

MLBMS

Muriel Lake Basin Management Society

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Japan Canada Oil Sands Limited
Suite 2300, Standard Life Building
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RE: Effect of the JACOS Hangingstone Expansion Project on the Muriel Lake Formation Aquifer

On behalf of the Muriel Lake Basin Management Society, which represents approximately 400 property owners and other interested Albertans, I am writing to seek clarification on the impact the proposed groundwater extraction from the Muriel Lake Formation aquifer for the Hangingstone Expansion Project's SAGD operation may have on Muriel Lake, Alberta. As I am sure you are well aware, the Muriel Lake Formation sits underneath Muriel Lake and is likely a source of groundwater feeding Muriel Lake.

Muriel Lake is located within the Municipal District of Bonnyville, Alberta 13 km south of the town of Bonnyville and 250 km northeast of the city of Edmonton within an area of expansive oil and gas development. Muriel Lake was once known for its clear water, beautiful beaches and rich habitat. Now, a number of sandbars which were once many feet under the water are exposed and covered in vegetation. Algae blooms have become a common occurrence and indicate the quality of water has diminished considerably. In 2006, Dr. Donahue (a hydrogeologist from the University of Alberta) determined that Muriel Lake's water level was then at its all time historic low. The lake has since decreased at least another meter. Dr. Donahue determined that although dry years in the 1980s and 1990s had likely contributed to the lakes decline, there were other contributing factors. Dr. Donahue suggested that further studies were needed to determine what factors were contributing to the lake's decline. These necessary studies have yet to be conducted.

It is our understanding that Japan Canada Oilsands conducted a study, and determined it sustainable, to pump water at a rate of 1400 m³/d from the Muriel Lake Formation Aquifer for the project's life (JACOS Hydrogeological Modelling Information Technical Report for the Hangingstone Expansion Project, p 14). Section 7 of the Environmental Impact Assessment (EIA) states that as a part of the EIA process, JACOS

researched and evaluated the effects of groundwater diversion on groundwater quantity and groundwater-surface water interactions. The report indicates that “as a result of reduced groundwater levels, groundwater discharge to surface water bodies (baseflow) and wetland areas may decrease” (p. 7-29). Further the report concludes that “the predicted effects on the Muriel Lake Formation aquifer, due to groundwater withdrawal, will be low to moderate in magnitude for the life of the Expansion Project” (7-30).

We are writing to you because we know that you too are concerned about the impact that the JACO’s Hangingstone Expansion project will have on the surface and groundwater in Alberta. We understand that your predications are based on models and theoretical calculations which you have indicated meet the requirements of the Water Conservation Guideline for Oilfield Injection (AENV 2006). Despite this, we ask that you provide us with further information on the potential impact your proposed expansion project could have on Muriel Lake. We would like to know whether you have conducted research on the potential impact your project could have specifically on Muriel Lake’s surface water? We would also like clarification on what “low to moderate” effect on the groundwater aquifer translates to in meters and actual effect on surface water? We are concerned because Muriel Lake is recognized as being an extremely stressed water body and the necessary research to determine the reasons for the lake’s decline have yet to be conducted.

As concerned citizens we believe it is our responsibility to draw to your attention the already strained position that Muriel Lake is in, and ask that you provide additional information on whether your proposed project will further detrimentally impact Muriel Lake. We can be reached at savemuriellake@gmail.com or by mail at Muriel Lake Basin Management Society, 3221 130 Ave, Edmonton AB, T5A 3B6.

Thank you for your time. We look forward to your response.

With respect,

Lyll Kortzman, President
Muriel Lake Basin Management Society

CC: JACOS Hangingstone Site Office;
Hon. Diana McQueen (Minister of Alberta Environment and Water);
Environment Canada (Alberta Office)