

ODFW AQUATIC INVENTORY PROJECT
OREGON PLAN FOR SALMON & WATERSHEDS
STREAM RESTORATION HABITAT REPORT

STREAM: Brush Creek Tributary (S-239)
BASIN: Pacific Ocean
SURVEY TYPE: Pre-Tx
DATE: June 7, 2005
SURVEY CREW: Justin Gerding, Greg Ryder
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.9 km²
USGS MAPS: Port Orford
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Brush Creek Tributary habitat survey extended 627 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 7.7 (range: 3.0-20.0). Land use for the reach was mature (50-90 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 2.5 percent. Riffles (80%) dominated stream habitat. Gravel (75%) dominated stream substrate. Wood volume was very low at 9.1 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

REACH 1

T33S-R15W-S25SE

REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	0%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	100%
Valley Width Index	7.7	VWI Range:	3 - 20

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	0%		
Landuse	0%		

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary Channel	627	1,699	0
Secondary Channel	83	70	3
Off-Channel Units	35	53	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 2
Width: 2.7	Width: 5.9	22.8 (15.3 - 32.7)	22.1 (17.5 - 26.7)
Depth: 0.25	Height: 0.5	0.9 (0.6 - 1)	0.9 (0.65 - 1.1)

W:D ratio: 14.5

Entrenchment (ACW:FPW ratio): 4.4

Stream Flow Type: LF

Habitat Units/100m (total channel length): 6.2

Average Unit Gradient: 2.5%

Habitat Units/100m (primary channel length): 7.3

Water temperature (°C): 11.5 - 11.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	LT
Riparian Vegetation:	M30	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	1%	Reach avg: 86%
Undercut Banks:	5%	Range: 69 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	63	10.0
Volume (m ³):	57	9.1
Key pieces (>=12m x 0.60m):	4	0.6

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

6/7/2005

REACH 1		T33S-R15W-S25SE					REACH 1					
HABITAT DETAIL												
Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
POOL-BACKWATER	2	10	2.6	0.48	26	0	8	35	55	3	0	0
POOL-LATERAL SCOUR	9	75	2.7	0.53	200	0	1	26	69	3	0	2
POOL-PLUNGE	3	9	4.2	0.47	35	1	0	22	72	3	2	2
POOL-STRAIGHT SCOUR	1	9	3.8	0.80	33	0	5	50	45	0	0	0
PUDDLED UNIT	3	83	0.9	0.04	70	0	0	33	67	0	0	0
RIFFLE	27	559	2.6	0.14	1,457	0	0	9	82	9	0	0
STEP/LOG	1	0	5.2	0.01	1	0	0	15	70	5	5	5
Total:	46	745	2.7	0.25	1,823	1	Avg: 1	17	75	6	0	1

HABITAT SUMMARY								
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m ²)	Percent	Number	(# / 100m ²)
Dammed & BW Pools	2	10	2.6	0.48	26	1.41%	0	0.0
Scour Pools	13	92	3.1	0.53	268	14.71%	1	0.4
Glides	0	0			0	0.00%	0	0.0
Riffles	27	559	2.6	0.14	1,457	79.96%	0	0.0
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	1	0	5.2	0.01	1	0.06%	0	0.0
Dry	3	83	0.9	0.04	70	3.87%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	15	20.1	23.9
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	4	5.4	6.4
Pool frequency (channel widths/pool):	8.4		
Residual pool depth (avg):	0.43		

Survey Date 6/7/2005
Report Date: 4/26/2006

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

Summary of Riparian Zone (0-30m) 3 transects

Total hardwoods/1000	671
Total conifers/1000 ft	264
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters		Zones 1-3 0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	2.0	0.3	1.7	0.3	2.0	0.7	5.7
15-30cm	0.3	1.3	0.0	3.0	1.0	1.0	1.3	5.3
30-50cm	0.0	0.0	0.0	0.0	1.3	0.0	1.3	0.0
50-90cm	0.0	0.0	0.3	0.0	0.7	0.0	1.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.3	3.3	0.7	4.7	3.3	3.0	1.4	3.7

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	83		85		70	
Shrub cover	21		19		35	
Grass/forb cover	79		80		62	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		67		100	
High terrace	17		0		0	
Low terrace	0		0		0	
Floodplain	50		33		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	22		44		59	

Summary of Riparian Zone (0-30m) for all reaches**3 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	671
Total conifers/1000 ft	264
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-m wide band

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.7	5.7
15-30cm	1.3	5.3
30-50cm	1.3	0.0
50-90cm	1.0	0.0
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

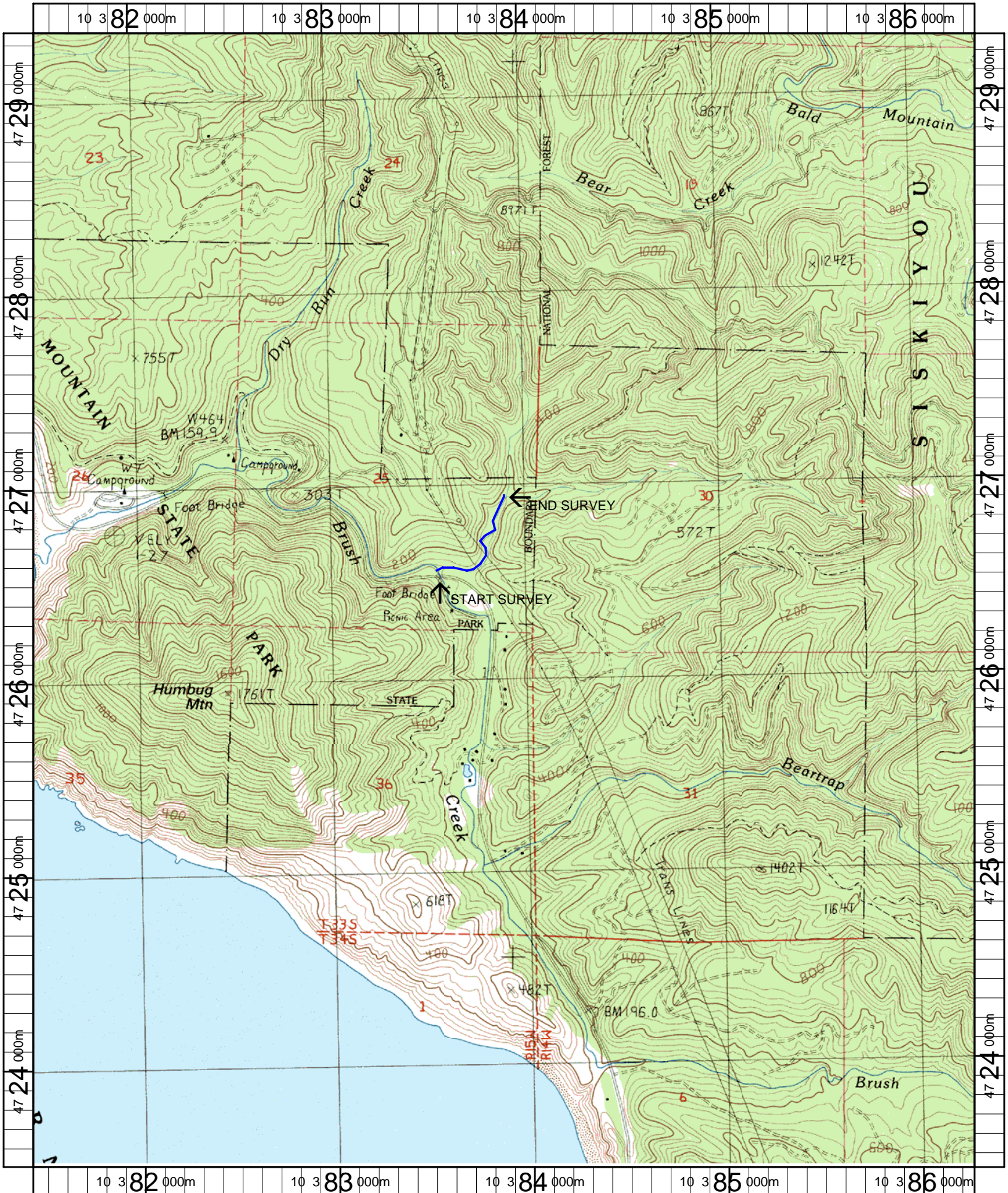
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
11	RT	1	FP	0	100	20	80	Conifer							WILLOW
								Hardwood	4						
11	RT	2	FP	0	80	20	80	Conifer							WILLOW
								Hardwood	3						
11	LF	3	HS	20	70	50	50	Conifer			2				DOUG FIR
								Hardwood	2						
11	LF	2	HS	65	90	30	70	Conifer	1			1			DOUG FIR, MYRTLE
								Hardwood		2					
11	LF	1	HS	65	95	30	70	Conifer							MYRTLE
								Hardwood	1						
11	RT	3	HS	30	60	20	80	Conifer			3				DOUG FIR, ELDERBERRY
								Hardwood	2						
18	LF	1	FP	0	70	30	70	Conifer							ALDER
								Hardwood		4					
18	LF	2	FP	0	90	5	90	Conifer							MYRTLE
								Hardwood	2	1					
18	LF	3	HS	75	80	10	90	Conifer							MYRTLE
								Hardwood	1	3					
18	RT	1	HT	0	80	0	100	Conifer							
								Hardwood							
18	RT	2	HS	115	80	40	60	Conifer							ALDER
								Hardwood		2					
18	RT	3	HS	100	30	90	10	Conifer							
								Hardwood							
29	RT	3	HS	65	90	20	60	Conifer	1		2	2			
								Hardwood							
29	LF	1	HS	65	85	20	80	Conifer			1				DOUG FIR
								Hardwood							
29	LF	2	HS	65	80	15	85	Conifer							ALDER
								Hardwood		1					
29	RT	2	HS	20	90	5	95	Conifer							SM OLD ROAD BED,
								Hardwood		3					MYRTLE ALDER
29	RT	1	FP	0	70	25	75	Conifer							
								Hardwood	1						
29	LF	3	HS	65	90	20	80	Conifer							MAPLE
								Hardwood	1						

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **5-SC** SITE ID: **239** BRUSH CREEK TRIBUTARY PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
2	RI	00	35.4	BC		
4	SL	00	36.7	/CS	H = .3 M	
9	PP	00	104.3		FORMED BY SUBMERGE	BEDROCK = HARDPAN
10	RI	00	126.7		U 9 = NO STEP	U 9=NO STEP, SUBMERGED
11	LP	00	131.4			OLD CONCRETE STRUCTUR
24	PD	02	332.1	WL		ROUGH SKIN NEWT, TROUT
25	PD	02	332.1			TROUT FRY
31	LP	00	413.1			BEDROCK = HARDPAN
33	BW	10	423.7	WL		RSN, TROUT FRY
34	PP	00	426.8			NO STEP
44	SP	00	597.3			TROUT
45	RI	01	627.1	TJ/	T = 12 C	
46	RI	11	627.1			TRIB



Name: PORT ORFORD
 Date: 5/1/2006
 Scale: 1 inch equals 2000 feet

Location: 10 383889 E 4726395 N
 Caption: BRUSH CREEK TRIBUTARY RESTORATION SITE - OCEAN BASIN