

October 6, 2016

Salt Spring Island Fire Protection District
105 Lower Ganges Road
Salt Spring Island, BC V8K 2T1

Dear Property Owner and/or Water Licensee:

I am writing to notify you that North Salt Spring Waterworks District (NSSWD) has made an application under the *Water Sustainability Act (WSA)* to the Ministry of Forests, Lands and Natural Resource Operations (MFLNRO) for a licence to store water in St. Mary Lake on Salt Spring Island by raising the height of the weir on Duck Creek.

A review of existing records indicated that you either: (a) hold a water licence on either St. Mary Lake or Duck Creek, (b) are a riparian owner on either St. Mary Lake or Duck Creek, or (c) are both a water licence holder and riparian owner on either St. Mary Lake or Duck Creek.

Under the *WSA*, those with standing (water licence holders and riparian property owners) have a right to object; therefore, as part of the application, NSSWD is required to serve notice to all riparian landowners and water licensees on St. Mary Lake and Duck Creek. NSSWD is also required to inform those with standing that a licence to store water via construction and use of a dam also includes the right to expropriate land that would be flooded by use of the dam at the maximum height authorized.

The level of St. Mary Lake is currently controlled by a small, low-head, fixed-height weir (dam) on Duck Creek, the stream at the discharge end of St. Mary Lake. The current weir crest height is 40.71 m – GSC and the goal is to increase the weir crest height by 29 cm to 41.00 m – GSC.

Potential impacts to St. Mary Lake Riparian Landowners and Water Licensees:

Riparian landowners on St Mary Lake could be impacted by seasonal flooding due to increased water levels in St. Mary Lake.

NSSWD does not anticipate any negative impacts to water licensees on their ability to withdraw water because the lake level will be higher and remain above any existing water intakes. Further, NSSWD does not expect there to be significant negative or permanent impacts to water quality given that the new lake level will still fall within the historical range for St. Mary Lake since, prior to construction of the weir in 2006, the average level of the lake at full capacity was higher (approximately 41.0 m – GSC) due to the presence of beaver dams in Duck Creek.

Potential impacts to Duck Creek riparian landowners and water licensees:

Riparian landowners and water licensees on Duck Creek could be impacted by changes to the flow regime in Duck Creek. The timing of refill and drawdown of St. Mary Lake and overflow to Duck Creek could change as a result of the increased storage in St. Mary Lake. In addition, a change to the required environmental flow needs in Duck Creek might also occur.

Project need:

In 2013, NSSWD engaged an engineering consultant to assess the source capacity of St. Mary Lake. The resulting report, entitled *St. Mary Lake Watershed Water Availability and Demand – Climate Change Assessment*, revealed that there is insufficient water in the lake to allow NSSWD to withdraw the full licensed amount unless storage is increased by raising the lake level. As a result, there is now a moratorium on new development within NSSWD boundaries. No new demand for water will be approved by the NSSWD Board of Trustees until the Duck Creek weir crest height has been increased to 41.0 m – GSC. Even at that time, there may not be enough water to withdraw the full licensed volume and support any new development, given that a water licence does not guarantee the water will be available.

During the summer of 2015, Salt Spring Island experienced severe drought. By implementing mandatory watering restrictions and reducing consumption by nearly 30%, NSSWD was able to maintain the level of St. Mary Lake just above the minimum level permitted by the conditional water licence. Despite the successful conservation efforts, a report entitled *Salt Spring Island 2015 Drought Assessment* concluded that St. Mary Lake was at serious risk of not refilling after such a drought unless there was greater than average rainfall in the following fall and winter. Thankfully, rainfall in December 2015 was nearly double the 'climate normal' average and St. Mary Lake did refill to capacity. However, despite heavier than normal precipitation during the first three months of 2016, the St. Mary Lake area experienced serious drought again during the summer of 2016.

For all the reasons detailed above, NSSWD has determined that raising the level of St. Mary Lake is the only means of preventing negative impacts to water quality and aquatic life, while supplying year-round flow to Duck Creek and meeting legal obligations to provide water to district ratepayers.

The following documents relating to this project are available for your viewing on our website in the Water/Lakeshore Owners section.

Document Type	Description	File Name
Application Form	Application for storage license SML Oct 27 2015 Copy of the NSSWD water storage license application submitted to the Ministry of Forests, Lands, and Natural Resource Operations October 2015. (This is the application in which NSSWD makes application for a water license on St. Mary Lake for the purpose of storage of 550,996 m ³ /year.)	Application for storage license SML Oct 27 2015
Map	St. Mary Lake Location of Weir Map showing the location (latitude and longitude) of the weir on Duck Creek. This document is part of the drawing referred to in Section 2 (1) (k) of the Water Regulation, B.C. Reg. 204/88.	Location of Weir
Other	Memo by Lynne Atwood of Genoa Environmental: Genoa Environmental 2011 Report Report discusses predicted impacts of increased lake levels on riparian vegetation at St. Mary Lake.	Genoa Environmental 2011 Report
Other	Environmental Impact Assessment Report by T. Hatfield of Ecofish Research Report assessing the impacts of the	Environmental Impact

Document Type	Description	File Name
	proposed changes to the operation of the weir on St. Mary Lake (Duck Creek).	Assessment Report
Drawing to Scale	Revised Weir Engineering Design Drawing Design drawing prepared by Anderson Civil Engineers detailing the proposed changes to the weir on Duck Creek including an additional 29 cm of height and a low flow notch with reduced depth.	Revised weir engineering design drawing
Other	St. Mary Lake – Impacts of the Raised Weir on Flooding Technical memorandum prepared by KWL Consulting Engineers to determine the maximum lake levels for the current and proposed weir heights for 2-year and 200-year rainfall events of various durations.	Impacts of the Raised Weir on Flooding
Other	Salt Spring Island 2015 Drought Assessment Technical memorandum prepared by KWL Consulting Engineers for NSSWD drought management purposes.	Salt Spring Island 2015 Drought Assessment
Other	Request for Review of Duck Creek Flow Requirements by Fisheries and Oceans Canada This document initiated the process of reviewing the minimum flow requirements for Duck Creek.	Request for Review of Duck Creek Flow Requirements
Other	St. Mary Lake Morphometry Two scanned pages from the St. Mary Lake Hypolimnetic Aerator Final Design report prepared by Northwest Hydraulic Consultants in 2006. Table 1 describes the morphometric features and Table 2 describes the depth strata volumes in St. Mary Lake.	St. Mary Lake Morphometry
Other	St. Mary Lake Volume Area Depth Curves One scanned page from the St. Mary Lake Hypolimnetic Aerator Final Design report prepared by Northwest Hydraulic Consultants in 2006.	St. Mary Lake Volume Area Depth Curves
Other	St. Mary Lake Lot Descriptions List of lot descriptions, the area of affected land, and addresses for properties on the shore of St. Mary Lake.	St. Mary Lake Lot Descriptions
Drawings to Scale	St. Mary Lake Full Drawing Set Shows the surveyed 41.0 m contour line for St. Mary Lake lakeshore properties (shows land flooded at 41.0 m above sea level GSC datum). These documents are part of the drawings referred to in Section 2 (1) (k) of the Water Regulation, B.C. Reg. 204/88.	St. Mary Lake Full Drawing Set

In addition, *St. Mary Lake Watershed Water Availability and Demand – Climate Change Assessment* and the *Salt Spring Island 2015 Drought Assessment*, and the *NSSWD Sustainable Water Management Strategy* are available for your review on the NSSWD website in the Documents/Reports section. These documents demonstrate the commitment to sustainable water management made by NSSWD.

Project status:

Although the licence application has been submitted, the process is complex and not all requirements have been met. NSSWD intends to have all required documentation for the licence application submitted to the MFLNRO by the end of 2016.

If you wish to comment on this application, all written comments must be directed to the address below and be received within 30 days of the date of this letter.

Jennifer Andrews
Authorizations Specialist - Water
Ministry of Forests, Lands and Natural Resource Operations
Water Authorizations, West Coast Region
103-2100 Labieux Road
Nanaimo, B.C. V9T 6E9

Conversely, if you are in favour of raising the level of St. Mary Lake, a letter of support submitted to the address above would be greatly appreciated.

Please do not hesitate to call NSSWD if you have questions about the project. We would also be pleased to meet with you, at your convenience, to discuss the project.

Sincerely,



Meghan McKee
Environmental Manager
North Salt Spring Waterworks District