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Canadian Environmental Assessment Agency
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January 29, 2016

Dear Ms. Testart,

Subject: Parks Canada comments on the draft EIS Guidelines for the Amisk Hydroelectric Project,
Dated December 2015

Focus of the Parks Canada Agency's Participation

The Parks Canada Agency (PCA), as a Federal Authority, recognizes its responsibility under the Canadian Environmental Assessment Act, 2012 (Section 20 and 67, CEAA 2012) to provide specialist or expert advice related to our mandate for projects subject to the federal environmental assessment process. The Parks Canada Agency is mandated to protect and present nationally significant examples of Canada's natural and cultural heritage and foster public understanding, appreciation and enjoyment in ways that ensure their ecological and commemorative integrity for present and future generations.

Parks Canada's primary interest in the Amisk Hydroelectric Project (the Project) is the potential cumulative impact on the Peace-Athabasca Delta (PAD) in Wood Buffalo National Park (WBNP) from the proposed flow regulation on the Peace River. Participation in the review of the Project will focus on PCA's mandate with respect to the potential effects of the project on the hydrology, ecological integrity, and Aboriginal use of the lower Peace River and the PAD in WBNP.

Context

The Amisk Hydroelectric Project is the fourth proposed hydroelectric generating facility along the Peace River. The proposed project is the furthest downstream and the last point of flow regulation before the Peace River enters WBNP. The Peace River flows into the PAD, which is located at the convergence of the Peace, Athabasca, and Birch rivers along the western end of Lake Athabasca. The PAD has a complex hydrology that contributes to its unique productivity and ecology. For more than four decades, the PAD has been the focus of environmental review by federal, provincial, territorial and Aboriginal governments, as well as industry and academic groups. Many groups and studies have focused on impacts to the bio-physical environment of the PAD from hydrological changes associated with regulation of the Peace River following construction of the WAC Bennett Dam in 1968. Some of these key studies and groups include:

- the Peace-Athabasca Delta Group (PADPG) and Implementation Committee (PADIC) (1970s/80s);
- the Northern River Basins Study (NRBS), Peace-Athabasca Delta Technical Studies (PADTS) program, and associated Northern Rivers Ecosystem Initiative (1991-2003); and
- the Mackenzie River Basin Board and Peace-Athabasca Delta Ecological Monitoring Program (PADEMP) (1997-present).

Review processes and associated studies of existing and approved hydroelectric facilities, notably the Site C Clean Energy Project, have highlighted the nature and extent of potential impacts of flow regulation on the Peace River extending to the PAD. Since flow regulation began on the Peace River, the height and volume of peak flow spring and summer events has diminished (Prowse et al. 2002), reducing the frequency and magnitude of summer flood events (Peters and Buttle 2009). Post-regulation flows on the Peace River in combination with climate effects have lessened the frequency and magnitude of spring ice-jam flooding events in the far downstream Peace River environment, including the PAD (Beltaos et al. 2006, Beltaos 2014) and reduced hydrological inputs to the delta from seasonal flow reversals of the Peace River by 90% (Peters and Buttle 2009). These hydrological characteristics are key to the downstream dynamics of the Peace River (Peters et al. 2006) and the unique, highly productive ecology of the PAD (Timoney 2013).

Parks Canada recognizes the complexity in determining the relative contributions of various causal factors that have cumulatively led to changes in the PAD (e.g. Candler et al. 2010, Ohlson et al. 2010, Beltaos 2014); however, research (e.g. Prowse et al. 2002, Beltaos et al. 2006) and traditional knowledge (Carver 2012, Janes Freedman Kyle Law Corporation 2014, CEAA & BCEAO 2014) attest to the direct impacts flow regulation of the Peace River have had on the hydrology of the PAD. The Mackenzie River Basin Board, concluded in 2012 that *"the Peace-Athabasca Delta is a clear example where cumulative effects have generated ecological change on a landscape scale"* (MRBB 2012).

Flow Regulation Cumulative Effects Assessment

Parks Canada acknowledges the technical guidance the CEA Agency provides on assessing cumulative environmental effects (CEAA 2014, 2015). However, an EIS that integrates cumulative effects considerations at the earliest stages of project assessment would more fully incorporate a precautionary approach as required by CEAA (2015) and ensure potential cumulative impacts on the PAD are considered in the decision for the Project.

As the fourth proposed hydroelectric generating facility along the Peace River and the furthest downstream, the Project has the potential to contribute to cumulative effects on the PAD in the following ways:

- The Project may contribute incremental effects to altered seasonal flow dynamics that influence ice formation and downstream flow reversals and flooding;
- The Project could interact with strategic flow release initiatives from upstream facilities in efforts to restore ecological integrity to the PAD, thus contributing to cumulative effects on the Peace River and downstream ecology of the PAD in WBNP.

Given the potential for the Project to contribute to the cumulative effects that extend to the PAD in WBNP, an EIS that incorporates the PAD within the spatial boundaries of relevant Valued Components (VCs) and assesses impacts relative to a pre-industrial baseline is warranted for the following reasons:

- There are indications that the PAD has already undergone adverse changes resulting from flow regulation of the Peace River (e.g. Beltaos 2014). Understanding these impacts relative to a pre-flow regulation baseline will be integral to efforts to restore or maintain the ecological integrity of the PAD in WBNP.
- The PAD is a Special Protected Area, as a result of being 80% within a National Park of Canada.
- The PAD is a Ramsar Wetland of International importance and one of the key features contributing to WBNP's designation as a World Heritage Site.

- The PAD is of cultural importance to Aboriginal Peoples. Aboriginal Peoples have raised concerns about the effects of flow regulation of the Peace River on Traditional Use in the PAD (including harvesting and access to traditional territories) as well as treaty rights (PCA 2013, CEAA & BCEAO 2014, MCFN 2014). Assessing the potential cumulative impacts of all flow regulation on the Peace River would be necessary to evaluate potential effects on Traditional Use in the PAD.
- The 2015 mandate letter to the Minister of the Environment and Climate Change carries instructions to: “Treat our freshwater as a precious resource that deserves protection and careful stewardship, including by working with other orders of government to protect Canada’s freshwater” (Rt. Hon. Justin Trudeau 2015). The PAD is considered a major regional source of freshwater in the greater Peace watershed.

The draft Amisk Hydroelectric Project EIS Guidelines include cumulative effects in the "Other Effects to Consider" Section 6.6.3. An integrated approach would draw upon existing knowledge and experience of cumulative effects throughout the assessment, including the identification of VCs and VC boundaries. Parks Canada requests the following changes to the EIS Guidelines:

1. As recommended by the Joint Review Panel for the Site C Clean Energy Project, the EIS Guidelines need to be specific in identifying the pre-industrial state as the baseline for the cumulative effects:

“The Panel agrees with participants who noted that the two previous dams should have been included explicitly in the cumulative effects assessment conducted by BC Hydro. The Panel believes that the assessment of cumulative effects would have benefited from evaluating the ongoing effects of the existing dams and from an evaluation of effects that have occurred in the past that may not be reflected in the current baseline (e.g. loss of riparian habitat).” (CEAA & BCEAO 2014)

Parks Canada recommends a consistent approach be specified for the Project in the EIS Guidelines and a pre-industrial baseline, defined as pre-construction of the WAC Bennett dam, be used in the cumulative effects assessment of surface water hydrology. Available information for pre-industrial baseline conditions was presented to the Joint Review Panel during the review of the Site C Clean Energy Project (CEAA & BCEAO 2014). The Panel agreed that adequate information was available for a pre-industrial baseline in the cumulative effects assessment (CEAA & BCEAO 2014). The use of a pre-industrial baseline would enable an evaluation of the potential cumulative effects of flow management operations from all proposed and existing facilities on the Peace River at proximal and downstream locations, including the PAD, relative to the unregulated state that existed prior to the construction of the WAC Bennett Dam.

2. *The boundaries of the surface water hydrology VCs should be determined by the potential cumulative effects of flow regulation, not by the anticipated surface hydrology impacts of the Amisk Hydroelectric Project alone.* Parks Canada recommends direction on the cumulative effects assessment include assessment of surface water and flow regulation impacts on seasonal water flow changes, ice formation and damming potential downstream of the facility including the geographic area of the PAD.

Aboriginal Engagement

Various Aboriginal Groups have noted concern over the potential for direct impacts on Traditional and Cultural Use of the PAD in WBNP from flow regulation of the Peace River. The Athabasca Cree First Nation (ACFN), Mikisew Cree First Nation (MCFN), Fort Chipewyan Metis Local 125, and the Little Red River Cree First Nation (LRRCFN) expressed concern to the Site C review Panel regarding the importance of water levels and waterways in the PAD for access to traditional lands (CEAE & BCEAO 2014).

Comments from the groups included concern over how operation of the existing dams has influenced the timing of high water, specifically creating higher winter flows and lower summer flows, which has made travel more dangerous and restricted access to traplines (Carver 2012, Janes Freedman Kyle Law Corporation 2014, CEAA & BCEAO 2014), as well as concern over access to geese and muskrat in the PAD (CEAA & BCEAO 2014). The ACFN and MCFN expressed concern over the operation of the existing dams contributing to drying in the PAD and how another project could significantly affect the PAD's resilience to withstand additional cumulative impacts (CEAA & BCEAO 2014). Canada also has a treaty obligation to the Mikisew Cree First Nation (MCFN) *"to continue to make every reasonable effort to correct man-induced changes to the natural water regime in the Peace/Athabasca Delta basin."*¹ For these reasons, the Parks Canada Agency recommends the above groups be included in the first list of Aboriginal groups identified in Section 5.1 to ensure they have an opportunity to meet with the proponent, review EIS documents and ensure their views are heard and recorded.

Please see attached Park's Canada's draft EIS Guideline comments in table format. We look forward to continuing to work with CEAA throughout the remainder of the review.

Respectfully,

<original signed by>

Jonah Mitchell
Field Unit Superintendent
Southwest Northwest Territories Field Unit
Parks Canada

Attachments: draft EIS comments Amisk PCA

¹ Treaty Land Entitlement Agreement between Canada and Mikisew Cree First Nation, Dec.23, 1986, p.6

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Peters, D.L., and Buttle, J.M. 2009. The effects of flow regulation and climatic variability on obstructed drainage and reverse flow contribution in a northern river-lake-delta complex, Mackenzie Basin headwaters. *River Research Applications*. Volume 26(9): 1065–1089.

Peters, D. L., T. D. Prowse, A. Pietroniro, and R. Leconte. 2006. Flood hydrology of the Peace-Athabasca Delta, northern Canada. *Hydrological Processes* 20:4073–4096.

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Prowse, T.D., Conly, M., Church, M., and English, M.C. 2002. A review of the hydrological results of the Northern Rivers Basin Study, Canada. Part 1 Peace and Slave Rivers. *River Research and Applications* 18(5): 429-446.

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Timoney, K. P. 2013. The Peace-Athabasca Delta: Portrait of a Dynamic Ecosystem. University of Alberta.

Part 1

Comment ID #: 1

EIS Guidelines Reference: Part 1, Section 4.2, Page 7

Comment:

Parks Canada requests the EIS Guidelines include ""determining cumulative effects"" as a general step under the Study strategy and methodology heading.

Parks Canada acknowledges the technical guidance the CEA Agency provides on assessing cumulative environmental effects (CEAA 2014, 2015). However, an EIS that integrates cumulative effects considerations at the earliest stages of project assessment would more fully incorporate a precautionary approach as required by CEAA (2015) and ensure potential cumulative impacts on the PAD are considered in the decision for the Project.

Reviewer: PCA

Link to Section 5 effect:

Agency Response:

Comment ID #: 2

EIS Guidelines Reference: Part 1, Section 4.5, Page 11

Comment:

Parks Canada requests the EIS Guidelines include 6.f determining cumulative effects as a subheading under ""6. Summary of environmental effects assessment for each VC, including:

Parks Canada acknowledges the technical guidance the CEA Agency provides on assessing cumulative environmental effects (CEAA 2014, 2015). However, an EIS that integrates cumulative effects considerations at the earliest stages of project assessment would more fully incorporate a precautionary approach as required by CEAA (2015) and ensure potential cumulative impacts on the PAD are considered in the decision for the Project

Reviewer: PCA

Link to Section 5 effect:

Agency Response:

Comment ID #: 3

EIS Guidelines Reference: Section 3.3.3, Page 6

Comment:

Parks Canada recommends the boundaries of the surface water hydrology assessment be determined by

the potential cumulative effects of flow regulation, not by the anticipated surface hydrology impacts of the Amisk Hydroelectric Project alone.

As the fourth proposed hydroelectric generating facility along the Peace River and the furthest downstream, the Project has the potential to contribute to cumulative effects on the PAD in the following ways:

- The Project may contribute incremental effects to altered seasonal flow dynamics that influence ice formation and downstream flow reversals and flooding;
- The Project could interact with strategic flow release initiatives from upstream facilities in efforts to restore ecological integrity to the PAD, thus contributing to cumulative effects on the Peace River and downstream ecology of the PAD in WBNP.

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- There are indications that the PAD has already undergone adverse changes resulting from flow regulation of the Peace River (e.g. Beltaos 2014). Understanding these impacts relative to a pre-flow regulation baseline will be integral to efforts to restore or maintain the ecological integrity of the PAD in WBNP.
- The PAD is a Special Protected Area, as a result of being 80% within a National Park of Canada.
- The PAD is a Ramsar Wetland of International importance and one of the key features contributing to WBNP's designation as a World Heritage Site.
- The PAD is of cultural importance to Aboriginal Peoples. Aboriginal Peoples have raised concern about the effects of flow regulation of the Peace River on Traditional Use in the PAD (including harvesting and access to traditional territories) as well as treaty rights (PCA 2013, CEAA & BCEAO 2014, MCFN 2014). Assessing the potential cumulative impacts of all flow regulation on the Peace River would be necessary to evaluate potential effects on Traditional Use in the PAD.
- The 2015 mandate letter to the Minister of the Environment and Climate Change carries instructions to: "Treat our freshwater as a precious resource that deserves protection and careful stewardship, including by working with other orders of government to protect Canada's freshwater" (Rt. Hon. Justin Trudeau 2015). The PAD is considered a major regional source of freshwater in the greater Peace watershed.

The draft Amisk Hydroelectric Project EIS Guidelines include cumulative effects in the "Other Effects to Consider" Section 6.6.3. An integrated approach would draw upon existing knowledge and experience of cumulative effects throughout the assessment, including the identification of VCs and VC boundaries. Parks Canada recommends direction on the cumulative effects assessment include assessment of

surface water and flow regulation impacts on seasonal water flow changes, ice formation and damming potential downstream of the facility including the geographic area of the PAD. (See Comment ID# 8).

Reviewer: PCA

Link to Section 5 effect: 5bi

Agency Response:

Part 2

Comment ID #: 4

EIS Guidelines Reference: Section 1.3, Page 12

Comment:

With the "current use of land" bullet include the location and use of federal lands

Reviewer: PCA

Link to Section 5 effect: 5bi

Agency Response:

Comment ID #: 5

EIS Guidelines Reference: Section 5.1, Page 18

Comment:

Include the Athabasca Cree First Nation (ACFN), Mikisew Cree First Nation (MCFN), Fort Chipewyan Metis Local 125, and Little Red River Cree First Nation in the first group of Aboriginal Groups.

Various Aboriginal Groups have noted concern over the potential for direct impacts on Traditional and Cultural Use of the PAD in WBNP from flow regulation of the Peace River. The Athabasca Cree First Nation (ACFN), Mikisew Cree First Nation (MCFN), Fort Chipewyan Metis Local 125, and the Little Red River Cree First Nation (LRRCFN) expressed concern to Site C review Panel regarding the importance of water levels and waterways in the PAD for access to traditional lands (CEAE & BCEAO 2014). Comments from the groups included concern over how operation of the existing dams has influenced the timing of high water, specifically creating higher winter flows and lower summer flows, which has made travel more dangerous and restricted access to traplines (Carver 2012, Janes Freedman Kyle Law Corporation 2014, CEAA & BCEAO 2014) as well as concern over access to geese and muskrat in the PAD (CEAA & BCEAO 2014). The ACFN and MCFN expressed concern over the operation of the existing dams contributing to drying in the PAD and how another project could significantly affect the PAD's resilience to withstand additional cumulative impacts (CEAA & BCEAO 2014). Canada also has a treaty obligation to the Mikisew Cree First Nation (MCFN) "to continue to make every reasonable effort to correct man-induced changes to the natural water regime in the Peace/Athabasca Delta basin." For these reasons the Parks Canada Agency recommends the above groups be included in the first list of Aboriginal groups identified in Section 5.1 to ensure they have an opportunity to meet with the proponent, review EIS documents, and ensure their views are heard and recorded.

Reviewer: PCA

Link to Section 5 effect: 5bi, 5ciii

Agency Response:

Comment ID #: 6

EIS Guidelines Reference: Section 6.1, Page 19-21

Comment:

(See also Comment ID #8) The EIS Guidelines should be specific in identifying the pre-industrial state, defined as pre-construction of the WAC Bennett dam, as the baseline for the cumulative effects assessment of the surface water VC.

As recommended by the Joint Review Panel for the Site C Clean Energy Project, the EIS Guidelines need to be specific in identifying the pre-industrial state as the baseline for the cumulative effects:

“The Panel agrees with participants who noted that the two previous dams should have been included explicitly in the cumulative effects assessment conducted by BC Hydro. The Panel believes that the assessment of cumulative effects would have benefited from evaluating the ongoing effects of the existing dams and from an evaluation of effects that have occurred in the past that may not be reflected in the current baseline (e.g. loss of riparian habitat).” (CEAA & BCEAO 2014)

Parks Canada recommends a consistent approach be specified for the Project in the EIS Guidelines and a pre-industrial baseline, defined as pre-construction of the WAC Bennett dam, be used in the cumulative effects assessment of surface water hydrology. Available information for pre-industrial baseline conditions was presented to the Joint Review Panel during the review of the Site C Clean Energy Project (CEAA & BCEAO 2014). The Panel agreed that adequate information was available for a pre-industrial baseline in the cumulative effects assessment (CEAA & BCEAO 2014). The use of a pre-industrial baseline would enable an evaluation of the potential cumulative effects of flow management operations from all proposed and existing facilities on the Peace River at proximal and downstream locations, including the PAD, relative to the unregulated state that existed prior to the construction of the WAC Bennett Dam.

Reviewer: PCA

Link to Section 5 effect:

Agency Response:

Comment ID #: 7

EIS Guidelines Reference: Section 6.2.2, Page 24

Comment:

Under the heading "Changes to Groundwater and Surface Water" include ice formation and dynamics

Reviewer: PCA

Link to Section 5 effect: 5bi

Agency Response:

Comment ID #: 8

EIS Guidelines Reference: Section 6.6.3, Page 30

Comment:

Parks Canada requests the EIS Guidelines specify assessment of the PAD within the spatial boundaries of the surface water VC and assesses cumulative effects relative to a pre-industrial baseline, defined as pre-construction of the WAC Bennett dam

Context

The Amisk Hydroelectric Project is the fourth proposed hydroelectric generating facility along the Peace River. The proposed project is the furthest downstream and the last point of flow regulation before the Peace River enters WBNP. The Peace River flows into the PAD, which is located at the convergence of the Peace, Athabasca, and Birch rivers along the western end of Lake Athabasca. The PAD has a complex hydrology that contributes to its unique productivity and ecology. For more than four decades the PAD has been the focus of environmental review by federal, provincial, territorial and Aboriginal governments, as well as industry and academic groups. Many groups and studies have focused on impacts to the bio-physical environment of the PAD from hydrological changes associated with regulation of the Peace River following construction of the WAC Bennett Dam in 1968. Some of these key studies and groups include:

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Assessing the potential cumulative impacts of all flow regulation on the Peace River would be necessary to evaluate potential effects on Traditional Use in the PAD.

- The 2015 mandate letter to the Minister of the Environment and Climate Change carries instructions to: “Treat our freshwater as a precious resource that deserves protection and careful stewardship, including by working with other orders of government to protect Canada’s freshwater” (Rt. Hon. Justin Trudeau 2015). The PAD is considered a major regional source of freshwater in the greater Peace watershed.

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Reviewer: PCA

Link to Section 5 effect: 5bi

Agency Response: