

These CTD data are an addition to NODC Accession 0000676 entitled: Temperature and salinity profiles from CTD casts in Willapa Bay, Washington, from charter/fishing boats as part of the Pacific Northwest Coastal Ecosystem Regional Study (PNCERS) from 29 July 1997 to 10 September 1998.

This set of hydrographic casts supported by a NOAA grant to Dr. Barbara Hickey at University of Washington and Washington SeaGrant as part of PNCERS-supported project that aimed to establish the links between coastal ocean dynamics, estuarine circulation, primary production, and oyster production in Willapa Bay and the other small, outer-coast estuaries of Washington and Oregon.

This submission is comprised of temperature and salinity from three that surveyed 3 estuaries in the Pacific Northwest: Grays Harbor and Willapa Bay in Washington State and Coos Bay in Oregon.

The data submitted here was collected from fishing vessels in March and June 1998 in Coos Bay, and in March 1998 in Grays Harbor. The entire data set, including that already in Accession 0000676, was collected between July 1997 and September 1998.

Processing

Data were processed using standard SeaBird routines. Profiles were low-pass-filtered with a time constant of 0.5s for conductivity and 2s for pressure; temperature was advanced 0.6s to align it with pressure. Profiles were loop-edited and averaged into 0.5mbins. Outliers were then manually edited.

Listing

A continuous listing of the data is contained in the tab-delimited file, **PNCERSsuppl_CB&GH_Hickey.txt**. There are two types of lines in these space-delimited files.

(1). There is a header line of metadata preceding the cast data. It includes: cast number, Latitude (degrees), Latitude (decimal minutes), Hemisphere, Longitude (degrees), Longitude (decimal minutes), Hemisphere, month, day, year (mm/dd/yy), time (GMT), and Bottom Depth in meters.

(2). The data line includes: Pressure (db), Temperature (°C), Salinity (no units).

References:

Results of this program were presented in the following publications:

Hickey BM, Banas, NS (2003) Oceanography of the U.S. Pacific Northwest coast and estuaries with application to coastal ecology. *Estuaries*, 26:1010-1031.

BM Hickey, X Zhang, and N Banas (2002) Coupling between the California Current System and a coastal plain estuary in low river flow conditions. *J. Geophys. Res.*, 107, 10.1029/1999JC000160

Banas, NS, Hickey, BM, MacCready, P, Newton, JA (2004) Dynamics of Willapa Bay, Washington: A highly unsteady partially mixed estuary. *J. Phys. Oceanogr.* 34:2413-2427.

Banas , NS, Hickey, BM (2005) Mapping exchange and residence time in a model of Willapa Bay, Washington, a branching, macrotidal estuary. *J. Geophys. Res.* 110, C11011, doi:10.1029/2005JC002950.

Banas, NS, Hickey, BM, Newton, JA, and Ruesink, J (2007) Tidal exchange, bivalve grazing, and patterns of primary production in Willapa Bay, Washington, USA. *Mar. Ecol. Prog. Ser.* 341:123-139.