

# Output of Noise Modelling of McLoughlin Point Wastewater Treatment Plant

## Report Context

The CRD has been planning wastewater treatment for the Core Area for over 30 years. During this time a significant number of reports have been prepared and/or reviewed to assess options and provide information to further planning.

In May 2016 a Project Board was established to define and implement wastewater treatment for the Core Area. The Project Board heard delegations and presentations from the public, industry professionals, and a CRD Director. The Project Board Chair and Vice Chair also met with staff from the CRD, all of the Core Area municipalities, and with Esquimalt and Songhees Nations representatives. The Project Board reviewed the previous technical work and extensive public commentary and developed a methodology to review and evaluate all options. This methodology included evaluation of a large number of options to identify a short list that best addressed the Project goals.

In September 2016 the Project Board presented its recommendation for wastewater treatment and on September 14, 2016 the CRD Board approved the Wastewater Treatment Project (the Project).

A significant number of the reports that have been prepared and/or reviewed still serve as useful background information, but not all of the reports are applicable to the Project. To respond to several recent public inquiries regarding topics of interest, the CRD has prepared a synopsis of reports along with a summary of the applicability of the report to the Project. The document summary is available here:

<https://www.crd.bc.ca/docs/default-source/wastewater-planning-2014/2017-05-30-summary-of-documents-related-to-topics-of-interest.pdf>. The document summary does not provide a comprehensive list of reports completed as part of wastewater treatment planning for the Core Area, it is a compilation of a number of reports related to key topics of interest: odour; seabed pipeline; bluffs and shoreline; geotechnical; and noise.

## Purpose of this Modelling

The modelling was undertaken to determine the noise in the Township of Esquimalt and the City of Victoria. The noise modelling was undertaken assuming a “worst case scenario” of 60 decibels everywhere along the McLoughlin Point Wastewater Treatment Plant site’s property line. However, actual noise levels from the treatment facility once operational are anticipated to be lower.

## Applicability to Project

The output of the model is applicable to the Project and confirms that the McLoughlin Point Wastewater Treatment Plant will meet all municipal noise bylaw requirements.



## McLoughlin Point Wastewater Treatment Plant: Noise During Operations

Per the Township of Esquimalt's Zoning Bylaw, operational noise from the McLoughlin Point Wastewater Treatment Plant will not exceed 60 decibels (dBA) at the plant's property line. This means predicted noise levels in James Bay, the closest location to the treatment plant in Victoria, will not exceed 35 dBA. This is 5 dBA below the most stringent limit in the City of Victoria's noise bylaw.

### Noise Levels for Common Sounds/Environments

NOISE / ENVIRONMENT	APPROXIMATE SOUND LEVEL (dBA)
Threshold of hearing	0
Just audible	10
Nighttime background noise, urban residential area	35
City of Victoria Noise Bylaw – most stringent limit	40
Township of Esquimalt Zoning Bylaw	60
Busy office	60
On sidewalk by passing car	70
On sidewalk by passing bus	80

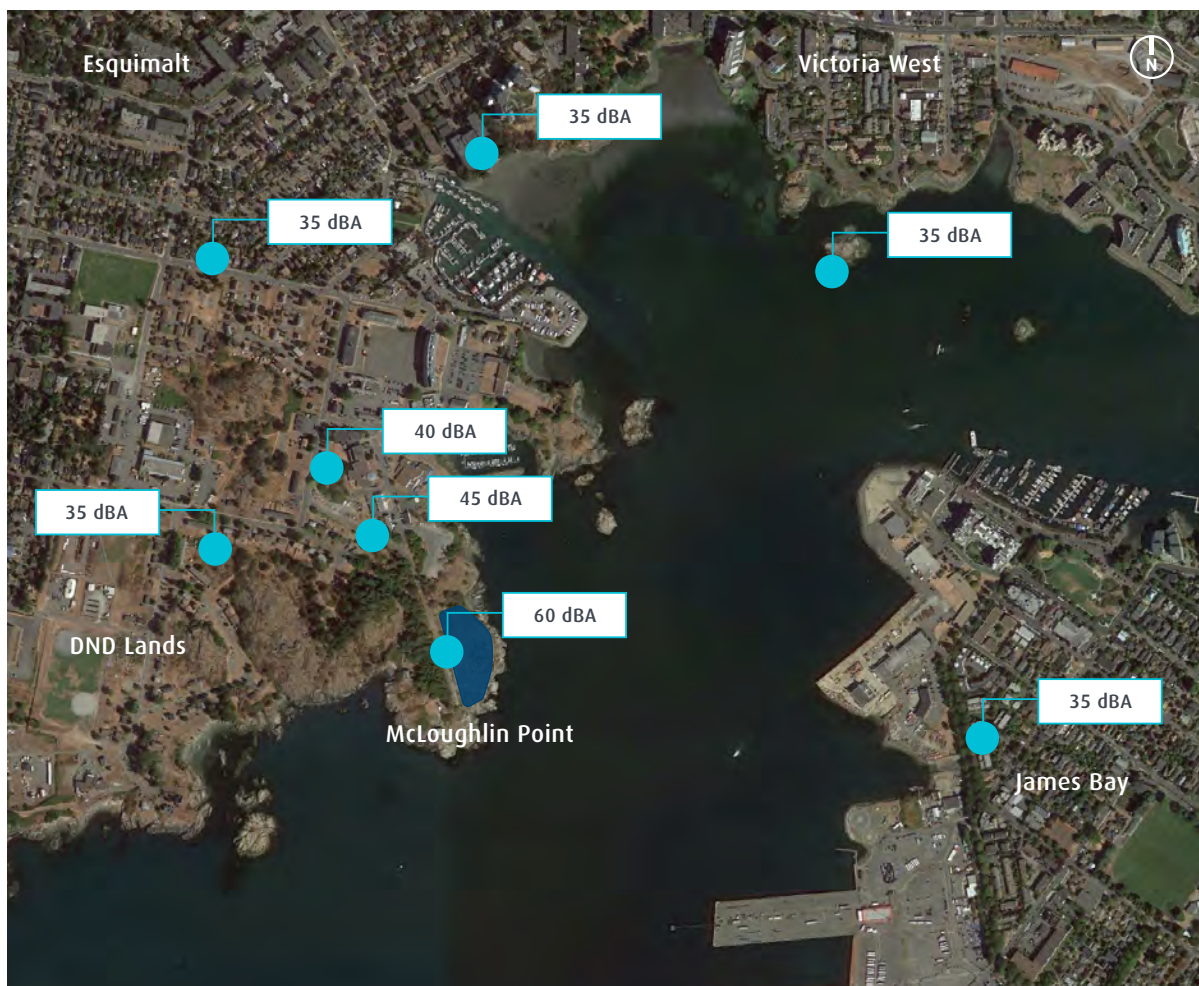
#### About the Wastewater Treatment Project

The Wastewater Treatment Project will provide tertiary treatment for wastewater from the core area municipalities of Victoria, Esquimalt, Saanich, Oak Bay, View Royal, Langford and Colwood, and the Esquimalt and Songhees First Nations. The Wastewater Treatment Project will be built so we comply with federal regulations by the end of 2020, and is being funded by the Government of Canada, the Government of British Columbia and the CRD.

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## Noise Model

- Noise levels at the locations shown on this map were calculated by assuming a “worst-case scenario” of 60 dBA everywhere along the property line. However, actual noise emissions from the treatment plant may result in lower noise levels.
- This noise model considers all sound propagation to occur under downwind or temperature inversion conditions (worst-case conditions).



*Predicted noise from McLoughlin Point Wastewater Treatment Plant. The noise model was generated with the state-of-the-art acoustical modelling software CadnaA which performs sound propagation calculations according to the widely used international standard ISO 9613-2:1996.*

## For More Information

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