

**Howe, Jennifer [CEAA]**

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**From:** Carolyn Campbell <email address removed>  
**Sent:** November 16, 2015 6:18 PM  
**To:** Amisk [CEAA]  
**Subject:** AWA comments on Amisk hydro project and federal environmental assessment  
**Attachments:** 20151116\_lt\_awa\_to\_ceaa\_amiskhp\_federal\_assessmt.pdf

To the Canadian Environmental Assessment Agency:  
Please see the attached letter.

Regards,  
**Carolyn Campbell**  
Conservation Specialist  
**Alberta Wilderness Association**

*"Defending Wild Alberta through Awareness and Action"*

455-12 St NW Calgary, AB T2N 1Y9  
403.283.2025 [www.AlbertaWilderness.ca](http://www.AlbertaWilderness.ca)

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ALBERTA WILDERNESS ASSOCIATION

*"Defending Wild Alberta through Awareness and Action"*

November 16, 2015

Amisk Hydroelectric Project  
Canadian Environmental Assessment Agency  
9700 Jasper Avenue, Suite 1145  
Edmonton, AB T5J 4C3  
By E-mail: [CEAA.Amisk.ACEE@ceaa-acee.gc.ca](mailto:CEAA.Amisk.ACEE@ceaa-acee.gc.ca)

Dear Canadian Environmental Assessment Agency:

**Re: Amisk Hydroelectric Project and Environmental Effects**

Alberta Wilderness Association (AWA) appreciates this opportunity to comment on the Amisk Hydroelectric Project ("the Project") and its potential environmental effects, to inform a Canadian Environmental Assessment Agency decision on whether a federal environmental assessment is required.

Alberta Wilderness Association, founded in 1965, is an Alberta-based conservation group with 7,000 members and supporters in Alberta and around the world. AWA works to ensure the protection of Alberta's wilderness areas, wild rivers and biodiversity. We also seek better management of Alberta's watersheds to ensure future generations enjoy healthy aquatic ecosystems and the abundant, clean water they provide.

AWA has a longstanding interest in Alberta's Peace River Valley because of its ecological significance. In addition to AWA valuing the ecological importance of the Peace River Valley, some of AWA's members use the Peace River Valley area for recreational activities such as boating, fishing, and hiking.

AWA requests that a federal environmental assessment be required for the Amisk Project. The Project will have significant impacts on a designated wildlife area. It will have significant impacts on local and regional aquatic and terrestrial ecosystems and species, including fisheries, species at risk and migratory birds. There will also be significant cumulative environmental effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out. Alberta does not have processes in place to assess cumulative effects that would be an appropriate substitute.

**Project Description**

**1. Project in a Wildlife Area**

The Amisk Project proposes to construct and operate an electrical generating facility and a dam structure for the diversion of water within a designated wildlife area. Dunvegan West Wildland

Provincial Park (WPP), established in 2000, extends along the right bank of the Peace River immediately adjacent to where the Project will be constructed. Dunvegan West WPP also extends along the Peace River right bank in several sections upstream of the Project site, one section of which is over 20 kilometers long; the riparian portion of these sections will be inundated by the Project headpond. Dunvegan West WPP also extends along the River right bank in sections at least 5 kilometers long downstream of the Project site.

In Alberta's parks and protected areas system, wildland provincial parks are established to afford a high degree of protection to wildlife habitat. Alberta Parks' description<sup>1</sup> of this parks category is:

- "Wildland provincial parks are a type of provincial park specifically established to preserve and protect natural heritage and provide opportunities for backcountry recreation.
- Wildland provincial parks are established under the *Provincial Parks Act*.
- Wildland provincial parks are large, undeveloped natural landscapes that retain their primeval character.
- Trails and primitive backcountry campsites are provided in some wildland parks to minimize visitor impacts on natural heritage values."

Dunvegan Wildland Provincial Park protects rare remnant parkland vegetation and wildlife communities in Alberta's Peace River Valley, and provides habitat for migratory birds. Alberta Parks' description<sup>2</sup> of Dunvegan Wildland Provincial Park is: "Stretching along the south bank of the Peace River from Dunvegan to the B.C. border, this park includes a unique mixture of grassland, aspen forest and steep-sided creek valleys. Many of the plants and birds here are more typical of the Parkland Natural Region located far to the south. Dunvegan West contains hoodoos and fossil beds. Its bedrock cliffs are home to nesting bald eagles, golden eagles and falcons. Red-sided and wandering garter snakes den along the river. South-facing slopes support typical parkland vegetation, with clones of aspen, shrubs, and grassland communities. Cacti are found on some of the drier sites. The valleys are key year-round habitat for deer and elk."

Alberta Parks has also placed a crown reservation/notation on Highland Park, which is adjacent to part of the Peace River left bank that will be inundated by the Project headpond. This is a candidate protection area for wildlife and wildlife habitat.

## 2. Project Magnitude

The Project proposes to construct and operate a new hydroelectric generating facility with a production capacity of 200 MW or more. Amisk states a 330 MW power generation facility capacity. AWA understands that the Project's production capacity based on average annual flows on that river reach is approximately 250 MW and not 330 MW. However, this is still within the parameters of the *Canadian Environmental Assessment Act (CEAA) Regulations Designating Physical Activities (Schedule s. 2)*.

The Project's engineering design is still evolving. The "Amisk Hydroelectric Project Executive Summary, Submitted to the Canadian Environmental Assessment Agency (CEAA) October 2015" ("Project Executive

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<sup>1</sup> Source: Alberta Environment and Parks. Alberta Parks Management and Land-use. Retrieved November 16, 2015 from <http://www.albertaparks.ca/albertaparksca/management-land-use/legislation-regulations.aspx>

<sup>2</sup> Source: Alberta Environment and Parks. Alberta Parks Information and Facilities: Dunvegan West Wildland Provincial Park. Retrieved November 16, 2015 from <http://www.albertaparks.ca/dunvegan-west/information-facilities.aspx>

Summary to CEAA”) states: “Project dimensions and levels are conceptual in nature and subject to change, based on the results of the ongoing preliminary engineering design” (p. 3). This document also states: “The total height of the dam from the existing river bed will be approximately 24 m and water levels immediately upstream from the dam are expected to increase by about 17 m over average water levels” (p.4).

In AWA’s view, a full range of potential dam heights should be disclosed and evaluated. The potential Project dimensions disclosed to date will result in an estimated headpond surface area of 3000 ha, but the increase in reservoir surface area compared to the annual mean natural river surface area is undisclosed. There is a need for Amisk to disclose the increase in reservoir surface area relative to the annual mean natural river surface area.

### **3. Project Impacts to Fisheries**

The Project Executive Summary to CEAA states that 27 species of fish have been recorded in the Project area, including sport fish species such as walleye, burbot, goldeye, northern pike, and mountain whitefish (p. 29). The Project will replace riparian areas and flowing water habitat with a headpond estimated to be 50 kilometers long, causing significant impacts to riparian areas, river channels, sediment transport and movement of organisms within the headpond, downstream and upstream. There is a need for Amisk to estimate absolute population abundances of ecologically-significant fish species to quantitatively evaluate ecosystem-level fisheries impacts resulting from the Project; however, AWA believes the Project will have significant local and regional impacts on fish habitat and fisheries.

The bull trout is a cold water species reliant on clear water. Its current Alberta range extends well downstream of the Project, and its historic range extended almost to the Slave River confluence, north of the Peace-Athabasca Delta. In July 2014, Alberta changed its bull trout listing from ‘Species of Special Concern’ to ‘Threatened’. In November 2012, scientists on the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed the Western Arctic populations of bull trout, which includes BC-Alberta’s Peace River population and NWT and Yukon populations, as ‘Special Concern’. The Project may have significant impacts to bull trout habitat and range recovery.

Field research published in 2013 confirmed the presence of prickly sculpin fish at the eastern periphery of their distribution in the Dunvegan region of the Peace River, 15 kilometers downstream of the Project site. These and other Pacific drainage fish in the Project vicinity are significant, as their presence is highly informative about the events of deglaciation in the area. The Project may have significant impacts on prickly sculpin and other fish species at the edge of their range distribution.

Benthic invertebrates are a critically important food resource for small fish as well as numerous bird species and bats. The Project may have a significant impact on benthic productivity, a major nutritional component of the food web of this ecosystem

### **4. Project Impacts to Disjunct Populations and Species at Risk**

The Alberta Conservation Information Management System (ACIMS) notes occurrences of four butterfly species of conservation concern in the Project vicinity: Pike’s Old World Swallowtail, Northern Checkerspot, Coral Hairstreak and Fletcher’s Hairstreak. Pike’s Old World swallowtail is endemic to the Peace Region and has been listed for over ten years by COSEWIC as a ‘Lower priority candidate’.

According to 2005 Alberta Conservation Association research: “[T]here is a close association between endemic butterflies of the Peace region and remnant native grasslands. No other region of northern

Alberta has as high a diversity of butterflies or as many species (23) with disjunct or edge-of-range populations (Kondla et al. 1994) as the Peace region. Grassland-dependent butterflies in the Peace region are physically separated from their main southern populations by a large area of boreal forest, which likely reduces marked exchanges between the two populations. As a result, nine species of disjunct populations occur in the Peace region grasslands... Pike's Old World swallowtail (*Papilio machaon pikei*), which feeds exclusively on dragonwort (*Artemisia dracunculus*) in the Peace region is restricted to eroded native slopes of the Peace River and its tributaries (Bird et al. 1995, Hervieux 2002)."<sup>3</sup> Project construction and operation may have a significant impact on these disjunct grassland butterfly species and their habitat.

The little brown bat, also referred to as little brown myotis (*Myotis lucifugus*) and the northern long-eared bat, also referred to as Northern myotis (*Myotis septentrionalis*), have been identified as two vertebrate species in the area having primary habitat associations with riparian environments that would be affected by a headpond. In February 2012 both the little brown myotis and northern myotis were assessed as 'Endangered' by an emergency assessment committee of COSEWIC; in December 2014, these species were added to Schedule 1 of the *Species at Risk Act*, listed as 'Endangered'. This listing was made on the basis of white-nose syndrome that is decimating these bat populations as it spreads westward across the continent at the rate of 200-400 km/year. It is important to keep western bat populations of these species as healthy as possible. The Project may have significant local and regional impact on these species and their habitat.

#### 5. Project Impacts to Migratory Birds

The Project Executive Summary to CEAA states: "A total of 166 bird species may occur in the LSA<sup>4</sup> (Federation of Alberta Naturalists, 2007), 132 of which are protected under the Migratory Bird Convention Act" (p. 32).

Prior studies have identified several migratory bird species at risk in the Peace River Valley region. The rusty blackbird, listed as 'Special Concern' in Schedule 1 of the *Species at Risk Act*, is associated with river island and river terrace habitat. The bay-breasted warbler, listed as a 'Species of Special Concern' in Alberta, is also associated with river island and river terrace habitat. Two other bird species in the Peace River Valley region listed as 'Special Concern' in Schedule 1 of the *Species at Risk Act* are the short-eared owl and the peregrine falcon. The peregrine falcon is also listed as 'Threatened' in Alberta. The Project may have significant local and regional impact on these species and their habitat.

#### Cumulative Effects of Project and Other Physical Activities in Peace River Valley

There will be significant local and regional cumulative environmental effects of the Project in combination with other physical activities that have been or will be carried out to the Peace River Valley. Prior industrial impacts, especially the Bennett Dam, have already significantly altered the Alberta Peace River's natural flow regime, morphology, sedimentation, ice regime, habitat and species movement. Agricultural settlement has also altered riparian and upland habitat. The Site C dam will foreseeably add to these cumulative impacts.

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<sup>3</sup> Source: Baker, A. 2005. A synthesis of 2001-2004 Peace native grasslands program. Technical Report (T-2004-002) produced by Alberta Conservation Association, Peace River, Alberta, Canada. (pp. 6-7)

<sup>4</sup> The local study area (LSA) is referred to by the Amisk Project proponent in the Project Executive Summary to CEAA as "represented by all sections within a 1 km buffer on either side of the centre line of the river." (p. 15)

### **Lack of Substitution**

Federal responsibilities and jurisdiction for fisheries and migratory bird impacts are not sufficiently addressed by Alberta laws and jurisdiction.

Alberta's regulations are not developed yet to address cumulative effects in this region. Alberta is years away from a regional plan for the Lower Peace region under the *Alberta Land Stewardship Act*; the initial multi-stakeholder advisory council has not been constituted. There is no approved water management plan for the Peace watershed, and no landscape management plan to set landscape disturbance limits. There is no biodiversity policy in place in Alberta to maintain and restore biodiversity to fulfill Alberta's national and international commitments under the 1992 United Nations Convention on Biological Diversity and the 1995 Canadian Biodiversity Strategy. There is no regional biodiversity management framework in place. Therefore, federal responsibility under *CEAA*, to consider and manage likely cumulative impacts, is not sufficiently addressed by provincial laws and jurisdiction.

Because of the Project's significant impacts on a designated wildlife area, on local and regional aquatic and terrestrial ecosystems and species, including fisheries, species at risk and migratory birds, and the significant cumulative environmental effects of the Project in combination with other activities, AWA requests that a federal environmental assessment be required for the Amisk Project.

Thank you for considering these comments.

Sincerely,  
ALBERTA WILDERNESS ASSOCIATION

<original signed by>

Carolyn Campbell  
Conservation Specialist