



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Silver Spring, Maryland 20910

**TIDE NOTE FOR HYDROGRAPHIC SURVEY**

**DATE:** April 6, 2003

**HYDROGRAPHIC BRANCH:** Pacific  
**HYDROGRAPHIC PROJECT:** OPR-N438-NRT3-2002  
**HYDROGRAPHIC SHEET:** F00486

**LOCALITY:** Columbia River, WA/OR  
**TIME PERIOD:** June 10-September 10, 2002

**TIDE STATION USED:** 943-9040 Astoria, OR  
Lat. 46° 12.5'N Lon. 123° 46.1'W  
**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.418 meters

**TIDE STATION USED:** 943-9099 Wauna, OR  
Lat. 46° 09.7'N Lon. 123° 24.4'W  
**PLANE OF REFERENCE (COLUMBIA RIVER LOW WATER DATUM):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.246 meters

**TIDE STATION USED:** 944-0422 Longview, WA  
Lat. 46° 06.5'N Lon. 122° 57.4'W  
**PLANE OF REFERENCE (COLUMBIA RIVER LOW WATER DATUM):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.001 meters

**TIDE STATION USED:** 944-0569 Skamokawa, WA  
Lat. 46° 16.0'N Lon. 123° 27.1'W  
**PLANE OF REFERENCE (COLUMBIA RIVER LOW WATER DATUM):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.226 meters

**REMARKS:** RECOMMENDED ZONING

Use zone(s) identified as: CR1, CR2, CR3, CR4, CR5, CR6, CR7, CR8, CR9, CR10, CR11, CR12, CR13, CR14, CR15, CR16, CR17, CR18, CR19, CR20, CR21, CR22, CR23, CR24, CR25, CR26, CR27, CR28, CR29, CR30, CR31, CR32, CR33, CR34, CR35, CR36, CR37, CR38, CR39, PAC211 & PAC211A.

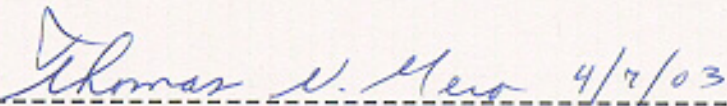
Refer to attachments for zoning information.



**TIDE NOTE FOR HYDROGRAPHIC SURVEY OPR-N438-NRT3-2002 cont.**

**Note 1:** For project OPR N438-NRT3-2002, the provided time series data at Astoria, OR(943-9040) are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the new 1983-2001 National Tidal Datum Epoch (NTDE). If verified six minute water level data for Astoria are retrieved from the CO-OPS Home Page at <http://www.co-ops.nos.noaa.gov/> before April 21, a corrector of 0.032 meters must be added to all verified water level time series data to place the water level values on the proper 1983-2001 NTDE plane. Water level time series data retrieved from the CO-OPS Home Page after April 21, 2003 will automatically be adjusted to the 1983-2001 Epoch. This change will be clearly noted on the CO-OPS Home Page and all time series data retrieved after the Epoch change will require NO vertical adjustment.

**Note 2:** The provided time series data at Wauna, OR(943-9099), Longview, WA(944-0422) and Skamokawa, WA(944-0569) are tabulated in metric units (meters), relative to Columbia River Low Water Datum (LWD) and on Greenwich Mean Time on the new 1983-2001(NTDE). Retrieve verified water level data using the Station Datum option to retrieve water level data on Columbia River LWD.

  
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CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION