



2017-MAR-21

Ministry of Forests, Lands
and Natural Resources Operations
PO Box 9340 Stn Prov Gov't
Victoria BC
V8W 9M1

ATTENTION: Scott. Morgan, Head, Dam Safety Section

Dear Mr. Morgan:

RE: Middle Chase River Dam – Status Update

Further to our letter dated 2016-SEP-13, the City has been working diligently to address the concerns with respect to the Middle Chase River Dam. This letter addresses the work the City of Nanaimo has undertaken and lays out a proposed path forward for Middle Chase River Dam.

Level sensors were installed on the Chase River system to provide early evacuation warning during major storm events. Data collected by the sensors provides information usable for the purpose of understanding how the Chase River basin reacts to rainfall, and updating calibration of hydrologic and hydraulic models.

The City engaged Urban Systems Ltd. to create a calibrated hydrology/hydraulic model based on stream flow response data. Initial indications from this work are that the Middle Chase Dam spillway has adequate capacity to pass the Inflow Design Flood. Please see attached letter and report by Urban Systems Ltd.

Given this information, the City proposes the following path forward with respect to Middle Chase:

1. Reconfigure and add to the level sensor array so data are more suitable for a wider range of model calibration. Together with a few more years of rainfall and stream flow data points, this will enable further modelling to refine estimates of IDF vs capacity. Timeframe for this would be starting in 2017.
2. Prior to the next Dam Safety review (2023), undertake further hydrologic and hydraulic assessments, and re-examine the need for the risk assessment at that time.

... 2

2017-MAR-21

Scott Morgan, Head, Dam Safety Section
Ministry of Forests, Lands and Natural Resources Operations
RE: Middle Chase River Dam – Status Update
Page 2

3. Reconfigure the debris boom at the Lower Chase spillway to allow routine debris in the reservoir to flush down the original (main) spillway. The new debris boom encompassing both the main and auxiliary spillways, debris is trapped against the dam, creating an operational, maintenance, safety and aesthetic concern. The City proposes to relocate the downstream connection point of the debris boom to protect the larger-capacity auxiliary spillway, and allow natural debris to flow through the original spillway. Spillway debris removal would continue as formerly. Given the large capacity of the auxiliary spillway, allowing the main spillway to pass debris is not expected to create an unacceptable risk.

We trust you will find our proposed course of action acceptable, and look forward to discussing with you soon.

Sincerely,



Tracy Samra, LL.B., LL.M.
Chief Administrative Officer

/jdk

pc: Brad McRae, Chief Operations Officer
Poul Rosen, Senior Manager, Engineering

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