and H.M. Cooley. 2004. Water Chemistry, Phytoplankton, and Sediment Chemistry Data for the Nelson and Assean River Systems, Manitoba, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 210 pp. <i>Draft</i> .	Completed	10/2004
02-03	Barth, C.C., L.J. Neufeld, and J.R. Olynik. 2003. Movements of Northern Pike, Walleye, and Lake Whitefish Tagged with Radio and Acoustic Transmitters in the Gull (Keeyask) Study Area, 2001/2003. Draft report prepared for Manitoba Hydro by North/South Consultants. 137 pp. <i>Draft</i> .	Completed	12/2003
02-04	Juliano, K.M. and L. Zrum. 2004. Zooplankton Data from Split, Clark, Gull, Stephens, and Assean Lakes, and the Nelson River, Manitoba, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 65 pp. <i>Draft</i> .	Completed	1/2004
02-05	Holm, J., V.L. Richardson, and R.L. Bretecher. 2003. Results of Index Gillnetting Studies Conducted in Assean Lake, Manitoba, Summer 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 80 pp. <i>Draft</i> .	Completed	12/2003
02-06	Hartman, E.J. and R.L. Bretecher. 2004. Results of Fisheries Investigations Conducted in the North Moswakot and South Moswakot Rivers, Manitoba, Fall 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 69 pp. <i>Draft</i> .	Completed	1/2004
02-08	Mochnacz, N.J., C.C. Barth, and J. Holm. 2004. Results of Fisheries Investigations Conducted in the Aiken River and at the Mouth of the Ripple River, Manitoba, Spring 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 106 pp. <i>Draft</i> .	Completed	3/2004
02-09	Holm, J. and R.A. Remnant. 2004. Results of Summer Index Gillnetting Studies Conducted in Split Lake and Clark Lake, and Spring Investigations of Adult and Larval Fish Communities in Portions of the Burntwood, Grass, and Nelson Rivers Flowing into Split Lake, Manitoba, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 131 pp. <i>Draft</i> .	Completed	4/2004
02-10	Dolce, L.T. and M.A. Sotiropoulos. 2004. Aquatic Macrophyte and Associated Epiphytic Invertebrate Data Collected in Gull Lake and Portions of the Nelson River between Birthday Rapids and Gull Rapids, Manitoba, Fall 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 57 pp. <i>Draft</i> .	Completed	3/2004



Report Number	Report Title	Status	Date Completed
02-12	Juliano, K.M. and L.J. Neufeld. 2004. Benthic Invertebrate and Sediment Data from Split Lake and Assean Lake, Manitoba, Winter 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 67 pp. <i>Draft</i> .	Completed	12/2004
02-13	Juliano, K.M. and L.J. Neufeld. 2005. Benthic Invertebrate, Sediment, and Drifting Invertebrate Data Collected from the Gull (Keeyask) Study Area, Manitoba, Spring - Fall 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 161 pp. <i>Draft</i> .	Completed	1/2005
02-14	Badiou, P.H. and H.M. Cooley. 2005. Water Chemistry, Phytoplankton, and Sediment Chemistry Data for the Nelson and Assean River Systems, Manitoba, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 255 pp. <i>Draft</i> .	Completed	2/2005
02-15	Johnson, M.W. 2005. Results of Fish Community Investigations Conducted in the Assean River Watershed, Manitoba, Spring and Fall 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 133 pp. <i>Draft</i> .	Completed	2/2005
02-16	Pisiak, D.J. 2005. Results of Summer Index Gillnetting Studies in Stephens Lake, Manitoba and Seasonal Investigations of Adult and Larval Fish Communities in the Reach of the Nelson River between Gull Rapids and Stephens Lake, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 179 pp. <i>Draft</i> .	Completed	1/2005
02-17	Richardson, V.L. and J. Holm. 2005. Results of Fish Community Investigations Conducted in Tributary Systems of the Nelson River between Birthday Rapids and Gull Rapids, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 98 pp. <i>Draft</i> .	Completed	1/2005
02-18	Holm, J., V.L. Richardson, and C.C. Barth. 2005. Floy-tag Application and Recapture Information from the Gull (Keeyask) Study Area, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 175 pp. <i>Draft</i> .	Completed	2/2005
02-19	Barth, C.C. 2005. Lake Sturgeon Investigations in the Keeyask Study Area, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 131 pp. <i>Draft</i> .	Completed	2/2005



Report Number	Report Title	Status	Date Completed
02-20	Johnson, M.W. and C.R. Parks. 2005. Results of Fish Community Investigations Conducted in the Reach of the Nelson River between Clark Lake and Gull Rapids, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 222 pp. <i>Draft</i> .	Completed	8/2005
03-01	Ryland, D. and B. Watts. Fish Taste Studies for Tataskweyak Cree Nation. Draft report prepared for Manitoba Hydro by the University of Manitoba. 44 pp. <i>Draft</i> .	Completed	1/2004
03-02	Ryland, D. and B. Watts. Fish Taste Studies for Fox Lake Cree Nation. Draft report prepared for Manitoba Hydro by the University of Manitoba. 43 pp. <i>Draft</i> .	Completed	1/2004
03-03	Maclean, B.D. and D.J. Pisiak. 2005. Results of Fish Community Investigations Conducted at the Mouth of the Ripple River, Manitoba, Spring 2003. Year II. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 43 pp. <i>Draft</i> .	Completed	2/2005
03-05	Badiou, P.H., H.M. Cooley, and T. Savard. 2005. Water Chemistry Data for the Lower Nelson River System, Manitoba, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 219 pp. <i>Draft</i> .	Completed	12/2005
03-06	Murray, L., C.C. Barth, and J.R. Olynik. 2005. Movements of Radio- and Acoustic- Tagged Northern Pike, Walleye, and Lake Whitefish in the Keeyask Study Area: May 2002 to April 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 125 pp. <i>Draft</i> .	Completed	8/2005
03-08	Barth, C.C. and L. Murray. 2005. Lake sturgeon Investigations in the Keeyask Study Area, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 127 pp. <i>Draft</i> .	Completed	10/2005
03-09	Pisiak, D.J. and E.J. Hartman. 2005. Results of Fish Community Investigations Conducted in the North Moswakot and South Moswakot Rivers, Manitoba, Spring and Fall 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 157 pp. <i>Draft</i> .	Completed	9/2005
03-11	Kroeker, D.S. and W. Jansen. 2005. Results of Fish Community Investigations Conducted in Tributaries of the Nelson River between Clark Lake and Gull Rapids, Manitoba, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 72 pp. <i>Draft</i> .	Completed	1/2006



Report Number	Report Title	Status	Date Completed
03-12	Maclean, B.D. and J.Holm. 2005. Results of Fish Community Investigations Conducted in the Mistuska River, Manitoba, Spring 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 90 pp. <i>Draft</i> .	Completed	9/2005
03-13	Maclean, B.D. and D.J. Pisiak. 2005. Results of Fish Community Investigations Conducted in the Aiken River, Manitoba, Spring 2003, Year II. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 108 pp. <i>Draft</i> .	Completed	12/2005
03-14	Pisiak, D. 2005. Results of Summer Index Gillnetting Studies in Stephens Lake, Manitoba, and Seasonal Investigations of Fish Communities in the Reach of the Nelson River between Gull Rapids and Stephens Lake, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 313 pp. <i>Draft</i> .	Completed	10/2005
03-15	Holm, J. 2006. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 244 pp. <i>Draft</i> .	Completed	9/2006
03-16	Dolce, L. T. and M.J. Burt. 2008. Aquatic Macrophyte and Associated Epiphytic Invertebrate Data Collected from the Keeyask Study Area, Manitoba, Late Summer 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 111 pp. <i>Draft</i> .	Completed	2/2008
03-17	Gill, G. 2007. Invertebrate Drift and Plant Biomass Data from the Nelson River at Birthday Rapids, Gull Lake, Gull Rapids, and Kettle Generating Station, Manitoba, Summer and Fall 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 72 pp. <i>Draft</i> .	Completed	11/2007
03-35	Maclean, B.D. and P. Nelson. 2005. Population and Spawning Studies of Lake Sturgeon (Acipenser fulvescens) at the Confluence of the Churchill and Little Churchill Rivers, Manitoba, Spring 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 70 pp. <i>Draft</i> .	Completed	1/2006
03-36	Bretecher, R.L., G.C. Dyck, and R.A. Remnant. 2007. Results of Fish Community Investigations Conducted in the Reach of the Nelson River Between Clark Lake and Gull Rapids (Including Gull Lake), 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 275 pp. <i>Draft</i> .	Completed	2/2007



Report Number	Report Title	Status	Date Completed
03-37	Cooley, H.M. and M.W. Johnson. 2008. An Evaluation of Walleye Condition from Stephens Lake. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 59 pp. <i>Draft</i> .	Completed	3/2008
04-03	Holm, J. 2005. Results of Fish Community Investigations Conducted in Clark Lake, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 116 pp. <i>Draft</i> .	Completed	10/28/2005
04-04	Badiou, P.H., T. Savard, and H.M. Cooley. 2007. Water Chemistry and Phytoplankton data for the Lower Nelson River System, Manitoba, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 247 pp. <i>Draft</i> .	Completed	1/2007
04-05	BARTH, C.C. and K. AMBROSE. 2006. Lake Sturgeon Investigations in the Keeyask Study Area, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 105 pp. <i>Draft</i> .	Completed	1/2006
04-06	Cooley, H.M. and T.G. Savard. 2008. Results of Greenhouse Gas Sampling in the Keeyask and Conawapa Study Areas: 2001-2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 76 pp. <i>Draft</i> .	Completed	2/2008
04-07	T. Savard and H.M. Cooley. 2007. Turbidity Monitoring Data for Clark and Gull Lakes, Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 51 pp. <i>Draft</i> .	Completed	1/2007
04-08	Holm, J. 2007. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 148 pp. <i>Draft</i> .	Completed	1/2007
04-09	Johnson, M.W. 2007. Results of Fish Community Investigations Conducted in the Reach of the Nelson River Between Clark Lake and Gull Rapids (Including Gull Lake), 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 159 pp. <i>Draft</i> .	Completed	1/2007
04-10	Johnson, M.W. and C.C. Barth. 2007. Results of Fish Community Investigations in the Kettle and Butnau Rivers, Manitoba, Spring 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 59 pp. <i>Draft</i> .	Completed	1/2007
04-11	Holm, J., H.M. Cooley, and E. Shipley. 2007. Trace Elements in Fish from the Keeyask Study Area: Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 62 pp. <i>Draft</i> .	Completed	2/2007



Report Number	Report Title	Status	Date Completed
04-12	Johnson, M.W. and B.D. Maclean. 2007. Results of Fish Community Investigations Conducted in the Mistuska River, Manitoba, Spring 2004. Year II. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 87 pp. <i>Draft</i> .	Completed	6/2007
04-13	Johnson, M.W. and B.D. Maclean. 2007. Results of Fish Community Investigations Conducted in the York Landing Arm of Split Lake and Its Major Tributaries, Manitoba, Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 74 pp. <i>Draft</i> .	Completed	5/2007
04-14	Pisiak, D.J. and B.D. Maclean. 2007. Population Studies of Lake Sturgeon (<i>Acipenser fulvescens</i>) in the Fox River, Manitoba, Summer 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 42 pp. <i>Draft</i> .	Completed	4/2007
04-15	Neufeld, L. 2007. Benthic Invertebrate and Sediment, Data Collected from Littoral Zones in the Keeyask Study Area, Manitoba, Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 92 pp. <i>Draft</i> .	Completed	4/2007
04-16	MacDonald, J.E. 2007. Results of Fish Community Investigations in Gull Rapids and Stephens Lake, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 113 pp. <i>Draft</i> .	Completed	5/2007
04-17	Burt, M.J. and L.T. Dolce. 2008. Aquatic Macrophyte and Associated Epiphytic Invertebrate Data Collected from the Keeyask Study Area, Manitoba, Summer 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 130 pp. <i>Draft</i> .	Completed	2/2008
04-18	Gill, G. 2007. Invertebrate Drift and Plant Biomass Data from the Nelson River at Birthday Rapids, Gull Rapids, and Kettle Generating Station, Manitoba, Summer and Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 91 pp. <i>Draft</i> .	Completed	11/2007
05-02	Holm, J. 2007. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 56 pp. <i>Draft</i> .	Completed	4/2007
05-03	Murray, L. and C.C. Barth. 2007. Movements of Radio- and Acoustic- Tagged Northern Pike, Walleye, and Lake Whitefish in the Keeyask Study Area: May 2003 to August 2004 and a Summary of Findings from 2001-2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 111 pp. <i>Draft</i> .	Completed	4/2007



Appendix 6A - Environmental Study Report List

Report Number	Report Title	Status	Date Completed
05-04	Jansen, W. and N. Strange. 2007. Mercury Concentrations in Fish From the Keeyask Project Study Area for 1999-2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 168 pp. <i>Draft</i> .	Completed	8/2007
05-05	Barth, C.C. and J.E. MacDonald. 2008. Lake Sturgeon Investigations in the Keeyask Study Area, 2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 63 pp. <i>Draft</i> .	Completed	3/2008
05-06	Mazur, K.M. and T.G. Savard. 2008. Proposed Keeyask Access Road Stream Crossing Assessment, 2004 and 2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 68 pp. 83 pp. <i>Draft</i> .	Completed	2/2008
06-02	Holm, J. 2007. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 61 pp. <i>Draft</i> .	Completed	4/2007
06-03	Savard, T. and H.M. Cooley. 2007. Dissolved Oxygen Surveys in the Keeyask Study Area: Winter 2005 and 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 54 pp. <i>Draft</i> .	Completed	4/2007
06-04	MacDonald, J.E. 2008. Lake Sturgeon Investigations in the Keeyask Study Area, 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 110 pp. <i>Draft</i> .	Completed	3/2008
06-05	Cassin, J. and R.A. Remnant. 2008. Results of Fish Spawning Investigations Conducted in Gull Rapids Creek, Pond 13, and Selected Tributaries to Stephens Lake, Spring 2005 and 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 45 pp. <i>Draft</i> .	Completed	3/2008
06-06	MacDonald, J.E. 2007. Fish community assessments of selected lakes within the Split Lake Resource Management Area, 2004-2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 145 pp. <i>Draft</i> .	Completed	11/2007
06-07	Jansen, W. 2008. Infection Rate of the Parasite <i>Triaenophorus crassus</i> in Lake Whitefish from the Keeyask Study Area for 2003-2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 35 pp. <i>Draft</i> .	Completed	3/2008



Report Number	Report Title	Status	Date Completed
06-08	Cooley, P.M. and L. Dolce. 2008. Aquatic Habitat Utilization Studies in Stephens Lake: Macrophyte Distribution and Biomass, Epiphytic Invertebrates, and Fish Catch-Per- Unit-Effort in Flooded Habitat. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 75 pp. <i>Draft</i> .	Completed	3/2008
06-09	Cooley, P.M. 2008. Carbon dioxide and methane flux from peatland watersheds and divergent water masses in a sub-arctic reservoir. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 45 pp. <i>Draft</i> .	Completed	3/2008
06-10	Capar, L.N. 2008. Benthic Invertebrate Data Collected from O'Neil Bay and Ross Wright Bay in Stephens Lake, Manitoba, Fall 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 34 pp. <i>Draft</i> .	Completed	3/2008
06-11	Jansen, W. and N. Strange. 2009. Fish mercury concentrations from the Keeyask Project Study Area for 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 68 pp. <i>Draft</i> .	Completed	7/2009
06-12	Larter, J.L. and P.M. Cooley. 2010. Substratum and Depth Distribution in Flooded Habitat of Stephens Lake, Manitoba, Thirty-Five Years after Impoundment. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 57 pp. <i>Draft</i> .	Completed	12/2010
06-13	Cooley, P.M., L. Dolce Blanchard, and J. Larter. 2009. The effect of local and regional watersheds on the spectral composition and attenuation of light and water quality parameters in the surface waters of Stephens Lake, Manitoba. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 51 pp. <i>Draft</i> .	Completed	5/2009
08-01	MacDonald, J.E. 2009. Lake Sturgeon Investigations in the Keeyask Study Area, 2007-2008. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 116 pp. <i>Draft</i> .	Completed	4/2009
08-02	Holm, J. 2009. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2007 and 2008. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 63 pp. <i>Draft</i> .	Completed	4/2009
09-01	Holm, J. 2010. Results of Index Gillnetting Studies Conducted in the Keeyask Study Area, Summer 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 110 pp. <i>Draft</i> .	Completed	10/2010



Report Number	Report Title	Status	Date Completed
09-02	Holm, J. 2010. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 48 pp. <i>Draft</i> .	Completed	10/2010
09-03	Michaluk, Y. and J.E. MacDonald. 2010. Lake Sturgeon Investigations in the Keeyask Study Area, 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 83 pp. <i>Draft</i> .	Completed	12/2010
09-04	Savard, T. S. Hnatiuk-Stewart, and H.M. Cooley. 2010. Water Quality Data for the Lower Nelson River System, Manitoba, 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 240 pp. <i>Draft</i> .	Completed	7/2010
09-05	Jansen, W. 2010. Fish Mercury Concentrations in the Keeyask Study Area, 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 42 pp. <i>Draft</i> .	Completed	12/2010
10-01	MacDonald, J.E. and C.C. Barth. 2011. Adult Lake Sturgeon Investigations in the Keeyask Study Area, Spring 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 78 pp. Draft	Completed	12/2011
10-02	Michaluk, Y., J.E. MacDonald and C.C. Barth. 2011. Results of Lake Whitefish Spawning Surveys in Ferris Bay and the North and South Moswakot Rivers, Fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 51 pp. Draft	Completed	11/2011
10-03	Henderson, L., C.C. Barth, J.E. MacDonald and S.J. Garner. 2011. Results of a Coarse Scale Habitat Inventory in the Upper Split Lake Area, Fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 75 pp. Draft	Completed	12/2011
10-04	Holm, J. 2011. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 53 pp. Draft	Completed	12/2011
10-05	Ambrose, K.M. and R. Remnant.2011. Fish Community Assessment of Armstrong Lake,2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 90 pp. Draft	Completed	12/2011



Report Number	Report Title	Status	Date Completed
10-06	MacDonald, J.E. and C.C. Barth. 2011. Benthic Invertebrate Surveys in Gull Lake and Stephens Lakes, Fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 78 pp. Draft	Completed	12/2011
10-07	Henderson, L.M., C.C. Barth, J.E. MacDonald and M. Blanchard. 2011. Young-of-the-Year and Sub-Adult Lake Sturgeon Investigations in the Keeyask Study Area, Spring and Fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 60 pp. Draft	Completed	12/2011
11-01	Hrenchuk, C.L. and C.A. McDougall. 2012. Adult Lake Sturgeon Investigations in the Keeyask Study Area, 2011. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 183 pp. <i>Draft</i>	Completed	12/2012
11-04	Henderson, L.M. and D.J. Pisiak. 2012. Results of Young-of-the-Year and Sub-Adult Lake Sturgeon Investigations in the Keeyask Study Area, Spring and Fall 2011. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 58 pp. <i>Draft</i>	Completed	12/2012
11-05	Holm, J. 2012. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2011. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 60 pp. <i>Draft</i>	Completed	12/2012
TBA	Ambrose, K.M. and R.A. Remnant. 2011. Results of fish community investigations in Armstrong Lake, Manitoba, 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. <i>Draft</i>	-	oort reference ort 10-5
TBA	Capar, L.N., and F. Schneider-Vieira. 2011. Results of benthic invertebrate sampling conducted in Gull and Stephens Lakes, Fall, 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. <i>Draft</i>	Duplicate report reference for 10-6	
TBA	Henderson, L. M., C. C. Bart, J.E. MacDonald, and S.J. Garner. 2011. Results of a coarse scale habitat inventory in the upper Split Lake area, fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. Draft	Duplicate report reference for 10-3	
TBA	Henderson, L.M. and C.C. Barth. 2011. Young-of-the-year and subadult lake sturgeon investigations in the Keeyask Study Area, 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. <i>Draft</i>	Duplicate report reference for 10-7	



Appendix 6A - Environmental Study Report List

Report Number	Report Title	Status	Date Completed	
TBA	Holm, J. 2011. Floy-tag application and recapture information from the Keeyask Study Area, 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. <i>Draft</i>	Duplicate report reference for 10-4		
TBA	MacDonald, J.E. and C.C. Barth. 2011. Lake sturgeon investigations in the Keeyask Study Area, Spring 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. <i>Draft</i>		Duplicate report reference for 10-1	
TBA	Michaluk, Y. J.E. MacDonald, and C. C. Barth. 2011. Results of lake whitefish spawning surveys in Ferris Bay and the North and South Moswakot rivers, fall, 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. <i>Draft</i>		te report e for 10-2	
TBA	McDougall, C.A., C.C. Barth, and C.L. Hrenchuk. 2013. Results of Juvenile Lake Sturgeon Movement and Habitat Utilization Studies in Stephens Lake, 2011. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. Draft	In preparation		
TBA	McDougall, C.A., C.C. Barth, and C.L. Hrenchuk. 2013. Results of Juvenile Lake Sturgeon Movement and Habitat Utilization Studies in Stephens Lake, October 2011 to 2012. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. Draft	In preparation		
Terrestrial	I Habitat and Ecosystems			
	Terrestrial habitats and ecosystems in the Lower Nelson River Region	In preparation		
	Responses of terrestrial habitats to reservoir flooding and water regulation in northern Manitoba	In preparation		
	Habitat relationships and wildlife habitat quality models for the Keeyask region			
FORESTRY				
01-16	Forestry Activities 2001. Draft report prepared for North/South Consultants Inc. by Plus4 Consulting Inc. and Resource Ecosystem Services. 49 pp.	Completed	12/1/2004	
03-07	Forestry activities 2003. Draft report prepared for Manitoba Hydro by Plus4 Consulting Inc.	Completed	3/31/2006	
TBA	Keeyask GS Forebay Clearing Plan Comparative Analysis; Hand Clearing Versus Machine Clearing (Draft). 2006 Draft report prepared for Manitoba Hydro by Plus4 Consulting Inc.	Completed	3/27/2006	



Report Number	Report Title	Status	Date Completed
	Plus4 Consulting Inc. and Ecostem Ltd., 2006. Keeyask Forebay Clearing Plan (Draft). Draft report prepared for Manitoba Hydro by Plus4 Consulting Inc.	Completed	2/22/2006
BIRDS, AMP	PHIBIANS AND REPTILES		
01-09	Tetr <i>ES</i> Consultants Inc., 2004. Avian field studies report, 2001. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i>	Completed	12/1/2004
02-11	Tetr <i>ES</i> Consultants Inc., 2005. Avian field studies report, 2002. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 190 pp. <i>Draft</i>	Completed	3/9/2005
03-04	Tetr <i>ES</i> Consultants Inc., 2005. Avian field studies report, 2003. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i>	Completed	10/28/2005
04-01	Tetr <i>ES</i> Consultants Inc., 2005. Access road – Avian Field Studies report, 2004. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 33 pp. <i>Draft</i>	Completed	10/28/2005
04-02	Tetr <i>ES</i> Consultants Inc., 2005. Amphibian and reptile field studies report 2001-2004. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 27 pp. <i>Draft</i>	Completed	10/28/2005
05-01	Tetr <i>ES</i> Consultants Inc., 2006. Access road – Avian field studies report, 2005. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 52 pp. <i>Draft</i>	Completed	3/31/2006
06-01	Tetr <i>ES</i> Consultants Inc., 2007. Access road – Avian field studies report, 2006. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	3/28/2007
07-01	Tetr <i>ES</i> Consultants Inc., 2007. Avian field studies report, 2007. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	12/2007
07-02	Tetr <i>ES</i> Consultants Inc., 2007. Amphibian and Reptile field studies report, 2007. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	12/21/2007
11-01	Stantec Consultants Ltd. Avian 2011 Field Studies Report, 2011. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	In preparation	



Mammals			
01-12	Patenaude, A. and R. Berger. 2004. Results of Mammal, Reptile & Amphibian Investigations in the Gull (Keeyask) Study Area, 2001. Draft report prepared for Manitoba Hydro by Wildlife Resource Consulting Services MB, Inc. 142 pp. <i>Draft</i> .	Completed	12/1/2004
02-07	Patenaude, A. and R. Berger. 2004. Results of Mammal Investigations in the Keeyask Study Area, 2002. Draft report prepared for Manitoba Hydro by Wildlife Resource Consulting Services MB, Inc. 162 pp. <i>Draft</i> .	Completed	3/15/2004
03-34	Patenaude, A., A. Kibbins, A. Walleyn and R. Berger. 2006. Results of mammal investigations in the Keeyask study area, 2003. Draft report prepared for Manitoba Hydro by Wildlife Resource Consulting Services MB, Inc. 246 pp. <i>Draft</i> .	Completed	1/23/2006
04-19	Kibbins, A. and R. Berger. 2007. Results of mammal investigations in the Keeyask study area, 2004. Draft report prepared for Manitoba Hydro by Wildlife Resource Consulting Services MB, Inc. 64 pp. <i>Draft</i> .	Completed	1/8/2007
08-XX	Wildlife Resource Consulting Services MB, Inc. Keeyask Project Generating Station Caribou of the Lower Nelson River, Workshop Discussion Report. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. 21 pp. <i>Draft</i> .	Completed	12/31/2008
09-01	Knudsen, B., R. Berger, B. Kiss, S. Johnstone, J. Hopkins and J. Kelly. 2009. Split Lake Resource Management Area Moose Survey Stage 1 - March 2009. Draft report prepared for Manitoba Hydro by Knudsen Wildlife Management Systems and Wildlife Resource Consulting Services MB, Inc. 52 pp. <i>Draft</i> .	Completed	4/30/2009
10-01	Knudsen, B., R. Berger, S. Johnstone, B. Kiss, J. Paille and J. Kelly. 2010. Split Lake Resource Management Area Moose Survey 2009 and 2010. Draft report prepared for Manitoba Hydro by Knudsen Wildlife Management Systems and Wildlife Resource Consulting Services MB, Inc. 144 pp. <i>Draft</i> .	Completed	12/15/2010
HERITAGE			
N/A	Northern Lights Heritage Services Inc. Keeyask Powistick (Gull Rapids) Generating Station Cultural and Physical Heritage Area Characterization Study. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	3/2001
A36-01	Northern Lights Heritage Services Inc. Keeyask Powistick (Gull Rapids) Heritage Resource Impact Assessment: 2001. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	12/2001



A27-02	Northern Lights Heritage Services Inc. Gull Rapids (Keeyask) Generating Station: Heritage Resource Impact Assessment (Year I): Fox Lake Cree Nation (Interim Report). Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	9/2002
02-04	Northern Lights Heritage Services Inc. Gull (Keeyask) Project Generating Station: Heritage Resource Impact Assessment Fox Lake Cree Nation. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	2002
A10-03	Northern Lights Heritage Services Inc. Keeyask Project: Generating Station: Heritage Resource Impact Assessment: Gull (Keeyask) Rapids Camp. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	6/2003
A10-03	Northern Lights Heritage Services Inc. Keeyask Project: Generating Station: Heritage Resource Impact Assessment of Gull (Keeyask) Rapids. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	11/2003
A10-03	Northern Lights Heritage Services Inc. Keeyask Project Heritage Resource Impact Assessment: Archaeological Survey of Stephen's and Fox (Atikinson) Lakes. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	12/2003
A07-04	Northern Lights Heritage Services Inc. Keeyask Project Generating Station: 2004 Heritage Resource Impact Assessment Gull (Keeyask) Rapids. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	11/2004
A07-04	Northern Lights Heritage Services Inc. Participatory Action Research, Tataskweyak Cree Nation Student Archaeological Program. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	3/2005
A08-04	Northern Lights Heritage Services Inc. Keeyask Projects: Heritage Resource Impact Assessment: Archaeological Investigation at the Paradise Beach Site on Fox (Atkinson) Lake. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	3/2005
A30-05	Northern Lights Heritage Services Inc. Gull (Keeyask) Project: Heritage Resource Impact Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	12/2005



A31-05	Northern Lights Heritage Services Inc. Gull (Keeyask) Generating Station: Kettle Lake Comparison Study. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	1/2006
A33-05	Northern Lights Heritage Services Inc. War Lake Archaeological Research Project (WARP) Archaeological Field Survey Report. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	4/2006
A31-06	Northern Lights Heritage Services Inc. Keeyask (Gull) Generating Station: Bryant's Point: Archaeological Field Investigation Component Heritage Resource Impact Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	9/2006
A28-06	Northern Lights Heritage Services Inc. Archaeological Survey of the Northwest Arm of Stephens Lake, Manitoba. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	12/2006
A31-06	Northern Lights Heritage Services Inc. Keeyask Projects: Archaeological Survey of Kettle Lake, Manitoba: Comparative Study for the Heritage Resource Impact Assessment (HRIA). Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	1/2007
A30-06	Northern Lights Heritage Services Inc. Keeyask (Gull) Project: 2006 Fox Lake Comparative Study Component. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	3/2007
A32-06	Northern Lights Heritage Services Inc. Keeyask Generating Station: Archaeological Field Investigation Component Clark Lake Archaeological Survey Heritage Resource Impact Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	3/2007
A25-07	Northern Lights Heritage Services Inc. Keeyask Generating Station 2007 Archaeological Field Investigation Component Clark Lake Archaeological Survey Heritage Resource Impact Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	2/2008
A25-07	Northern Lights Heritage Services Inc. Keeyask Generating Station 2007 Archaeological Field Investigation Component Carscadden Lake and Portage (Pisitif) Creek Archaeological Survey Heritage Resource Impact Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	2/2008



A38-08	Northern Lights Heritage Services Inc. Archaeological Investigation of the Lower Odei & Burntwood Rivers Related to the Aboriginal Sturgeon Fishery. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	10/2008
A34-08	Northern Lights Heritage Services Inc. Keeyask Generating Station 2008 Archaeological Field Investigation Component: Carscadden Lake Archaeological Survey Heritage Resource Impact Assessment (HRIA). Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	1/2009
A30-08	Northern Lights Heritage Services Inc. 2008 Split Lake Archaeological Shoreline Survey. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	3/2009
A35-08	Northern Lights Heritage Services Inc. Keeyask Generating Station 2008 Archaeological Field Investigation Component Clark Lake Archaeological Survey Heritage Resource Impact Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	3/2009
A29-08	Northern Lights Heritage Services Inc. Keeyask Generating Station 2008 Archaeological Field Investigation Component Pointe West Site (HfKe-2) Formal Excavation. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	4/2009
N/A	Northern Lights Heritage Services Inc. Keeyask Construction Power Transmission Line Cultural and Physical Heritage Area Characterization Study & Route Selection. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	5/2009
A40-09	Northern Lights Heritage Services Inc. Keeyask Generation Project 2009: HRIA of Impervious and Granular Deposit Borrow Areas. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	6/2009
A37-09	Northern Lights Heritage Services Inc. Keeyask Infrastructure Project 2009 HRIA Startup and Main Camp (Phase 1). Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	8/2009
A18-09 & A5109	Northern Lights Heritage Services Inc. Keeyask Transmission Project 2009 Heritage Resource Impact Assessment. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i> .	Completed	10/2009



11/2009
11/2009
3/2010
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11/2011



1.2 PUBLIC INVOLVEMENT PROGRAM SUPPORTING VOLUME

As of this filing there are no errata to report for the Public Involvement Program Supporting Volume.



1.3 PROJECT DESCRIPTION SUPPORTING VOLUME

Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 2	2-24	"The south access road includes a	"The south access road includes a
		13.5 km section of new road	19 km section of new road
		between Gull Rapids and Butnau	between Gull Rapids and Butnau
		Dam and a 21.5 km section of	Dam and a 16 km section of
		existing road that will be upgraded	existing road that will be upgraded
		to Provincial Road standards (Table	to Provincial Road standards (Table
		3-1)."	3-1)"



1.4 PHYSICAL ENVIRONMENT SUPPORTING VOLUME

As of this filing there are no errata to report for the Physical Environment Supporting Volume.



1.5 AQUATIC ENVIRONMENT SUPPORTING VOLUME

Chapter	Page	Current Text	Corrected Text/Clarification
Acknowledgements j		"Jarod Larter, B. Sc."	"Jarod Larter, B. Sc., Adv. Dip. GIS, M. Sc."
Acknowledgements	i	"Paul Cooley, B. Sc., M. Sc., Ph. D."	"Paul Cooley, B. Sc., M. A., Ph. D."
Acknowledgements	i	"Laura Henderson, B. Sc., M. Sc."	"Laura Henderson, B. Sc."
Acknowledgements	i	"Laurel Neufeld, B. Sc., M. Sc."	"Laurel Neufeld, B. Sc."
List of Tables	xxvii, 5-v	Table 5-1 is listed as starting on p. 5-73	Table 5-1 starts on p. <u>5-75</u>
List of Tables	xxx, 7- v	Table 7-1 is listed as starting on p. 7-51	Table 7-1 starts on p. <u>7-53</u>
List of Figures	xxxiv, 2-x	"Figure 2-11: Open water season (± standard error) concentrations of (A) magnesium, (B) potassium, (C) sodium, and (D) calcium measured at sites in the Keeyask Study Area: 2001-2004"	"Figure 2-11: Open water season (± standard error) concentrations of (A) magnesium, (B) potassium, (C) sodium, and (D) calcium measured at sites in the Aquatic Environment Study Area: 2001-2004"
List of Maps	xI, 2- xiii	"Map 2-8: Water quality sampling sites 2001-2004 – Downstream area"	"Map 2-8: Water quality sampling sites 2001-2004 – <u>Stephens Lake</u> area"
Appendix 1A Part 1	Map 1A-8B on p. 1A-68	The purple "North Shore bench" area is missing from the map image (but included in the map legend)	A map showing the location of the purple "North Shore bench" area during Phase 2 and Phase 3 of habitat construction can be found in the Fish Habitat Compensation Plan
Appendix 1A Part 2	II	Appendix I is listed as starting on p. 23	Appendix I starts on p. 24
Appendix 1B	Table 1B-1 (p.1B-1 to 1B- 14)	Two different, incomplete references were included for each 2010 data report	A table with one correct reference for each 2010 data report is provided as an attachment
Chapter 2	Map 2- 1 p. 191	Areas within the larger Water Quality Study Area are not labeled with their names	A map with labeled areas is provided as an attachment



Chapter 3	3-30	"As discussed in Section 6.2.3.3.2, the total area of large river and lake habitat"	"As discussed in Section 3.3.2.1, the total area of large river and lake habitat"
Chapter 4	4-133	"Table 4-20A: Residual effects on the zooplankton community: operation period"	"Table <u>4-20B</u> : Residual effects on the zooplankton community: operation period"
Chapter 5	Figure 5-1	The 2002-2003 date range in panel A (Split Lake fish abundance) is incorrect	The date range should be 1997- 1998, 2001-2002. A figure with the correct date range is provided as an attachment
Appendix 6B	6D-6	The final paragraph in Section 6D.3 is a drafting note	The drafting note should be omitted

A few formatting errors present in the initial electronic version of the AE SV (distributed on CD on 06 July 2012) were identified before binders were printed. These formatting errors were corrected in the web and print versions, as well as in the electronic version on all subsequently distributed CDs. These corrections included such things as: the addition of missing section prefixes to page numbers (e.g., in Section 2, p. 147 became p. 2-147); the movement of section headings stranded at the bottom of pages, or related tabular data/literature cited/table of contents entries split across two pages, to the top of the following page; updating map names in the List of Maps to match titles on maps included in the document; correcting the page number(s) on p. 2I-6 and the list of Attachments on p. 1A-ix; and fixing the incorrect location of a "Tables, Maps and Figures" title page. Apart from formatting, document content between the two versions was not altered.

1.5.1 Corrected Tables and Figures

The changes notes for Table 1B-1 below are comparable to those notes for Table 6A-1 of the Response to EIS Guidelines.

Table 1B-1: Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
99-01	Remnant, R.A. and C.C. Barth. 2003. Results of Experimental Gillnetting on the Nelson River between Birthday and Gull Rapids, Manitoba, Fall 1999. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 75 pp. <i>Draft</i> .	Completed	Dec-03
99-02	Zrum, L. and C.L. Bezte. 2003. Water Chemistry, Phytoplankton, Benthic Invertebrate, and Sediment Data for Gull Lake and the Nelson River between Birthday Rapids and Gull Rapids, Manitoba, Fall, 1999. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 66 pp. <i>Draft</i> .	Completed	Dec-03



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
01-01	Zrum, L. and T.J. Kroeker. 2003. Benthic Invertebrate and Sediment Data from Split Lake and Assean Lake, Manitoba, Winter, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 78 pp. <i>Draft</i> .	Completed	Dec-03
01-02	Barth, C.C., R.L. Bretecher, and J. Holm. 2004. Floy-tag Application and Recapture Information from the (Gull) Keeyask Study Area, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 88 pp. <i>Draft</i> .	Completed	Nov-04
01-03	Barth, C.C., D.L. Neufeld, and R.L. Bretcher. 2003. Results of Fisheries Investigations Conducted in Tributaries of the Nelson River Between Birthday Rapids and Gull Rapids, Manitoba, Spring, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 53 pp. <i>Draft</i> .	Completed	Dec-03
01-04	Juliano, K.M. and L. Zrum. 2003. Zooplankton Data from Split, Clark, Gull, Stephens, and Assean Lakes, Manitoba, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 59 pp. <i>Draft</i> .	Completed	Dec-03
01-05	Dunmall, K.M., J. Holm, and R.L. Bretcher. 2003. Results of Index Gillnetting Studies Conducted in Assean Lake, Manitoba, Summer 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 70 pp. <i>Draft</i> .	Completed	Dec-03
01-06	Dolce, L.T. and M.A. Sotiropoulos. 2004. Aquatic Macrophyte and Associated Epiphytic Invertebrate Data Collected in Gull Lake and Portions of the Nelson River Between Birthday Rapids and Gull Rapids, Manitoba, Fall 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 56 pp. <i>Draft</i> .	Completed	Jan-04
01-07	Dunmall, K.M., J.E. MacDonald, and R.L. Bretecher. 2004. Results of Summer Index Gillnetting Studies Conducted in Split Lake and Clark Lake, and Spring Investigations of Adult and Larval Fish Populations in Portions of the Burntwood River, Grass River, and Nelson River flowing into Split Lake, Manitoba, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 116 pp. <i>Draft</i> .	Completed	Feb-04
01-08	Remnant, R.A., N.J. Mochnacz, and J.E. MacDonald. 2004. Results of Fisheries Investigations Conducted in the Assean River Watershed, Manitoba, Spring and Fall, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 106 pp. <i>Draft</i> .	Completed	Oct-04



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
01-10	Pisiak, D.J., T. Kroeker, and R.A. Remnant. 2004. Results of Summer Index Gillnetting Studies in Stephens Lake, Manitoba, and Seasonal Investigations of Adult and Larval Fish Communities in the Reach of the Nelson River between Gull Rapids and Stephens Lake, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 110 pp. <i>Draft</i> .	Completed	Oct-04
01-11	Sotiropoulos, M.A. and L.J. Neufeld. 2004. Benthic Invertebrate, Sediment, and Drifting Invertebrate Data Collected from the Gull (Keeyask) Study Area, Manitoba, Spring - Fall 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 138 pp. <i>Draft</i> .	Completed	Oct-04
01-13	Remnant, R.A., C.R. Parks, and J.E. MacDonald. 2004. Results of Fisheries Investigations Conducted in the Reach of the Nelson River between Clark Lake and Gull Rapids (Including Gull Lake), 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 154 pp. <i>Draft</i> .	Completed	Oct-04
01-14	Barth, C.C. and N.J. Mochnacz. 2004. Lake Sturgeon Investigations in the Gull (Keeyask) Study Area, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 146 pp. <i>Draft</i> .	Completed	Oct-04
01-15	Badiou, P.H., and H.M. Cooley. 2004. Water Chemistry, Phytoplankton, and Sediment Chemistry Data for the Nelson and Assean River Systems, Manitoba, 2001. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 210 pp. <i>Draft</i> .	Completed	Oct-04
02-03	Barth, C.C., L.J. Neufeld, and J.R. Olynik. 2003. Movements of Northern Pike, Walleye, and Lake Whitefish Tagged with Radio and Acoustic Transmitters in the Gull (Keeyask) Study Area, 2001/2003. Draft report prepared for Manitoba Hydro by North/South Consultants. 137 pp. <i>Draft</i> .	Completed	Dec-03
02-04	Juliano, K.M. and L. Zrum. 2004. Zooplankton Data from Split, Clark, Gull, Stephens, and Assean Lakes, and the Nelson River, Manitoba, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 65 pp. <i>Draft</i> .	Completed	Jan-04
02-05	Holm, J., V.L. Richardson, and R.L. Bretecher. 2003. Results of Index Gillnetting Studies Conducted in Assean Lake, Manitoba, Summer 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 80 pp. <i>Draft</i> .	Completed	Dec-03



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
02-06	Hartman, E.J. and R.L. Bretecher. 2004. Results of Fisheries Investigations Conducted in the North Moswakot and South Moswakot Rivers, Manitoba, Fall 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 69 pp. <i>Draft</i> .	Completed	Jan-04
02-08	Mochnacz, N.J., C.C. Barth, and J. Holm. 2004. Results of Fisheries Investigations Conducted in the Aiken River and at the Mouth of the Ripple River, Manitoba, Spring 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 106 pp. <i>Draft</i> .	Completed	Mar-04
02-09	Holm, J. and R.A. Remnant. 2004. Results of Summer Index Gillnetting Studies Conducted in Split Lake and Clark Lake, and Spring Investigations of Adult and Larval Fish Communities in Portions of the Burntwood, Grass, and Nelson Rivers Flowing into Split Lake, Manitoba, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 131 pp. <i>Draft</i> .	Completed	Apr-04
02-10	Dolce, L.T. and M.A. Sotiropoulos. 2004. Aquatic Macrophyte and Associated Epiphytic Invertebrate Data Collected in Gull Lake and Portions of the Nelson River between Birthday Rapids and Gull Rapids, Manitoba, Fall 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 57 pp. <i>Draft</i> .	Completed	Mar-04
02-12	Juliano, K.M. and L.J. Neufeld. 2004. Benthic Invertebrate and Sediment Data from Split Lake and Assean Lake, Manitoba, Winter 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 67 pp. <i>Draft</i> .	Completed	Dec-04
02-13	Juliano, K.M. and L.J. Neufeld. 2005. Benthic Invertebrate, Sediment, and Drifting Invertebrate Data Collected from the Gull (Keeyask) Study Area, Manitoba, Spring - Fall 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 161 pp. <i>Draft</i> .	Completed	Jan-05
02-14	Badiou, P.H. and H.M. Cooley. 2005. Water Chemistry, Phytoplankton, and Sediment Chemistry Data for the Nelson and Assean River Systems, Manitoba, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 255 pp. <i>Draft</i> .	Completed	Feb-05
02-15	Johnson, M.W. 2005. Results of Fish Community Investigations Conducted in the Assean River Watershed, Manitoba, Spring and Fall 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 133 pp. <i>Draft</i> .	Completed	Feb-05



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
02-16	Pisiak, D.J. 2005. Results of Summer Index Gillnetting Studies in Stephens Lake, Manitoba and Seasonal Investigations of Adult and Larval Fish Communities in the Reach of the Nelson River between Gull Rapids and Stephens Lake, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 179 pp. <i>Draft</i> .	Completed	Jan-05
02-17	Richardson, V.L. and J. Holm. 2005. Results of Fish Community Investigations Conducted in Tributary Systems of the Nelson River between Birthday Rapids and Gull Rapids, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 98 pp. <i>Draft</i> .	Completed	Jan-05
02-18	Holm, J., V.L. Richardson, and C.C. Barth. 2005. Floy-tag Application and Recapture Information from the Gull (Keeyask) Study Area, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 175 pp. <i>Draft</i> .	Completed	Feb-05
02-19	Barth, C.C. 2005. Lake Sturgeon Investigations in the Keeyask Study Area, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 131 pp. <i>Draft</i> .	Completed	Feb-05
02-20	Johnson, M.W. and C.R. Parks. 2005. Results of Fish Community Investigations Conducted in the Reach of the Nelson River between Clark Lake and Gull Rapids, 2002. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 222 pp. <i>Draft</i> .	Completed	Aug-05
03-01	Ryland, D. and B. Watts. Fish Taste Studies for Tataskweyak Cree Nation. Draft report prepared for Manitoba Hydro by the University of Manitoba. 44 pp. <i>Draft</i> .	Completed	Jan-04
03-02	Ryland, D. and B. Watts. Fish Taste Studies for Fox Lake Cree Nation. Draft report prepared for Manitoba Hydro by the University of Manitoba. 43 pp. <i>Draft</i> .	Completed	Jan-04
03-03	Maclean, B.D. and D.J. Pisiak. 2005. Results of Fish Community Investigations Conducted at the Mouth of the Ripple River, Manitoba, Spring 2003. Year II. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 43 pp. <i>Draft</i> .	Completed	Feb-05
03-05	Badiou, P.H., H.M. Cooley, and T. Savard. 2005. Water Chemistry Data for the Lower Nelson River System, Manitoba, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 219 pp. <i>Draft</i> .	Completed	Dec-05



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
03-06	Murray, L., C.C. Barth, and J.R. Olynik. 2005. Movements of Radio- and Acoustic- Tagged Northern Pike, Walleye, and Lake Whitefish in the Keeyask Study Area: May 2002 to April 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 125 pp. <i>Draft</i> .	Completed	Aug-05
03-08	Barth, C.C. and L. Murray. 2005. Lake sturgeon Investigations in the Keeyask Study Area, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 127 pp. <i>Draft</i> .	Completed	Oct-05
03-09	Pisiak, D.J. and E.J. Hartman. 2005. Results of Fish Community Investigations Conducted in the North Moswakot and South Moswakot Rivers, Manitoba, Spring and Fall 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 157 pp. <i>Draft</i> .	Completed	Sep-05
03-11	Kroeker, D.S. and W. Jansen. 2005. Results of Fish Community Investigations Conducted in Tributaries of the Nelson River between Clark Lake and Gull Rapids, Manitoba, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 72 pp. <i>Draft</i> .	Completed	Jan-06
03-12	Maclean, B.D. and J.Holm. 2005. Results of Fish Community Investigations Conducted in the Mistuska River, Manitoba, Spring 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 90 pp. <i>Draft</i> .	Completed	Sep-05
03-13	Maclean, B.D. and D.J. Pisiak. 2005. Results of Fish Community Investigations Conducted in the Aiken River, Manitoba, Spring 2003, Year II. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 108 pp. <i>Draft</i> .	Completed	Dec-05
03-14	Pisiak, D. 2005. Results of Summer Index Gillnetting Studies in Stephens Lake, Manitoba, and Seasonal Investigations of Fish Communities in the Reach of the Nelson River between Gull Rapids and Stephens Lake, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 313 pp. <i>Draft</i> .	Completed	Oct-05
03-15	Holm, J. 2006. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 244 pp. <i>Draft</i> .	Completed	Sep-06



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
03-16	Dolce, L. T. and M.J. Burt. 2008. Aquatic Macrophyte and Associated Epiphytic Invertebrate Data Collected from the Keeyask Study Area, Manitoba, Late Summer 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 111 pp. <i>Draft</i> .	Completed	Feb-08
03-17	Gill, G. 2007. Invertebrate Drift and Plant Biomass Data from the Nelson River at Birthday Rapids, Gull Lake, Gull Rapids, and Kettle Generating Station, Manitoba, Summer and Fall 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 72 pp. <i>Draft</i> .	Completed	Nov-07
03-35	Maclean, B.D. and P. Nelson. 2005. Population and Spawning Studies of Lake Sturgeon (Acipenser fulvescens) at the Confluence of the Churchill and Little Churchill Rivers, Manitoba, Spring 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 70 pp. <i>Draft</i> .	Completed	Jan-06
03-36	Bretecher, R.L., G.C. Dyck, and R.A. Remnant. 2007. Results of Fish Community Investigations Conducted in the Reach of the Nelson River Between Clark Lake and Gull Rapids (Including Gull Lake), 2003. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 275 pp. <i>Draft</i> .	Completed	Feb-07
03-37	Cooley, H.M. and M.W. Johnson. 2008. An Evaluation of Walleye Condition from Stephens Lake. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 59 pp. <i>Draft</i> .	Completed	Mar-08
04-03	Holm, J. 2005. Results of Fish Community Investigations Conducted in Clark Lake, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 116 pp. <i>Draft</i> .	Completed	28-Oct-05
04-04	Badiou, P.H., T. Savard, and H.M. Cooley. 2007. Water Chemistry and Phytoplankton data for the Lower Nelson River System, Manitoba, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 247 pp. <i>Draft</i> .	Completed	Jan-07
04-05	BARTH, C.C. and K. AMBROSE. 2006. Lake Sturgeon Investigations in the Keeyask Study Area, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 105 pp. <i>Draft</i> .	Completed	Jan-06
04-06	Cooley, H.M. and T.G. Savard. 2008. Results of Greenhouse Gas Sampling in the Keeyask and Conawapa Study Areas: 2001-2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 76 pp. <i>Draft</i> .	Completed	Feb-08



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
04-07	T. Savard and H.M. Cooley. 2007. Turbidity Monitoring Data for Clark and Gull Lakes, Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 51 pp. <i>Draft</i> .	Completed	Jan-07
04-08	Holm, J. 2007. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 148 pp. <i>Draft</i> .	Completed	Jan-07
04-09	Johnson, M.W. 2007. Results of Fish Community Investigations Conducted in the Reach of the Nelson River Between Clark Lake and Gull Rapids (Including Gull Lake), 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 159 pp. <i>Draft</i> .	Completed	Jan-07
04-10	Johnson, M.W. and C.C. Barth. 2007. Results of Fish Community Investigations in the Kettle and Butnau Rivers, Manitoba, Spring 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 59 pp. <i>Draft</i> .	Completed	Jan-07
04-11	Holm, J., H.M. Cooley, and E. Shipley. 2007. Trace Elements in Fish from the Keeyask Study Area: Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 62 pp. <i>Draft</i> .	Completed	Feb-07
04-12	Johnson, M.W. and B.D. Maclean. 2007. Results of Fish Community Investigations Conducted in the Mistuska River, Manitoba, Spring 2004. Year II. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 87 pp. <i>Draft</i> .	Completed	Jun-07
04-13	Johnson, M.W. and B.D. Maclean. 2007. Results of Fish Community Investigations Conducted in the York Landing Arm of Split Lake and Its Major Tributaries, Manitoba, Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 74 pp. <i>Draft</i> .	Completed	May-07
04-14	Pisiak, D.J. and B.D. Maclean. 2007. Population Studies of Lake Sturgeon (<i>Acipenser fulvescens</i>) in the Fox River, Manitoba, Summer 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 42 pp. <i>Draft</i> .	Completed	Apr-07
04-15	Neufeld, L. 2007. Benthic Invertebrate and Sediment, Data Collected from Littoral Zones in the Keeyask Study Area, Manitoba, Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 92 pp. <i>Draft</i> .	Completed	Apr-07
04-16	MacDonald, J.E. 2007. Results of Fish Community Investigations in Gull Rapids and Stephens Lake, 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 113 pp. <i>Draft</i> .	Completed	May-07



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
04-17	Burt, M.J. and L.T. Dolce. 2008. Aquatic Macrophyte and Associated Epiphytic Invertebrate Data Collected from the Keeyask Study Area, Manitoba, Summer 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 130 pp. <i>Draft</i> .	Completed	Feb-08
04-18	Gill, G. 2007. Invertebrate Drift and Plant Biomass Data from the Nelson River at Birthday Rapids, Gull Rapids, and Kettle Generating Station, Manitoba, Summer and Fall 2004. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 91 pp. <i>Draft</i> .	Completed	Nov-07
05-02	Holm, J. 2007. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 56 pp. <i>Draft</i> .	Completed	Apr-07
05-03	Murray, L. and C.C. Barth. 2007. Movements of Radio- and Acoustic-Tagged Northern Pike, Walleye, and Lake Whitefish in the Keeyask Study Area: May 2003 to August 2004 and a Summary of Findings from 2001-2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 111 pp. <i>Draft</i> .	Completed	Apr-07
05-04	Jansen, W. and N. Strange. 2007. Mercury Concentrations in Fish From the Keeyask Project Study Area for 1999-2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 168 pp. <i>Draft</i> .	Completed	Aug-07
05-05	Barth, C.C. and J.E. MacDonald. 2008. Lake Sturgeon Investigations in the Keeyask Study Area, 2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 63 pp. <i>Draft</i> .	Completed	Mar-08
05-06	Mazur, K.M. and T.G. Savard. 2008. Proposed Keeyask Access Road Stream Crossing Assessment, 2004 and 2005. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 68 pp. 83 pp. <i>Draft</i> .	Completed	Feb-08
06-02	Holm, J. 2007. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 61 pp. <i>Draft</i> .	Completed	Apr-07
06-03	Savard, T. and H.M. Cooley. 2007. Dissolved Oxygen Surveys in the Keeyask Study Area: Winter 2005 and 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 54 pp. <i>Draft</i> .	Completed	Apr-07
06-04	MacDonald, J.E. 2008. Lake Sturgeon Investigations in the Keeyask Study Area, 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 110 pp. <i>Draft</i> .	Completed	Mar-08



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
06-05	Cassin, J. and R.A. Remnant. 2008. Results of Fish Spawning Investigations Conducted in Gull Rapids Creek, Pond 13, and Selected Tributaries to Stephens Lake, Spring 2005 and 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 45 pp. <i>Draft</i> .	Completed	Mar-08
06-06	MacDonald, J.E. 2007. Fish community assessments of selected lakes within the Split Lake Resource Management Area, 2004-2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 145 pp. <i>Draft</i> .	Completed	Nov-07
06-07	Jansen, W. 2008. Infection Rate of the Parasite <i>Triaenophorus crassus</i> in Lake Whitefish from the Keeyask Study Area for 2003-2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 35 pp. <i>Draft</i> .	Completed	Mar-08
06-08	Cooley, P.M. and L. Dolce. 2008. Aquatic Habitat Utilization Studies in Stephens Lake: Macrophyte Distribution and Biomass, Epiphytic Invertebrates, and Fish Catch-Per- Unit-Effort in Flooded Habitat. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 75 pp. <i>Draft</i> .	Completed	Mar-08
06-09	Cooley, P.M. 2008. Carbon dioxide and methane flux from peatland watersheds and divergent water masses in a sub-arctic reservoir. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 45 pp. <i>Draft</i> .	Completed	Mar-08
06-10	Capar, L.N. 2008. Benthic Invertebrate Data Collected from O'Neil Bay and Ross Wright Bay in Stephens Lake, Manitoba, Fall 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 34 pp. <i>Draft</i> .	Completed	Mar-08
06-11	Jansen, W. and N. Strange. 2009. Fish mercury concentrations from the Keeyask Project Study Area for 2006. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 68 pp. <i>Draft</i> .	Completed	Jul-09
06-12	Larter, J.L. and P.M. Cooley. 2010. Substratum and Depth Distribution in Flooded Habitat of Stephens Lake, Manitoba, Thirty-Five Years after Impoundment. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 57 pp. <i>Draft</i> .	Completed	Dec-10



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
06-13	Cooley, P.M., L. Dolce Blanchard, and J. Larter. 2009. The effect of local and regional watersheds on the spectral composition and attenuation of light and water quality parameters in the surface waters of Stephens Lake, Manitoba. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 51 pp. <i>Draft</i> .	Completed	May-09
08-01	MacDonald, J.E. 2009. Lake Sturgeon Investigations in the Keeyask Study Area, 2007-2008. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 116 pp. <i>Draft</i> .	Completed	Apr-09
08-02	Holm, J. 2009. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2007 and 2008. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 63 pp. <i>Draft</i> .	Completed	Apr-09
09-01	Holm, J. 2010. Results of Index Gillnetting Studies Conducted in the Keeyask Study Area, Summer 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 110 pp. <i>Draft</i> .	Completed	Oct-10
09-02	Holm, J. 2010. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 48 pp. <i>Draft</i> .	Completed	Oct-10
09-03	Michaluk, Y. and J.E. MacDonald. 2010. Lake Sturgeon Investigations in the Keeyask Study Area, 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 83 pp. <i>Draft</i> .	Completed	Dec-10
09-04	Savard, T. S. Hnatiuk-Stewart, and H.M. Cooley. 2010. Water Quality Data for the Lower Nelson River System, Manitoba, 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 240 pp. <i>Draft</i> .	Completed	Jul-10
09-05	Jansen, W. 2010. Fish Mercury Concentrations in the Keeyask Study Area, 2009. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 42 pp. <i>Draft</i> .	Completed	Dec-10
10-01	MacDonald, J.E. and C.C. Barth. 2011. Adult Lake Sturgeon Investigations in the Keeyask Study Area, Spring 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 78 pp. Draft	Completed	Dec-10
10-02	Michaluk, Y., J.E. MacDonald and C.C. Barth. 2011. Results of Lake Whitefish Spawning Surveys in Ferris Bay and the North and South Moswakot Rivers, Fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 51 pp. Draft		



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
10-03	Henderson, L., C.C. Barth, J.E. MacDonald and S.J. Garner. 2011. Results of a Coarse Scale Habitat Inventory in the Upper Split Lake Area, Fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 75 pp. Draft		
10-04	Holm, J. 2011. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 53 pp. Draft		
10-05	Ambrose, K.M. and R. Remnant.2011. Fish Community Assessment of Armstrong Lake,2010. <u>Draft report prepared for</u> <u>Manitoba Hydro by North/South Consultants Inc.</u> 90 pp. <i>Draft</i>		
10-06	MacDonald, J.E. and C.C. Barth. 2011. Benthic Invertebrate Surveys in Gull Lake and Stephens Lakes, Fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 78 pp. Draft		
10-07	Henderson, L.M., C.C. Barth, J.E. MacDonald and M. Blanchard. 2011. Young-of-the-Year and Sub-Adult Lake Sturgeon Investigations in the Keeyask Study Area, Spring and Fall 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 60 pp. Draft	Completed	12/2011
11-01	Hrenchuk, C.L. and C.A. McDougall. 2012. Adult Lake Sturgeon Investigations in the Keeyask Study Area, 2011. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. 167 pp. <i>Draft</i>	Completed	<u>Dec-12</u>
11-04	Henderson, L.M. and D.J. Pisiak, 2012. Results of Young-of-the-Year and Sub-Adult Lake Sturgeon Investigations in the Keeyask Study Area, Spring and Fall 2011. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i>	Completed	<u>Dec-12</u>
<u>11-05</u>	Holm, J., 2012. Floy-tag Application and Recapture Information from the Keeyask Study Area, 2011. Keeyask Project Environmental Studies Program Report prepared for Manitoba Hydro. <i>Draft</i>	Completed	<u>Dec-12</u>
TBA	Ambrose, K.M. and R.A. Remnant. 2011. Results of fish community investigations in Armstrong Lake, Manitoba, 2010. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. <i>Draft</i>	Duplicate report reference for report 10-5	



 Table 1B-1:
 Keeyask Generation Project aquatic environment study reports

Report Number	Report Title	Status	Date Completed
TBA	Capar, L.N., and F. Schneider-Vieira. 2011. Results of benthic	Duplicate	
	invertebrate sampling conducted in Gull and Stephens Lakes, Fall,	report	
	2010. Draft report prepared for Manitoba Hydro by North/South	reference	
	Consultants Inc. Draft	for 10-6	
TBA	Henderson, L. M., C. C. Bart, J.E. MacDonald, and S.J. Garner. 2011.	Duplicate	
	Results of a coarse scale habitat inventory in the upper Split Lake	report	
	area, fall 2010. Draft report prepared for Manitoba Hydro by	reference	
	North/South Consultants Inc. Draft	for 10-3	
TBA	Henderson, L.M. and C.C. Barth. 2011. Young-of-the-year and	Duplicate	
	subadult lake sturgeon investigations in the Keeyask Study Area,	report	
	2010. Draft report prepared for Manitoba Hydro by North/South	reference	
	Consultants Inc. Draft	for 10-7	
TBA	Holm, J. 2011. Floy-tag application and recapture information from	Duplicate	
	the Keeyask Study Area, 2010. Draft report prepared for Manitoba	report	
	Hydro by North/South Consultants Inc. Draft	reference	
		for 10-4	
TBA	MacDonald, J.E. and C.C. Barth. 2011. Lake sturgeon investigations	Duplicate	
	in the Keeyask Study Area, Spring 2010. Draft report prepared for	report	
	Manitoba Hydro by North/South Consultants Inc. Draft	reference	
		for 10-1	
TBA	Michaluk, Y. J.E. MacDonald, and C. C. Barth. 2011. Results of lake	Duplicate	
	whitefish spawning surveys in Ferris Bay and the North and South	report	
	Moswakot rivers, fall, 2010. Draft report prepared for Manitoba	reference	
	Hydro by North/South Consultants Inc. Draft	for 10-2	
TBA	McDougall, C.A., C.C. Barth, and C.L. Hrenchuk. 2013. Results of Juvenile Lake Sturgeon Movement and Habitat Utilization Studies in Stephens Lake, 2011. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. Draft	In preparation	
ТВА	McDougall, C.A., C.C. Barth, and C.L. Hrenchuk. 2013. Results of Juvenile Lake Sturgeon Movement and Habitat Utilization Studies in Stephens Lake, October 2011 to 2012. Draft report prepared for Manitoba Hydro by North/South Consultants Inc. <i>Draft</i>	In preparation	



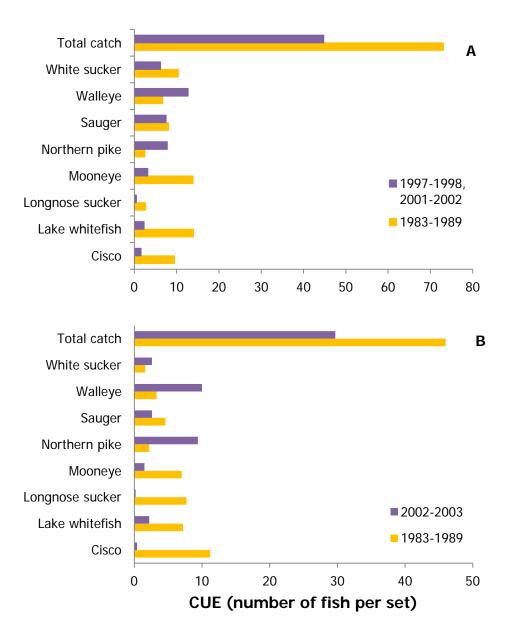


Figure 5-1: Comparison of historic (pre-1997; Ecological Monitoring Program) and recent (post-1997; Keeyask environmental studies) fish abundance in Split Lake (A) and Stephens Lake (B), as indicated by catch-per-unit-effort (CUE; number of fish/standard gang set)



1.6 TERRESTRIAL ENVIRONMENT SUPPORTING VOLUME

Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 1	1-II	"Error! Bookmark not defined."	Remove this entry from the list of tables. Duplicate table number, caption does not appear in text
Chapter 1	1-7	"Figure 1.8-1"	"Figure 1-6"
Chapter 1	1-13	"Figure 1.8-1"	" <u>Figure 1-6</u> "
Chapter 1	1-16	"Figure 1-3 illustrates the conceptual approach on moose."	"Figure <u>1-5</u> illustrates the conceptual approach on moose."
Chapter 1	1-17	"Table 1.3-2"	" <u>Table 1-2</u> "
Chapter 1	1-21	"Project operation since most Project-related changes are expected to be decline in magnitude with time."	"Project operation since most Project-related changes are expected to decline in magnitude with time."
Chapter 1	1-23	"has the key topic already experienced major stress ordeclines from events that occurred in the past?"	"has the key topic already experienced major stress <u>or</u> <u>declines from events</u> that occurred in the past?"
Chapter 1	1-28	"(Map 1.7-1)"	"(<u>Map 1.1</u>)"
Chapter 2	2-5	"defined in Table 1.4-1."	"defined in Table 1-4."
Chapter 2	2-6	"(e.g., Figure 1.1-1)," "(e.g., Figure 1.3-2)" "(e.g., Figure 1.3-3)."	"(<i>e.g.</i> , Figure <u>1-2</u>)," "(<i>e.g.</i> , Figure <u>1-3</u>)" "(<i>e.g.</i> , Figure <u>1-4</u>)."
Chapter 2	2-6	"(Table 1.3-1)"	"(Table <u>1-1</u>)"
Chapter 2	2-8	"(Map 1.7-1)"	"(Map <u>2-1</u>)"
Chapter 2	2-11	"photography from 1962, 1975, 1986,"	"photography from 1962, 1971 , 1986,"
Chapter 2	2-18	"(Section 2.2.5.2)"	"(Section <u>2.6.2.2</u>)"
Chapter 2	2-19	"Land accounted for 91% of Study Zone 6"	"Land accounted for <u>89%</u> of Study Zone 6"
Chapter 2	2-20	"(PE SV Section 5)"	"(PE SV Section <u>2</u>)"
Chapter 2	2-34	"see the PD SV Section 1.3)."	"see the PD SV Section 1.4)."
Chapter 2	2-36	"Over the 50-year period from 1967 to 2006,"	"Over the <u>40-year</u> period from 1967 to <u>2008</u> ,"



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 2	2-36	"were the highest in winter (3.11°C increase) and in September (1.54°C increase)."	"were the highest in <u>January</u> (0.46°C increase per decade) and in April-June (0.32-0.43°C increase per decade)."
Chapter 2	2-36	"with October mean precipitation decreasing 33.88 mm."	"with annual precipitation decreasing 3.13 mm per year."
Chapter 2	2-40	"Figure 2-7 to Figure 2-14."	"Figure 2-7 to Figure 2-15 ."
Chapter 2	2-54	"Approximately 7% of Study Zone 4 burned recently (between the beginning of 2002 and end of 2011),"	"Approximately <u>8.5%</u> of Study Zone 4 burned recently (between the beginning of 2002 and end of 2011),"
Chapter 2	2-84	"(PD SV Section 2.2)"	"(PD SV Section <u>2.4</u>)"
Chapter 2	2-88	"(Table 2-12; Map 2-25)"	"(Table 2-12; Map <u>2-26</u>)"
Chapter 2	2-88	"(Map 2-25 to Map 2.13-3)"	"(Map 2-26 to Map 2-27)"
Chapter 2	2-89	"(Map 2-25 to Map 2.13-3)"	"(Map 2-25 to Map 2-27)"
Chapter 2	2-90	"(Table 2-12; Map 2-25 to Map 2-28)"	"(Table 2-12; Map 2-25 to Map <u>2-</u> <u>27</u>)"
Chapter 2	2-94	"As described in section 2.3.6, Project-related fire regime effects are not expected."	"As described in section 2.5.4 , Project-related fire regime effects are not expected."
Chapter 2	2-104	"(Table 2-18)"	"(Table <u>2-17</u>)"
Chapter 2	2-111	"(see Section 3.3)"	"(see Section <u>3.4</u>)"
Chapter 2	2-117	"Table Total: Overall Study area land area = 12,385 Rest of the Regional Study Area = 10,677"	"Overall Study area land area = 12,374 Rest of the Regional Study Area = 10,666"
Chapter 2	2-121	"(Section 4.2.3)"	"(PD SV Section 6)"
Chapter 2	2-124	"(see Section 2.12, Table 2.12-1"	"(see Section 2.12, Table <u>2-52</u> "
Chapter 2	2-125 to 2- 151	Page numbering set to value of "1" for all pages.	Set page numbering to run from 2- 125 to 2-151
Chapter 2	2-147	"(black spruce mixture on mineral increases from 20.3% to 20.5%)"	"(black spruce dominant on thin peatland decreases from 32.3% to 32.1%)"
Chapter 2	2-151	"(see Section 4.2.3)"	"(see PD SV Section 6)"
Chapter 2	2-155	"(Section 2.3.4)"	"(Section <u>2.5.4</u>)"



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 2	2-155	"As described in Section 2.2.4.3,"	"As described in Section 2.3.6.3,"
Chapter 2	2-162	"(Section 4.3)"	"(Section <u>2.8.3.2</u>)"
Chapter 2	2-165	"Appendix 2F, Table 2 83)"	"Appendix 2F, Table 2F-1)"
Chapter 2	2-167	"A tall shrub band was present at upper elevations along approximately 59% of the classified shoreline, becoming wide along about 21% of the shoreline."	"A tall shrub band was present at upper elevations along approximately <u>69%</u> of the classified shoreline, becoming wide along about <u>24%</u> of the shoreline."
Chapter 2	2-167	"Marsh wetland forms included lacustrine marsh, stream marsh, riparian fen, riparian bog and shallow water (shallow water was only mapped for the Keeyask reach of the Nelson River where bathymetry data were available to separate shallow from deep water)."	"Marsh wetland forms included lacustrine marsh and stream marsh. Other shore zone wetland forms included riparian fen, riparian bog and shallow water (shallow water was only mapped for the Keeyask reach of the Nelson River where bathymetry data were available to separate shallow from deep water)."
Chapter 2	2-167	"(Map 2-29 to Map 2-40)"	"(Appendix 2F, Map 2F-1 to Map 2F-13)"
Chapter 2	2-167	"(Map 2-28 to Map 2-40)"	"(Appendix 2F, Map 2F-1 to Map 2F-13)"
2.8.4.1.1	p.2-181/ paragraph 4, Line 6	(EnvPPs; Section 8.3.2)	(EnvPPs; Response to EIS Guidelines Section 8.3.2)
Chapter 2	2-181	"An additional 1,604 ha could be indirectly affected in the wetland zone of influence, which could increase the total Project effects to 0.7% of wetland habitat in the Regional Study Area."	"An additional 1,604 ha could be indirectly affected in the wetland zone of influence, which could increase the total Project effects to 7,765 ha, or 0.7%, of wetland habitat in the Regional Study Area."
Chapter 2	2-181	"Table 2-46"	"Table <u>2-47</u> "
Chapter 2	2-182	This table should have been the analogue to Table 2-36 in the Ecosystem Diversity section (Section 2.7).	Replace with the Table 2-46 provided below.
		(00011011 211)	



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 2	2-183	Last row of table is missing.	Replace with the Table 2-47 provided below.
Chapter 2	2-185	"(Response to EIS Guidelines Chapter 4 Section 4.2.3)"	"(Response to EIS Guidelines Chapter 4 Section <u>4.3.3</u>)"
Chapter 2	2-187	This table should have been the analogue to Table 2-37 in the Ecosystem Diversity section (Section 2.7).	Replace with the Table 2-48 provided below.
Chapter 2	2-185	"between 0.2% and 2.4% of estimated historical area for the remaining wetland types."	"between 0.2% and 1.3% of estimated historical area for the remaining wetland types (Table 2 46)."
Chapter 2	2-185	"to between 3.0% and 6.2% of estimated historical area."	"to between 3.0% and 6.2% of estimated historical area (Table 2 48)."
Chapter 2	2-186	"The decrease in length over the expansion period would be due to decreased shoreline shape complexity."	"The decrease in length over the expansion period would be due to peninsulas and islands disappearing and decreased shoreline shape complexity."
Chapter 2	2-186	"wetland quality scores lower than 20."	"wetland quality scores lower than 20 (Table 2-47)."
Chapter 2	2-186 / paragraph 3, line 2	"Table 2-48"	"Table <u>2-46</u> "
Chapter 2	2-186	"wetland quality scores lower than 20."	"wetland quality scores lower than 20 (Table 2-47)."
Chapter 2	2-186 / paragraph 6, line 4	"Table 2-48"	"Table 2-46 "
Chapter 2	2-186 / paragraph 7, line 2	"Table 2-47"	"Table <u>2-46</u> "
Chapter 2	2-187 / Table 2-48	This table should have been the analogue to Table 2-37 in the Ecosystem Diversity section (Section 2.7).	Replace with the Table 2-48 provided below.



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 2	2-188	"between 0.2% and 1.6% of estimated historical area for the remaining wetland types."	"between 0.2% and 1.6% of estimated historical area for the remaining wetland types (Table 2-46)."
Chapter 2	2-188	"to between 1.7% and 6.5% of estimated historical area."	"to between 1.7% and 6.5% of estimated historical area (Table 2-48)."
Chapter 2	2-194	"(Section 2.2.4)"	"(TE SV Section 2.3.3)"
Chapter 2	2-233	"Nelson River Marsh"	This legend item groups three coarse habitat types that should be shown as separate colors on the map: "Nelson River shrub and/or low vegetation on upper beach"; "Nelson River shrub and/or low vegetation on sunken peat"; and "Nelson River marsh"
Chapter 2 Appendices 2D to G	Page footer	"Section 3: Plants"	"Section 2: Habitat and Ecosystems"
Chapter 3	3-6	"The 55 km² Local Study Area"	"The 187 km² Local Study Area"
Chapter 3	3-15	"Based on the species distribution and abundance classes (Table 3-2), no species were very widespread and very abundant in the inland plots while 168 species were localized and scarce (Error! Reference source not found.). No species were widespread or very widespread in the shoreline wetland transects while 17 species were scattered."	"Based on the species distribution and abundance classes (Table 3-2), no species were very widespread and very abundant in the inland plots while <u>158</u> species were localized and scarce (Table 3-3). No species were widespread or very widespread in the shoreline wetland transects while <u>11 species</u> were scattered."
Chapter 3	Table 3-3	"Shoreline Wetland Transects: Scattered=17, Localized = 236"	"Shoreline Wetland Transects: Scattered= <u>11</u> , Localized= <u>169</u> "
Chapter 3	3-16	"Drafting note under table caption."	Remove this drafting note.



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 3	3-18	"No taxa were widespread or very widespread in the shoreline wetland transects."	"The shoreline wetland descriptive results were estimated using the species that were present in at least one quadrat in both transects. No taxa were widespread or very widespread in the shoreline wetland transects."
Chapter 3	3-19		Add following sentence to the end of last paragraph: "Table 3-4 identifies the plant species typically found in each of the water duration zones, as well as variations related to substrate type and water regime zone."
Chapter 6	6B-1	"Table 6B-4: Bird Species Potentially Using the Bird Regional Study Area"	"Table 6B- 1 : Bird Species Potentially Using the Bird Regional Study Area"
Chapter 7	7-4	Table 7-1: "Zone 5: 14,160 km²"	"Zone 5: 14,200 km²"
Chapter 7	7-9	"The total amount of physical habitat lost (area of physical habitat falling within Zone 1) was calculated"	"The total amount of physical habitat lost (area of physical habitat falling within Zone <u>2</u>) was calculated"
Chapter 7	7-61	"Winter range tends to be smaller, a fraction of that occupied in summer (Brown <i>et al.</i> 2000)"	" <u>Summer</u> range tends to be smaller, a fraction of that occupied in <u>winter</u> (Brown <i>et al.</i> 2000)."
Chapter 7	7-69	"Summer Resident Caribou Habitat Models"	" <u>Caribou Habitat Models</u> "
Chapter 7	7-69	"or peatland complexes greater than 2,000 ha"	" or peatland complexes greater than 200 ha."



1.6.1.1 Corrected Tables and Figures

Table 2-46. Wetlands Affected During Construction and Operation by Wetland Type as a Percentage of Regional Study Area

Wetland Type	Regional Study Area		Co	onstruction Peri	Operation Period		
	Total Estimated Area ¹ (ha)	Total Estimated Percentage ¹ (%)	Project Footprint (%)	Habitat Zone of Influence (%)	After Mitigation (%)	Project Footprint at Year 30 (%)	Net Habitat Affected at Year 30 ² (%)
Non-regulated Types							
Bay Lacustrine Marsh	426	0	1.5	1.6	0	1.4	0
Stream Riparian Marsh	108	0	1.9	2.4	0	1.9	0
Flat Swamp	4	0	-	-	-	-	-
Shore and floating Riparian Fen	32,033	2.9	0.6	0.7	0.7	0.6	0.8
Northern ribbed, ladder or net String Fen	155	0	-	-	-	-	-
Basin Fen	12	0	-	-	-	-	-
Collapse scar Fen	76	0	-	-	-	-	-
Horizontal Fen	48,260	4.4	0.3	0.4	0.4	0.3	0.4
Slope Fen	2,106	0.2	0.5	0.6	0.6	0.6	0.8
Horizontal and blank Fen/ Bog mixture	2,549	0.2	-	-	-	-	-
Shore and floating Riparian Bog	2,073	0.2	0.5	0.5	0.5	0.5	0.5
Peat plateau Bog	60,951	5.6	0.6	0.7	0.7	0.6	0.7
Slope Bog	18,041	1.6	0.2	0.2	0.2	0.2	0.2
Collapse scar (CS) Bog	1,806	0.2	1.2	1.3	1.3	1.3	1.6
Flat Bog	7,526	0.7	0.6	0.6	0.6	0.6	0.6
Blanket Bog/ CS mixture Bog	17,188	1.6	-	-	-	-	-
Peat plateau/CS mixture Bog	122,256	11.1	0.5	0.6	0.6	0.5	0.7
Veneer Bog	31,596	2.9	0.3	0.4	0.4	0.3	0.4



Table 2-46. Wetlands Affected During Construction and Operation by Wetland Type as a Percentage of Regional Study Area

Wetland Type	Regional Study Area		Construction Period			Operation Period	
	Total Estimated Area ¹ (ha)	Total Estimated Percentage ¹ (%)	Project Footprint (%)	Habitat Zone of Influence (%)	After Mitigation (%)	Project Footprint at Year 30 (%)	Net Habitat Affected at Year 30 ² (%)
Blanket Bog	258,612	23.6	0.5	0.7	0.7	0.5	0.7
Strongly sloped Veneer Bog	485,117	44.2	0.6	0.7	0.7	0.5	0.8
Regulated Types ³							
Nelson River shore zone wetland	6,156	n/a	388	441	441	0	0
Total mapped wetland area	1,097,026	100	6,161	7,765	7,765	6,164	8,276

Notes: ¹ Net wetland area affected at Year 30 is after predicted reservoir expansion, Project-related indirect effects (*e.g.*, edge and groundwater effects) and habitat recovery from habitat rehabilitation and natural regeneration. ² Extrapolated from Study Zone 4 values using method described in Section 2.2.4.4. Nelson River shoreline wetland habitat composition was not extrapolated from Study Zone 4 to the Regional Study Area due to the large differences in the Nelson River water regimes along the river reaches. . ³ Areas provided because percentages were not calculated for Nelson River wetlands since these areas were not extrapolated from Study Zone 4 to the Regional Study Area as per previous footnote.



Table 2-47: Wetland Quality Types Affected During Construction and Operation as a Percentage of Area in Regional Study Area

			Construct	tion Period	k	Operation	Period
Wetland Quality Score Class	Total Estimated Regional Study Area (ha)	Existing Percentage of Regional Study Area (%)	Project Footprint (%)	Habitat Local Study Area (%)	After Mitigation	Year 30 After Construction Mitigation, Reservoir Expansion and Habitat Recovery	Habitat Local Study Area, Reservoir Expansion and Habitat Recovery
60	534	0.0	1.6	1.7	0.0	1.5	0.0
50	32,033	2.9	1.2	1.3	1.3	1.2	1.4
40	1,268	0.1	0.6	0.6	0.6	0.6	0.6
30	55,434	5.1	0.7	0.7	0.7	0.7	0.8
20	259,412	23.6	0.7	0.8	0.8	0.7	0.9
10	748,345	68.2	0.9	1.0	1.0	0.9	1.1
<u>AII</u>	<u>1,097,026</u>	<u>100.0</u>	<u>6,161</u>	<u>7,765</u>	<u>7,756</u>	<u>6,155</u>	<u>8,276</u>
Note: Reported a	areas are land area only.						



Table 2-48: Wetland Habitat Affected During Construction and Operation Including Cumulative Historical Effects as a Percentage of Historical Area in Regional Study Area

			Coi	Construction Period			Operation Period	
Non-regulated wetland type	Total Estimated Historical Regional Study Area (ha)	Estimated Percentage of Historical Regional Study Area Wetlands (%)	Project Footprin t (%)	Habitat Zone of Influence (%)	After Mitigati on (%)	Project Footprint at Year 30 (%)	Net Habitat Affected at Year 30 ¹ (%)	
Bay Lacustrine Marsh	426	0.0	3.2	3.3	3.3	3.1	1.7	
Stream Riparian Marsh	108	0.0	3.6	4.1	4.1	3.6	1.7	
Flat Swamp	4	0.0	n/a	n/a	n/a	n/a	n/a	
Shore and floating Riparian Fen	33,017	2.9	5.3	5.4	5.4	5.3	5.5	
Slope Fen	2,175	0.2	5.4	5.5	5.5	5.5	5.7	
Northern ribbed, ladder or net String Fen	160	0.0	n/a	n/a	n/a	n/a	n/a	
Basin Fen	12	0.0	n/a	n/a	n/a	n/a	n/a	
Collapse scar Fen	79	0.0	n/a	n/a	n/a	n/a	n/a	
Horizontal Fen	49,648	4.4	4.8	4.9	4.9	4.8	4.9	
Horizontal and blank Fen/ Bog mixture	2,571	0.2	n/a	n/a	n/a	n/a	n/a	
Shore and floating Riparian Bog	2,139	0.2	5.3	5.3	5.3	5.3	5.3	
Peat plateau Bog	62,949	5.6	5.4	5.5	5.5	5.4	5.6	



Table 2-48: Wetland Habitat Affected During Construction and Operation Including Cumulative Historical Effects as a Percentage of Historical Area in Regional Study Area

	Total Estimated Historical Regional Study Area (ha)		Coi	Construction Period			Operation Period	
Non-regulated wetland type		Estimated Percentage of Historical Regional Study Area Wetlands (%)	Project Footprin t (%)	Habitat Zone of Influence (%)	After Mitigati on (%)	Project Footprint at Year 30 (%)	Net Habitat Affected at Year 30 ¹ (%)	
Slope Bog	18,533	1.6	4.5	4.6	4.6	4.5	4.6	
Collapse scar (CS) Bog	1,866	0.2	6.1	6.2	6.2	6.3	6.5	
Flat Bog	7,770	0.7	5.4	5.5	5.5	5.5	5.5	
Blanket Bog/ CS Mixture Bog	17,428	1.5	n/a	n/a	n/a	n/a	n/a	
Peat plateau bog/CS mixture Bog	125,986	11.2	5.2	5.3	5.3	5.2	5.4	
Veneer Bog	31,871	2.8	2.9	3.0	3.0	2.9	3.0	
Blanket Bog	266,368	23.6	5.1	5.3	5.3	5.2	5.3	
Strongly sloped Veneer Bog	497,669	44.2	4.8	5.0	5.0	4.8	5.0	

Notes: ¹ Net habitat affected at Year 30 is after predicted reservoir expansion, Project-related indirect effects (*e.g.*, edge and groundwater effects) and habitat recovery from habitat rehabilitation and natural regeneration. Habitat types with values of "n/a" are types with no expected project effects, and are not considered in the cumulative effects analysis.



 Table 6B-1:
 Bird Species¹ Potentially Using the Bird Regional Study Area

Scientific Name	Common Name	Status ²	Observed Using the Study Area
Loons			-
Gavia pacifica	Pacific Loon	М	✓
Gavia immer	Common Loon	В	✓
Grebes			
Podilymbus podiceps	Pied-billed Grebe	В	
Podiceps auritus	Horned Grebe	B?	✓
Podiceps grisegena	Red-necked Grebe	В	✓
Pelicans and Cormorants			
Pelecanus erythrorhynchos	American White Pelican	B?,N	✓
Phalacrocorax auritus	Double-crested Cormorant	B,N	✓
Herons and Bitterns			
Botaurus lentiginosus	American Bittern	В	
Ardea herodias	Great Blue Heron	В	✓
Swans			
Cygnus columbianus	Tundra Swan	М	✓
Geese			
Anser albifrons	Greater White-fronted Goose	М	
Anser caerulescens	Snow Goose	М	✓
Anser rossii	Ross's Goose	М	
Branta canadensis	Canada Goose	В	✓
Ducks			
Anas crecca	Green-winged Teal	В	✓
Anas rubripes	American Black Duck	В	✓
Anas platyrhynchos	Mallard	В	✓
Anas acuta	Northern Pintail	В	✓
Anas discors	Blue-winged Teal	В	✓
Anas clypeata	Northern Shoveller	В	✓
Anas strepera	Gadwall	B,N	✓
Anas americana	American Wigeon	В	✓
Aythya valisinerina	Canvasback	B?,N	
Aythya americana	Redhead	B?,N	
Aythya collaris	Ring-necked Duck	В	✓



Table 6B-1: Bird Species Potentially Using the Bird Regional Study Area

Scientific Name	Common Name	Status ²	Observed Using the Study Area	
Aythya marila	Greater Scaup	M	√	
Aythya affinis	Lesser Scaup	В	✓	
Somateria mollissima	Common Eider	M		
Melanitta nigra	Black Scoter	M	✓	
Melanitta perspicillata	Surf Scoter	M	✓	
Melanitta fusca	White-winged Scoter	В	✓	
Bucephala clangula	Common Goldeneye	В	✓	
Bucephala albeola	Bufflehead	В	✓	
Lophodytes cucullatus	Hooded Merganser	В	✓	
Mergus merganser	Common Merganser	В	✓	
Mergus serrator	Red-breasted Merganser	В	✓	
Gulls and Terns				
Stercorarius parasiticus	Parasitic Jaeger	В?		
Larus philadelphis	Bonaparte's Gull	В	✓	
Larus delawarensis	Ring-billed Gull	В	✓	
Larus argentatus	Herring Gull	В	✓	
Sterna caspia	Caspian Tern	В	✓	
Sterna hirundo	CommonTern	В	✓	
Sterna paradisaea	Arctic Tern	M	✓	
Chlidonias niger	Black Tern	B <mark>?</mark>	✓	
Accipters (Hawks and Eagle	es)			
Pandion haliaetus	Osprey	В	✓	
Haliaeetus leucocephalus	Bald Eagle	В	✓	
Circus cyaneus	Northern Harrier	В	✓	
Accipiter striatus	Sharp-shinned Hawk	В	✓	
Accipiter gentilis	Northern Goshawk	Р	✓	
Buteo jamaicensis	Red-tailed Hawk	В	✓	
Buteo lagopus	Rough-legged Hawk	M		
Aquila chrysaetos	Golden Eagle	B,M	✓	
Falcons				
Falco sparverius	American Kestrel	В		
Falco columbarius	Merlin	В	✓	
Falco peregrinus anatum	Peregrine Falcon	M		



 Table 6B-1:
 Bird Species¹ Potentially Using the Bird Regional Study Area

Scientific Name	Common Name	Status ²	Observed Using the Study Area	
Falco rusticolus	Gyrfalcon	W?	-	
Owls				
Bubo virginianus	Great Horned Owl	Р	✓	
Nyctea scandiaca	Snowy Owl	M,W	✓	
Surnia ulula	Northern Hawk-Owl	Р	✓	
Strix nebulosa	Great Gray Owl	Р	✓	
Asio otus	Long-eared Owl	В	✓	
Asio flammeus	Short-eared Owl	В	✓	
Aegolius funerus	Boreal Owl	Р	✓	
Upland Gamebirds				
Dendragapus canadensis	Spruce Grouse	Р	✓	
Lagopus lagopus	Willow Ptarmigan	W	✓	
Bonasa umbellus	Ruffed Grouse	Р	✓	
Tympanuchus phasianellus	Sharp-tailed Grouse	Р	✓	
Rails and Cranes				
Coturnicops noveboracensis	Yellow Rail	В		
Porzana carolina	Sora	В	✓	
Fulica americana	American Coot	В		
Grus canadensis	Sandhill Crane	В	✓	
Shorebirds				
Pluvialis squatarola	Black-bellied plover	M		
Pluvialis dominica	Lesser golden-Plover	M		
Charadrius semipalmatus	Semipalmated Plover	M		
Charadrius vociferus	Killdeer	В	✓	
Tringa melanoleuca	Greater Yellowlegs	В	✓	
Tringa flavipes	Lesser Yellowlegs	В	✓	
Tringa solitaria	Solitary Sandpiper	В	<u>✓</u>	
Actitis macularia	Spotted Sandpiper		✓	
Limosa haemastica	Hudsonian Godwit	М		
Arenaria interpres	RuddyTurnstone	M		
Calidris conutus	Red Knot	М		
Calidris alba	Sanderling	M		



Table 6B-1: Bird Species Potentially Using the Bird Regional Study Area

Scientific Name	Common Name	Status ²	Observed Using the Study Area
Calidris pusilla	Semipalmated Sandpiper	М	
Calidris minutilla	Least Sandpiper	M	
Calidris fuscicollis	White-rumped Sandpiper	M	
Calidris bairdii	Baird's Sandpiper	M	
Calidris melanotos	Pectoral Sandpiper	M	
Calidris alpina	Dunlin	M?	
Limnodromus griseus	Short-billed Dowitcher	B?	
Gallinago gallinago	Wilson's Snipe*	В	✓
Phalaropus lobatus	Red-necked Phalarope	M	
Nighthawks			
Chordeiles minor	Common Nighthawk	В	✓
Hummingbirds			
Archilochus colubris	Ruby-throated Hummingbird	B,N	
Kingfishers			
Cerlye alcyon	Belted Kingfisher	В	✓
Woodpeckers			
Sphyrapicus varius	Yellow-bellied Sapsucker	В	✓
Picoides pubescens	Downy Woodpecker	Р	✓
Picoides villosus	Hairy Woodpecker	Р	✓
Picoides tridactylus	Three-toed Woodpecker	Р	✓
Picoides arcticus	Black-backed Woodpecker	Р	✓
Colaptes auratus	Northern Flicker	В	✓
Dryocopus pileatus	Pileated Woodpecker	Р	
Passerines			
Contopus borealis	Olive-sided Flycatcher	В	✓
Empidonax flaviventris	Yellow-bellied Flycatcher	В	✓
Empidonax alnorum	Alder Flycatcher	В	✓
Empidonax minimus	Least Flycatcher	В	✓
Sayornis phoebe	Eastern Phoebe	В	
Tyrannus tyrannus	Eastern Kingbird	В	
Eremophila alpestris	Horned Lark	B?,W	
Tachycineta bicolor	Tree Swallow	В	✓



 Table 6B-1:
 Bird Species¹ Potentially Using the Bird Regional Study Area

Scientific Name	Common Name	Status ²	Observed Using the Study Area
Riparia riparia	Bank Swallow	В	✓
Hirundo pyrrhonota	Cliff Swallow	В	✓
Hirundo rustica	Barn Swallow	В	
Perisoreus canadensis	Gray Jay	Р	✓
Pica pica	Black-billed Magpie	Р	
Corvus brachyrhynchos	American Crow	Р	✓
Corvus corax	Common Raven	Р	✓
Parus hudsonicus	Boreal Chickadee	Р	✓
Sitta canadensis	Red-breasted Nuthatch	Р	✓
Troglodytes troglodytes	Winter Wren	В	✓
Regulus satrapa	Golden-crowned Kinglet	В	✓
Regulus calendula	Ruby-crowned Kinglet	В	✓
Catharus minimus	Gray-cheeked Thrush	M	✓
Catharus ustulatus	Swainson's Thrush	В	✓
Catharus guttatus	Hermit Thrush	В	✓
Turdus migratorius	American Robin	В	✓
Anthus spinoletta	Water Pipit	M	✓
Bombycilla garrulus	Bohemian Waxwing	В	
Bombycilla cedrorum	Cedar Waxwing	В	✓
Lanius excubitor	Northern Shrike	M	
Moqueur roux	Brown Thrasher	B?	
Certhia americana	Brown Creeper	В	✓
Sturnus vulgaris	European Starling	B,I	
Vireo solitarius	Blue-headed Vireo	В	√
Vireo philadelphicus	Philadelphia Vireo	В	
Vireo olivaceus	Red-eyed Vireo	В	✓
Vermivora peregrina	Tennessee Warbler	В	✓
Vermivora celata	Orange-crowned Warbler		
Dendroica petechia	Yellow Warbler		
Dendroica magnolia	Magnolia Warbler		
Dendroica tigrina	Cape May Warbler	В	✓
Dendroica coronata	Yellow-rumped Warbler	В	✓
Dendroica fusca	Blackburnian Warbler	В	<u> </u>
DETIGIOICA TUSCA	DIACKDUITIIAIT WAI DIEI	D	·



 Table 6B-1:
 Bird Species¹ Potentially Using the Bird Regional Study Area

Scientific Name	Common Name	Status ²	Observed Using the Study Area
Dendroica palmarum	Palm Warbler	В	✓
Dendroica castanea	Bay-breasted Warbler	В	✓
Dendroica striata	Blackpoll Warbler	В	✓
Mniotilta varia	Black-and-white Warbler	В	✓
Seiurus aurocapillus	Ovenbird	В	✓
Seiurus noveboracensis	Northern Waterthrush	В	✓
Wilsonia pusilla	Wilson's Warbler	В	✓
Pheucticus Iudovicianus	Rose-breasted Grosbeak	В	✓
Spizella arborea	American Tree Sparrow	В	✓
Spizella passerina	Chipping Sparrow	В	✓
Spizella pallida	Clay-colored Sparrow	B?,N	✓
Pooecetes gramineus	Vesper Sparrow	В	
Passerculus sandwichensis	Savannah Sparrow	В	✓
Ammodramus leconteii	Le conte's Sparrow	В	✓
Passerella iliaca	Fox Sparrow	В	✓
Melospiza melodia	Song Sparrow	В	✓
Melospiza lincolnii	Lincoln's Sparrow	В	✓
Melospiza georgiana	Swamp Sparrow	В	✓
Zonotrichia albicollis	White-throated Sparrow	В	✓
Zonotrichia leucophrys	White-crowned Sparrow	В	✓
Zonotrichia querula	Harris's Sparrow	М	
Junco hyemalis	Dark-eyed Junco	В	✓
Calcarius lapponicus	Lapland Longspur	М	
Calcarius pictus	Smith's Longspur	М	
Plectophenax nivalis	Snow Bunting	М	✓
Agelaius phoeniceus	Red-Winged Blackbird	В	✓
Euphagus carolinus	Rusty Blackbird	В	✓
Quiscalus quiscula	Common Grackle	•	
Pinicola enucleator	Pine Grosbeak P		✓
Loxia curvirostra	Red Crossbill	Р	✓
Loxia leucoptera	White-winged Crossbill	Р	✓
Carduelis flammea	Common Redpoll	Р	✓
		M,W	



Table 6B-1: Bird Species¹ Potentially Using the Bird Regional Study Area

Scientific Name	Common Name	Status ²	Observed Using the Study Area
Carduelis pinus	Pine Siskin	B?,N	
Passer domesticus	House Sparrow	B,I	
TOTAL SPECIES OBSERV	<mark>129</mark>		

¹Birds known or likely to occur within the study area

 2 Note: B = breeding, M = migrant, P = permanent resident, N = northern extent of range, W = winter range, I = introduced, ? = unknown; appropriate habitat uncertain

³Bird Surveys from 2001 to 2010

Source: Godfrey 1986; Manitoba Naturalists Society 2003



1.7 SOCIO-ECONOMIC ENVIRONMENT, RESOURCE USE AND HERITAGE RESOURCES SUPPORTING VOLUME

1.7.1 Part 1 – Socio-Economic Environment

Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 5	5-viii	Table 5-30 is listed twice	Delete second reference; there is only 1 Table 5-30
Chapter 5	5-62	Figure 5-11 was the incorrect figure	See attached replacement figure below
Chapter 5	5-64	Figure 5-12 was the incorrect figure	See attached replacement figure below
Chapter 5	5-81	"While diseases of the circulatory system were the leading cause of all KCNs resident deaths, when only premature deaths (those that occurred before age 75) were reviewed, there are different trends. Injury and poisoning, which are almost totally preventable, accounted for 2,254 or 48% of all PYLL between 1980 and 2005. Diseases of the circulatory system was second accounting for 12% of PYLL and unknown causes were third accounting for 11% of PYLL. This shows that while diseases of the circulatory system account for the most deaths and are very important, many of these deaths occur at an older age and may not be preventable. Injury deaths however, impact younger residents and are preventable for the most part (see Figure 5-26 and Table 5-9) which lists all causes of death presented in the category of "other" in the pie chart)."	"Diseases of the circulatory system was second, accounting for 12% of PYLL and unknown causes were third, accounting for 11% of PYLL (see Figure 5-26), This shows that while diseases of the circulatory system account for the most deaths and are very important, many of these deaths occur at an older age and may not preventable. Injury deaths however, tend to impact younger residents (which is why the number of PYLL are high) and are preventable for the most part (see Table 5-9 which lists all causes of death presented in the category of "other" in the pie chart) and shows that 11 classifications of disease accounted for less than half the PYLL as seen in the one category of injury and poisoning."

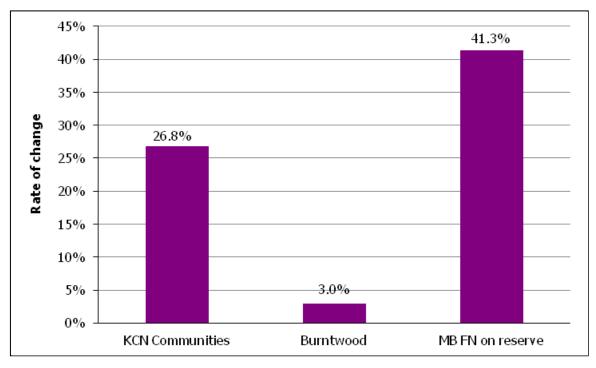


Chapter 5	5-139	"Average annually daily traffic volumes for PR 280 as shown on Table 5-17 range between"	"Average annually daily traffic volumes for PR 280 as shown on Table <u>5-16</u> range between" Note: revised traffic sections are being filed as a Supplementary Filing.
Chapter 5	5-216	"As shown in Table 5-25, as compared to Table 5-26 (existing conditions)"	"As shown in Table 5-25, as compared to Table <u>5-10</u> (existing conditions)"
Chapter 5	5-217	"As shown in Table 5-26 as compared to Table 5-27 (existing conditions)"	"As shown in Table 5-26 as compared to Table <u>5-11</u> (existing conditions)"
Chapter 5	5-239 5-240 5-241	"Table 5-31: Summary of Operation Phase Effects on Valued Environmental Components for Personal, Family and Community Life"	"Table <u>5-30</u> : Summary of Operation Phase Effects on Valued Environmental Components for Personal, Family and Community Life"



1.7.1.1 Corrected Tables and Figures

SE SV - Section 5.3.2.1.4 - Replacement Figure Pg 5-62



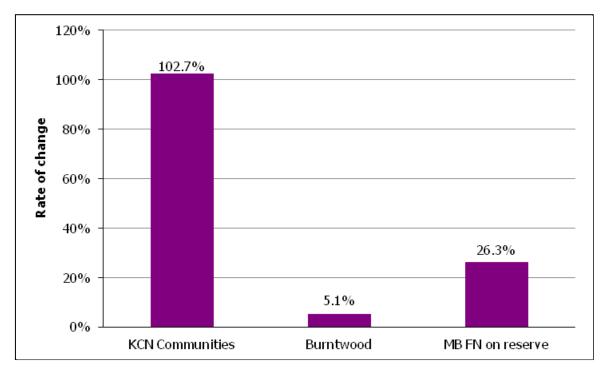
Manitoba Health, special data run 2011.

Note: KCN communities include Tataskweyak Cree Nation, War Lake First Nation, York Factory First Nation and Fox Lake Cree Nation

Figure 5-11: Percentage Change in Numbers of Hospitalizations for Diabetes (1984-1988 and 2002-2006)



pg. 5-64 – replacement figure



Source: Manitoba Health, special data run 2011.

Note: KCN communities include Tataskweyak Cree Nation, War Lake First Nation, York Factory First Nation and Fox Lake Cree Nation

Figure 5-12: Percentage Change in Number of Hospitalizations for Injuries (1984-1988 and 2002-2006) Averages



1.7.2 Part 2 – Resource Use

Corrections to the Keeyask Generation Project, Environmental Impact Statement, Socio-Economic Environment, Resource Use and Heritage Resources Supporting Volume, Part 2 – Resource Use are as follows. Subsequent to filing of the Keeyask Generation Project Environmental Impact Statement by the Keeyask Hydropower Limited Partnership, a calculation error in the Commercial Forestry Study was found that over estimates the amount of standing timber in the Commercial Forest Zone (FMU 86). The error in volume calculation for cutting class 1 and 2 stands was the result of an error in mid-age calculations. The mid-age reference formula erroneously used the values in the crown closure column in the spreadsheet lookup formula whereas the value in the cutting class column should have been used. This then also affected the Forest Damage Appraisal and Valuation calculations and overestimated the amount payable by Manitoba Hydro to Manitoba Conservation and Water Stewardship.

Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 1	1-14	Reference to Map 1-1 is incorrect	"As noted above, previous archaeological investigations accounted for 42 sites, for a total of 162 sites within the Regional Study Area (Table 1-1)"
Chapter 1	1-28	"Of the 50 archaeological sites recorded within Core Study Area 28% were affiliated with Pre-European Contact culture period (n=29). Nine sites (19%) were related to the Historic Period and"	"Of the 50 archaeological sites recorded within <u>the</u> Core Study Area <u>58%</u> were affiliated with <u>the</u> Pre-European Contact culture period (n=29). Nine sites (<u>18%</u>) were related to the Historic Period and"
Chapter 1	1-30	Duplicate Figure	DELETE figure 1-17 on pg. 1-30 as this figure already appears on pg. 1- 31



Chapter	Page	Current Text	Corrected Text/Clarification
Chapter 1	1-82	"Effects on standing timber in FMU 86 as a result of the Project Footprint are shown in Table 1-8. An estimated total of 40,859 m3 (0.63%) of softwood and 5,293 m3 (0.54%) of hardwood will be affected by the Project for a combined total of 46,152 m3 (0.62%). This is less than 1% of the total standing timber within the FMU. Some of this wood volume may be of sufficient size and concentration to make it practical to salvage."	"Effects on standing timber in FMU 86 as a result of the Project Footprint are shown in Table 1-8. An estimated total of 27,239 m³ (0.42%) of softwood and 3,301 m³ (0.34%) of hardwood will be affected by the Project for a combined total of 30,540 m³ (0.41%). This is less than 0.5% of the total standing timber within the FMU. Some of this wood volume may be of sufficient size and concentration to make it practical to salvage."
Chapter 1	1-84	"The resultant FDA&V indicates the estimated compensation payable to be \$298,011.75. The calculation includes effects of construction and operation phases of the development."	"The resultant FDA&V indicates the estimated compensation payable to be \$198,590.21 . The calculation includes effects of construction and operation phases of the development."

1.7.2.1 Corrected Tables and Figures

Table 1-8: Project Effect on Standing Timber within FMU 86 (CFZ)

•		ng Timber ¹ in FMU 86	•	Effect on Gross Mer (m³)	Standing chantable	Proje	ect Effect	(%)
Soft wood	Hard wood	Total	Soft wood	Hard wood	Total	Soft wood	Hard wood	Total
6,450,518	975,391	7,425,909	27,239	3,301	30,540	0.42	0.34	0.41

¹ Gross Merchantable Volume does not consider operational constraints or cull factors. Gross Merchantable volume was used in the FDA&V.



Table 1-10: Project Forest Damage Appraisal and Valuation Summary (\$)

Plantation Cost	Softwood Dues	Hardwood Dues	Forest Renewal Charge	Fire Protection Charge	Total Valuation
0.00	31,325.40	3,795.69	158,277.31	5,191.81	198,590.21

Plantation establishment cost \$882.35/ha; FRC = forest renewal charge (softwood = \$5.75/m³, hardwood = \$0.50/m³); FPC = forest protection charge (\$0.17/m³); Considers Gross Merchantable Volume which does not consider operational constraints or cull factors (Manitoba, Government of 2002).

Table 1D-2: Project Footprint Gross Merchantable Volume (m³) within the CFZ Subject to Valuation

Softwood	Hardwood	Total			
27,239.5	3,300.6	30,540.1			
Notes: Project Footprint falls entirely within open Crown land (ownership code =1)					

Table 1D-3: Project Footprint Gross Merchantable Volume Valuation (\$)

Softwood	Hardwood	Total 35,121.09	
31,325.40	3,795.69		
Notes: Based on timber dues as per Table 1C-1, App	endix 1C		

Table 1D-4: Project Footprint within CFZ Forest Renewal Charge Valuation (\$)

Softwood	Hardwood	Total			
156,627.01	1,650.30	158,277.31			
Notes: Based on 2009 Softwood forest renewal charge of \$5.75/m³.					

Table 1D-5: Project Footprint within the CFZ Fire Protection Cost Valuation (\$)

Softwood	Hardwood	Total	
4,824.97	366.84	5,191.81	
Notes: Based on Forest Protection Charge of \$0.17/m ³ .			



Table 1D-6: Crown Land Forest Damage Appraisal and Valuation Summary

Total	Total	Total	Soft-wood	Hard-wood	FRC	FP	Total
Area	Softwood	Hardwood	Dues	Dues	Charge	Charge	Valuation
(ha)	(m³)	(m³)	(\$)	(\$)	(\$)	(\$)	(\$)
783	27,239.5	3,300.6	31,325.40	3,795.69	158,277.31	5,191.81	198,590.21

Notes:

FRC- Forest Renewal Charge; FP- Forest Protection Charge

Table 1E-2: Standing Timber Volume Affected during the Construction Phase of the Project

	Cover Type				
Cutting Class	Working Group	M	N	S	Total (m ³)
0	Softwood	0.0	0.0	0.0	0.0
0	Hardwood	0.0	0.0	0.0	0.0
1	Softwood	1.1	41.0	2142.8	2184.8
1	Hardwood	0.1	108.8	214.0	322.9
2	Softwood	0.0	0.0	4625.7	4625.7
2	Hardwood	0.0	0.0	431.5	431.5
3	Softwood	84.1	181.5	11548.2	11813.8
3	Hardwood	45.1	481.6	938.7	1465.4
4	Softwood	162.6	267.7	6645.3	7075.5
4	Hardwood	70.9	421.8	322.0	814.6
5	Softwood	0.0	0.0	0.0	0.0
5	Hardwood	0.0	0.0	0.0	0.0
Softwood Total		247.7	490.2	24961.9	25699.9
Hardwood Total		116.1	1012.1	1906.2	3034.4
Grand Total		363.8	1502.3	26868.2	28734.2

Notes:

M= softwood mixedwood; N= hardwood mixedwood; S= softwood; Note that there are no pure hardwood stands in the study area.



Table 1E-3: Standing Timber Volume Affected during the Operations Phase of the Project

	Cover Type				
Cutting Class	Working Group	M	N	S	Total (m ³)
0	Softwood	0.0	0.0	0.0	0.0
0	Hardwood	0.0	0.0	0.0	0.0
1	Softwood	0.0	0.0	258.6	258.6
1	Hardwood	0.0	0.0	28.2	28.2
2	Softwood	0.0	0.0	34.2	34.2
2	Hardwood	0.0	0.0	1.7	1.7
3	Softwood	0.0	58.3	51.7	109.9
3	Hardwood	0.0	92.9	51.7	144.5
4	Softwood	51.6	53.5	419.9	525.0
4	Hardwood	22.1	142.6	101.6	266.2
5	Softwood	0.0	0.0	0.0	0.0
5	Hardwood	0.0	0.0	0.0	0.0
Softwood Total		51.7	75.5	1412.5	1539.6
Hardwood Total		22.1	142.6	101.6	266.3
Grand Total		73.8	218.0	1514.0	1805.9

Notes:

M= softwood mixedwood; N= hardwood mixedwood; S= softwood; Note that there are no pure hardwood stands in the study area.



Table 1E-4: Standing Timber Volume Affected during the Construction and Operations Phase of the Project

Cover Type					
Cutting Class	Working Group	M	N	S	Total (m ³)
0	Softwood	0.0	0.0	0.0	0.0
0	Hardwood	0.0	0.0	0.0	0.0
1	Softwood	1.1	41.0	2401.3	2443.4
1	Hardwood	0.1	108.8	242.2	351.1
2	Softwood	0.0	0.0	4660.0	4660.0
2	Hardwood	0.0	0.0	433.1	433.3
3	Softwood	84.1	203.5	12248.0	12535.6
3	Hardwood	45.1	539.8	990.4	1575.3
4	Softwood	214.2	321.2	7065.2	7600.6
4	Hardwood	93.0	506.1	341.9	941.0
5	Softwood	0.0	0.0	0.0	0.0
5	Hardwood	0.0	0.0	0.0	0.0
Softwood Total		299.4	565.7	26374.4	27239.5
Hardwood Total		138.2	1154.7	2007.8	3300.6
Grand Total		437.6	1720.3	28382.2	30540.1

Notes:

M= softwood mixedwood; N= hardwood mixedwood; S= softwood; Note that there are no pure hardwood stands in the study area.



1.8 RESPONSES TO REQUESTS FOR ADDITIONAL INFORMATION FROM TAC AND PUBLIC REVIEWERS, RD 1 & 2

Chapter	Process	Current Text in Response	Corrected Text/Clarification
NRCan- 0010	TAC Public Rd 1	"The hydraulic conductivity values ranged from 1 x 10 ⁻⁴ to 1 x 10 ⁸ m/s."	"The hydraulic conductivity values ranged from 1 x 10 ⁻⁴ to 1 x 10 ⁻⁸ m/s."
NRCan- 0014	TAC Public Rd 1	"This sentence suggests that the earthquake reporting is complete in Manitoba for magnitude 3 and larger since 1927 based on an NRCan map that displays the known earthquakes between 1627 and 2008"	"This sentence suggests that the earthquake reporting is complete in Manitoba for magnitude 3 and larger since 1627 based on an NRCan map that displays the known earthquakes between 1627 and 2008"
NRCan- 0015	TAC Public Rd 1	"This sentence suggests that the earthquake reporting is complete in Manitoba for magnitude 3 and larger since 1927 based on an NRCan map that displays the known earthquakes between 1627 and 2008"	"This sentence suggests that the earthquake reporting is complete in Manitoba for magnitude 3 and larger since 1627 based on an NRCan map that displays the known earthquakes between 1627 and 2008"
PCN- 0001	TAC Public Rd 2		The reviewer is correct that there is currently no reservoir on the lower Churchill River in Labrador and that in amalgamating text from several sections of the Aquatic Environment Supporting Volume, references to data and models used to predict effects to the lower Churchill River were inadvertently included in the list of existing reservoirs. We apologize for any confusion this may have caused.

