

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

STREAM: AXE CREEK  
 GCG: 3-MS  
 SITE ID: 454  
 BASIN: COQUILLE  
 TREATMENT DATE: 2011  
 SURVEY DATE: 3/14/2011  
 SURVEY CREW: Frank Drake and Keenan Smith  
 USGS MAPS: REMOTE  
 ECOREGION: Mid-Coastal Sedimentary  
 REPORT PREPARED BY: Matt Strickland / Charles Stein

REACH: 1 LOCATION: T29S-R11W-S13NE

**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 30-50cm dbh

Primary channel length (meters) and area (m<sup>2</sup>): 931 : 3,003

Secondary channel length (meters) and area (m<sup>2</sup>) 32 : 44

VWI average: 4.0 VWI Range: 1.5 - 7 Average Gradient: 3.4%

Pieces LWD per 100m: 16.3 Wood Volume (m<sup>3</sup>) per 100m: 15.1

Percent pools: 20% Complex pools (LWD pieces>=3): 8 Pools >=1m deep:0

<u>Percent substrate (avg):</u>	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	3	18	37	37	5	0
Pool units	3	26	36	32	3	0
Fast water units	0	12	37	44	6	1

**SURVEY COMMENTS:**

This is a pre treatment restoration survey. The crew noted observing a winter steelhead redd and juvenile coho salmon. The crew also noted numerous debris jams throughout the survey length.

Survey Date: 3/14/2011

Report Date: 9/14/2011

T29S-R11W-S13NE

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**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	4.0	VWI Range:	1.5 - 7

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 (m<sup>2</sup>)</u>	<u>Dry Units</u>
Primary	931	3,003	0
Secondary	32	44	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 3.1	Width: 4.5	5.3 ( 4.6 - 7.3 )	6.9 ( 4.6 - 11.3 )
Depth: 0.32	Height: 0.2	0.5 ( 0.4 - 0.6 )	0.9 ( 0.5 - 1.05 )

W:D ratio: 19.4

Stream Flow Type: HF

Average Unit Gradient: 3.4%

Water temperature (°C): 9.0 - 9.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 8.3

Habitat Units/100m (primary channel length): 8.6

**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:	5%	Reach avg: 87%
Undercut Banks:	8%	Range: 61 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	152	16.3
Volume (m <sup>3</sup> ):	141	15.1
Key pieces (>=12m x 0.60m):	3	0.3

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

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**REACH 1**

**HABITAT DETAIL**

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BOULDERS	7	57	2.5	0.22	208	47	0	6	23	51	16	4
CULVERT CROSSING	1	24	2.4	0.20	59	0	0	10	40	35	15	0
POOL-BACKWATER	1	2	1.2	0.25	2	0	40	50	0	10	0	0
POOL-ISOLATED	1	2	1.4	0.20	3	0	80	0	0	0	20	0
POOL-LATERAL SCOUR	20	129	3.3	0.55	421	4	4	26	35	33	3	1
POOL-PLUNGE	8	50	4.0	0.58	187	3	1	24	40	31	4	0
RIFFLE	28	609	3.0	0.21	1,845	24	0	13	42	42	3	0
RIFFLE W/ POCKETS	4	80	3.7	0.31	302	13	0	16	26	43	15	0
STEP/COBBLE	2	6	1.8	0.14	13	2	0	53	20	25	3	0
STEP/LOG	8	4	3.7	0.08	9	0	0	12	52	36	0	0
<b>Total:</b>	<b>80</b>	<b>963</b>	<b>3.1</b>	<b>0.32</b>	<b>3,047</b>	<b>93</b>	<b>Avg: 3</b>	<b>18</b>	<b>37</b>	<b>37</b>	<b>5</b>	<b>0</b>

**HABITAT SUMMARY**

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )
Dammed & BW Pools	2	4	1.3	0.23	5	0.17%	0	0.0
Scour Pools	28	180	3.5	0.56	608	19.94%	7	1.2
Glides	0	0			0	0.00%	0	0.0
Riffles	32	689	3.1	0.22	2,146	70.44%	37	1.7
Rapids	0	0			0	0.00%	0	0.0
Cascades	7	57	2.5	0.22	208	6.83%	47	22.6
Step/Falls	10	10	3.3	0.09	21	0.70%	2	9.4
Dry	0	0			0	0.00%	0	0.0
Culverts	1	24	2.4	0.20	59	1.92%	0	0.0

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T29S-R11W-S13NE

REACH 1

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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:	30	31.1	32.2
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	8	8.3	8.6
Pool frequency (channel widths/pool):	7.2		
Residual pool depth (avg):	0.36		

Survey Date 3/14/2011  
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**RIPARIAN ZONE  
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	406
Total conifers/1000 ft	0
Total conifers >20" dbh/1000 f	0
Total conifers >35" dbh/1000 f	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	0.0	0.0	1.0	0.0	0.7	0.0	1.7
15-30cm	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
30-50cm	0.0	1.7	0.0	0.0	0.0	0.7	0.0	2.3
50-90cm	0.0	0.7	0.0	0.0	0.0	0.3	0.0	1.0
>90cm	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.7
Total/100m2	0.0	3.7	0.0	1.3	0.0	1.7	0.0	2.2

**Canopy closure and ground cover**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	84		82		83	
Shrub cover	31		22		18	
Grass/forb cover	51		58		73	

**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	50		33		17	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		17	
Riprap	0		0		0	
Surface slope (%)	44		36		48	

**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	406
Total conifers/1000 ft	0
Total conifers >20" dbh/1000 f	0
Total conifers >35" dbh/1000 f	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	1.7
15-30cm	0.0	1.0
30-50cm	0.0	2.3
50-90cm	0.0	1.0
>90cm	0.0	0.7



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OREGON PLAN MONITORING SITE  
SURVEY DATE: 3/14/2011

COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 454 STREAM: AXE CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	CC	00	24.4	CC	CULVERT 2.6WIDE,1.8 TALL,WITH OPEN BOTTOM AND SUBSTRATE THROUGHOUT.GPS NOT AVAILABLE
1	4	RP	00	71.6	DJ,HS,SS	
1	5	RI	00	88.2	DJ	
1	6	LP	00	92.5	HS, SS/	
1	7	RP	00	106.4	DJ	
1	10	CB	01	150.9	/LS,/TJ,DJ	
1	11	CB	11	150.9		TEMP 10C
1	13	SL	00	158.15		H=.25
1	14	RP	00	184.35	DJ	
1	17	LP	00	206.15	DJ	
1	18	RI	00	234.65	DJ	
1	19	LP	00	239.65	DJ	



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COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 454 STREAM: AXE CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	20	RI	00	259.15	DJ	
1	21	PP	00	270.45	DJ	
1	22	RI	01	315.75	DJ,/TJ	
1	23	CB	11	315.75		TEMP 10.5
1	24	LP	00	321.75	DJ	
1	26	LP	00	331.85	DJ	
1	28	PP	00	349.75	DJ	
1	29	SL	00	350.05		H=.30
1	32	SL	00	364.25	/SS	H=.25
1	34	LP	00	378.05	DJ,/LS	
1	35	RI	00	417.25	/LS,/SS	
1	36	LP	00	423.75		STW REDD

COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 454 STREAM: AXE CREEK

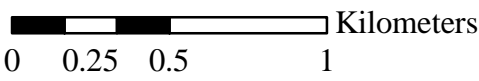
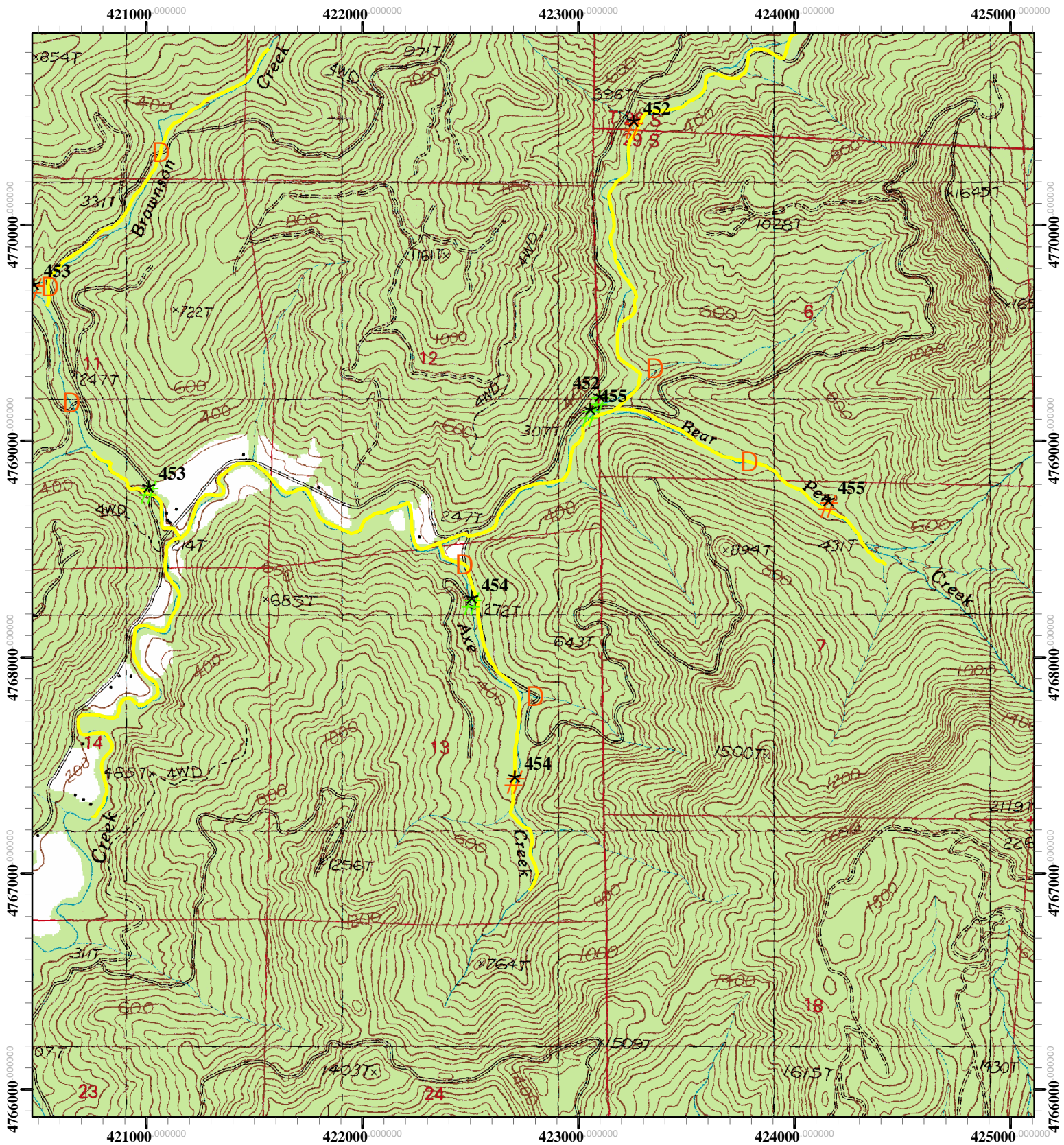
REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	39	CB	01	444.95	DJ	
1	42	LP	02	444.95		COHO FRY N= 6-10
1	43	SL	02	444.95	DJ	H=.50
1	50	PP	00	530.05	DJ	
1	51	SL	00	530.25	DJ	H=.25
1	53	LP	01	553.85	DJ	
1	54	RI	01	577.55	TJ/	
1	55	RI	02	577.55	DJ	
1	56	RI	11	577.55		TEMP 9C
1	59	LP	00	622.75	DJ	
1	64	SL	00	670.75		H=.30
1	65	RI	00	720.75	DJ,SS	

COMMENT SUMMARY





MONITORING AREA: 3-MS SITE ID: 454 STREAM: AXE CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	67	LP	00	737.25	DJ	HARDPAN
1	69	LP	00	757.65	DJ	
1	70	RI	01	807.65	DJ/TJ	COHO FRY
1	71	CB	11	807.65		HARDPAN. TEMP 9.5C
1	72	RI	00	857.65	DJ	
1	74	PP	00	875.45	DJ	
1	75	SL	00	875.75	DJ	H=.25
1	77	SL	00	884.05	DJ	H=.35
1	78	RI	00	910.75	SS/	
1	79	LP	00	917.25	DJ	





Restoration Site ID: 454  
 Stream: Axe Creek  
 T29S- R11W - S13  
 USGS Map: Remote  
 Basin: Coquille

-  Proposed Pre-Tx REST Start Point
-  Proposed Pre-Tx REST End Point
-  Potential Barrier
-  Spawning Survey Segments

