CENWS-OD-TS-DMMO

MEMORANDUM FOR: RECORD April 29, 2008

SUBJECT: DETERMINATION REGARDING THE EXCLUSIONARY STATUS OF DREDGED MATERIAL FROM THE OUTER-HARBOR REACHES OF THE FEDERAL NAVIGATION CHANNEL, GRAYS HARBOR, WASHINGTON.

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 exclusionary status of dredged material from the outer-harbor reaches of the federal navigation channel (see Attachment 1).

2. Background. The Army Corps of Engineers dredges approximately 455,000 cubic yards of material annually from the three outermost reaches (Bar Channel, Entrance Channel/Pt. Chehalis, South Reach) of the Grays Harbor federal navigation channel (USACE, 2006). Dredged material from these reaches is used primarily for beach nourishment at Half Moon Bay or Southwest Beach. The remainder is placed at the Pt. Chehalis or South Jetty dispersive disposal sites. Sediment from the three outer reaches is characterized every six years with respect to grain size to ensure it still meets the exclusionary criteria.

   Outer Crossover Channel, while considered part of the outer harbor, has not had exclusionary status in the past. Approximately 258,000 cubic yards of material is dredged annually from Crossover Channel.

3. Exclusionary Criteria. The federal navigation project, beach nourishment sites, and dredged material disposal sites are all located within three miles of the baseline for territorial seas. Therefore, Section 404 of the Clean Water Act (CWA) applies, but not the Marine Protection, Research and Sanctuaries Act. The CWA Section 404(b)1 Guidelines for Specification of Disposal Sites for Dredged or Fill Material (CFR 40 Section 230.60, subparagraphs a and b) include exclusionary criteria with regard to testing. The Guidelines state that (1) dredged or fill material is most likely to be free from chemical, biological, or other pollutants where it is composed primarily of sand, gravel, or other naturally occurring inert material. Dredged material so composed is generally found in areas of high current or wave energy such as streams with large bed loads or coastal areas with shifting bars and channels; and (2) the extraction site shall be examined in order to assess whether it is sufficiently removed from sources of pollution to provide reasonable assurance that the proposed discharge material is not a carrier of contaminants (EPA, 1980). Dredged material that meets these two guidelines may be excluded from further testing.

4. Sampling. Samples were collected in April 2008 for the purpose of verifying the exclusionary status of the Bar Channel, Entrance Channel/ Pt. Chehalis, and South Reach. Sediment samples were also collected from Crossover Channel to determine its eligibility for exclusionary status. Samples were collected with a Van Veen grab sampler and analyzed for grain size. Sampling stations are shown in Attachment 2 and tabulated in Attachment 3.

5. Grain-size Analysis. The analytical laboratory used a #200 sieve (75 microns) instead of the #230 sieve (62.5 microns) that is typically used to separate sand from fine-grained particles under the Dredged Material Management Program. Use of a #200 sieve provides a higher estimate of the fines content compared to a #230 sieve. However, this was inconsequential in the case of the samples from the three outermost reaches, as the percentage of sediment passing the #200 sieve was very low. The testing results were as follows:

Table 1. Grain-size Results

Sample #	Reach	Gravel (%)	Sand (%)	Fines (%)	Meets Exclusionary Criterion
15	Bar	0	98.9	1.1	yes
16	Bar	0	99.0	1.0	yes
17	Bar	0	99.1	0.9	yes
18	Bar	0	99.2	0.8	yes
1	Entrance/PC	0.6	99.0	0.4	yes
2	Entrance/PC	0	99.4	0.6	yes
3	Entrance/PC	9.0	90.0	1.0	yes
4	Entrance/PC	0	99.2	0.8	yes
5	Entrance/PC	0	99.0	1.0	yes
6	Entrance/PC	0.3	98.9	0.8	yes
7	Entrance/PC	21.0	77.8	0.2	yes
8	Entrance/PC	0	99.3	0.7	yes
9	South	0	98.3	1.7	yes
10	South	0	98.6	1.4	yes
14	South	0	90.7	9.3	yes
11	Crossover	0	60.3	39.7	no
12	Crossover	0	71.4	28.6	no
13	Crossover	0	68.6	31.4	no

The grain-size analysis showed that the dredged material from Bar Channel, Entrance Channel/ Pt. Chehalis, and South Reach was predominantly sand, with fines content below 10 percent in all cases. Samples from Crossover Channel, while also predominantly sand, had much more significant fines content, ranging from 28.6 to 39.7 percent.

6. Exclusionary Status Determination. The DMMP agencies have traditionally used 20 percent fines as the upper limit for determining eligibility for exclusionary status. The Northwest Regional Sediment Evaluation Team (RSET) recently adopted the 20-percent guideline (RSET, 2006). The fines content from the Bar Channel, Entrance Channel/ Pt. Chehalis, and South Reach met the grain-size criterion for exclusionary status. Samples from Crossover Channel did not.

With respect to the proximity of the three outermost dredging reaches to sources of contamination, the major current and historical sources of contamination in Grays Harbor are found in the inner harbor, near Aberdeen, Cosmopolis, Hoquiam and Montesano. These sources are approximately seven miles or more from the outer harbor reaches (measured along the channel alignment). Data from past sediment surveys show a pattern of decreasing concentrations of chemicals of concern

when moving from the inner to the outer harbor. Therefore the DMMP agencies determined that the outer reaches are sufficiently removed from sources of pollution to provide reasonable assurance that the proposed discharge material is not a carrier of contaminants.

In summary, the DMMP agencies have determined that dredged material from the Bar Channel, Entrance Channel/Pt. Chehalis, and South Reach meets the exclusionary criteria under the Clean Water Act and does not require additional chemical testing. Dredged material from Crossover Channel must continue to be included in full characterization surveys as specified in the Grays Harbor programmatic sampling and analysis plan (USACE, 2006).

7. Project Summary. Table 2 includes project summary and tracking information.

Table 2. Project Summary

Project ranking	Exclusionary
Dredged volume	455,000 cy/yr
Design dredged depth	-36 to -46 feet MLLW
SAP received	March 13, 2008
SAP approved	March 24, 2008
Sampling dates	April 4 and 11, 2008
Data report received	April 21, 2008
DAIS Tracking number	GRAYS-1-X-O-250
Frequency Determination (6 years)	April 2014

8. References.

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

USACE, 2006. *Dredged Material Characterization for Maintenance Dredging, FY 2006-2011, Grays Harbor, Washington – Programmatic Sampling and Analysis Plan.* Prepared by Science Applications International Corporation for U.S. Army Corps of Engineers, Seattle District. October 2006.

9. Agency Signatures.

Concur:

4/29/08 David F. Fox
Date David Fox, P.E. - Seattle District Corps of Engineers

5/1/08
Date Erika Hoffman - Environmental Protection Agency

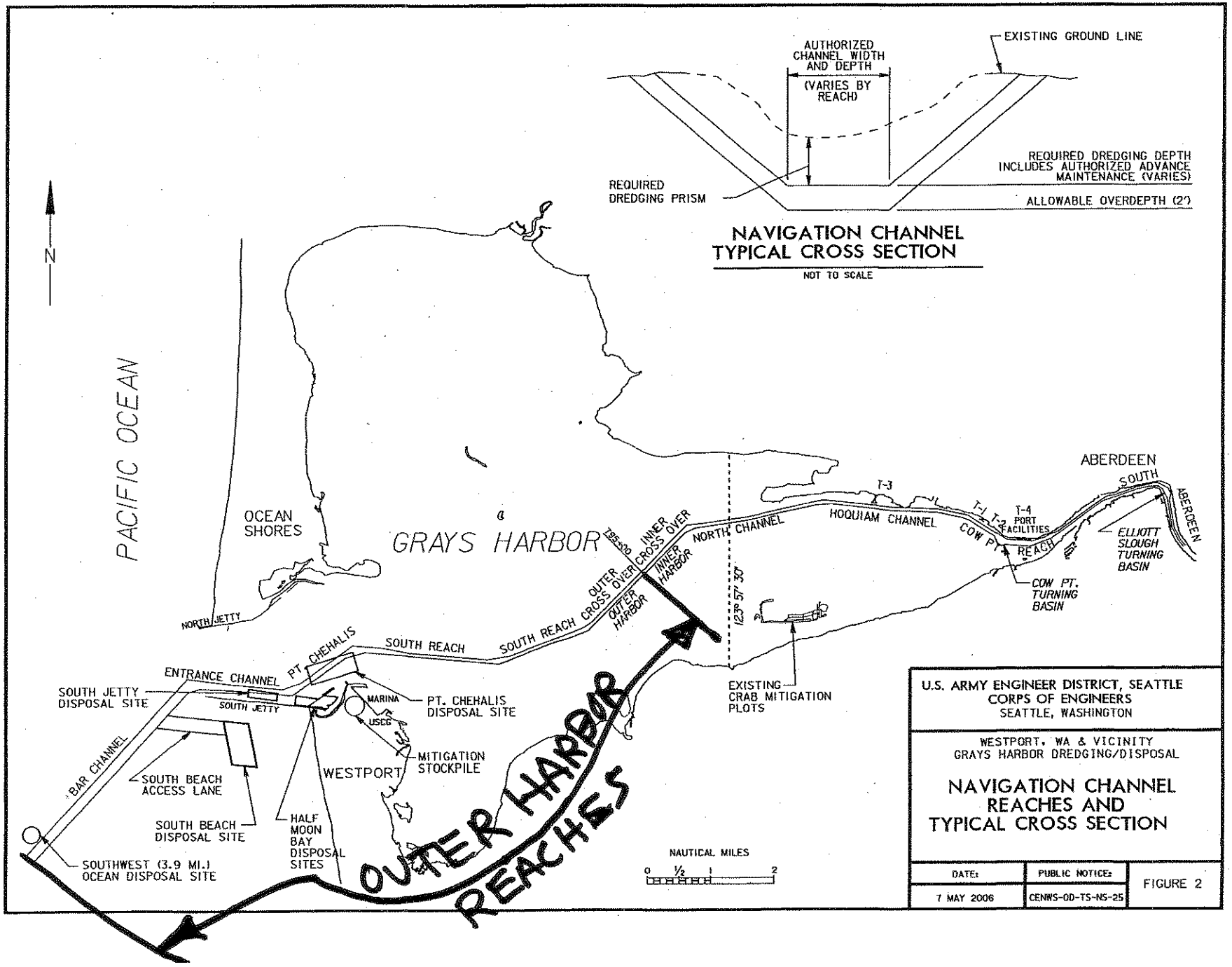
05/01/2008 Laura Inouye
Date Laura Inouye, Ph.D. - Washington Department of Ecology

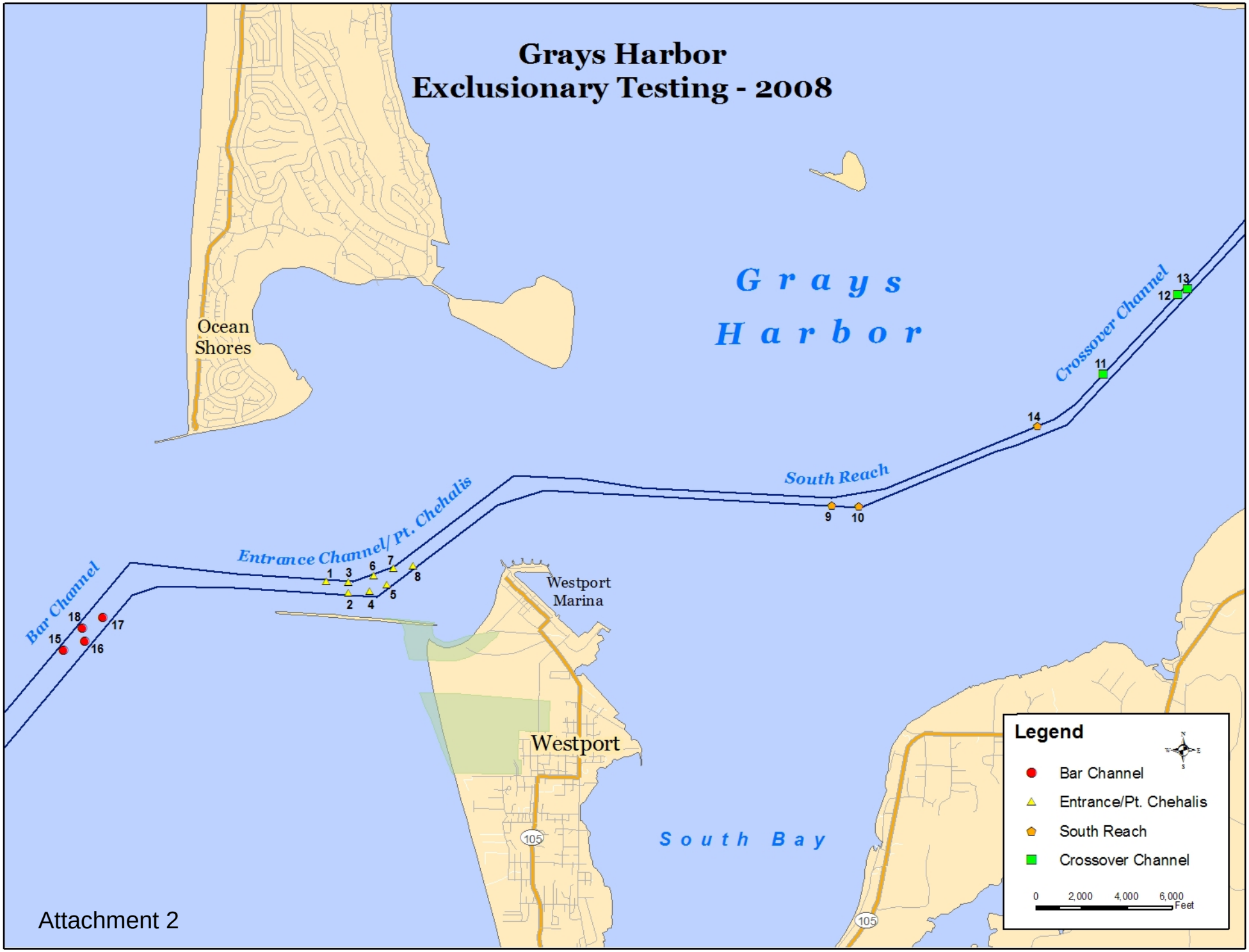
1-May-08 Courtney Wasson
Date Courtney Wasson - Washington Department of Natural Resources

Copies furnished:

DMMP signatories
Hiram Arden, CENWS-OD-TS-NS
Steve Martin, CENWS-PM-PL-ER

Attachment 1





Attachment 2

Grays Harbor Outer Harbor Grab Sampling - April 2008

Sample #	Sample Name	Northing	Easting	Nad83 Lat.	Nad83 Long.	Time	Date	Depth NOS MLLW
1	Entrance/Pt. Chehalis_1	596082.85	728671.60	46.91007241	-124.14933145	8:56:18	04/01/2008	34.8
2	Entrance/Pt. Chehalis_2	595531.51	729631.01	46.90868388	-124.14539489	9:05:16	04/01/2008	38.5
3	Entrance/Pt. Chehalis_3	595985.93	729643.37	46.90993012	-124.14542949	9:17:45	04/01/2008	35.0
4	Entrance/Pt. Chehalis_4	595588.38	730566.00	46.90895803	-124.14166844	9:24:16	04/01/2008	35.0
5	Entrance/Pt. Chehalis_5	595849.05	731347.32	46.90977085	-124.13859374	9:31:12	04/01/2008	37.1
6	Entrance/Pt. Chehalis_6	596267.38	730758.95	46.91084225	-124.14102262	9:37:55	04/01/2008	35.4
7	Entrance/Pt. Chehalis_7	596535.51	731662.38	46.91169093	-124.13746111	9:47:38	04/01/2008	32.6
8	Entrance/Pt. Chehalis_8	596624.87	732520.01	46.91204405	-124.13404960	9:59:51	04/01/2008	35.0
9	S.Channel_1	598700.99	751064.83	46.92004894	-124.06029668	10:19:51	04/01/2008	36.9
10	S.Channel_2	598619.72	752255.23	46.91997351	-124.05552301	10:27:43	04/01/2008	37.4
11	Crossover_1	604068.23	763193.81	46.93624148	-124.01276221	10:48:36	04/01/2008	34.1
12	Crossover_2	607469.70	766588.70	46.94597255	-123.99978951	11:01:12	04/01/2008	36.8
13	Crossover_3	607716.31	767016.95	46.94670014	-123.99812034	11:09:16	04/01/2008	37.6
14	S.Channel_3	601911.15	760222.99	46.92996951	-124.0242571	8:29:39	04/11/2008	36.9
15	Bar_1	593366.73	716985.25	46.90114159	-124.1955300	15:50:41	04/11/2008	46.8
16	Bar_2	593737.68	717933.24	46.90227929	-124.1918112	15:58:14	04/11/2008	46.1
17	Bar_4	594769.66	718764.18	46.90521240	-124.1886836	16:23:19	04/11/2008	45.7
18	Bar_3	594313.82	717835.87	46.90384482	-124.1923081	16:31:07	04/11/2008	45.3

Northings & Eastings in NAD83-91 State Plane Washington South Zone 4602 (US Survey Feet)
Lat&Long in NAD83 (North & East) (ddd.dddddddd)
Depths in NOS M.L.L.W.