

**ODFW AQUATIC INVENTORY PROJECT
RESTORATION MONITORING
STREAM HABITAT REPORT**

STREAM: WALKER CREEK
 GCG: 2-MC
 SITE ID: 379
 BASIN: SIUSLAW
 TREATMENT DATE:
 SURVEY DATE: 7/5/2008
 SURVEY CREW: Roslyn Overstake / Kellie Scofield
 USGS MAPS: WALTON
 ECOREGION: Mid-Coastal Sedimentary
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Second growth timber (15-30 cm dbh)

Dominant riparian vegetation: Deciduous trees: size class 15-30cm dbh

Primary channel length (meters) and area (m²): 814 : 2,706

Secondary channel length (meters) and area (m²) 30 : 94

VWI average: 2.3 VWI Range: 1 - 3 Average Gradient: 2.8%

Pieces LWD per 100m: 14.4 Wood Volume (m³) per 100m: 26.4

Percent pools: 44% Complex pools (LWD pieces>=3): 3 Pools >=1m deep: 2

Percent substrate (avg):	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	7	24	33	25	2	10
Pool units	10	34	29	19	2	6
Fast water units	1	14	36	33	2	14

COMMENTS:

This survey is a reference site. The crew noted beaver activity and debris jams throughout the survey. They also noted observing fish. Evidence of wildlife included a snake.

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**WALKER CREEK
GCG: 2-MC SITE ID: 379**

Survey Date: 7/5/2008

Report Date: 12/29/2008

T18S-R08W-S02NE

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	2.3	VWI Range:	1 - 3

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	814	2,706	0
Secondary	30	94	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 3
Width: 3.3	Width: 5.1	6.6 (5 - 10)	5.7 (5.1 - 6.4)
Depth: 0.28	Height: 0.3	0.7 (0.5 - 0.8)	0.8 (0.75 - 0.9)

W:D ratio: 16.2

Stream Flow Type: MF

Average Unit Gradient: 2.8%

Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio): 1.3

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

Habitat Units/100m (primary channel length): 7.2

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	9%	Reach avg: 75%
Undercut Banks:	8%	Range: 50 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	117	14.4
Volume (m ³):	215	26.4
Key pieces (>=12m x 0.60m):	13	1.6

OREGON DEPT OF FISH AND WILDLIFE

WALKER CREEK

HABITAT INVENTORY

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T18S-R08W-S02NE

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
DRY UNIT	1	8	4.7	0.00	35	0	0	10	30	60	0	0
POOL-BEAVER DAM	2	68	4.8	0.85	465	0	25	59	12	5	0	0
POOL-DAMMED	1	7	2.6	0.55	17	3	0	60	20	20	0	0
POOL-LATERAL SCOUR	17	187	3.7	0.58	649	22	11	31	31	19	2	6
POOL-PLUNGE	3	13	4.6	0.68	62	11	0	28	33	24	3	12
POOL-STRAIGHT SCOUR	1	13	3.0	0.65	39	2	10	30	30	30	0	0
RAPID/BEDROCK	1	11	3.0	0.05	33	2	0	5	5	5	5	81
RAPID/BOULDERS	1	15	3.2	0.07	48	15	0	11	33	44	11	0
RIFFLE	21	496	2.7	0.06	1,367	55	1	14	38	34	2	12
STEP/BEAVER DAM	2	3	4.2	0.04	14	0	45	37	12	5	0	0
STEP/BEDROCK	1	1	3.8	0.01	5	0	0	0	0	0	0	100
STEP/BOULDERS	1	2	3.8	0.05	7	7	0	11	33	22	33	0
STEP/COBBLE	4	17	2.3	0.04	41	4	0	14	52	31	3	0
STEP/LOG	3	5	3.9	0.05	19	0	10	37	35	16	2	0
Total:	59	844	3.3	0.28	2,800	121	Avg: 7	24	33	25	2	10

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	3	74	4.0	0.75	482	17.21%	3	0.6
Scour Pools	21	214	3.8	0.60	750	26.80%	35	4.7
Glides	0	0			0	0.00%	0	0.0
Riffles	21	496	2.7	0.06	1,367	48.81%	55	4.0
Rapids	2	26	3.1	0.06	81	2.89%	17	21.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	11	28	3.4	0.04	85	3.03%	11	13.0
Dry	1	8	4.7	0.00	35	1.26%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE
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WALKER CREEK
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T18S-R08W-S02NE

REACH 1

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	24	28.4	29.5
Pools >=1m deep:	2	2.4	2.5
Complex pools (LWD pieces>=3):	3	3.6	3.7
Pool frequency (channel widths/pool):	6.9		
Residual pool depth (avg):	0.54		

OREGON DEPARTMENT OF FISH AND WILDLIFE
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WALKER CREEK
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RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1605
Total conifers/1000 ft	386
Total conifers >20" dbh/1000 ft	0
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	8.3	1.0	5.7	0.7	1.7	1.7	15.7
15-30cm	0.0	2.0	1.3	2.7	3.3	3.3	4.7	8.0
30-50cm	0.0	0.7	0.0	1.3	0.0	0.7	0.0	2.7
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	11.0	2.3	9.7	4.0	5.7	2.1	8.8

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	67		78		76	
Shrub cover	68		68		62	
Grass/forb cover	26		28		33	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		100		100	
High terrace	50		0		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	7		19		24	

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	1605
Total conifers/1000 ft	386
Total conifers >20" dbh/1000 ft	0
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	1.7	15.7
15-30cm	4.7	8.0
30-50cm	0.0	2.7
50-90cm	0.0	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		
20	LT	1	HT	0	75	60	30	Conifer							
								Hardwood			1				
20	LT	2	HS	15	90	65	35	Conifer	2	1					
								Hardwood	3	1					
20	LT	3	HS	30	80	45	35	Conifer	1	3					
								Hardwood							
20	RT	1	HS	10	90	40	30	Conifer							30 BARE
								Hardwood	7						
20	RT	2	HS	15	80	50	30	Conifer			1				
								Hardwood	4	1					
20	RT	3	HS	25	80	50	40	Conifer			3				
								Hardwood		1					
39	LT	1	HT	0	35	70	30	Conifer							
								Hardwood	4						
39	LT	2	HS	30	65	75	25	Conifer							
								Hardwood	1		2				
39	LT	3	HS	30	70	65	35	Conifer			1				
								Hardwood		2					
39	RT	1	HT	0	75	75	25	Conifer							
								Hardwood	5	1					
39	RT	2	HS	10	85	80	20	Conifer							
								Hardwood		3	1				
39	RT	3	HS	10	85	75	25	Conifer			1				
								Hardwood	2	3	1				
59	LT	1	HS	10	60	80	20	Conifer							
								Hardwood	5	2					
59	LT	2	HS	15	60	80	20	Conifer			1				
								Hardwood	5	1					
59	LT	3	HS	20	50	75	25	Conifer	1	1					
								Hardwood	3	2					
59	RT	1	HS	20	65	80	20	Conifer							
								Hardwood	4	3	1				
59	RT	2	HS	30	90	60	40	Conifer	1	1					
								Hardwood	4	2	1				
59	RT	3	HS	30	90	60	40	Conifer			1				
								Hardwood	2	1					

COMMENT SUMMARY

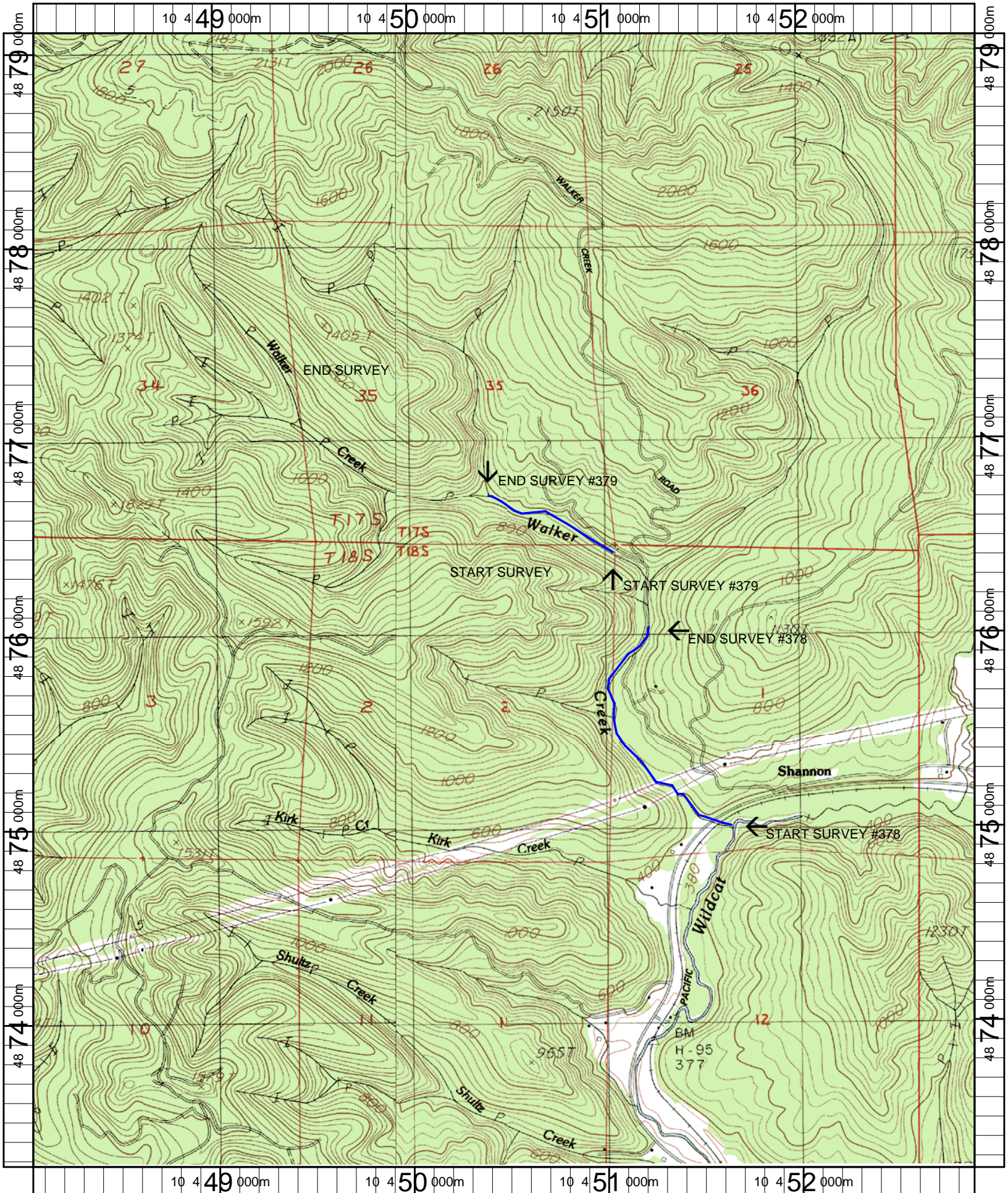
MONITORING AREA: 2-MC SITE ID: 379 STREAM: WALKER CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	SD	00	1.6	BD	H=0.70M
2	BP	01	61.6	BV	FISH OBSERVED
3	SD	01	63.3	BD	H=0.25M
4	BP	01	70.8	BV, DJ	FISH OBSERVED
9	LP	00	107.3		FISH OBSERVED
10	SC	00	108.3		PHOTO 81@1:40
11	LP	00	120.3		FISH 5-15CM, COTTID
13	LP	00	142.5		FISH 5-15CM
15	LP	00	170	BV, WL	SNAKE, FISH
17	LP	00	220.4		FISH OBSERVED
18	RI	00	235.9		SOME POOLING CREATED BY LOGS
20	RI	01	284.4	/TJ	
21	RI	11	284.4		T=12C, ACW=1.6M
22	LP	00	297.4	DJ	
24	LP	00	321.4		FISH OBSERVED
27	SL	00	343		H=0.40M
28	DP	00	349.5		DAMMED BY LOGS
33	RI	00	422.5		POCKET POOL WITH FISH 5X5M, D= 0.40M
34	LP	00	433	DJ	
38	LP	00	462.3		FISH OBSERVED
39	RI	00	512.3	DJX2	
41	SR	00	563.5		H=0.40M

COMMENT SUMMARY

MONITORING AREA: 2-MC SITE ID: 379 STREAM: WALKER CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
47	SB	00	664.4		H=0.50M
49	RI	00	702.8	DJ	
52	LP	00	732.4		FISH 15CM
54	SL	00	750		H=1.0M
55	RI	00	775		FISH OBSERVED
57	SL	00	782.1		H=0.80M



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

MC-379 Walker Creek (Reference) 2008 Summer Habitat Survey Photographs



Reach photo