

MEMORANDUM FOR RECORD

July 18, 2007

SUBJECT: DETERMINATION REGARDING THE SUITABILITY OF PROPOSED DREDGED MATERIAL FROM THE CITY OF LONGVIEW REGIONAL WATER TREATMENT PLANT (REGULATORY FILE #NWS-2007-862-CRS) EVALUATED UNDER SECTION 404 OF THE CLEAN WATER ACT FOR DISPOSAL IN THE COWLITZ RIVER.

1. **Introduction.** This memorandum reflects the consensus determination of the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers, Washington Departments of Ecology and Natural Resources, and the Environmental Protection Agency) regarding the suitability of sediment proposed for dredging from adjacent to the City of Longview Regional Water Treatment Plant (RWTP) for disposal in the Cowlitz River downstream of the plant. The City of Longview proposes to dredge approximately 5,000 cubic yards (cy) of sediment per year to prevent accumulation next to the intake structure and to provide an adequate flow of water to the treatment plant. See the vicinity map in Attachment 1.
2. **Background.** The RWTP is located on the west bank of the Cowlitz River at river mile (RM) 5.17. The Toutle River, which originates on the west and northwest flanks of Mount St. Helens, is a tributary to the Cowlitz. After the eruption of Mount St. Helens in 1980, a sediment retention structure (SRS) was constructed by the Corps of Engineers on the North Fork of the Toutle River to prevent large quantities of sediment and ash from being transported downstream. However, in recent years, the SRS has filled to the spillway crest and sediment is being passed through the SRS in greater amounts (USACE 2007a).

The additional sediment load has created problems along the Cowlitz River, including for the RWTP. To counteract the increased sedimentation rate, the City of Longview constructed an 8-foot tall sediment retention dam in front of the intake structure in 2005. However, by 2006 sediment deposits had already exceeded the height of the dam and threaten to bury the lower section of the intake. In addition, during periods of low river flow, the accumulated sediment could impede the flow of water from the main channel of the river to the treatment plant intake, thereby threatening the water supply for 47,500 customers (COL 2007).

The current proposal is to conduct maintenance dredging on an as-needed basis to 1) prevent build-up of sediment near the water intake and 2) provide an adequate flow of water from the main channel of the river during periods of low flow in summer and fall. Dredging will be performed by divers using a venturi eductor and discharged back to the Cowlitz River downstream, away from the water intake. The proposed dredging area runs the full width of the intake structure and across the river to the main channel, which runs near the east bank. The approximate dredging area is 30 feet by 500 feet and the anticipated dredge depth is 3 to 5 feet (see Attachments 2, 3 and 4). An estimated 5,000 cubic yards of sediment will be removed per year.

3. **Corps of Engineers Study.** The increased sedimentation rate on the Cowlitz has increased the probability of flooding by decreasing the flow capacity of the river. In order to maintain levels of flood protection and restore the sediment transport potential of the river, the Corps of Engineers is

planning to dredge from the mouth of the Cowlitz to RM 2.5. In January 2007 a sediment evaluation study was conducted by Portland District from the mouth of the Cowlitz to RM 10. Ten samples were taken, one from each river mile (Attachments 5 and 6). All samples were analyzed for sediment conventionals and five of the samples were tested for the chemicals of concern (COCs) included in the Northwest Regional Sediment Evaluation Framework (SEF) (RSET 2006; USACE 2007b).

The grain-size analysis indicated that the Cowlitz River samples were predominantly sand, ranging from 90.7% to 98.9% in sand content (see Attachment 7). The chemical analysis showed that all COCs were below their respective SEF screening levels. All 4.5 million cubic yards proposed for dredging were found suitable for upland or in-water disposal. (RSET 2007, Attachment 8).

4. **Suitability Determination.** The Corps of Engineers study demonstrated that the sediment in the lower 10 miles of the Cowlitz River is clean sand and is suitable for in-water disposal. Based on the results of this study, the DMMP agencies conclude that the material adjacent to the water treatment plant is suitable for in-river disposal downstream of the treatment plant. This suitability determination memorandum does ***not*** constitute final agency approval of the project. During the public comment period that follows a public notice, the resource agencies will provide input on the overall project. A final decision will be made after full consideration of agency input, and after an alternatives analysis is done under section 404(b)(1) of the Clean Water Act.

5. **References.**

COL 2007. *Joint Aquatic Resources Permit Application*. City of Longview. June 2007.

RSET 2006. *Northwest Regional Sediment Evaluation Framework - Interim Final*. Regional Sediment Evaluation Team. September 2006.

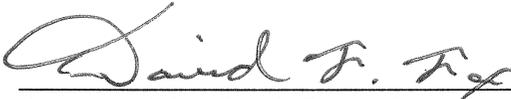
RSET 2007. *Memorandum for File: RSET Review of Corps of Engineers, Portland District, Sediment Characterization Report for the Lower Cowlitz River*. Stephanie Stirling, U.S. Army Corps of Engineers, Northwestern Division. May 2007.

USACE 2007a. *Mount St. Helens Project – Lower Cowlitz River Interim Dredging – Environmental Assessment*. U.S. Army Corps of Engineers, Portland District. June 2007 Draft.

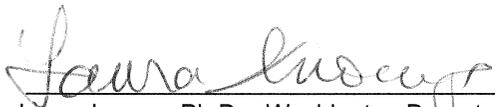
USACE 2007b. *Cowlitz River Federal Project – Sediment Quality Evaluation Report*. U.S. Army Corps of Engineers, Portland District. March 2007.

6. Agency Signatures.

Concur:

7/25/07 
Date David Fox, P.E. - Seattle District Corps of Engineers

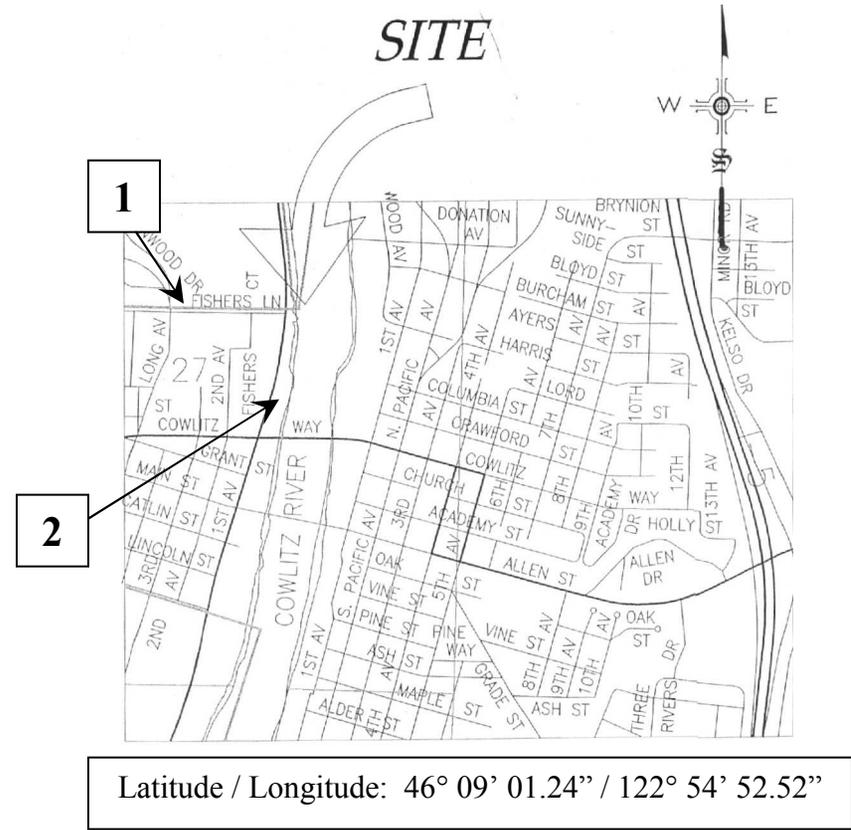
7/25/07 
Date Erika Hoffman - Environmental Protection Agency

7/25/2007 
Date Laura Inouye, Ph.D. - Washington Department of Ecology

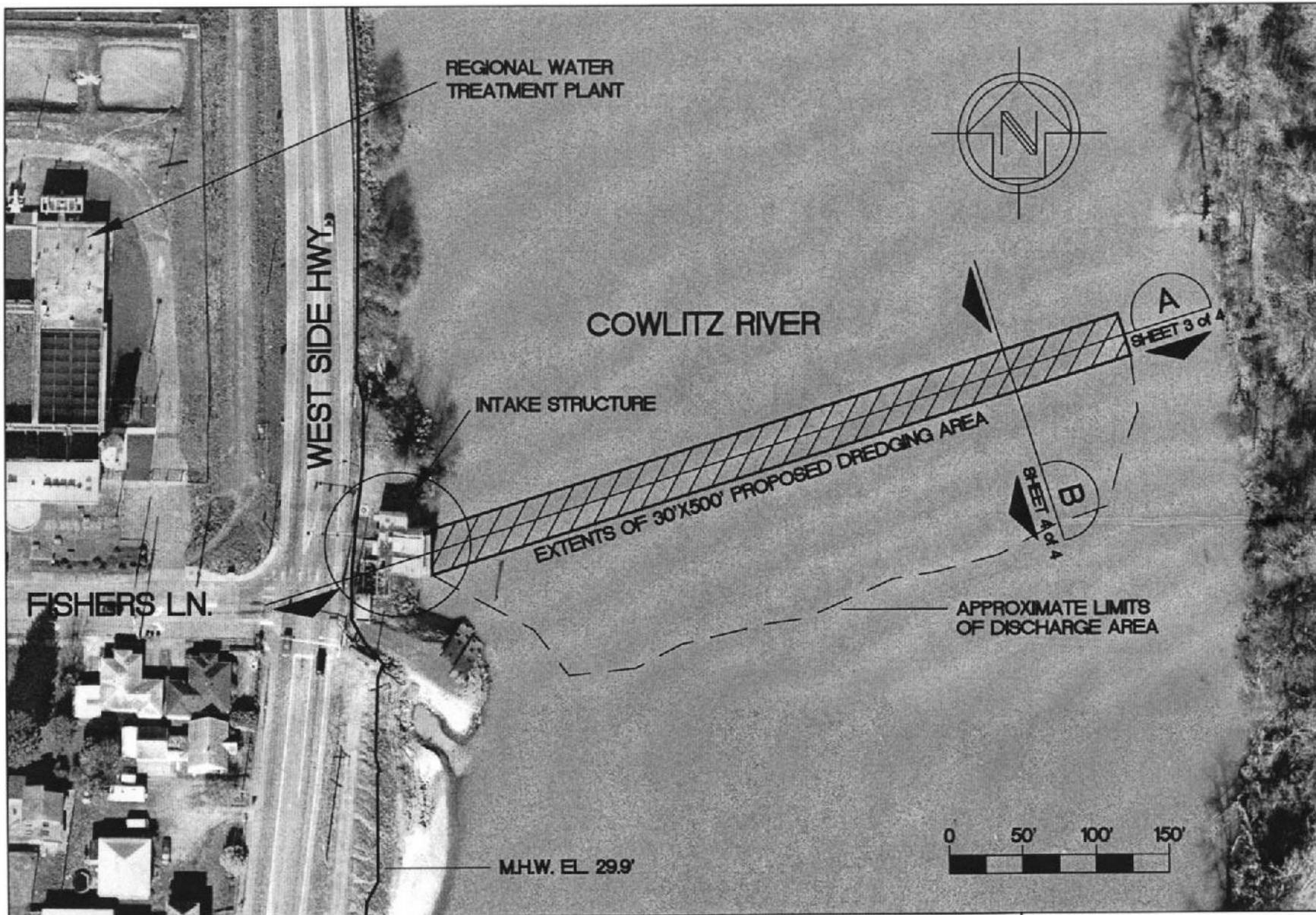
7/26/2007 
Date Courtney Wasson - Washington Department of Natural Resources

Copies furnished:

DMMP signatories
Alisa Ralph, Seattle District Regulatory Branch
DMMO file

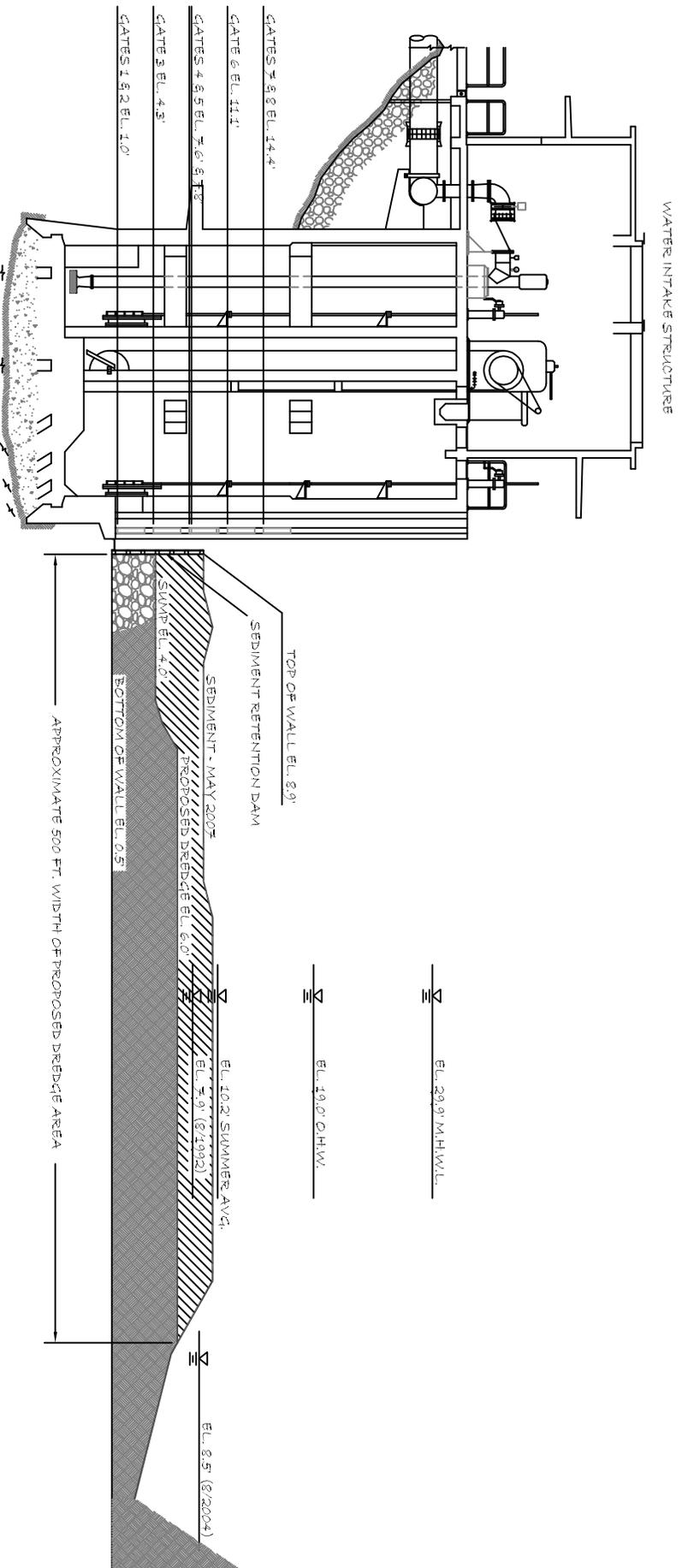


<p>PURPOSE: Maintain continued operation of the City of Longview Regional Water Treatment Plant</p> <p>DATUM: M.L.L.W</p> <p>ADJACENT OWNERS / LESSEES:</p> <ol style="list-style-type: none"> CDID No. 1 5350 Pacific Way Longview, WA 98632 Dennis Woods 100 Fishers Lane, Kelso WA 98626 	<p>APPLICANT: Longview, City of</p> <p>REFERENCE: NWS-2007-862-CRS</p> <p>ADDRESS: Regional Water Treatment Plant 101 Fishers Lane Kelso, WA 98626</p>	<p>PROPOSED: Maintenance Dredging</p> <p>IN: Cowlitz River</p> <p>NEAR / AT: Longview</p> <p>COUNTY: Cowlitz STATE: WA</p> <p>SHEET: 1 of 4 DATE: 7/2007</p>
--	---	---



GENERAL SITE PLAN
WATER INTAKE STRUCTURE AT RIVER MILE 5.17

Reference: NWS-2007-862-CRS
Applicant: Longview, City of
Proposed: Maintenance Dredging
At: Longview, Washington
Sheet: 2 of 4 Date: 7/2007



INTAKE STRUCTURE CROSS-SECTION A
 COWLITZ RIVER LOOKING NORTH @ RIVER MILE 5.17



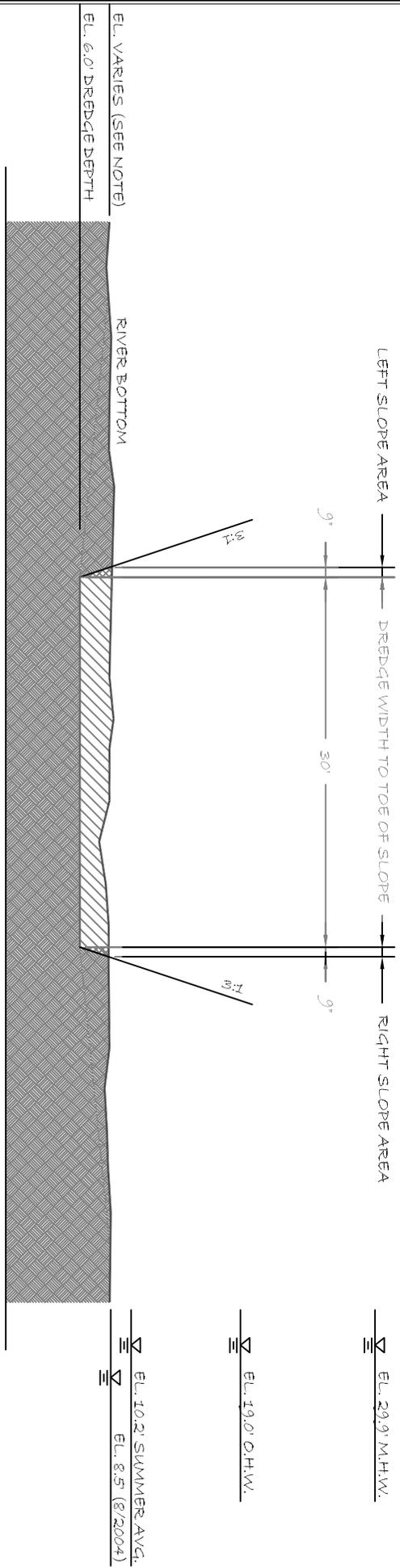
NOT TO SCALE

Reference: NWS-2007-862-CRS
 Applicant: Longview, City of
 Proposed: Maintenance Dredging
 At: Longview, Washington
 Sheet: 3 of 4 Date: 7/2007

 MATERIAL TO BE REMOVED FROM THE PROPOSED DREDGE AREA.
 NOTE: THE RIVER BOTTOM VARIES FROM EL. 6.0' TO EL. 11.0' BASED ON SOUNDINGS DONE 6.5.2007.

 SIDE SLOPE MATERIAL REMOVED FROM THE OVERALL DREDGE AREA. ACTUAL SIDE SLOPE WILL DEPEND ON STABILITY OF RIVER SEDIMENT.

 UNDISTURBED RIVER BOTTOM



REGIONAL WATER TREATMENT PLANT
 WATER SUPPLY CHANNEL CROSS-SECTION B
 COWLITZ RIVER @ RIVER MILE 5.17

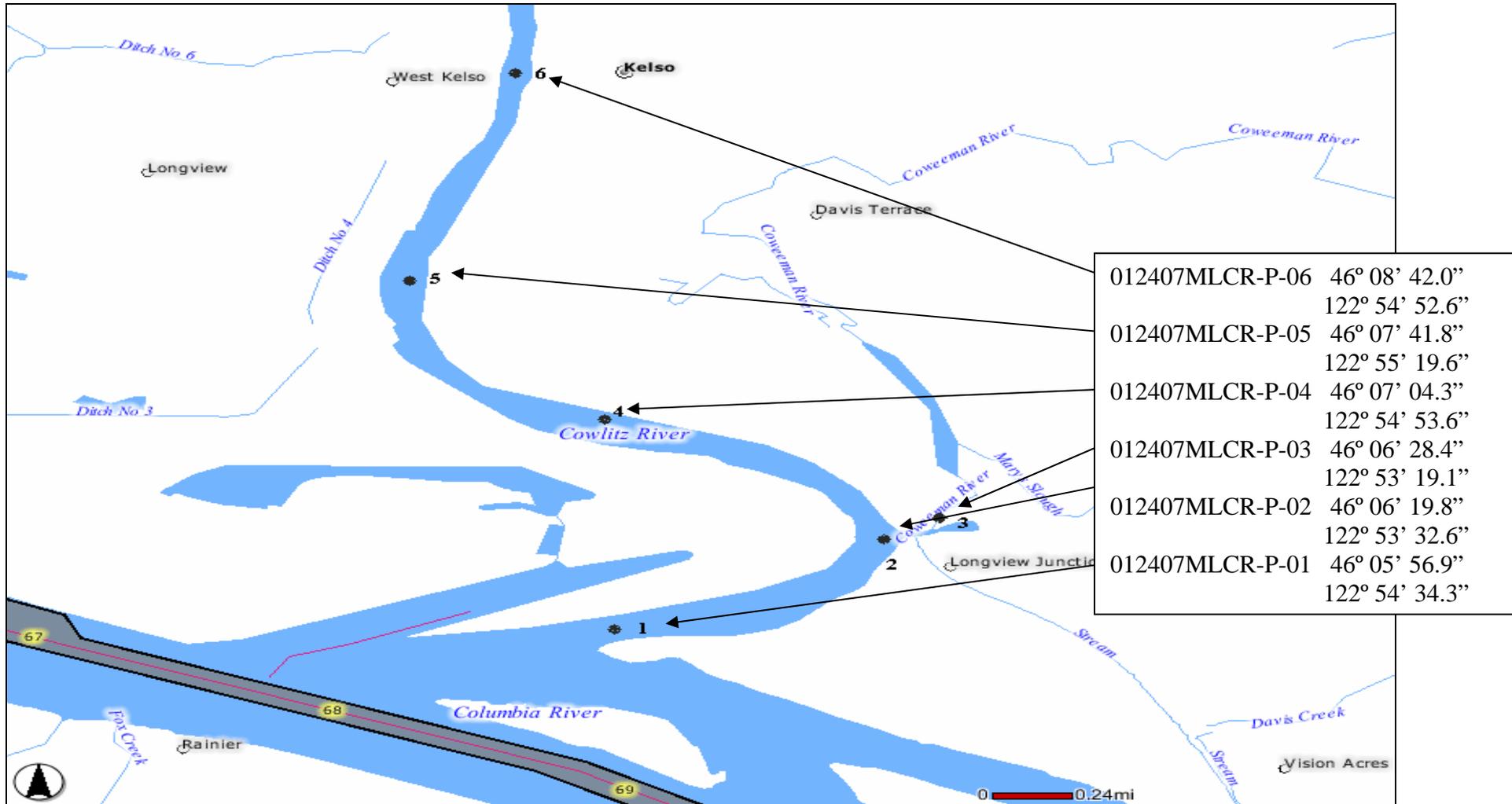


Reference: NWS-2007-862-CRS
Applicant: Longview, City of
Proposed: Maintenance Dredging
At: Longview, Washington
Sheet: 4 of 4 **Date:** 7/2007



**COWLITZ RIVER
SEDIMENT QUALITY EVALUATION**
Sampled January 24, 2007

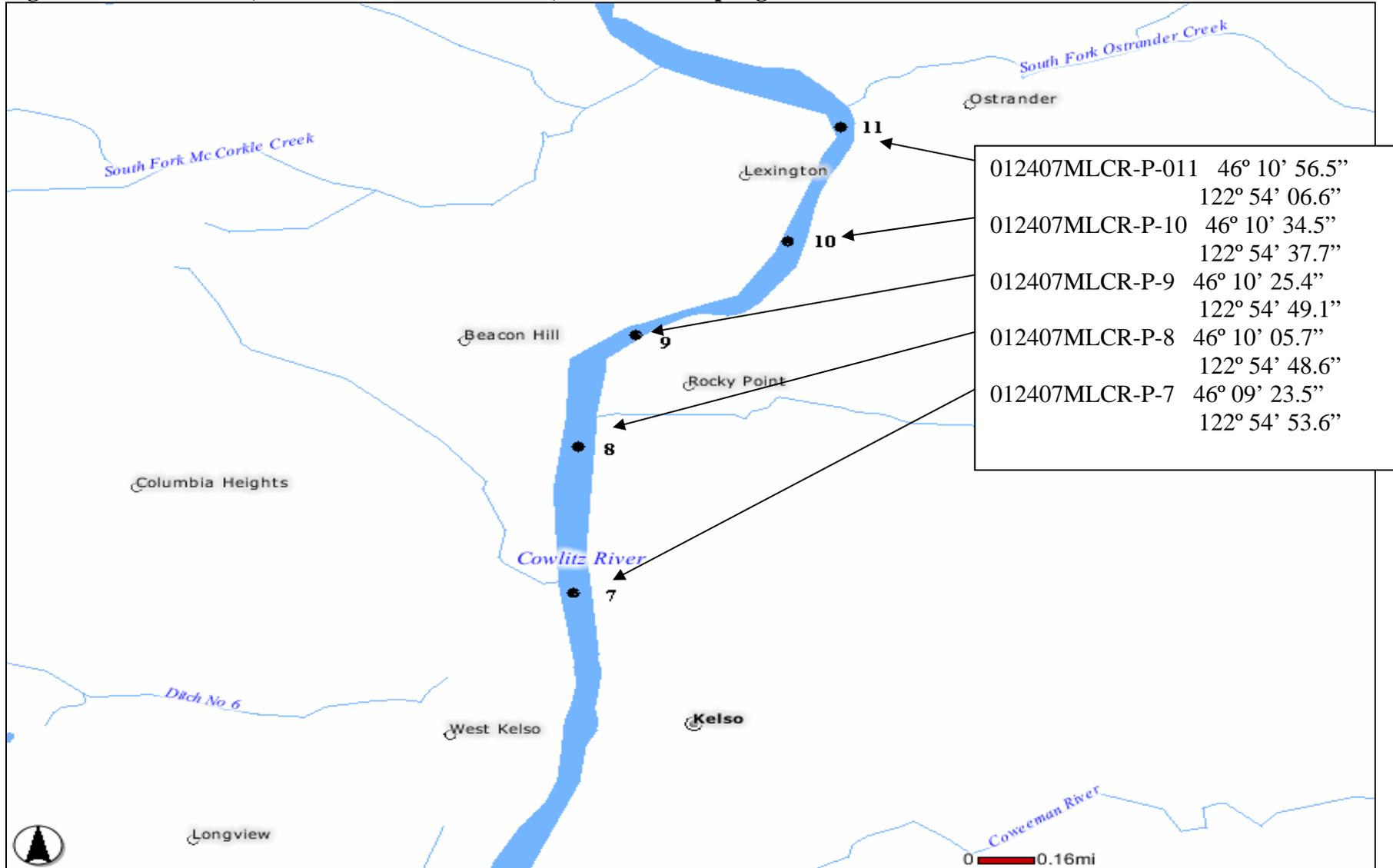
Figure 2: Cowlitz River, Mouth to Rivermile 5, Sediment Sampling Station Locations





**COWLITZ RIVER
SEDIMENT QUALITY EVALUATION**
Sampled January 24, 2007

Figure 3: Cowlitz River, Rivermile 5 to Rivermile 10, Sediment Sampling Station Locations





COWLITZ RIVER
SEDIMENT QUALITY EVALUATION
 Sampled January 24, 2007

Table 2. Physical Analysis & Volatile Solids

River	Sample I.D.	Percent			
		Gravel	Sand	Silt/Clay	Volatile Solids
Cowlitz	012407MLCR-P-01	0	98.9	1.13	0.29
Cowlitz	012407MLCR-P-02	0	94.7	5.28	0.38
Cowlitz	012407MLCR-P-04	5.2	93.2	1.38	0.42
Cowlitz	012407MLCR-P-05	2	98.5	0.49	0.42
Cowlitz	012407MLCR-P-06	2	98.2	0.77	0.39
Cowlitz	012407MLCR-P-07	2.0	97.2	0.81	0.45
Cowlitz	012407MLCR-P-08	0.7	96.2	3.06	0.38
Cowlitz	012407MLCR-P-09	2.5	97.4	0.14	0.31
Cowlitz	012407MLCR-P-10	9.0	90.7	0.33	0.34
Cowlitz	012407MLCR-P-11	0.6	98.4	1.01	0.31
Cowlitz	Mean	2.4	96.3	1.44	0.37
Coweeman	012407MLCR-P-03	25.5	49.4	25.1	9.81

**CENWD-PDS
Memorandum for File**

**27 April 2007
(revised 17 May 2007)
(revised 22 May 2007)**

**SUBJECT: RSET REVIEW OF CORPS OF ENGINEERS, PORTLAND DISTRICT,
SEDIMENT CHARACTERIZATION REPORT FOR THE LOWER
COWLITZ RIVER**

The Corps of Engineers proposes to dredge up to 4.5 million cubic yards of sediment from the Lower Cowlitz River, River Mile 0-2.5, as part of a flood control project. The Corps proposes to dispose of the material at an upland location.

Eleven samples were taken, 10 from the Cowlitz River. The samples were taken between river miles 0-10, one per mile, to characterize the proposed dredging area, and the material that would be in-filling the proposed dredging area. One sample was taken from the Coweeman River, to assess finer-grained material. All samples were collected as grab samples using a ponar sampler. All samples were submitted for physical analyses including total volatile solids. Six samples were analyzed for metals, total organic carbon, pesticides and polychlorinated biphenyls, phenols, phthalates, miscellaneous extractables, and polynuclear aromatic hydrocarbons. The six samples submitted for chemical analyses included samples collected in the lower five miles of the Cowlitz River and the one sample collected in the Coweeman River.

The physical analyses for the Cowlitz River show that the material is predominantly sand (91 percent to 99 percent). The physical analyses for the one sample taken in the Coweeman River indicated 75 percent sand and gravel and 25 percent silts and clay.

There were no exceedances of Sediment Evaluation Framework screening level in any of the samples that underwent chemical analysis.

All of the material within the proposed dredging area is suitable for either upland or in-water disposal. Future dredging events in the Lower Cowlitz River may require additional sampling.

Stephanie Stirling