

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

STREAM: BEAR PEN CREEK  
 GCG: 3-MS  
 SITE ID: 455  
 BASIN: COQUILLE  
 TREATMENT DATE: 2011  
 SURVEY DATE: 3/15/2011  
 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-R10W-S06SW

**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>): 1,190 : 4,617

Secondary channel length (meters) and area (m<sup>2</sup>): 201 : 258

VWI average: 6.8 VWI Range: 1 - 17 Average Gradient: 2.5%

Pieces LWD per 100m: 26.3 Wood Volume (m<sup>3</sup>) per 100m: 49.3

Percent pools: 27% Complex pools (LWD pieces>=3): 18 Pools >=1m deep:2

<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	4	19	48	21	8	1
Pool units	6	27	46	16	5	0
Fast water units	1	9	49	25	13	2

**SURVEY COMMENTS:**

This is a pre treatment restoration survey. The crew noted large wood habitat structures throughout the survey length. The crew also noted observing several salmon carcasses. A 1.4 meter step over a log near the end of the survey was noted as a potential barrier to upstream fish migration.

Survey Date: 3/15/2011

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T29S-R10W-S06SW

REACH 1

**Valley and Channel Summary**

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0%	Constraining Terraces	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	6.8	VWI Range:	1 - 17

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

Type	Length (m)	Area (m <sup>2</sup> )	Dry Units
Primary	1,190	4,617	0
Secondary	201	258	7

Channel Dimensions (m)

Wetted	Active	Floodprone <i>n</i> = 7	First Terrace <i>n</i> = 5
Width: 3.4	Width: 4.1	5.9 ( 1.1 - 10.5 )	6.1 ( 4.8 - 7.2 )
Depth: 0.34	Height: 0.4	0.8 ( 0.6 - 1 )	1.0 ( 0.7 - 1.3 )

W:D ratio: 12.5

Stream Flow Type: HF

Average Unit Gradient: 2.5%

Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio): 1.4

Habitat Units/100m (total channel length): 7.8

Habitat Units/100m (primary channel length): 9.2

**Riparian, Bank, and Wood Summary**

	Primary	Secondary
Land Use:	ST	LT
Riparian Vegetation:	D30	S

Bank Condition and Shade

Bank Status	Percent Reach Length	Shade (% of 180)
Actively Eroding:	15%	Reach avg: 86%
Undercut Banks:	9%	Range: 64 - 100

Large Wood Debris

	Total	Total / 100m primary channel
All pieces (>=3m x 0.15m):	313	26.3
Volume (m <sup>3</sup> ):	587	49.3
Key pieces (>=12m x 0.60m):	19	1.6

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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/BEDROCK	1	2	0.3	0.10	1	0	0	0	0	0	0	100
CASCADE/BOULDERS	6	153	4.1	0.32	704	83	0	10	39	17	34	0
DRY CHANNEL	2	30	1.2	0.00	40	0	0	53	48	0	0	0
POOL-BACKWATER	1	2	1.3	0.20	2	0	0	30	0	70	0	0
POOL-DAMMED	1	8	4.1	0.60	33	3	0	40	60	0	0	0
POOL-ISOLATED	1	2	0.6	0.15	1	0	0	40	60	0	0	0
POOL-LATERAL SCOUR	41	325	3.7	0.58	1,243	2	6	27	45	17	5	0
POOL-PLUNGE	1	8	4.5	0.70	36	0	0	30	60	10	0	0
PUDDLED UNIT	5	61	1.1	0.15	68	3	18	43	22	15	2	0
RAPID/BOULDERS	1	26	2.5	0.30	65	1	0	0	5	45	50	0
RIFFLE	41	761	3.0	0.18	2,611	10	1	10	53	26	10	0
STEP/COBBLE	4	11	5.2	0.18	54	1	0	1	41	50	8	0
STEP/LOG	4	3	6.3	0.16	18	0	0	3	98	0	0	0
<b>Total:</b>	109	1,391	3.4	0.34	4,875	103	<b>Avg:</b> 4	19	48	21	8	1

**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	3	11	2.0	0.32	36	0.74%	3	8.3
Scour Pools	42	333	3.8	0.58	1,279	26.23%	2	0.2
Glides	0	0			0	0.00%	0	0.0
Riffles	41	761	3.0	0.18	2,611	53.54%	10	0.4
Rapids	1	26	2.5	0.30	65	1.33%	1	1.5
Cascades	7	155	3.6	0.29	704	14.44%	83	11.8
Step/Falls	8	14	5.7	0.17	73	1.49%	1	1.4
Dry	7	92	1.1	0.11	108	2.22%	3	2.8
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

BEAR PEN CREEK  
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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:	45	32.3	37.8
Pools >=1m deep:	2	1.4	1.7
Complex pools (LWD pieces>=3):	18	12.9	15.1
Pool frequency (channel widths/pool):	7.6		
Residual pool depth (avg):	0.40		

Survey Date 3/15/2011

**RIPARIAN ZONE  
VEGETATION SUMMARY**

Report Date: 9/14/2011

REACH 1

**Summary of Riparian Zone (0-30m) 4 transects**

Total hardwoods/1000	442
Total conifers/1000 ft	61
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	0.5	0.0	0.8	0.0	0.3	0.0	1.5
15-30cm	0.0	0.5	0.0	0.8	0.5	2.5	0.5	3.8
30-50cm	0.0	1.0	0.0	0.3	0.5	0.8	0.5	2.0
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	2.0	0.0	1.8	1.0	3.5	0.3	2.4

**Canopy closure and ground cover**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	55		58		62	
Shrub cover	66		58		44	
Grass/forb cover	34		43		54	

**Predominant landform in each zone**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	25		50		75	
High terrace	75		50		25	
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 (%)	16		31		25	

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

**4 transects**

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

Total hardwoods/1000	442
Total conifers/1000 ft	61
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	1.5
15-30cm	0.5	3.8
30-50cm	0.5	2.0
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	
95	LT	3	HS	20	60	35	60	Conifer				1		
								Hardwood		1				
95	RT	1	HT	0	65	85	15	Conifer						
								Hardwood						
95	RT	2	HS	15	55	45	55	Conifer						
								Hardwood	1					
95	RT	3	HS	15	65	35	65	Conifer			1			
								Hardwood	1					



OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 3/15/2011

COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 455 STREAM: BEAR PEN CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RI	00	39.7		TEMP=8.5 C
1	2	LP	00	52.9		METRIC FOR START OF SURVEY
1	6	LP	00	97.9	HS	HS LOGS
1	9	RI	01	121		
1	11	PD	02	121		ACW=1.1M; IGNORE FPW AND ACW ENTRIES
1	16	LP	00	152.4		SALMONID SKELETON
1	17	RI	00	177.2		
1	18	LP	00	189.8	HS	HS LOGS
1	21	SL	00	237.95		H=.40
1	24	LP	01	266.25	HS	HS LOGS
1	25	PD	02	266.25	/SS	ACW=1.4
1	26	RI	01	324.25	HS	HS LOGS

OREGON DEPT OF FISH AND WILDLIFE  
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OREGON PLAN MONITORING SITE  
SURVEY DATE: 3/15/2011

COMMENT SUMMARY

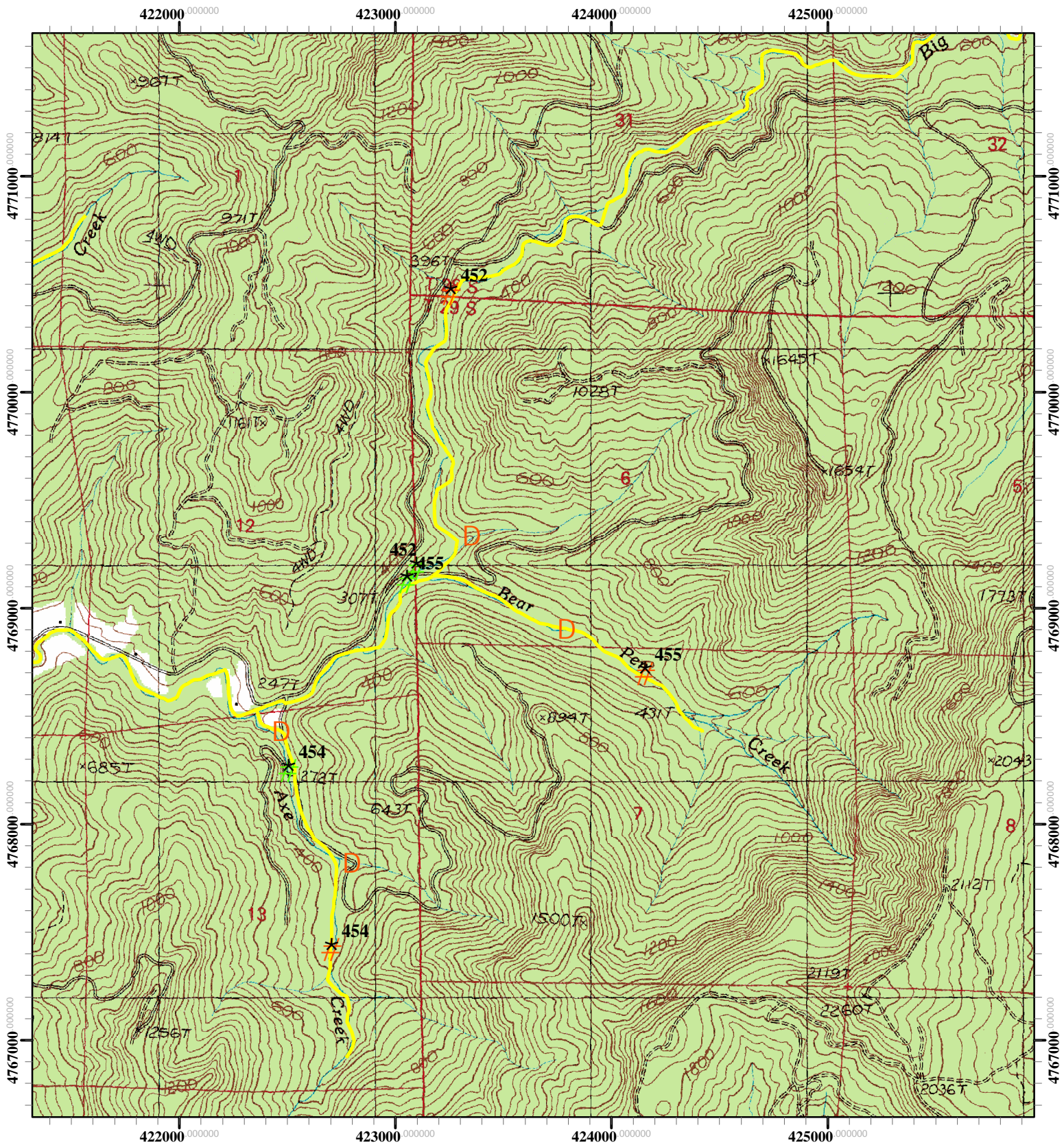
MONITORING AREA: 3-MS SITE ID: 455 STREAM: BEAR PEN CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	28	DC	02	324.25		ACW=1.4
1	30	PD	02	334.25		ACW=1.3
1	32	PD	02	353.65		ACW=2.1; COHO FRY
1	36	SL	00	397.75		H=.35
1	39	LP	01	428.35	DJ; /TJ	
1	40	CR	11	428.35		TEMP=9; HARDPAN SUBSTRATE
1	42	LP	00	468.75	HS	HS LOGS
1	43	RI	00	488.55	/SS	
1	46	LP	00	516.45	HS	HS LOGS
1	50	PD	02	560.95		ACW=1.3
1	51	PP	00	568.95	HS	REDD; HS LOGS
1	52	SL	00	569.45		H=.50





COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 455 STREAM: BEAR PEN CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	62	DC	02	619.35	/SS	
1	68	LP	00	667.45	/LI	
1	72	LP	00	708.35		COHO CARCASS
1	74	LP	00	720.65	HS	SALMON CARCASS; HS LOGS
1	79	LP	00	758.15	HS	HS LOGS; WETTED WIDTH IS 6.1M
1	83	RI	01	830.85	/SS	
1	91	SL	00	959.55	PN	H=1.4
1	95	LP	00	1011.35		WETTED WIDTH= 5.3
1	108	RI	00	1190.25	/TJ	SEE TRIB UNIT 109 FOR GPS COORDINATES FOR END MI
1	109	RI	11	1190.25		TEMP=9



Restoration Site ID: 455  
 Stream: Bear Pen Creek  
 T29S- R10W - S06  
 USGS Map: Remote  
 Basin: Coquille

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

