

The Canadian
Geotechnical Society



La Société Canadienne
de Géotechnique

CGS Luncheon Presentation

Keeyask Generating Station – Earthfill Dams and Dykes

Presented by:

Blake Holowick

M.Sc., P.Eng. Manitoba Hydro

Sean Cockrem

P.Eng. Hatch

Presentation Abstract:

Keeyask is a 695 MW hydroelectric generating station located on the Nelson River in northern Manitoba approximately 730 km north of Winnipeg. Approximately 2.4 km of earthfill dams with a maximum height of 30 m were constructed across the Nelson River for the project. Additionally, 21 km of dykes were constructed along the north and south shores of the Nelson River to retain the forebay. This presentation provides an overview of the Keeyask Generating Station, followed by a summary of the construction of the earthfill embankment structures, including cofferdam construction, overburden / bedrock excavation, foundation preparation and treatment, grout curtain construction, and earthfill placement.

About the Presenters:

Blake Holowick is a Geotechnical Engineer at Manitoba Hydro. He is involved with embankment dam design, construction and maintenance, as well as shoreline / channel erosion protection, and slope stability projects related to Manitoba Hydro's generating, transmission, and distribution systems. He attended the University of Manitoba where he received a Bachelor's Degree in Civil Engineering in 2008, and a Master's Degree specializing in Geotechnical Engineering in 2010.

Sean is a geotechnical engineer at Hatch. He was involved with the detailed geotechnical design of Manitoba Hydro's 695 MW Keeyask Generating Station starting in September 2013. In between September 2015 and February 2019 he was the full time onsite geotechnical lead for the Owner's Engineering Department. In that time he was involved with the application and modification of the detailed design for all geotechnical matters on site. He attended the University of Manitoba and graduated with a Bachelor's Degree of Science in Civil Engineering in 2012.

For event information, please visit:

<http://www.cgsmanitoba.ca/lunch-seminars/upcoming/>

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Date: Wednesday, January 13, 2021

Time: Presentation at 12:00 PM

Registration Fee: Free Event!

Location: MS Teams Meeting

[Click here to join the meeting](#)

- This event qualifies for 1 Professional Development Hour. The event is classified as 'Informal Activity' under EGM's CPD Program.
- Please note that if you are unable to attend, someone else can be sent in your place. We are accepting walk-ins depending on seating availability.
- If you wish to be added to the mailing list, please send an email to cgs.manitoba@gmail.com