

# Salish Cruise Dataset

## Distributed by NANOOS-APL

Dataset Version 20160929 (September 29, 2016)

### Data Provider

Oceanographic cruise data from the Salish Sea, primarily Puget Sound and Strait of Juan de Fuca (Washington), have been contributed by many groups. These include the Puget Sound Regional Synthesis Model (**PRISM**, <http://www.prism.washington.edu/>; <http://prism.washington.edu/story/PRISM+Cruises>), and the Washington Ocean Acidification Center (**WOAC**) (<https://environment.uw.edu>), both of which were carried out by the University of Washington, Seattle, Washington, with other partners. Data distributed in this dataset package were collected by partners as illustrated in the table at: <http://nvs.nanoos.org/CruiseSalish>

### Data Distributor

This dataset is being distributed by NANOOS-APL, the APL- UW Data Management component of the Northwest Association of Networked Ocean Observing Systems (**NANOOS**, <http://www.nanoos.org>). It was extracted from the NANOOS - Applied Physics Laboratory (**APL**) Database for Marine in-situ observations via APL Environmental and Information Systems Department, University of Washington, Seattle, Washington: <http://eis.apl.washington.edu>

The files are available for download on the NANOOS Visualization System (**NVS**): <http://www.nanoos.org/nvs/nvs.php?section=NVS-Assets-Cruises-PRISM>

### Contacts

For scientific questions about the dataset, contact: *Jan Newton, Ph.D.* (NANOOS Executive Director, APL-UW), [jnewton@uw.edu](mailto:jnewton@uw.edu)

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### Dataset and Data Files

A dataset zip file *Salish\_Cruise-<Cruise Year>\_<Cruise Month>-Data.zip* contains this README documentation file and CSV data files described below. Files in this zip file correspond to the data for one cruise. All files are in ASCII (text) CSV format with 3 header rows indicating variable names, variable units and the source of data (CTD or lab analysis).

1. *SalishCruise\_<Cruise Month><Cruise Year>\_downcast.csv*

This file contains the down cast data collected using the CTD package and any additional sensors attached to a rosette cage deployed on a research vessel. All down casts during the cruise are contained in this file and are sorted by station.

2. *SalishCruise\_<Cruise Month><Cruise Year>\_labupcast.csv*

This file contains the up cast data collected using the CTD package and any additional sensors attached to a rosette cage deployed on a research vessel. The up cast data corresponds to when the bottles on the rosette cage were fired and water samples were collected. The data from the lab analysis of the waer samples is also included. All up casts during the cruise are contained in this file and are sorted by station.

## **Data Dictionary**

All latitude and longitude values are in both decimal degrees and degrees minutes. All time stamps are in Universal Time Coordinate (UTC) format.

### **ObservationsData file:**

Columns: cast and data variables, listed below:

Cast variables: There are 7 columns, listed below that give the information about each cast.

#### **Cast variables (7):**

- Cruise ID – Cruise identification including the research vessel abbreviation and cruise number
- UTC Time – Time of the cast in UTC
- Latitude DegMin – Latitude of the cast in degrees minutes
- Longitude DegMin – Longitude of the cast in degrees minutes
- Latitude Deg – Latitude of the cast in decimal degrees
- Longitude Deg – Longitude of the cast in decimal degrees
- Station – Station name

Variable names and units: There are 25 possible variables, listed below with their units and grouped by categories.

#### **Physical variables (4):**

- Pressure (dbar)
- Depth (m)
- Temperature (deg C)
- Potential Temperature (deg C)
- Salinity
- Sigma-theta (kg/m<sup>3</sup>)
- Sigma-t (kg/m<sup>3</sup>)

#### **Light and optical conditions (3):**

- PAR (μmol/m<sup>2</sup>/s)
- Beam Transmission (%)
- Beam Attenuation (1/m)
- Turbidity (NTU)

#### **Oxygen and biological activity (3):**

- Oxygen Concentration MG (mg/L)
- Oxygen Concentration MG Titration (mg/L)
- Oxygen Concentration MG, corrected using titrated water samples
- Oxygen Concentration MOL (μmol/kg)
- Oxygen Saturation (%)
- pH
- Chlorophyll Fluorescence (μg/L)
- Chlorophyll Concentration (μg/L)
- Phaeopigment Concentration (μg/L)

#### **Nutrients (5):**

- Nitrate (μM)
- Nitrite (μM)
- Ammonium (μM)
- Phosphate (μM)
- Silicate (μM)

