

**Status:** Complete

## Salt Marsh Restoration: Boundary Bay Sites 3.3, 3.4 & 3.5

### Location and Size

Salt Marsh Restoration Sites 3.3, 3.4 and 3.5 are located in the Provincial Boundary Bay Wildlife Management Area near the south end of 64<sup>th</sup> Street and the south end of 72<sup>nd</sup> Street in the Corporation of Delta, B.C. The site covers a gross area of approximately 71,554 m<sup>2</sup> (7.15ha).



**Figure 1.** Location of Salt Marsh Restoration Sites 3.3, 3.4 and 3.5 along Boundary Bay in Delta, B.C.

### Previous State

Prior to restoration works, the site was characterized by dense accumulations of historically deposited woody debris, mostly composed of saw-cut logs from the forestry sector. Based on aerial photo reviews, the vast majority of the woody debris had been present for 25 to 70 years before the restoration works were undertaken. The debris was observed to be smothering underlying salt marsh vegetation and had compacted the sediments preventing the associated salt marsh from achieving its full productive capacity.

### Overview of Completed Project

Port Metro Vancouver undertook restoration works in September 2013, which involved the careful removal and proper disposal of excessive woody debris and litter from approximately September 2014

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2.5 km of shoreline. Wildlife snags were installed to provide perching and roosting habitat for raptors.

The target vegetation species for recolonization includes saltgrass, pickleweed, dunegrass, other halophytic grasses, orache and various salt tolerant herbaceous species (e.g., silver burweed, gumweed, aster and dock). These salt marsh species provide an important source of primary production, nutrients and organic matter supporting a detritus-based food web utilized by a diverse assemblage of marine and estuarine species. The restored salt marsh will also provide a number of other ecological functions such as wave dampening, carbon sequestration, photosynthesis and oxygen production. Based on similar projects, it is predicted that the salt marsh will be fully functioning within 3 to 5 years.

Port Metro Vancouver will continue to annually monitor sites in its Habitat Bank to ensure that biophysical objectives are met.



**Photo 1.** Pre-removal photograph of Site 3.3 prior to restoration works (Photo Credit: W. Jans, July 2013).



**Photo 2.** Post-removal satellite image of Site 3.3 less than one month after log removal works (Photo Credit: Google Earth, October 2013).



**Photo 3.** Pre-removal photograph of Site 3.4 prior to restoration works (Photo Credit: W. Jans, July 2013).



**Photo 4.** Post-removal satellite image of Site 3.4 less than one month after log removal works (Photo Credit: Google Earth, October 2013).



**Photo 5.** Pre-removal photograph of Site 3.5 prior to log removal works (Photo Credit: W. Jans, July 2013).



**Photo 6.** Post-removal satellite image of Site 3.5 less than one month after log removal works (Photo Credit: Google Earth, October 2013).



**Photo 7.** Pre-restoration photograph of Site 3.3, view facing the dike (July 2013).



**Photo 8.** Pre-restoration photograph of Site 3.4, view parallel to the dike (July 2013).



**Photo 9.** Excavator removing logs from Site 3.3 (September 2013).



**Photo 10.** Installation of a vertical log to create a wildlife snag for a raptor perch (Photo Credit: W. Jans, September 2013).



**Photo 11.** Site conditions at Site 3.4 approximately one month after restoration works (October 2013).



**Photo 12.** A short-eared owl perched on an installed short snag (December 2013).



**Photo 13.** Site conditions at Site 3.4 approximately one year after the restoration works (August 2014).



**Photo 14.** Site conditions at Site 3.5 approximately one year after the restoration works (August 2014).