

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

STREAM: MT SCOTT CREEK
 GCG: 8-W
 SITE ID: 486
 BASIN: WILLAMETTE RIVER
 TREATMENT DATE:
 SURVEY DATE: 1/23/2013
 SURVEY CREW: Dave Stewart
 USGS MAPS: GLADSTONE
 ECOREGION: Willamette Valley
 REPORT PREPARED BY: Diana Forsberg, Lora Tennant

REACH: 1 LOCATION: T02S-R02E-S54NW

SURVEY DESCRIPTION:

Channel morphology: Constrained by high terraces
 Dominant landuse(s): Designated green way area or park
 Dominant riparian vegetation: Mixed conifer/deciduous: size class 30-50cm dbh
 Primary channel length (meters) and area (m²): 562 : 4,304
 Secondary channel length (meters) and area (m²) 97 : 406
 VWI average: 20.0 VWI Range: 20 - 20 Average Gradient: 0.4%
 Pieces LWD per 100m: 15.0 Wood Volume (m³) per 100m: 25.5
 Percent pools: 55% Complex pools (LWD pieces>=3): 5 Pools >=1m deep: 6
Percent substrate (avg): Silt / organics Sand Gravel Cobble Boulder Bedrock
 All units 14 5 79 2 0 0
 Pool units 10 6 82 2 0 0
 Fast water units 15 5 80 1 0 0

SURVEY COMMENTS:

This was a pre-treatment survey because the habitat structures had just recently been placed the previous fall. Cabled log and boulder habitat structures were seen throughout the survey, as well as signs of beaver activity.

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T02S-R02E-S54NW

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	20.0	VWI Range:	20 - 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	562	4,304	0
Secondary	97	406	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 3	<u>First Terrace</u> n = 2
Width: 6.9	Width: 8.0	9.5 (7.5 - 12.4)	9.3 (9 - 9.5)
Depth: 0.51	Height: 0.4	0.7 (0.7 - 0.8)	1.5 (1.5 - 1.5)

W:D ratio: 21.9

Stream Flow Type: LF

Average Unit Gradient: 0.4%

Water temperature (°C): 5.0 - 6.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 5.0

Habitat Units/100m (primary channel length): 5.9

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	GN	UR
Riparian Vegetation:	M30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	8%	Reach avg: 68%
Undercut Banks:	2%	Range: 17 - 94

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	84	15.0
Volume (m ³):	144	25.5
Key pieces (>=12m x 0.60m):	1	0.2

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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
GLIDE	2	100	8.3	0.23	825	1	10	5	85	0	0	0
POOL-ALCOVE	1	24	8.0	0.35	192	0	89	5	5	0	0	0
POOL-DAMMED	1	4	3.0	0.50	12	0	10	5	85	0	0	0
POOL-LATERAL SCOUR	14	346	7.5	0.87	2,560	0	10	6	82	2	0	0
POOL-STRAIGHT SCOUR	1	5	5.0	0.80	25	0	10	10	75	5	0	0
RIFFLE	10	161	6.3	0.19	969	0	15	5	80	1	0	0
STEP/COBBLE	3	17	6.5	0.12	111	1	8	3	78	10	0	0
STEP/STRUCTURE	1	2	8.0	0.20	16	0	10	5	85	0	0	0
Total:	33	659	6.9	0.51	4,710	2	Avg: 14	5	79	2	0	0

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	28	5.5	0.43	204	4.33%	0	0.0
Scour Pools	15	351	7.3	0.86	2,585	54.89%	0	0.0
Glides	2	100	8.3	0.23	825	17.52%	1	0.1
Riffles	10	161	6.3	0.19	969	20.56%	0	0.0
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	4	19	6.9	0.14	127	2.70%	1	0.8
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

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POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	17	25.8	30.3
Pools >=1m deep:	6	9.1	10.7
Complex pools (LWD pieces>=3):	5	7.6	8.9
Pool frequency (channel widths/pool):	4.9		
Residual pool depth (avg):	0.62		

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RIPARIAN ZONE

Report Date: 10/18/2013

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	447
Total conifers/1000 ft	20
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	0.3	0.0	3.0	0.0	0.0	0.0	3.3
15-30cm	0.0	0.7	0.3	0.0	0.0	0.3	0.3	1.0
30-50cm	0.0	0.3	0.0	0.0	0.0	1.0	0.0	1.3
50-90cm	0.0	1.0	0.0	0.0	0.0	0.7	0.0	1.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	0.0	2.3	0.3	3.0	0.0	2.0	0.1	2.4

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	51		43		41	
Shrub cover	5		7		19	
Grass/forb cover	27		26		26	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		0		0	
High terrace	100		83		83	
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 (%)	0		0		0	

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 ft	447
Total conifers/1000 ft	20
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	0.0	3.3
15-30cm	0.3	1.0
30-50cm	0.0	1.3
50-90cm	0.0	1.7
>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		
1	LF	1	HT	0	75	15	5	Conifer							UTM-
								Hardwood					2		25.614N/36.72
1	LF	2	HT	0	75	20	0	Conifer							5W
								Hardwood	8						DEAD LOG,
1	LF	3	HT	0	95	85	0	Conifer							IVY BARE
								Hardwood							GRND
1	RT	1	HT	0	90	5	80	Conifer							YARD DEBRIS
								Hardwood							DUMPED
1	RT	2	HT	0	80	10	80	Conifer							TRAIL TO CR;
								Hardwood					1		NEW
1	RT	3	HT	0	90	20	80	Conifer							PLANTINGS
								Hardwood	1						SOME RCG
15	LF	1	HT	0	10	5	40	Conifer							TRAIL
								Hardwood							ADJACENT;
15	LF	2	HT	0	10	5	40	Conifer							WETLAND,
								Hardwood							HOUSES
15	LF	3	HT	0	10	5	40	Conifer							
								Hardwood							
15	RT	1	HT	0	70	5	5	Conifer							
								Hardwood							
15	RT	2	HT	0	70	5	5	Conifer							
								Hardwood							
15	RT	3	HT	0	10	5	5	Conifer							
								Hardwood							
32	LF	1	HT	0	50	0	0	Conifer							
								Hardwood							
32	LF	2	IP	0	0	0	0	Conifer							
								Hardwood							
32	LF	3	IP	0	0	0	0	Conifer							
								Hardwood							
32	RT	1	HT	0	10	0	30	Conifer							
								Hardwood							
32	RT	2	HT	0	20	0	30	Conifer							
								Hardwood							
32	RT	3	HT	0	40	0	30	Conifer							
								Hardwood							

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COMMENT SUMMARY

MONITORING AREA: 7-L SITE ID: 486 STREAM: MT SCOTT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RI	00	9		118-0210/PHOTO LOOKING U/S, T=5C; 1 PC RIPRAP MID CHNL
1	2	LP	00	39.5		118-0211/ RIP T #1
1	3	RI	01	51.5	HS	0212-RIP LEFT BANK, 1 PC RIPRAP AT ALCOVE ENTRANCE
1	4	AL	10	51.5	HS	0213, 0214-WD PROJECT RECENTLY CONSTRUCTED ALCOVE
1	5	LP	00	80	HS	RT SIDE RECENTLY CONSTRUCTED
1	6	SC	00	86.5	HS	
1	7	LP	00	108.5	HS	BY GRAVEL OVERLOOK AREA
1	8	LP	01	153.5	HS	
1	9	RI	11	153.5	HS	TEMP=9C, CAMAS CR
1	10	SC	00	159.5		TEMP=5.5C, SOME RIPRAP-BROKEN CONCRETE
2	11	SP	00	164.5		SOME RIPRAP
2	12	SC	00	168.5		BROKEN CONCRETE
2	13	LP	00	198.5		OLD BRIDGE ABUTMENT
2	14	RI	00	208.5	BV	CUT LOG XING CREEK
2	15	LP	00	238.5		RIP T#2
2	16	RI	00	258.5		INCISED CHNL, WD DUCK BOX; END @ PED BC
2	17	GL	00	308.5	BC, /SS	STORM WATER OUTFLOW, START AT PED BRIDGE
2	18	GL	00	358.5		CONCRETE RIPRAP IN CR
2	19	RI	00	382.5		WIRE CAGES ON TREES

COMMENT SUMMARY

MONITORING AREA: 7-L SITE ID: 486 STREAM: MT SCOTT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	20	RI	00	401.5		FENCE, RIPRAP SOME EXPOSED GRAVEL
2	21	LP	00	422.5		KIDS ROCK DAM FENCE/ END OF ABUTMENT
2	22	SS	00	424.5		OLD DAM, BRIDGE ABUTMENT
2	23	LP	01	444.5	BV	OLD DAM, RIPARIAN
2	24	RI	01	454.5		SIDE CHNL/
2	25	LP	01	480.5		BAMBOO ON LEFT
2	26	RI	01	493.5		LOG IN CR-CUT END LOG
2	28	RI	02	493.5		CAREX, SIDE CHNL
2	29	DP	02	493.5		SIDE CHNL END
2	30	LP	00	504.5		IVY ON TOPPLED TREE-CUT
2	31	LP	00	534.5	BV	LG POND CREATED DEEP-EST. SUB; REST OPPORT.
2	32	LP	00	538.8	BV	SIDE CHNL REST.; RIP #3 EST.-TOO DEEP
2	33	LP	00	561.8		WETLAND/; BV EST; EOS AT SM DRAINAGE/

W-486 Mt Scott Creek (Willamette Basin) - 2013 Winter Restoration Survey



Unit 1 - looking upstream.



Unit 4 - looking upstream at log habitat structures



Unit 4 - alcove.

W-486 Mt Scott Creek (Willamette Basin) - 2013 Winter Restoration Survey



Unit 8 - looking downstream.



Unit 9 - tributary looking upstream.



Unit 31 - artificially created pond.