

Tod Inlet Debris Removal Project 2017

Summary

SeaChange Marine Conservation Society
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The SeaChange SCUBA dive team and RV John Strickland crew removed a total of 130.05 T of underwater debris from the estuarine marine environment of Tod Inlet to improve water quality and sediment health for recreational fish populations. The work was completed by the end of March 2017. The area of removal included the underwater environs near the entrance of the Park boundary to the mouth of Tod Creek within the inlet.

Location map of Debris Removal and Signage



The primary objectives of this project were to:

1. Remove debris from the substrate of Tod Inlet to reduce contaminating materials within the water column and sediments, and to reduce surface areas for the hydroid stages of jellyfish in the inlet;
2. Increase food availability and health of the inlet for juvenile salmon and anadromous trout species (Cutthroat trout); and
3. Improve communications amongst recreational boaters about the harm caused by dumping of waste in the low circulating waters of Tod Inlet.

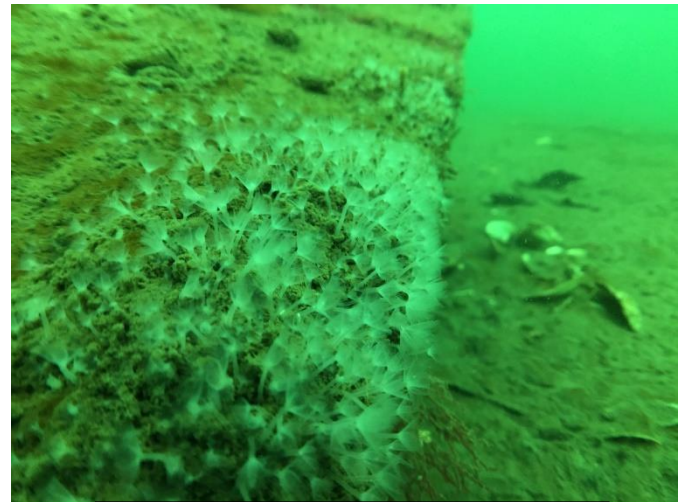
Project Deliverables



Derelict boat removed from Tod

The underwater debris within the Inlet was mapped (a total of 24.06 linear km) in the summer of 2015 by seasonal SeaChange employees with an underwater camera and GPS held units. In the spring of 2016, the Canadian Hydrological Service from the Institute of Ocean Studies conducted a multi-beam bathymetric survey of the entire inlet. The underwater map, analysis of the CHS data and the underwater side-scan survey conducted by the WCB dive team guided decisions on the best strategies for removing larger debris from the inlet such as derelict boats. Three derelict boats were removed in total. A Debris Removal Plan was created based on these surveys (attached).

Removing the ropes, chains, boats, boat parts and other debris from the substrate of Tod Inlet reduced the toxic load and surface area for the polyps of jellyfish predominate in the inlet's waters. The debris removal also eliminated navigational hazards for the benefit of recreational fishers and other boaters.



Jellyfish polyps on cement structure in Tod Inlet



Underwater debris consisting of rubber tires, boat parts, metal, rope, cement and engine blocks were removed from 24 linear km subtidal area using SCUBA WCB certified dive team with appropriate equipment. Larger debris was removed by barge and crane (RV John Strickland from the Institute of Ocean Science). An excavator on shore removed the debris from the work float to place it in debris bins.



RV John Strickland vessel removing derelict boat from the inlet

A Safety Management Plan was put in place before underwater operations began (please see attached). The Plan includes the safety protocols for foot and boat traffic while the project is underway.

Communications

A media release (attached) was distributed in January of 2017 describing the project. Several articles (attached) were written on this project for the local newspaper, the Peninsula News Review. SeaChange received many positive comments from Park visitors about the debris removal. Videos were created illustrating the nature of the underwater environment and the debris removal (please view one attached).

We will replicate this work in other estuaries and bays in the southern Salish Sea to expand potential fish habitats and to educate others we do need to pay better attention to the quality of water and sediments in recreational fishing areas for the overall health of our fish and communities.



Excavator removing one of the derelict vessels from the work float to load into a debris bin