Columbia River Between Vancouver, Washington and The Dalles, Oregon

Project Description

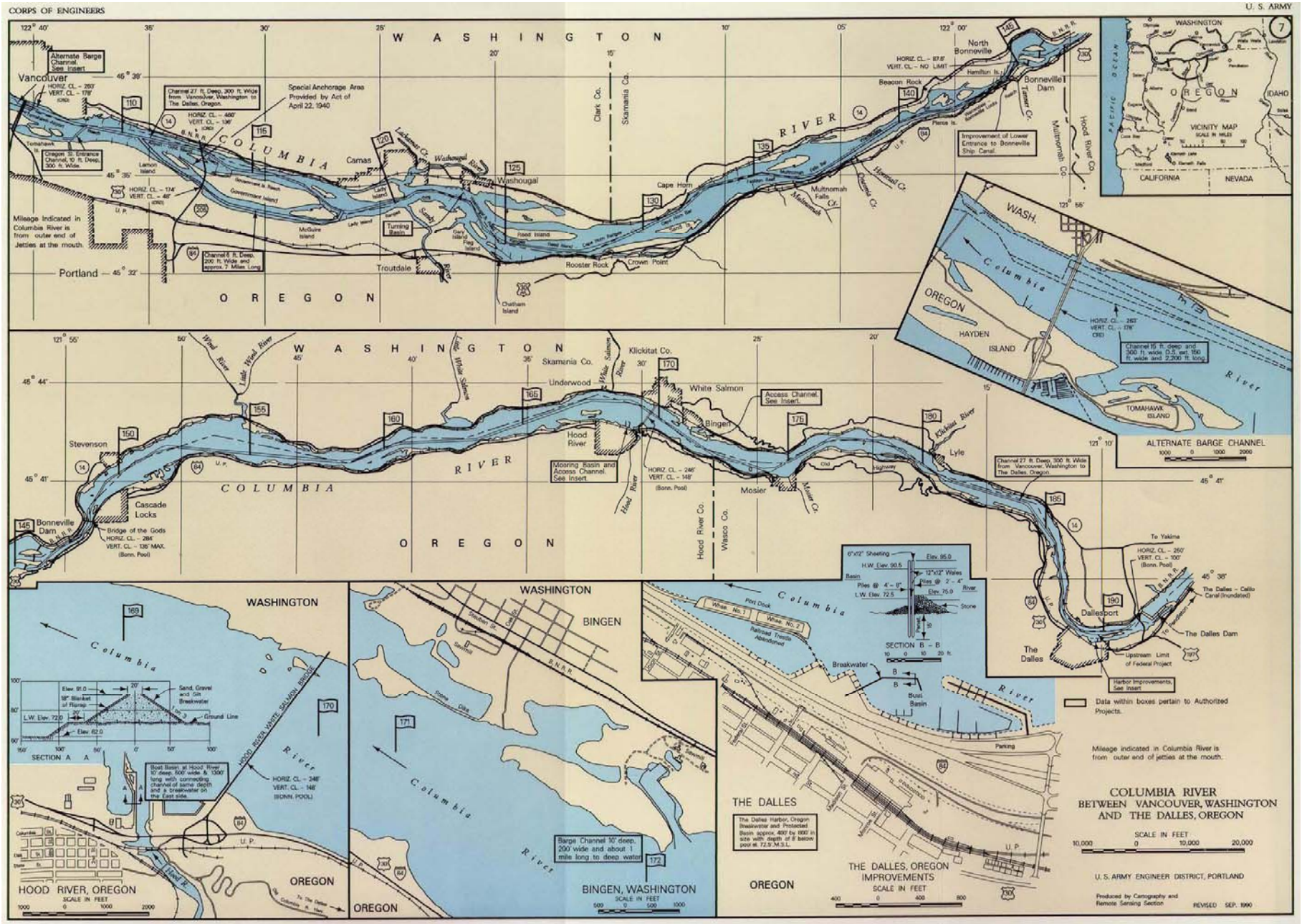
The authorized project is that portion of the Columbia River between Vancouver, Washington and The Dalles, Oregon a length of 84.5 miles. The authorized dimension of the channel is 27 feet by 300 feet. An alternate barge channel under the wide span of the I-5 Bridge (RM 106.5) that connects to the main channel 7,500 feet upstream from the bridge is authorized to 15 feet by 300 feet. Other features include an extension from I-5 Bridge downstream along the Vancouver turning basin, the upstream entrance to Oregon Slough, a small boat recreation channel on the south side of Government Island, turning basins at Camas and Washougal, and at Hood River a small boat basin and connecting channel. (Project Map- http://cadd.nwp.usace.army.mil/P&I-Maps/NWP_n06a.jpg)

Maintenance

The current usage of the project necessitates maintenance only to 17 feet CRD and dredging is localized and infrequent. Dredging has been mostly confined to limited areas below RM 126 (Reed Island).

Sediment Description

Sediment dredged in the main channel is typical Columbia River clean sand low in fines and organics.


CORPS OF ENGINEERS
U. S. ARMY
7
WASHINGTON
OREGON
COLUMBIA RIVER
Vancouver
Portland
Camas
Washougal
Troutdale
Cape Horn
Rooster Rock
Crown Point
Chatham Island
Clark Co.
Skamania Co.
North Bonneville
Bonneville Dam
Beacon Rock
Hamilton Is.
Pierce Is.
Multnomah Co.
Hood River Co.
Multnomah Falls
Alternate Barge Channel. See Insert.
Special Anchorage Area Provided by Act of April 22, 1940
Oregon 30' Entrance Channel, 10' ft. Deep, 300 ft. Wide.
Channel 27 ft. Deep, 300 ft. Wide from Vancouver, Washington to The Dalles, Oregon.
Channel 6 ft. Deep, 200 ft. Wide and approx. 7 Miles Long
Turning Basin
Improvement of Lower Entrance to Bonneville Ship Canal.
Mileage Indicated in Columbia River is from outer end of Jetties at the mouth.
Klickitat Co.
Skamania Co.
Underwood
White Salmon
Bingen
Hood River
Stevenson
Cascade Locks
Bridge of the Gods
Bonneville Dam
Mosier
Lyle
Dallesport
The Dalles
Access Channel. See Insert.
Mooring Basin and Access Channel. See Insert
Channel 27 ft. Deep, 300 ft. Wide from Vancouver, Washington to The Dalles, Oregon.
To Yakima
The Dalles - Celilo Canal (Inundated)
The Dalles Dam
Upstream Limit of Federal Project
Harbor Improvements. See Insert
Data within boxes pertain to Authorized Projects.
Mileage indicated in Columbia River is from outer end of jetties at the mouth.
ALTERNATE BARGE CHANNEL
HAYDEN ISLAND
TOMAHAWK ISLAND
VICINITY MAP
CALIFORNIA
NEVADA
IDAHO
HOOD RIVER, OREGON
SECTION A A
Boat Basin at Hood River 10' deep, 500' wide & 1300' long with connecting channel of same depth and a breakwater on the East side.
HOOD RIVER-WHITE SALMON BRIDGE
BINGEN, WASHINGTON
Barge Channel 10' deep, 200' wide and about 1 mile long to deep water
THE DALLES
The Dalles Harbor, Oregon Breakwater and Protected Basin approx. 400' by 800' in size with depth of 8' below pool el. 72.5 M.S.L.
THE DALLES, OREGON IMPROVEMENTS
SECTION B - B
COLUMBIA RIVER BETWEEN VANCOUVER, WASHINGTON AND THE DALLES, OREGON
SCALE IN FEET
U. S. ARMY ENGINEER DISTRICT, PORTLAND
Produced by Cartography and Remote Sensing Section
REVISED SEP. 1990

Sediment Evaluation

August 25, 1999, Twelve box-core surface sediment samples were collected from shoals in the Columbia River, river mile (RM) 106+30, 113+00, 114+00, 118+20 and 125+00, August 25, 1999. Two samples collected near the I-5 Bridge, RM 106+30, were taken from the purposed channel re-location site. All samples were sent to Sound Analytical Services, Inc. laboratory of Tacoma, WA, for physical analyses only. The material collected consisted of >80% sand and <5% volatile solids. The Dredge Material Evaluation Framework (DMEF) for the Lower Columbia River Management Area has characterized the sediment in this reach of the Columbia River as "exclusionary". Visual and laboratory analyses confirm the exclusionary ranking. The material represented by the samples collected from the Columbia River sites is considered suitable for either open unconfined in-water or upland placement.

August 13, and September 2, 2009 One ponar grab sample (P-01) was collected on August 13, 2009 from the Fashion Reef (RM 132.8-135.0) area of the Columbia River FNC. Eleven (11) boxcore surface-grab samples (BC2 to BC12) were collected September 2, 2009 from the I-5 crossing main channel (RM 106+30) and from intermittent shoals from RM 108+45 to RM 133+38. Eleven of the twelve samples were submitted for physical analyses. Sample BC-05 contained only ½" to 1" rocks without a soil matrix and was deleted from physical analysis. One sample, 081309CRVD-P-01[1], was also submitted for chemical analysis.

The analyses indicated a mean grain-size of 99.9% sand and gravel. Sample BC-06 contained 61.2% sand and 38.7% gravel. Sample BC-05 contained only ½" to 1" rocks without a soil matrix and was deleted from physical analysis. The remaining 10 samples contained over 96% sand. Levels of metals were consistent with historical values and did not approach the SEF screening levels (SL). All analyte concentrations were substantially below the SLs.

The material within the FNC study area meets the SEF very-low ranking category (formerly Exclusionary) and is determined suitable for dredging and unconfined in-water placement without further characterization for a period of 10 years (2019).

[1] 081309CRVD-P-01 has also been referred to as 081409VT-P-01 and 081409 CRFR-P-01 on chains of custody and laboratory reports. The name has been changed to 081309CRVD-P-01 to reflect the actual sampling date of August 13, 2009, and to make the name consistent with other samples.

SAMPLE LOCATION

MAPS

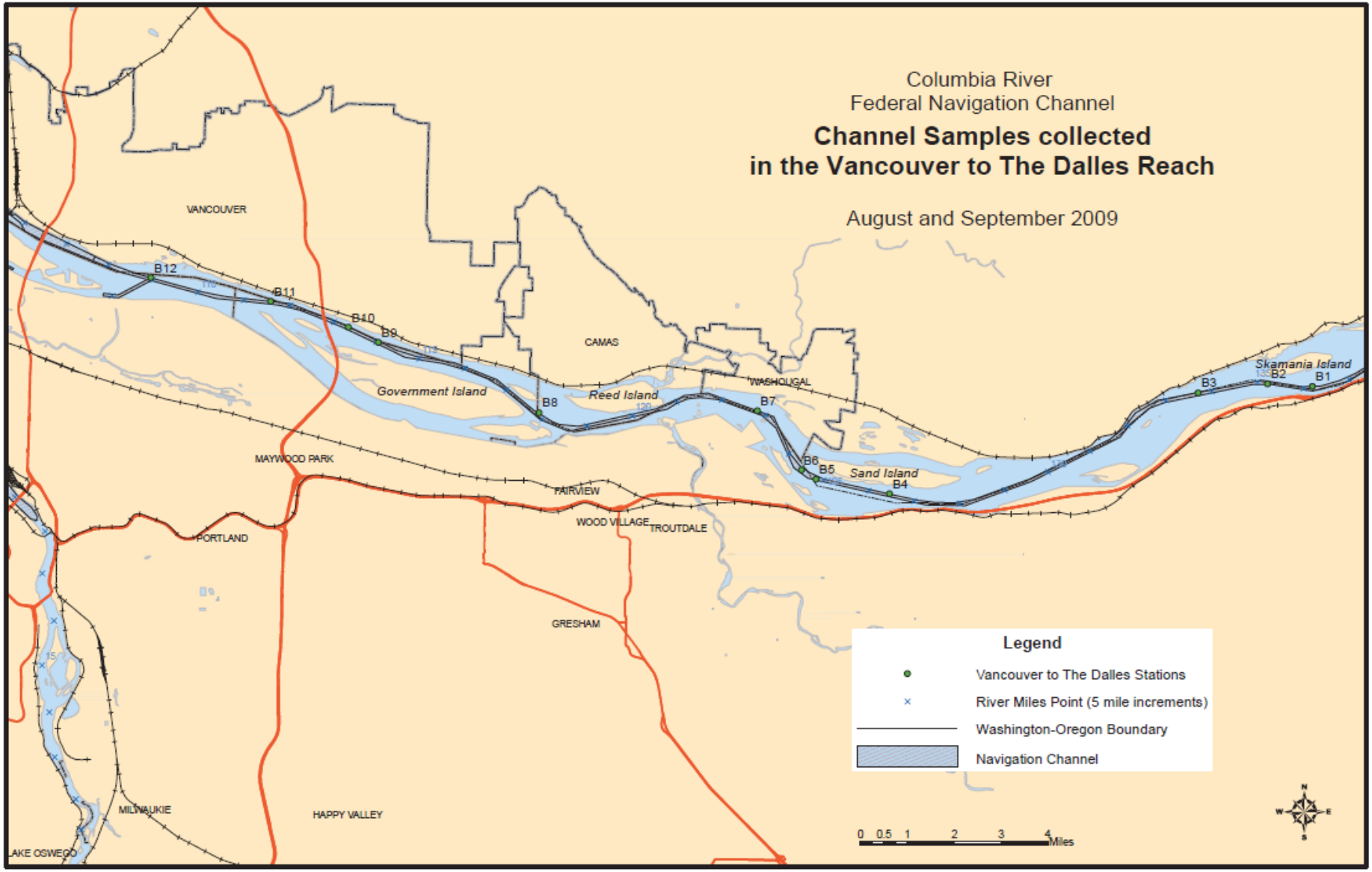



Figure 1: Vancouver to The Dalles Sampling Stations 2009