

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

STREAM: Charlotte Creek (U-14)
BASIN: Umpqua River
SURVEY TYPE: Post-Tx
DATE: August 17, 2007
SURVEY CREW: Peter Cole, Lisa Biggs
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 10.0 km²
USGS MAPS: Deer Head Point
ECOREGION: Coast Range Coastal Uplands

GENERAL DESCRIPTION:

The Charlotte Creek habitat survey extended 568 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 2.7 (range: 1.0-4.5). Land use for the reach was second growth (15-30 cm dbh) and mature (50-90 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (62%) and riffles (23%) dominated stream habitat. Gravel (69%) dominated stream substrate. Wood volume was high at 42.0 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

T22S-R10W-S17NW

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	2.7	VWI Range:	1 - 4.5

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 Channel	568	2,299	0
Secondary Channel	30	39	1
Off-Channel Units	40	102	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 3.6	Width: 10.1	11.3 (10.5 - 12)	13.1 (12.6 - 13.8)
Depth: 0.32	Height: 0.6	1.3 (1.1 - 1.5)	1.5 (1.35 - 1.7)

W:D ratio: 16.2
 Stream Flow Type: LF
 Average Unit Gradient: 1.1%
 Water temperature (°C): 14.0 - 14.0

Entrenchment (ACW:FPW ratio): 1.1
 Habitat Units/100m (total channel length): 5.5
 Habitat Units/100m (primary channel length): 6.2

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	3%	Reach avg: 85%
Undercut Banks:	13%	Range: 64 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	140	24.6
Volume (m ³):	238	42.0
Key pieces (>=12m x 0.60m):	7	1.2

OREGON DEPT OF FISH AND WILDLIFE

CHARLOTTE CREEK POST-TX (4-UWP, 14)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

8/17/2007

REACH 1		T22S-R10W-S17NW					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	1	21	2.4	0.25	51	47	0	5	45	20	30	0
POOL-BACKWATER	5	40	2.6	0.31	102	17	9	18	57	10	6	0
POOL-LATERAL SCOUR	13	298	4.6	0.64	1,518	62	6	11	73	8	3	0
PUDDLED UNIT	1	30	1.3	0.07	39	2	5	23	50	18	5	0
RAPID/BOULDERS	1	25	3.8	0.25	95	70	0	0	60	20	20	0
RIFFLE	11	207	3.0	0.06	564	83	0	5	74	15	5	0
STEP/COBBLE	3	17	4.0	0.06	72	10	0	3	75	14	8	0
Total:	35	638	3.6	0.32	2,440	291	Avg: 4	9	69	12	6	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	5	40	2.6	0.31	102	4.16%	17	16.7	
Scour Pools	13	298	4.6	0.64	1,518	62.21%	62	4.1	
Glides	0	0			0	0.00%	0	0.0	
Riffles	11	207	3.0	0.06	564	23.11%	83	14.7	
Rapids	1	25	3.8	0.25	95	3.89%	70	73.7	
Cascades	1	21	2.4	0.25	51	2.08%	47	92.8	
Step/Falls	3	17	4.0	0.06	72	2.95%	10	13.9	
Dry	1	30	1.3	0.07	39	1.60%	2	5.1	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	18	28.2	31.7
Pools >=1m deep:	1	1.6	1.8
Complex pools (LWD pieces>=3):	9	14.1	15.8
Pool frequency (channel widths/pool):	3.5		
Residual pool depth (avg):	0.59		

Survey Date 8/17/2007
Report Date: 11/7/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	813
Total conifers/1000 ft	0
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	4.0	0.0	3.3	0.0	7.7
15-30cm	0.0	1.0	0.0	0.7	0.0	0.0	0.0	1.7
30-50cm	0.0	1.0	0.0	1.0	0.0	0.7	0.0	2.7
50-90cm	0.0	0.7	0.0	0.0	0.0	0.7	0.0	1.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	3.0	0.0	5.7	0.0	4.7	0.0	4.4

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	71		71		49	
Shrub cover	53		51		44	
Grass/forb cover	45		45		45	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		50		67	
High terrace	33		33		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	17		17		33	
Riprap	0		0		0	
Surface slope (%)	44		55		63	

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	813
Total conifers/1000 ft	0
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	7.7
15-30cm	0.0	1.7
30-50cm	0.0	2.7
50-90cm	0.0	1.3
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

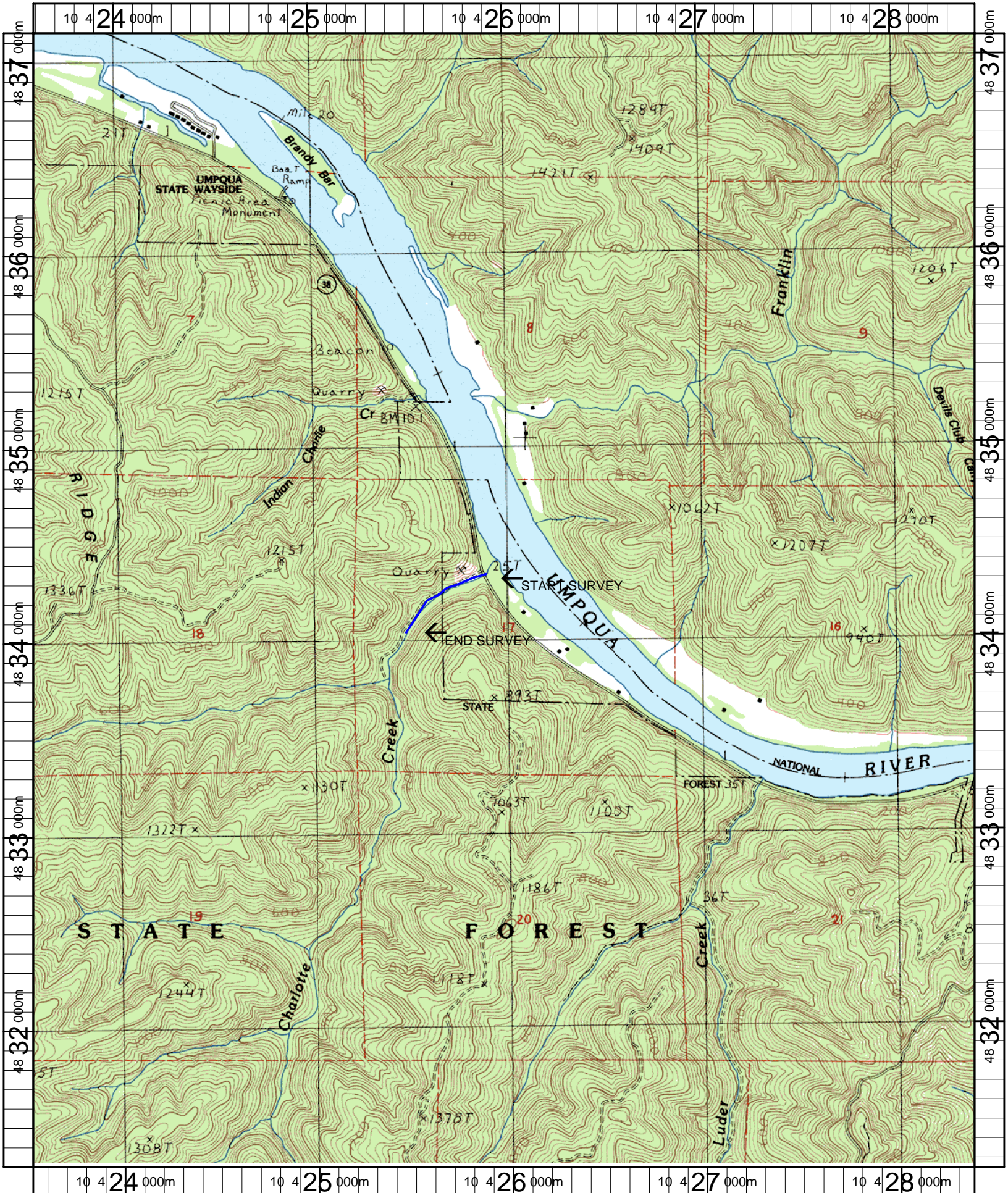
Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
10	LT	1	HS	45	95	10	90	Conifer							
								Hardwood				1			
10	LT	2	HS	30	95	10	90	Conifer							
								Hardwood				2			
10	LT	3	HS	60	80	25	75	Conifer							
								Hardwood				2			
10	RT	1	HS	70	80	75	25	Conifer							
								Hardwood				1			
10	RT	2	RB	0	50	10	70	Conifer							
								Hardwood	5						
10	RT	3	RB	0	10	10	25	Conifer							
								Hardwood	2						
18	LT	1	HT	0	90	100	0	Conifer							CANOPY COVER IS FROM CANOPY COVER IS FROM 6M OF HS AND 4M OF HT
								Hardwood	1						
18	LT	2	HT	0	90	100	0	Conifer							
								Hardwood	2						
18	LT	3	HS	90	50	55	45	Conifer							
								Hardwood	1			1			
18	RT	1	RB	0	90	15	80	Conifer							
								Hardwood				2			
18	RT	2	HS	150	80	65	35	Conifer							
								Hardwood	2	2					
18	RT	3	HS	120	70	50	50	Conifer							
								Hardwood	7						
24	LT	1	HS	150	10	100	0	Conifer							
								Hardwood							
24	LT	2	HS	150	20	100	0	Conifer							
								Hardwood	3						
24	LT	3	HS	110	20	100	0	Conifer							
								Hardwood				1			
24	RT	1	HT	0	60	20	75	Conifer							
								Hardwood	0	3	1				
24	RT	2	HT	0	90	20	75	Conifer							
								Hardwood				1			
24	RT	3	RB	0	65	25	75	Conifer							
								Hardwood							

COMMENT SUMMARY

MONITORING AREA: 4-UMP SITE ID: 14 STREAM: CHARLOTTE CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	25		STARTED AT UPSTREAM END OF CULVERT
2	RI	01	53.6		ANOTHER AQI START SIGN AT BEGINNING OF THIS UNIT. SALMON SPAWNING S
5	PD	02	77.8	AM	1 RSN
9	BW	10	128.6	WL TRAIL/	1 DEAD CRAWDAD
10	CB	00	149.7		TEMPERATURE =14C AT 10:40, RIP 1
13	LP	00	198	HS	LWD
15	LP	00	221.2	AM	1 DEAD PGS 2.5"
18	LP	00	302.1	AM, HS	4.5" BODY RED-LEGGED FROG. + OLD LWD HS. PICTURE, RIP 2
20	BW	10	327.2	HS	LWD
23	BW	10	351.7		WEIRD BRIGHT GREEN ALGAE COVERS BOTTOM. LOTS OF ELK THROUGHOUT
24	RI	00	368.3		COHO & COTTID THROUGHOUT SURVEY, RIP 3
25	LP	00	383.5	DJ, HS SS/	LWD
31	LP	00	485.2	HS, AM	VERY LARGE REDLEGGED FROG. BEDROCK=HARDPAN
33	LP	00	537.4	HS, AM	LWD. 2.5" REDLEGGED FROG
35	LP	00	568.2	HS	LWD. END SIGN LEFT ALDER



Name: DEER HEAD POINT
 Date: 5/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 425982 E 4834202 N
 Caption: CHARLOTTE CREEK RESTORATION SITE - UMPQUA BASIN