

# MEMORANDUM

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<b>Date:</b>	March 13, 2015
<b>To:</b>	Gord Ruffo, Charlotte Olson (PMV)
<b>From:</b>	Scott Northrup, R.P.Bio.
<b>File:</b>	302-035.04
<b>Re:</b>	Flood Box Outfall Maintenance on Westham Island – Anticipated Permitting Requirements

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At a meeting held between the Delta Farmers Institute (DFI), the Corporation of Delta and PMV's Habitat Enhancement Program on January 8<sup>th</sup>, 2015, the DFI requested information related to permitting needs for flood box outfall maintenance on Westham Island. Following this meeting, a visit to Westham Island took place on February 20, 2015 in order to assist the project team in gaining a better understanding of site conditions associated with flood box outfalls and to provide guidance to DFI regarding the permitting process which would be required prior to undertaking the work.

## 1.0 WORKS REQUIRED

Currently two specific types of work are required to maintain the integrity of the flood box outfalls on Westham Island, including the removal of excess sediment and accumulated drift logs in front of the outfalls. Additional information related to the specific maintenance techniques and equipment used could better inform the guidance provided below, therefore any recommendations in this memo should be considered preliminary.

Sediment accumulates at outfall locations and in tidally influenced drainage channels from yearly flooding and from erosion from Westham Island fields. Sediment is removed with heavy equipment and is either side cast at an approved location or removed from the site

Drift log accumulations at outfalls and in drainage channels exacerbates sediment accumulation which contributes to poor outfall function. Drift logs are either moved to another part of the intertidal zone or are removed from the site.

## 2.0 FEDERAL FISHERIES ACT – SERIOUS HARM ASSESSMENT

A key permitting consideration for any proposed flood box maintenance is whether the proposed works could result in *serious harm to fish*<sup>1</sup> and therefore require a Fisheries Act Section 35(2) Authorization. Any maintenance works on the flood box outfalls on Westham Island would be of short duration and relatively limited in scope and therefore the area potentially affected would be small. Comparable habitat is readily available to fish in the immediate vicinity of the flood box locations and specific techniques and equipment are available to mitigate any potential harmful effects to fish habitat. Due to the above considerations, it is anticipated that the sites would recover quickly upon completion of works and that the works would not result in permanent alteration or destruction of fish habitat. However, the preliminary conclusion is conditional upon the works being performed in accordance with appropriate mitigation to avoid or sufficiently minimize *serious harm to fish* and should further be reviewed by a qualified environmental professional (QEP).

Some typical mitigation measures that may be required include:

- **Timing:** Works should be scheduled to occur during periods of least risk to fish, as outlined in Area 28 here: [www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/bc-s-eng.html](http://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/bc-s-eng.html). The least risk work window for the Westham Island area is between July 16 and February 28 of any year, meaning that this is the period during which any instream work should be undertaken. Regardless of the time of year, it is understood that works would take place during low tide when the sites are dry.
- **Material handling:** Excess sediment and logs can either be removed from the work zones, or placed at other locations that do not result in *serious harm to fish*. Excess sediment can be placed in areas that do not support tidal marsh or areas that will re-colonize quickly after placement. Logs can be placed upstream or downstream of the work zones, in areas with existing log accumulations.
- **Site access:** The work zones would need to be accessed via a route that causes the least harm to vegetated habitats or habitats that are typified by soft sediments. Riparian removal would need to be minimized or restored upon completion of the work.
- **Machinery:** Machinery would need to result in a minimal footprint and not result in permanent changes to the intertidal zone. Machinery with bio-friendly fluids (oils, lubricants etc.) are recommended.

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<sup>1</sup> Fisheries and Oceans Canada interprets *serious harm to fish* as the death of fish or any permanent alteration to, or destruction of, fish habitat.

### 3.0 PROVINCIAL WATER ACT

The provincial *Water Act* states that either approval for, or at minimum a notification, is required for any works or activities that can be considered “changes in and about a stream”. “Changes in and about a stream” is a comprehensive definition, which covers a wide range of activities that might occur near or below the high water mark of a water feature.

Approvals are written authorizations issued by the Water Stewardship Division (WSD) of the Ministry of Forests, Lands and Natural Resource Operations (MFLNRO) for “changes in and about a stream” that are generally of a complex nature. In contrast, Notifications typically involve works that do not involve any diversion of flow, can be completed within a relatively short timeframe, and pose minimal risk of impact to the environment or third parties.

The proposed works represent works that occur over a short timeframe and are of a minor nature, especially within the context of the Fraser River. MFLNRO guidance also indicates that most maintenance works and rural storm water management activities can be addressed through Notification.

Notifications must be submitted to MFLNRO, via [www.frontcounterbc.gov.bc.ca/](http://www.frontcounterbc.gov.bc.ca/), for review at least 45 days prior to commencing the proposed change. Notification may result in a response from a MFLNRO Habitat Officer prior to the completion of the 45 day review period, with specified terms and conditions prescribed. In most cases, however, Notifications do not receive a response and it is understood that the works can proceed providing that appropriate mitigation measures are applied.

### 4.0 CONCLUSION

It is unlikely that the proposed works would require an Authorization for *serious harm to fish* from DFO. Under the guidance of a QEP, works can either be self-assessed or they can be submitted for a Request for Review by DFO. In either case, a site visit, description of work methods and a description of proposed mitigation to avoid *serious harm to fish* should be developed to guide the work.

The works would be expected to require a Notification under the provincial *Water Act*, which must be submitted a minimum of 45 days in advance of the proposed construction commencement date.

If you wish to discuss this further, please do not hesitate to contact the undersigned.

Regards,  
**Hemmera Envirochem Inc.**



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