

The Dalles Dam Fishway Status Report

Date: 5/25/2014
 Inspection Period: 5/18/2014 to 5/24/2014

THE DALLES DAM



**US Army Corps
 of Engineers**
 Portland District

The Dalles Project-Fisheries
 P.O. Box 564
 The Dalles, OR 97058-9998
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Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	21	Temperature: Secchi:	57.0 F 4.1 feet
NORTH FISHWAY						
Exit differential	0	≤ 0.5'				
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.0' ± 0.1'				
Entrance differential	0	1.0' - 2.0'				
Entrance weir N1	0	depth (≥ 8')				
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.			
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	Manually adjusted as needed.			
East entrance differential	0	1.0' - 2.0'	Average 1.5			Fish unit outage 0356-0524 for maintenance
Entrance weir E1	0	No criteria	Average 9.4			Manually adjusted.
Entrance weir E2	0	depth (≥ 8')	Average 12.3			
Entrance weir E3	0	depth (≥ 8')	Average 10.7			
Collection channel velocity	0	1.5 - 4 fps	Average 2.2			
Transportation channel velocity	0	1.5 - 4 fps	Average 2.4			
North channel velocity	0	1.5 - 4 fps	Average 1.7			
South channel velocity	0	1.5 - 4 fps	Average 3.3			
West entrance differential	0	1.0' - 2.0'	Average 1.5			
Entrance weir W1	0	depth (≥ 8')	Average 11.2			
Entrance weir W2	0	depth (≥ 8')	Average 11.2			
Entrance weir W3	closed	No criteria	Average closed			
South entrance differential	0	1.0' - 2.0'	Average 1.5			
Entrance weir S1	0	depth (≥ 8')	Average 10.5			
Entrance weir S2	0	depth (≥ 8')	Average 10.5			
JUVENILE PASSAGE						
Sluiceway operation	0	1, 8, 18	MU 18 off ~30 min for rolling unit outage Unit 17 and 19 on during that time.			
Turbine trashrack drawdown	0	<1.5', wkly	Range 0.2' - 0.5'.			
Spill volume	13	40%+-1%	Average 36.0			<40% due to gas cap
Spill Pattern	0	per FPP				
Turbine Unit Priority	14	per FPP	Full MW demand with T8 limiting unit availability			
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds/Sea lions:

Bird observation data collected once daily. Gull numbers are increasing down stream of the bridge. See avian zones map for details.
Hazing effectiveness downstream of bridge shortlived. Below trigger for high gull numbers.
No sea lion sightings for this week.

Operations:

Spill reduced from 40% due to gas cap. Noticeable affect of increased north fishladder passage with spill <100KCFS.
Calibration checked 5/19, some measurements out, room for error as river level high see avg tab, weir openings all >9.9' TDE notified.

Current Outages:

T8 (MU15 & MU16) de-rated to single unit full load ops through 2017. Out of service several days for maintenance.
MU22 out of service 3/24 to 5/15/2014 for overhaul.
MU20 dewatering attempted, but delayed due to excessive leakage. Fish units reduced to half load 0715-0815 during taillog installation.

Maintenance:

Parts for new weir 158/159 arriving. Fabrication starting. Wheels and shaft assembly started.
North fishway pump motor replacement ordered.
Nine collection channel pumps to be removed/inspected for maintenance issues in preparation for next winter dewatering.
Planning to install equalizing valve for PUD intake bulkhead for next winter dewatering.
Long term repair plans funding dependent; Upgrade east exit weirs 154-157, stabilize north ladder rock walls, remove collection channel diffusers, replace all entrance weir wheels with plastic composite wheels and repair/modify all east fishway dewatering pumps.
Fish related but non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 10/11 wire rope replacement, update fish unit reliability assessment, planning upgrade fish unit breakers and fish unit transformer replacement.
All spillway items on Critical Infrastructure list and Unfunded Requirement list

Studies:

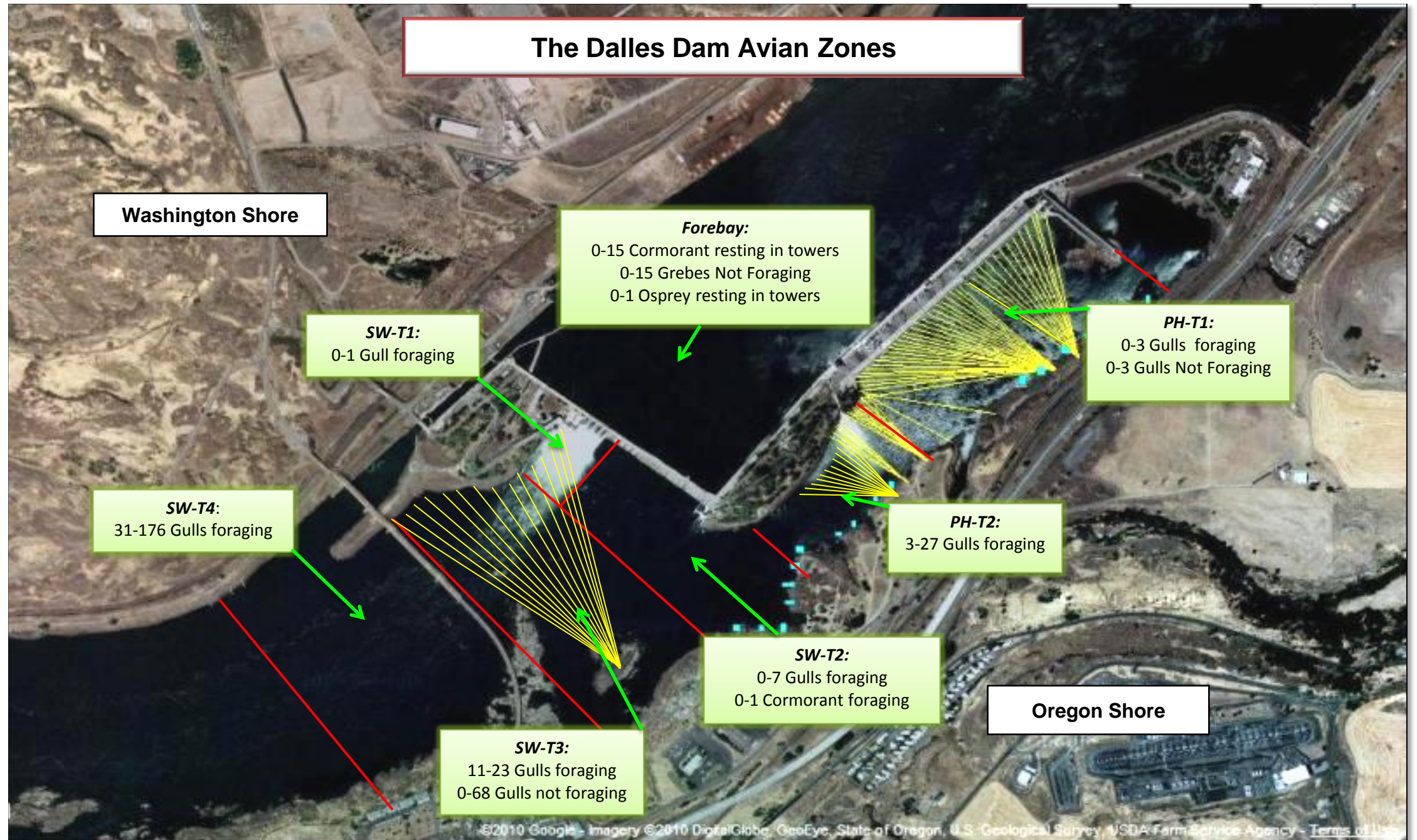
PIT - PSMFC PIT tag monitoring continues at count stations. No issues.
EFL - Plan of backup water through dam, under roadway and into AWS conduit at junction pool. Starting Plans and Specs. Construction winter 2015. Coordination in progress for test pits excavation between fishladder and fishlock parking area in Nov. ADCP flow velocity survey in June and Nov. EFL DDR onsite kickoff meeting scheduled for May 29.
PUD - PUD 'freedom' second turbine proposal for north fishway in FERC review process. COE reviewed and commented.
Lamprey - No new developments.

Research/Contractors:

ODFW Northern Pikeminnow Management Program evaluation electrofishing; No sampling at The Dalles this week.
Fish counters on site at north and east count stations 16 hours a day 1 April through 30 October.
PSMFC PUD weekly sampling continues. Subyearling smolt starting to arrive. Subyearling fry majority of sample.
Normandeau fish counting program 4/1 through 10/31. Night video starts mid June. Fish Field Unit investigating video visibility improvements.
USDA hazers launching pyrotechnics from downstream navlock peninsula. Also on call for sea lion hazing and pigeon removal as needed.
University of Idaho maintaining antennas.
Removal last set of 3 derelict Vertical Barrier Screens from MU 12 gate well slot scheduled week of Aug11. Coordination in progress.
WDFW started dam angling of predatory northern pike minnow from the BRZ adjacent to the project.

Approved by;
Ron D. Twiner
Operation Project Manager
The Dales Dam

The Dalles Dam Avian Zones



Hazing activity primarily in SW-T4
Numbers reflect weekly range of daily averages

The Dalles East												
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
5/18	2265.0	1589.0	676.0	14.0	13.0	1.0	These species not present YTD					
5/19	2124.0	1494.0	630.0	19.0	19.0	0.0						
5/20	2335.0	1675.0	660.0	23.0	22.0	1.0						
5/21	1680.0	1046.0	634.0	28.0	28.0	0.0						
5/22	1554.0	1032.0	522.0	26.0	22.0	4.0						
5/23	1911.0	1499.0	412.0	32.0	22.0	10.0						
5/24	1804.0	1288.0	516.0	25.0	24.0	1.0						
total	13673.0	9623.0	4050.0	167.0	150.0	17.0						

The Dalles North												
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
5/18	723.0	640.0	83.0	8.0	8.0	0.0	These species not present YTD					
5/19	307.0	287.0	20.0	5.0	5.0	0.0						
5/20	177.0	170.0	7.0	0.0	0.0	0.0						
5/21	199.0	193.0	6.0	0.0	0.0	0.0						
5/22	302.0	270.0	32.0	1.0	1.0	0.0						
5/23	131.0	125.0	6.0	0.0	0.0	0.0						
5/24	110.0	106.0	4.0	0.0	0.0	0.0						
total	1949.0	1791.0	158.0	14.0	14.0	0.0						

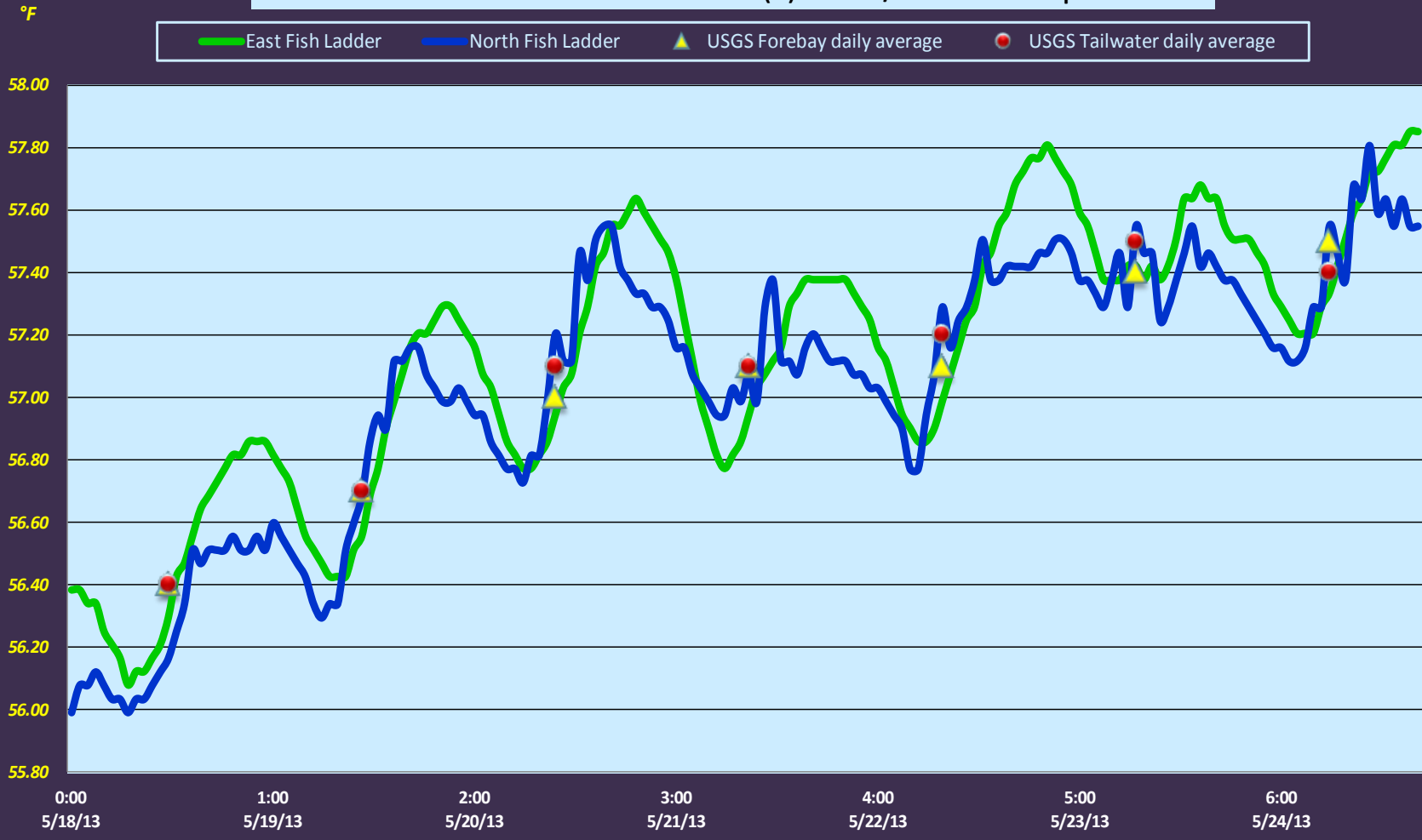
Ladder % North												
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
5/18	24.2	28.7	10.9	36.4	38.1	0.0	These species not present YTD					
5/19	12.6	16.1	3.1	20.8	20.8	0.0						
5/20	7.0	9.2	1.0	0.0	0.0	0.0						
5/21	10.6	15.6	0.9	0.0	0.0	0.0						
5/22	16.3	20.7	5.8	3.7	4.3	0.0						
5/23	6.4	7.7	1.4	0.0	0.0	0.0						
5/24	5.7	7.6	0.8	0.0	0.0	0.0						
total % North	12.5	15.7	3.8	7.7	8.5	0.0						
total % East	87.5	84.3	96.2	92.3	91.5	100.0						

<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Data.aspx>

Data obtained via preceding hyperlink

2 weeks of velocity data to be provided next week

The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures



	Forebay	Tailwater
	56.4	56.4
USGS	56.7	56.7
	57.0	57.1
	57.1	57.1
DATA	57.1	57.2
	57.4	57.5
	57.5	57.4
AVG:	57.0	

Secchi:	
SUN	4.0
MON	4.5
TUES	4.5
WED	4.5
THUR	4.0
FRI	3.3
SAT	4.0
AVG:	4.1

The Dalles Dam Daily Readings and Averages for
Temperatures, Secchi, Entrances, and Spill

= out of criteria

Date:	North Fish Ladder		East Fish Ladder										Spill%		
	North Entrance		East Entrance					West Entrance			South Entrance				
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
5/18/14			1.5	9.0	12.5	11.1	15.6	1.6	10.9	11.0	C l o s e d	1.6	9.9	9.9	
	1.3	10.0	1.5	7.6	12.5	11.0	15.4	1.7	10.9	10.9		1.6	10.4	10.4	30.6
	1.4	10.0	1.7	6.5	12.4	10.9	15.1	1.6	10.9	11.0		1.5	10.5	10.5	31.6
5/19/14			1.5	8.0	12.5	11.1	16.3	1.6	11.1	11.1		1.6	10.5	10.5	
	1.4	10.0	1.7	8.1	12.6	11.1	16.1	1.5	11.7	11.6		1.5	10.6	10.5	38.1
	1.3	10.0	1.6	8.4	12.4	10.6	15.8	1.5	11.5	11.5		1.5	10.5	10.5	39.4
5/20/14			1.5	10.1	12.5	10.0	16.0	1.5	11.5	11.6		1.5	10.4	10.5	
	1.4	10.0	1.4	10.0	12.4	9.9	16.1	1.5	11.4	11.5		1.5	10.5	10.4	38.5
	1.3	10.0	1.6	9.9	12.5	9.9	15.6	1.5	11.5	11.5		1.5	10.5	10.6	37.9
5/21/14			1.6	10.0	12.5	9.4	15.2	1.5	11.5	11.5		1.5	10.4	10.3	
	1.4	10.0	1.5	9.9	12.0	11.4	15.2	1.5	11.1	11.1		1.4	10.6	10.6	40.2
	1.3	10.0	1.7	10.2	12.2	11.2	15.2	1.6	10.4	10.5		1.4	10.5	10.5	39.1
5/22/14			1.6	10.1	12.2	10.8	14.6	1.5	11.0	11.0		1.4	10.6	10.6	
	1.3	10.0	1.6	10.0	12.1	10.9	14.7	1.6	11.2	11.2		1.4	10.8	10.8	31.4
	1.4	10.0	1.6	10.0	11.9	10.9	14.7	1.5	11.0	11.1		1.4	10.6	10.5	33.2
5/23/14			1.4	10.0	12.1	11.4	15.2	1.6	10.9	10.9	1.5	10.4	10.4		
	1.4	9.9	1.5	10.0	12.1	11.2	15.0	1.5	10.9	11.0	1.3	10.6	10.6	37.0	
	1.3	10.1	1.5	9.9	12.0	11.2	15.0	1.4	11.1	11.1	1.5	10.4	10.4	36.9	
5/24/14			1.3	9.9	11.9	9.8	16.4	1.4	11.2	10.8	1.3	10.4	10.4		
	1.4	10.1	1.5	9.2	12.0	10.0	16.0	1.5	12.0	12.1	1.6	10.5	10.5	34.2	
	1.3	10.1	1.6	10.0	12.0	10.6	16.6	1.4	12.0	12.0	1.6	10.1	10.1	36.5	
AVG:	1.3	10.0	1.5	9.4	12.3	10.7	15.5	1.5	11.2	11.2		1.5	10.5	10.5	36.0



Failed tribal platform along Oregon shoreline across from Westrick Park.

Vertical line on the left side of the page.