

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

STREAM: Walker Creek (MC-378)
BASIN: Siuslaw River
SURVEY TYPE: Pre-Tx
DATE: July 6, 2007
SURVEY CREW: Andy Livesay, Ryan Lande
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 11.9 km²
USGS MAPS: Walton
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Walker Creek habitat survey extended 1,849 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 10.3 (range: 4.0-20.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 1.8 percent. Scour pools (43%) and riffles (35%) dominated stream habitat. Gravel (38%) and cobble (31%) dominated stream substrate. Wood volume was low at 15.4 m³/100m.

COMMENTS:

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

The crew noted several habitat structures during the survey.

REACH 1

T18S-R08W-S01SW

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	10.3	VWI Range:	4 - 20

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	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	1,849	8,294	1
Secondary Channel	270	619	8
Off-Channel Units	66	59	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 9	<u>First Terrace</u> n = 8
Width: 4.0	Width: 6.9	9.8 (6.5 - 15.1)	12.5 (6.7 - 19.5)
Depth: 0.32	Height: 0.4	0.9 (0.66 - 1.2)	1.5 (0.8 - 1.9)

W:D ratio: 16.7

Entrenchment (ACW:FPW ratio): 1.5

Stream Flow Type: MF

Habitat Units/100m (total channel length): 7.0

Average Unit Gradient: 1.8%

Habitat Units/100m (primary channel length): 8.2

Water temperature (°C): 14.0 - 14.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	YT
Riparian Vegetation:	D30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	12%	Reach avg: 83%
Undercut Banks:	8%	Range: 19 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	404	21.9
Volume (m ³):	285	15.4
Key pieces (>=12m x 0.60m):	3	0.2

OREGON DEPT OF FISH AND WILDLIFE

WALKER CREEK PRE-TX (2-MC, 378)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/2/2007

REACH 1		T18S-R08W-S01SW					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
CASCADE/BOULDERS	2	18	0.4	0.02	7	4	5	18	28	30	20	0
CULVERT CROSSING	1	15	2.5	0.20	38	0	30	5	30	30	5	0
DRY CHANNEL	2	57	3.3	0.00	192	1	5	35	48	13	0	0
DRY UNIT	5	72	2.2	0.00	148	1	7	31	39	23	0	0
POOL-BACKWATER	2	8	2.2	0.23	16	0	23	68	8	3	0	0
POOL-ISOLATED	3	6	1.0	0.08	6	1	53	25	18	3	0	0
POOL-LATERAL SCOUR	62	785	4.5	0.61	3,685	201	8	17	35	30	7	4
POOL-PLUNGE	2	11	5.3	0.55	57	30	0	15	20	48	18	0
POOL-STRAIGHT SCOUR	1	19	4.4	0.95	84	2	10	60	10	20	0	0
PUDDLED UNIT	3	41	1.0	0.12	44	7	25	28	38	8	0	0
RAPID/BOULDERS	12	336	3.6	0.13	1,287	319	4	11	28	38	19	0
RIFFLE	35	756	4.3	0.13	3,167	148	3	7	44	40	5	0
STEP/BOULDERS	3	2	3.3	0.07	7	11	0	5	10	23	62	0
STEP/COBBLE	18	61	3.7	0.08	233	5	0	5	61	32	1	1
STEP/LOG	1	0	4.5	0.07	1	0	0	5	50	45	0	0
Total:	152	2,185	4.0	0.32	8,971	730	Avg: 7	14	38	31	7	2

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	5	13	1.5	0.14	21	0.24%	1	4.7
Scour Pools	65	815	4.5	0.61	3,826	42.65%	233	6.1
Glides	0	0			0	0.00%	0	0.0
Riffles	35	756	4.3	0.13	3,167	35.30%	148	4.7
Rapids	12	336	3.6	0.13	1,287	14.34%	319	24.8
Cascades	2	18	0.4	0.02	7	0.08%	4	54.1
Step/Falls	22	64	3.6	0.08	241	2.69%	16	6.6
Dry	10	169	2.1	0.04	384	4.28%	9	2.3
Culverts	1	15	2.5	0.20	38	0.42%	0	0.0

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	70	32.0	37.9
Pools >=1m deep:	1	0.5	0.5
Complex pools (LWD pieces>=3):	39	17.8	21.1
Pool frequency (channel widths/pool):	4.5		
Residual pool depth (avg):	0.51		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

WALKER CREEK PRE-TX
GCG: 2-MC SITE ID: 378

Survey Date 7/2/2007
Report Date: 11/7/2007

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 7 transects

Total hardwoods/1000	409
Total conifers/1000 ft	35
Total conifers >20" dbh/1000 ft	17
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	1.7	0.0	1.6	0.0	2.4	0.0	5.7
15-30cm	0.0	0.3	0.0	0.3	0.1	0.1	0.1	0.7
30-50cm	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.3
50-90cm	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.1	2.1	0.1	1.9	0.3	2.7	0.2	2.2

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	78	74	74
Shrub cover	54	58	61
Grass/forb cover	42	31	35

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	21	21	36
High terrace	71	71	64
Low terrace	0	0	0
Floodplain	7	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	7	0
Riprap	0	0	0
Surface slope (%)	20	11	32

Summary of Riparian Zone (0-30m) for all reaches

7 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	409
Total conifers/1000 ft	35
Total conifers >20" dbh/1000 ft	17
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	0.0	5.7
15-30cm	0.1	0.7
30-50cm	0.1	0.3
50-90cm	0.3	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		
23	LT	1	HT	0	90	50	40	Conifer							
								Hardwood	1						
23	LT	2	HT	0	85	40	40	Conifer							
								Hardwood		1					
23	LT	3	HT	0	75	65	20	Conifer							
								Hardwood							
23	RT	1	HT	0	75	80	10	Conifer							
								Hardwood							
23	RT	2	HT	0	75	75	10	Conifer							
								Hardwood							
23	RT	3	HT	0	90	80	10	Conifer							
								Hardwood							
43	LT	1	HT	0	65	30	70	Conifer							
								Hardwood	1						
43	LT	2	HT	0	60	50	50	Conifer							
								Hardwood							
43	LT	3	HT	0	65	55	45	Conifer							
								Hardwood			1				
43	RT	1	HT	0	75	65	35	Conifer							
								Hardwood	3						
43	RT	2	HT	0	85	45	45	Conifer							
								Hardwood	4						
43	RT	3	HT	0	85	30	65	Conifer							
								Hardwood	9	1					
67	LT	1	HT	0	70	65	35	Conifer							
								Hardwood							
67	LT	2	HS	45	65	55	40	Conifer							
								Hardwood							
67	LT	3	HS	80	50	40	60	Conifer							
								Hardwood							
67	RT	1	HT	0	70	80	20	Conifer							
								Hardwood			1				
67	RT	2	HT	0	80	65	30	Conifer							
								Hardwood			1				
67	RT	3	HT	0	65	50	45	Conifer							
								Hardwood	1						

96	LT	1	HS	70	85	35	55	Conifer		
								Hardwood	3	
96	LT	2	HS	90	85	35	50	Conifer		
								Hardwood	5	
96	LT	3	HS	90	85	40	55	Conifer		
								Hardwood	2	
96	RT	1	FP	0	75	50	45	Conifer		
								Hardwood	4	
96	RT	2	HT	0	35	90	10	Conifer		
								Hardwood		
96	RT	3	HT	0	20	95	5	Conifer		
								Hardwood		
116	LT	1	HT	0	85	25	70	Conifer		
								Hardwood		
116	LT	2	HT	0	85	40	55	Conifer		1
								Hardwood		
116	LT	3	HT	0	85	55	45	Conifer		
								Hardwood		
116	RT	1	HT	0	90	20	75	Conifer		1
								Hardwood		
116	RT	2	HT	0	75	65	35	Conifer		
								Hardwood		
116	RT	3	HT	0	80	75	25	Conifer		
								Hardwood		
131	LT	1	HT	0	70	10	90	Conifer		
								Hardwood	1	
131	LT	2	HT	0	80	85	10	Conifer		
								Hardwood		
131	LT	3	HT	0	80	90	5	Conifer		
								Hardwood	1	
131	RT	1	HS	110	85	75	20	Conifer		
								Hardwood	1	
131	RT	2	RB	0	70	10	20	Conifer		
								Hardwood		
131	RT	3	HS	130	90	10	85	Conifer		
								Hardwood	1	
145	LT	1	HT	0	80	90	10	Conifer		
								Hardwood		
145	LT	2	HT	0	85	90	10	Conifer		
								Hardwood	2	
145	LT	3	HS	90	80	95	5	Conifer		
								Hardwood	3	
145	RT	1	HS	95	75	85	15	Conifer		
								Hardwood		
145	RT	2	HS	25	65	70	25	Conifer		
								Hardwood		

145 RT 3 HS 55 85 75 20 **Conifer** 1
Hardwood

COMMENT SUMMARY

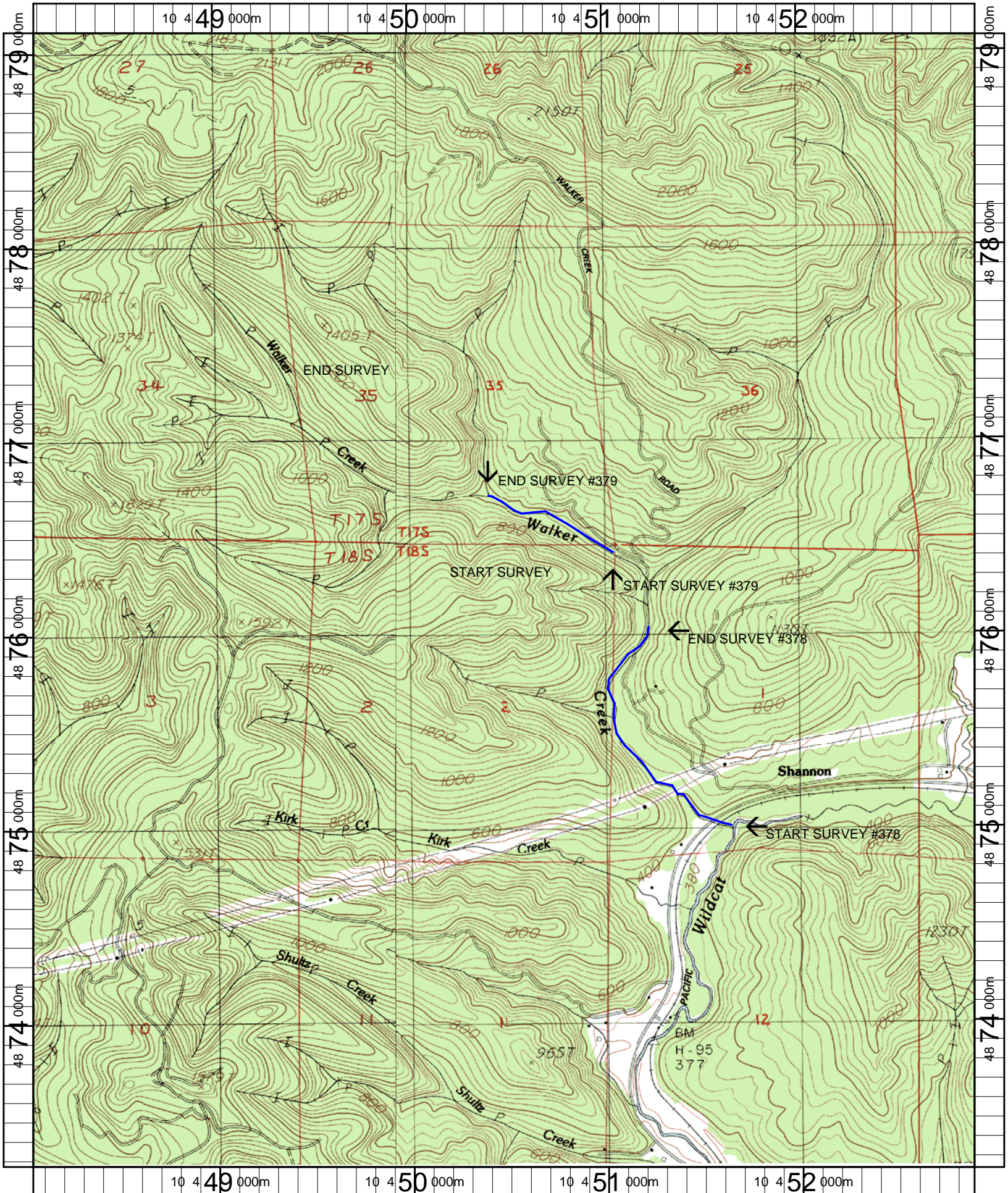
MONITORING AREA: 2-MC SITE ID: 378 STREAM: WALKER CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
9	LP	00	84.6		POOL CREATED BY GIANT ROOTWAD
10	RI	01	111.6	BC	RAILROAD CROSSING
22	LP	00	264.3	CS/	
23	RI	00	287.6	CS/CS, BC	HIGHWAY 126
29	RI	01	365.1	DJ, BV	
36	RI	00	395.1	BV	
37	LP	00	413.1	HS	OLDER HAB STRUCTURE, CABLED LOGS. LARGER COHO FRY IN POOL
40	LP	00	432.1		YELLOW FLAG 2
43	SC	01	495.1	BV, /TJ	
45	LP	01	519.6	BV	
46	SL	01	519.9	BV	
48	LP	02	519.9	DJ, HS	
53	RI	00	588.8		MADE ME PUT IN PTC FOR RIFFLE
54	LP	00	595.6	HS	
56	LP	00	635.6	HS	FLAG #23
61	LP	01	702.6	BV, HS	
66	LP	00	753.1	HS	PLACED AND CABLED LOGS AND BOULDERS. UNIDENTIFIED FROG
67	RI	00	778.1	HS	
69	LP	00	811.1		WASHED OUT CULVERT IN STREAM. .50 BY 2 METERS
86	LP	01	933	BV	
94	DU	02	985		MADE ME ENTER PTC AND MAX DEPTH
95	LP	00	1001	HS	

COMMENT SUMMARY

MONITORING AREA: 2-MC SITE ID: 378 STREAM: WALKER CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
96	RI	01	1051	HS, TJ/	
97	RB	11	1051	AM	TEMP. 13, JUVENILE PACIFIC GIANT SALAMANDER
112	LP	00	1222.5	HS	
114	LP	01	1234.5	HS	LOTS OF COHO FRY, DACE.
115	RB	11	1234.5		TEMP. 12
121	LP	00	1381	HS	
123	PP	00	1389.2	HS	
124	SC	00	1390.7	DJ, HS	WATER FLOWING UNDER LOG
126	LP	00	1422.7	DJ	
127	RI	00	1446.7	HS	
128	LP	00	1457.2	HS	
130	LP	00	1481.2	HS, DJ	LOTS OF COHO FRY PRESENT
132	CB	11	1485.7		TEMP. 14
133	SP	00	1504.7	HS	
134	CC	00	1519.7	CC	CULVERT 2.1 BY 3.5 M WIDE. CORRUGATED STEEL CULVERT BOTTOM
142	LP	00	1710.2	SS, DJ	
152	RB	01	1848.8	TJ/	
153	CB	02	1848.8		TEMP. 13



Name: WALTON
 Date: 5/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 450480 E 4876175 N
 Caption: WALKER CREEK TREATMENT (#378) AND REFERENCE (#379)
 REACHES - SIUSLAW BASIN