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REGIONAL CENTRE OF EXPERTISE ON EDUCATION FOR SUSTAINABLE DEVELOPMENT

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November 24, 2017

Anna Kessler, Project Manager
Prairie North Region
Canadian Environmental Assessment Agency
Canada Place
Suite 1145, 9700 Jasper Avenue
Edmonton, Alberta
T5J 4C3

Dear Ms Kessler,

Re. Input for Preparation of Advice to Minister of Environment and Climate Change regarding *Common Ground Drainage Channel Diversion Project* under CEAA 2012

As you are likely aware from our earlier correspondence with your Ministry, RCE Saskatchewan is a Regional Centre of Expertise (RCE) on Education for Sustainable Development (ESD) acknowledged by the UN University in 2007.[1] Our RCE brings together scholars and community practitioners dedicated to advancing ESD in our region and research in ESD.[2] We are writing to you to provide further input to the Minister of Environment and Climate Change Canada now that we have received the actual proposal for the *Common Ground Drainage Channel Diversion Project* that you sent to the Calling Lakes Ecomuseum, a flagship project of our RCE. This document is meant to support the extensive analysis we have provided to you in our earlier correspondence to your Minister dated November 19, 2017 (attached). This earlier correspondence requested that the project be subject to a Federal Environmental Impact

1 UN University, "RCE Vision and Mission," available from: https://www.rcenetwork.org/portal/rce-vision-and-mission
2 RCE Saskatchewan, "About the Saskatchewan RCE on ESD." Available from: http://www.saskrce.ca/about-us

Assessment under *CEAA 2012*. Our more recent analysis of the actual proposal only further confirms our view of the need for such an assessment.

You will recall from our earlier correspondence of November 19, 2017, that there was ambiguity regarding which lakes were to be reduced by 0.6 m: (1) the Quill Lakes or (2) Kutawagan Lake and Pel Lake. The interpretation that it is the Quill Lakes is now confirmed by several sections of the actual proposal: the second paragraph on page 1 of the *Executive Summary* (the closest preceding referent to "lakes elevation will be lowered by approximately 0.6 m" in the second last line of that paragraph is Big Quill Lakes in the 2nd sentence preceding this statement). This reference to Big Quill Lake and a 0.6 m reduction is also found in section 2.0 of the report ("Design Analysis", paragraph 1). Our reading of the final "Summary and Conclusions" is that it is the Quill Lakes that are intended to be reduced by 0.6 m as the final paragraph on p. 8 indicates that the goal of the Project is to limit (presumably in an effective way) "the amount of surface water contributing to the rise of the Quill Lakes". Based on this and our earlier analysis provided in our November 19th letter, the diversion will need to be well over 27,000,000 m^3 per year from the Quill Lakes basin into the Qu'Appelle River Watershed (i.e. the projected volume of water in the Project proposal (i.e., of 7,000,000 m^3) is in error). This larger proposed diversion requires a Federal Environmental Impact Assessment as it exceeds 10,000,000 m^3 and transfers water from one watershed into another (see our letter of November 19, 2017). If further confirmation by your Ministry suggests that the actual Project goal is a mere 2.6 cm reduction in the Quill Lakes over 5 years through a 7,000,000 m^3 diversion, then this is reduction is not sufficient to address in any serious way the stated goal of the Project, i.e. to reduce the Quill Lakes water levels. Nor would it warrant taking on the significant environmental risks. The inability to solve the flooding problem by a drainage solution, and this Project proposal in particular, is highlighted by the report's admission in its final concluding remark: "There is still a large surface water area where water is still migrating towards Quill Lakes from the north, west, and east of the lakes" (p. 8).

The following briefly summarize some further issues raised by the actual Project proposal:

The summary statement of the Project report under "Operational Details" indicates "sampling for water quality will be done biweekly in the first three years to ensure that there is good understanding of the changing water quality with time throughout the year." We believe that the precautionary principle should be applied and that the onus is on those proposing the Project to show sufficient understanding of how water quality typically changes in analogous cases prior to

allowing the Project to proceed (versus only discovering what occurs after the drainage channel has been constructed).

Under "Operational Details" this section confirms that the Quill Lakes Watershed Authority (QLWA) No. 14 "will have responsibility for the day to day operation of all aspects of the drainage channel." Our previous letter of November 19th has indicated the ongoing conflict of interest of attempting to have the QLWA seek to impartially operate the drainage channel given its governance structure committed to those upstream and in the Quill Lakes basin. Furthermore, the report makes no mention of how the water flow will be measured to ensure that no more than 7,000,000 m^3 per year is diverted. A further concern is that the report outlines no mechanism to ensure that this amount would not be exceeded in high flooding years (particularly in the event there is political and other pressures to release very high volumes of water through this route that is now enabled once the drainage channel has been constructed). That this scenario is a viewed as a real possibility for the Qu'Appelle River watershed is not a surprise in light of the City of Regina releasing large volumes of strained sewage into the Qu'Appelle system following heavy rains in August, 2015.[3] The possibility of such an emergency flood release using the proposed Project channel is also increased due to the absence of any other measures to mitigate flooding in the Quill Lakes basin being formally part of this project proposal (vs. later stages that may or may not materialize).

This "Operational Details" section also states that "the Structures are expected to operate at full capacity during the late spring and then operate at a lower flow throughout the summer and fall season." Given that the *Last Mountain Lake Migratory Bird Sanctuary* is located at the north end of Last Mountain Lake (where this water flow is diverted) it seems that the operation at full capacity in late spring may also correspond with moments of significant spring bird migrations for some species and activities of other wildlife as part of the National Wildlife Area also at the north end of the Lake. The impact of this full capacity release timing on natural species needs to be investigated.

The cost estimate for the Channelization (Phase 1) is $3,187,600 (p. 6). We are interested in the additional costs associated with the degradation of the freshwater water through the proposed diversion channel (versus preserved upstream and used for irrigation or other economic purposes). The economic value of this freshwater water should be calculated on the basis of the

3 *CBC News*. "Qu'Appelle Lakes Chair wants Regina to 'stop dumping raw sewage' Ken Hutchinson said he and other locals were not notified about waste water dumping ahead of the long weekend." August 3, 2015. Available from: http://www.cbc.ca/news/canada/saskatchewan/qu-appelle-lakes-chair-wants-regina-to-stop-dumping-raw-sewage-1.3177503

price differential with an irrigated crop (versus non-irrigated crop) with this volume of water (information likely available from the Province of Alberta that irrigates extensively) along with the foregone revenue from this freshwater sale by the provincial government.

The report cites the Ducks Unlimited Dam located at Pel Lake as a starting point for the drainage channel diversion (Section 6.0, p. 7). It is unclear from the Project report the extent to which, if any, Ducks Unlimited has been consulted. As it is their dam, they should have particular expertise related to its operation and the potential environmental and other impacts of the Project proposal.

Further items not addressed in the Project report include:

- the need to assess the impact of adding this additional water to the existing natural water bodies which appear to be used as part of the "ditch" (e.g., Saline Creek, Peter Lake, etc.). The additional flow could cause erosion and negatively impact water quality, fish and fish habitat in these natural water bodies.
- the need to assess the increased flood risk to Last Mountain Lake and downstream water bodies caused by this presumably long term diversion into Last Mountain Lake. While this may not be an issue, the report needs to demonstrate that it isn't prior to Project approval.
- the need to consult with Manitoba on the potential transboundary impacts of diverting additional water into the Qu'Appelle River and ultimately the Assiniboine River along with issues associated with diverting lower quality water (our RCE has received specific concerns raised from individuals in Manitoba in this regard).
- the need to do a proper study to support the basis of the Project Report's predictions on the salinity of the water that will be diverted, and modeling of the potential impacts of this additional total dissolve solids (TDS) to Last Mountain Lake, specifically:
    - impacts to aquatic macroinvertebrates and the food web
    - impacts to instream vegetation
    - potential for saline stratification in Last Mountain Lake resulting in accumulation of higher density saline water in the lake bottom potentially affecting bottom habitats (e.g., displacing species that utilize bottom habitat such as burbot and lake whitefish)
    - cumulative effects of the increased salinity load to the lake; if the salinity of the lake inflow is higher than the lake outflow this will result in a cumulatively increasing TDS load in Last Mountain Lake and degradation of the water quality over time, potentially affecting fish and fish habitats in Last Mountain Lake
- the need to examine the opportunity cost of the Project proposal in light of the fact that some of

the alternatives assessed by KGS, such as wetland restoration, or removal of illegal drains, could likely have positive impacts on birds and wildlife and form part of a sustainable long term solution.

Thank you for considering these comments as part of your requested input to the Minister of Environment and Climate Change on the proposed *Common Ground Drainage Channel Diversion Project*. Please also include as part of your input to the Minister the analysis and concerns we raised in our earlier letter to the Minister dated November 19, 2017. Our access to the actual proposal now confirms that in our view this project requires a Federal Environmental Impact Assessment under *CEAA 2012*. Feel free to contact us if you have any questions or concerns or if we might be of further assistance in relation to our comments. We look forward to hearing your final decision.

Sincerely,

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Attachments (4):

- RCE Saskatchewan, *Letter from Roger Petry, Garth Pickard, and Aura Lee MacPherson to Hon. Catherine McKenna, Minister of Environment and Climate Change Canada*, re. Request for Federal Environmental Impact Assessment of QLWA C*ommon Ground Drainage Diversion Project*, November 19, 2017
- Saskatchewan Ministry of Environment, *Letter from Wes Kotyk to Kerry Holdness re.* "QLWA Common Ground Drainage Diversion Project," Sept. 8, 2017 (EASB File #: 2017-014).

- Calling Lakes Ecomuseum, *Letter from Aura Lee MacPherson to Honourable Scott Moe, Minister of the Environment, re*. “Quill Lakes Watershed Diversion Plan to Move Water through Kutawagan Lake into Last Mountain Lake”, June 15, 2017.
- Saskatchewan Water Security Agency, *Letter from Honourable Scott Moe to Aura Lee MacPherson*, July 26, 2017 (#2017-126)

cc. Hon. Ralph Goodale, Minister of Public Safety
cc. Shauna Sigurdson, Regional Director Prairie North Region, Canadian Environmental Assessment Agency
cc. Kerry Hecker, Protected Areas Manager, Canadian Wildlife Service, Environment and Climate Change Canada
cc. Dale Nicholson, Regional Director General, Central and Arctic Region, Fisheries and Oceans Canada