

**November 8, 2021**  
**ATTACHMENT: Federal Authority Advice Record**  
**Response due by November 28, 2021**  
**Horsefly Regional Emergency Spillway Project – Municipality of Taber**  
**Agency File: 005811**

Department/Agency	Health Canada
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1. Is it probable that your department or agency may be required to exercise a power or perform a duty or function related to the Project to enable it to proceed?

Not Applicable.

If yes, specify the Act of Parliament and that power, duty or function.

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2. Is your department or agency in possession of specialist or expert information or knowledge that may be relevant to the conduct of an impact assessment of the Project?

Specify as appropriate.

As a federal authority, Health Canada will provide specialist or expert information or knowledge in the Department's possession (expertise) to support the assessment of impacts on human health from projects considered individually and cumulatively under the *Impact Assessment Act* (IAA). The Department provides expertise in the areas described below; it does not play a regulatory role. How the expertise provided by Health Canada will be used in the impact assessment process will ultimately be determined by the reviewing body(ies). It should also be noted that expertise related to assessing human health that is relevant to Impact Assessments may be held by other federal, provincial, and municipal partners, reflecting the shared jurisdiction for environmental and human health within Canada. For example, the Public Health Agency of Canada has expertise in the social determinants of health, and may provide that expertise through Health Canada, upon request from the reviewing body.

There are many determinants of health, from the economic environment to a person's individual characteristics<sup>1</sup>.

To support the implementation of the IAA, Health Canada can provide expertise in the following areas:

- Air quality

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<sup>1</sup> Government of Canada (<https://www.canada.ca/en/public-health/services/health-promotion/population-health/what-determines-health.html>)

- Recreational and drinking water quality
- Traditional foods (country foods)
- Noise
- Methodological expertise in conducting human health risk assessment (HHRA)
- Methodological expertise in conducting health impact assessment (HIA)
- Electromagnetic fields
- Radiological emissions
- Public health emergency management of toxic exposure events

**Available Health Canada guidance:**

Health Canada has published the following guidance documents for evaluating human health impacts:

*Guidance for Evaluating Human Health Impacts in Environmental Assessment:*

- Human Health Risk Assessment
- Air Quality
- Water Quality
- Country Foods
- Noise
- Radiological Impacts

<https://www.canada.ca/en/services/health/publications/healthy-living.html#a2.5>

Guidance prepared by Health Canada on management of crude oil incidents titled “*Guidance for the environmental public health management of crude oil incidents: a guide intended for public health and emergency management practitioners*” is available as a PDF and in html format through the following link:

<http://publications.gc.ca/site/eng/9.849592/publication.html>

3. (a) Has your department or agency considered the Project; exercised a power or performed a duty or function under any Act of Parliament in relation to the Project; or taken any course of action that would allow the Project to proceed in whole or in part?

No.

Specify as appropriate.

N/A

(b) Please include a description of consultation activities that would occur with Indigenous groups if your department or agency has to exercise a power or perform a duty or function related to the Project, and how potential impacts to Indigenous groups are addressed by your department or agency.

N/A

(c) Please include a description of opportunities for public participation if your department or agency has to exercise a power, or perform a duty or function related to the Project.

N/A

4. Has your department or agency had previous contact or involvement with the proponent or other party in relation to the Project? (for example, enquiry about methodology, guidance, or data; introduction to the project)

No.

Provide an overview of the information or advice exchanged.

N/A

5. Does your department or agency have additional information or knowledge not specified, above?  
No

Provide an overview of the information or advice exchanged.

N/A

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6. From the perspective of the mandate and area(s) of expertise of your department or agency:  
I. Indicate whether the description of potential effects presented in the Initial Project Description sufficiently characterizes potential project effects— including direct and incidental effects, and effects within federal jurisdiction. Provide advice on whether these effects may be adverse and whether your regulatory instruments could be used to address these effects.

#### **Air Quality**

Ambient air quality may be affected by exhaust emissions from machinery, fugitive dust, and fuel combustion by-products during construction. The initial project description (iPD) describes emissions for vehicles and equipment but does not describe what air pollutants may be released. The detailed project description (DPD) should provide a description of the air pollutants predicted to be emitted by the project and the potential effects on the ambient air quality of the region.

With respect to the proposed evaluation of air quality, HC is of the opinion that the most stringent ambient air quality standards or objectives (e.g. Canadian Ambient Air Quality Standards or Alberta Ambient Air Quality Objectives) should be used to undertake an assessment of existing (baseline) and predicted future (project-only, project + baseline, cumulative) air quality (e.g., for nitrogen dioxide (NO<sub>2</sub>), sulphur dioxide (SO<sub>2</sub>), fine particulate matter (PM<sub>2.5</sub>), and other air pollutants identified by the proponent that will be emitted from the project). HC also notes that equipment to be used during the Project construction will use diesel fuel. As such, the health effects of diesel exhaust and diesel particulate matter (DPM) should also be assessed, including the carcinogenic and non-carcinogenic effects of DPM (separate from fine particulate matter).

#### **Noise**

Ambient noise levels may increase due to machinery use, construction activities, and increased traffic during the construction phases of the Project. The iPD states that noise is a potential effect from the project but provides no other details. The DPD should contain a more complete description of the project, timing of construction, and operational activities as they relate to noise impacts. The noise assessment should identify, locate, and describe all relevant human receptors that may have a heightened sensitivity to noise exposure (e.g. Indigenous peoples, schools, children care centres, places of worship, etc.).

- II. Identify any additional potential adverse effects of the Project that are not described in the Initial Project Description and their linkage to effects, effects within federal jurisdiction, and direct and incidental effects

#### **Human Health Setting and Health Impact Assessment**

In order to assess potential risks to human health, it is necessary to identify locations of potential human receptors including residences and sensitive human receptor locations (i.e. schools, hospitals, retirement complexes or assisted care homes) through maps and diagrams. The distances between human receptor locations and the key components of the Project that may impact these receptors should be identified. A human health risk assessment (HHRA) that contains all relevant contaminants and potential exposure pathways should be considered.

In Sections 15 and 22, the iPD presents regional health, social, and socioeconomic of the region and a prediction on the potential effects of the project but does not include disaggregated information to understand how the project could potentially produce differential impacts on the health of diverse groups of people. Disaggregated information is required to conduct gender-based analysis plus (GBA+) to understand the differential health impact of the project on women, children and other vulnerable groups (including from a cumulative effects perspective), and should be incorporated in the impact assessment.

#### **Water Quality**

Surface water may be impacted by spills of fuels, hydrocarbons, chemicals, and waste products used for the Project during construction. This has the potential to impact recreational water quality and may impact human health through dermal contact. HC suggests identifying water bodies that are currently used, or may be used in the future, for recreational and ceremonial purposes (e.g. swimming, fishing) and that may be affected by Project activities.

Local changes to ground water patterns may also affect the quality of potable water sources, particularly for land users. Although the iPD describes the drinking water sources and wastewater treatment plants there is no

information provided on the potential for the project to impact the drinking water sources or water used for traditional purposes (drinking while on the land, ceremonial, etc.). HC recommends the proponent identify all drinking water sources and water bodies that are used for traditional purposes and confirm whether Indigenous users consume treated or untreated water from the Project site.

### **Country Foods**

Section 21 of the iPD indicates that as there is no current traditional land use of the Project lands, harvesting of country foods was not considered in the iPD. The DPD should describe the harvesting of country foods in the region from Indigenous People and non-Indigenous and the potential project impact the Project will have on country food harvesting. HC notes that there is potential for project-related deposition of pollutants on terrestrial vegetation or surface water as a result of surface disturbance and emissions from construction activities. These pathways should be considered in a HHRA.

Additionally with the expansion of canals and larger volume of water through existing drains and/or wetlands, the potential for conversion of natural mercury to methylmercury was not identified in the iPD. A discussion of this should be provided in the DPD, and should also identify if any of these waterbodies are used or will be used in the future and propose a methylmercury monitoring plan if necessary.

III. Indicate any issues that should be addressed in the detailed project description that would inform a full understanding of how the Project's potential effects to areas of federal jurisdiction are effectively being mitigated and managed. Please be as specific as possible and include a description of any anticipated residual and/or potential significant adverse effects.

All the issues described under II should be provided in the DPD.

IV. Indicate the issues that should be addressed in the impact assessment of the Project, should the Agency determine that an impact assessment is required.

For each issue discussed, provide a concise, plain-language summary that is appropriate for inclusion in the Summary of Issues.

All issues Identified under point I and II should be addressed in the impact assessment of the project if the Agency determines one is required. The points are repeated below.

For a project to pose a potential risk to human health through exposure to chemical substances, three criteria must be present: the potential for emissions or the release of contaminants of potential concern (COPCs), potential human receptor(s), and existing pathway(s) for human exposure to COPCs. Human health may also be affected by noise emissions that reach nearby human receptors.

Based on the limited information provided in the initial Project Description (iPD), Health Canada (HC) has identified key issues and information requirements above that are likely to be relevant to the Horsefly Regional Emergency Spillway Project (the Project). This however, is not to be construed as an exhaustive list of issues pertaining to human health for this project.

Refer to points I and II above for information to be included in the Summary of Issues.

Brenda Woo

**Name of Departmental / Agency Responder**

Regional Manager,  
Environmental Health Program Alberta Region  
Regulatory Operations and Enforcement Branch

**Title of Responder**

November 26, 2021

**Date**