

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

STREAM: Deer Creek (MC-301)
BASIN: Alsea River
SURVEY TYPE: Post-Tx
DATE: August 14, 2006
SURVEY CREW: Lanoah Babcock, Sharon Tippery
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.2 km²
USGS MAPS: Toledo South, Elk City
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Deer Creek habitat survey extended 1,964 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 7.1 (range: 1.0-17.0). Land use for the reach was mature (50-90 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 2.3 percent. Scour pools (46%) and beaver pools (24%) dominated stream habitat. Sand (42%) and gravel (33%) dominated stream substrate. Wood volume was low at 12.9 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

T12S-R10W-S11SW

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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	7.1	VWI Range:	1 - 17

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 Channel	1,964	7,644	0
Secondary Channel	0	0	0
Off-Channel Units	69	65	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 9	<u>First Terrace</u> n = 7
Width: 3.1	Width: 5.1	6.2 (4.7 - 9.7)	10.8 (6 - 26.3)
Depth: 0.29	Height: 0.3	0.7 (0.5 - 0.7)	1.2 (0.8 - 1.75)

W:D ratio: 15.5
 Stream Flow Type: LF
 Average Unit Gradient: 2.3%
 Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 8.1
 Habitat Units/100m (primary channel length): 8.3

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	1%	Reach avg: 77%
Undercut Banks:	4%	Range: 44 - 89

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	204	10.4
Volume (m ³):	254	12.9
Key pieces (>=12m x 0.60m):	23	1.2

OREGON DEPT OF FISH AND WILDLIFE

DEER CREEK POST-TX (2-MC, 301)

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

8/14/2006

REACH 1		T12S-R10W-S11SW					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	3	59	3.0	0.18	183	97	0	2	7	18	63	10
CULVERT CROSSING	1	11	3.5	0.10	39	4	6	83	6	0	6	0
POOL-BEAVER DAM	3	193	6.8	1.19	1,839	0	10	82	8	0	0	0
POOL-ISOLATED	2	21	2.1	0.09	43	0	33	65	3	0	0	0
POOL-LATERAL SCOUR	70	933	3.7	0.50	3,355	149	5	68	14	6	5	2
POOL-PLUNGE	4	29	5.8	0.43	169	40	3	55	4	9	28	3
RAPID/BOULDERS	8	216	3.0	0.14	706	254	0	7	16	25	49	4
RIFFLE	44	497	2.1	0.07	1,202	48	2	19	57	18	3	0
STEP/BEAVER DAM	3	3	4.1	0.05	13	0	10	53	33	3	0	0
STEP/BOULDERS	1	5	3.3	0.05	17	15	0	5	15	20	60	0
STEP/COBBLE	22	60	2.1	0.06	134	1	0	6	67	27	0	0
STEP/LOG	2	3	2.0	0.04	8	0	0	75	25	0	0	0
STEP/STRUCTURE	1	5	0.2	0.12	1	0	0	70	20	10	0	0
Total:	164	2,033	3.1	0.29	7,709	608	Avg: 4	42	33	13	7	1

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	214	4.9	0.75	1,882	24.42%	0	0.0	
Scour Pools	74	962	3.8	0.49	3,524	45.71%	189	5.4	
Glides	0	0			0	0.00%	0	0.0	
Riffles	44	497	2.1	0.07	1,202	15.59%	48	4.0	
Rapids	8	216	3.0	0.14	706	9.16%	254	36.0	
Cascades	3	59	3.0	0.18	183	2.37%	97	53.0	
Step/Falls	29	76	2.3	0.06	172	2.24%	16	9.3	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	11	3.5	0.10	39	0.50%	4	10.4	

POOL SUMMARY			
	Total	Total of all Channel Lengths	
		# / Km	Primary Channel Length # / Km
All Pools:	79	38.9	40.2
Pools >=1m deep:	3	1.5	1.5
Complex pools (LWD pieces>=3):	24	11.8	12.2
Pool frequency (channel widths/pool):	5.1		
Residual pool depth (avg):	0.45		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

DEER CREEK POST-TX
GCG: 2-MC SITE ID: 301

Survey Date 8/14/2006
Report Date: 3/5/2007

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 7 transects

Total hardwoods/1000	627
Total conifers/1000 ft	96
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	9

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	0.0	0.0	0.0	0.0	0.0
15-30cm	0.0	1.3	0.0	2.3	0.0	1.7	0.0	5.3
30-50cm	0.0	2.0	0.1	1.1	0.4	1.1	0.6	4.3
50-90cm	0.0	0.6	0.6	0.0	0.3	0.1	0.9	0.7
>90cm	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total/100m2	0.1	3.9	0.7	3.4	0.7	3.0	0.5	3.4

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	70	69	71
Shrub cover	80	75	65
Grass/forb cover	19	24	34

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	43	57	71
High terrace	50	43	29
Low terrace	7	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 (%)	34	28	29

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

7 transects

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

Total hardwoods/1000	627
Total conifers/1000 ft	96
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	9

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	0.0
15-30cm	0.0	5.3
30-50cm	0.6	4.3
50-90cm	0.9	0.7
>90cm	0.1	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			
23	RT	3	HS	25	75	70	30	Conifer							
								Hardwood		7	1				
23	LF	1	HT	22	80	90	10	Conifer							2D-0430236-4931383
								Hardwood				1			
23	LF	2	HT	3	70	70	30	Conifer							
								Hardwood		3					
23	LF	3	HT	4	75	60	40	Conifer							
								Hardwood		1					
23	RT	1	LT	13	80	80	20	Conifer							
								Hardwood		3	1				
23	RT	2	HS	32	75	70	30	Conifer							
								Hardwood		2	1				
44	LF	1	HT	20	75	60	30	Conifer							3D-0430351-4931493
								Hardwood			1				
44	LF	2	HS	30	70	80	20	Conifer							
								Hardwood		4	1				
44	LF	3	HS	55	75	40	60	Conifer							
								Hardwood			1				
44	RT	1	HT	14	80	80	20	Conifer							
								Hardwood		1	2	1			
44	RT	3	HS	60	75	0	85	Conifer							15% OPEN
								Hardwood		2					
44	RT	2	HT	55	75	15	80	Conifer							TRANS
								Hardwood		4	2				
63	RT	3	HS	45	75	80	20	Conifer					1		
								Hardwood			1				
63	LF	2	HS	45	70	80	20	Conifer					2		
								Hardwood							
63	LF	3	HS	35	75	70	30	Conifer							
								Hardwood			1				
63	RT	2	HS	60	60	100	0	Conifer							VINE MAPLE
								Hardwood							
63	RT	1	HS	65	60	100	0	Conifer							VINE MAPLE
								Hardwood							
63	LF	1	HS	50	65	100	0	Conifer					1		
								Hardwood							

76	LF	1	HS	50	60	60	40	Conifer Hardwood				NO GPS COVERAGE
76	LF	2	HS	45	75	80	20	Conifer Hardwood				
76	LF	3	HS	40	80	80	20	Conifer Hardwood			1	
76	RT	1	HS	45	60	70	30	Conifer Hardwood		2		
76	RT	2	HS	40	70	60	40	Conifer Hardwood	1		1	
76	RT	3	HS	30	75	30	60	Conifer Hardwood			1	
95	RT	2	HT	8	65	75	25	Conifer Hardwood				
95	RT	3	HS	30	75	55	45	Conifer Hardwood		2		
95	LF	1	HS	45	75	70	30	Conifer Hardwood	1		2	
95	LF	3	HS	15	75	65	35	Conifer Hardwood			1	
95	LF	2	HS	20	70	75	25	Conifer Hardwood			1	
95	RT	1	HT	40	60	90	10	Conifer Hardwood	3		1	
115	RT	3	HT	10	75	90	10	Conifer Hardwood			1	
115	LF	2	HT	3	75	90	10	Conifer Hardwood	2			
115	LF	3	HT	5	75	90	10	Conifer Hardwood	1		2	
115	RT	1	HT	17	80	65	35	Conifer Hardwood		2		1
115	RT	2	HT	3	75	75	25	Conifer Hardwood			3	
115	LF	1	HT	11	80	85	15	Conifer Hardwood	1		3	
138	RT	3	HT	5	10	90	10	Conifer Hardwood				
138	RT	2	HT	3	30	90	10	Conifer Hardwood				MOSTLY BLACKBERRY
138	RT	1	HT	23	50	85	15	Conifer Hardwood				NO TREES-
138	LF	3	HS	50	80	85	15	Conifer Hardwood			1	
138	LF	1	HS	55	70	90	10	Conifer Hardwood	1			1

138	LF	2	HS	45	80	95	5	Conifer		1
								Hardwood	1	

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **301** DEER CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	8	CC		START SIGN ALDER/
2	CC	00	19	CC, BV		10% METAL
3	RI	00	37	WL		
4	LP	00	55	BV, WL		ELK, COHO, CAT
5	RI	00	72	WL		
6	LP	00	87	BV		COHO
7	RI	01	108	BV		
8	IP	10	108			COHO
9	LP	00	119	BV		COHO
10	RI	00	123.3	WL	T=13.0C	
11	LP	00	156.3	BV,HS,WL	HS	COHO
13	LP	00	172.3			COHO
15	LP	00	206.3	HS	HS	
17	LP	00	214.2	HS		
19	LP	00	233.2	BV		COHO
20	RI	00	239.2	WL		ELK
21	LP	00	249.2			COHO
23	LP	00	272.2	BV	RIPARIAN #1	COHO
24	RI	00	287.2	BV, HS		
25	LP	00	302.2	BV, HS	HS	COHO
26	RI	00	313.2	BV		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **301** **DEER CREEK POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
27	LP	00	317.2			COHO
28	RI	00	324.2			GRAVEL BAR
29	LP	00	332.2	BV		
30	SL	00	334.5	BV	H=0.65M	
31	LP	00	347.5	WL, BV		COHO, DEER
33	LP	00	360.5			COHO
35	LP	00	382.5	BV		COHO
37	LP	00	396.7	BV		COHO
39	LP	00	411.3			COHO
40	RI	00	427.3	WL		DEER, ELK
41	LP	00	435.3	BV		COHO
42	RI	00	457.3	BV		
43	PP	00	465.3	BV, GS		
44	SS	00	469.8	GS, HS	H=0.60M, RIPARIAN #2	USGS GAGE STATION
46	LP	00	491.8			COHO
48	LP	00	508.1			COHO
50	LP	00	515.3	WL		COHO
52	LP	00	531.8			COHO
53	RI	00	553.8	WL		
54	LP	00	563.8		HILLSLOPE/HILLSLOPE	SALMON SPAWNING SUR
55	RB	00	610.8			BEAUTIFUL TREES

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **301** **DEER CREEK POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
58	LP	00	644.8			COHO
63	CB	00	718.2		SS/, RIPARIAN #3	PINK DOT FLAG
64	PP	00	728.2	SS/		COHO
66	PP	00	743.6			COHO
67	RB	00	751.6	WL		
68	LP	00	758.6			LOTS OF COHO
69	RB	00	802.6		SS	
70	LP	00	808.6			COHO
71	RB	00	841.6	BV		COHO
74	LP	00	889.6			METAL DEBRIS, PINK DOT
75	RB	00	911.1	BV		CRAWDAD
76	LP	00	925.1	BV	RIPARIAN #4	COHO
77	SD	00	926.3	BD, WL	H=0.80M	
78	BP	01	973.3	/TJ,/SS,BV	/TJ, MEADOW WITH ALDERS	COHO, WL
80	RI	00	980.3	BV		LAMPRAY
81	LP	00	1004.3	BV		
83	LP	00	1033.3			COHO
85	LP	00	1050.3			COHO
89	LP	00	1095.7		T=10.0C	COHO
91	LP	00	1119.7	WL		COHO
93	LP	00	1158.7	WL		COHO, GAME TRAILS

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **301** DEER CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
95	LP	00	1183.7		RIPARIAN #5	
96	SB	00	1189		H=0.25M	
99	LP	01	1229.6	TJ/	TJ/	
100	RI	11	1229.6		T=10.5C	T=10.5C
102	LP	01	1258	TJ/	TJ/	
103	RI	11	1258		T=10.5C	T=10.5C
105	LP	00	1295	WL		ELK, COHO
106	RI	01	1302	TJ/	TJ/	
107	RI	11	1302		SUBSURF. FLOW UNDER BL	T=11.0C, SUBSURFACE AT
110	SD	00	1324.5	BD	H=0.55M, BV COMPLEX	
111	BP	00	1332.5	BV		
112	SD	00	1333.8	BD	H=0.80M	
113	BP	00	1471.8	BV, WL		RED-LEGGED FROG, COH
115	LP	00	1482.6	BV	RIPARIAN #6	COHO
118	SC	00	1502.5	BV		
120	RI	00	1527.5	BV		
121	LP	00	1535.5	BV		
123	LP	00	1551.7			COHO
124	SC	00	1553.7	WL		
125	LP	00	1576.7			LOTS OF COHO
127	LP	00	1594.7			COHO

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **301** DEER CREEK POST-TX

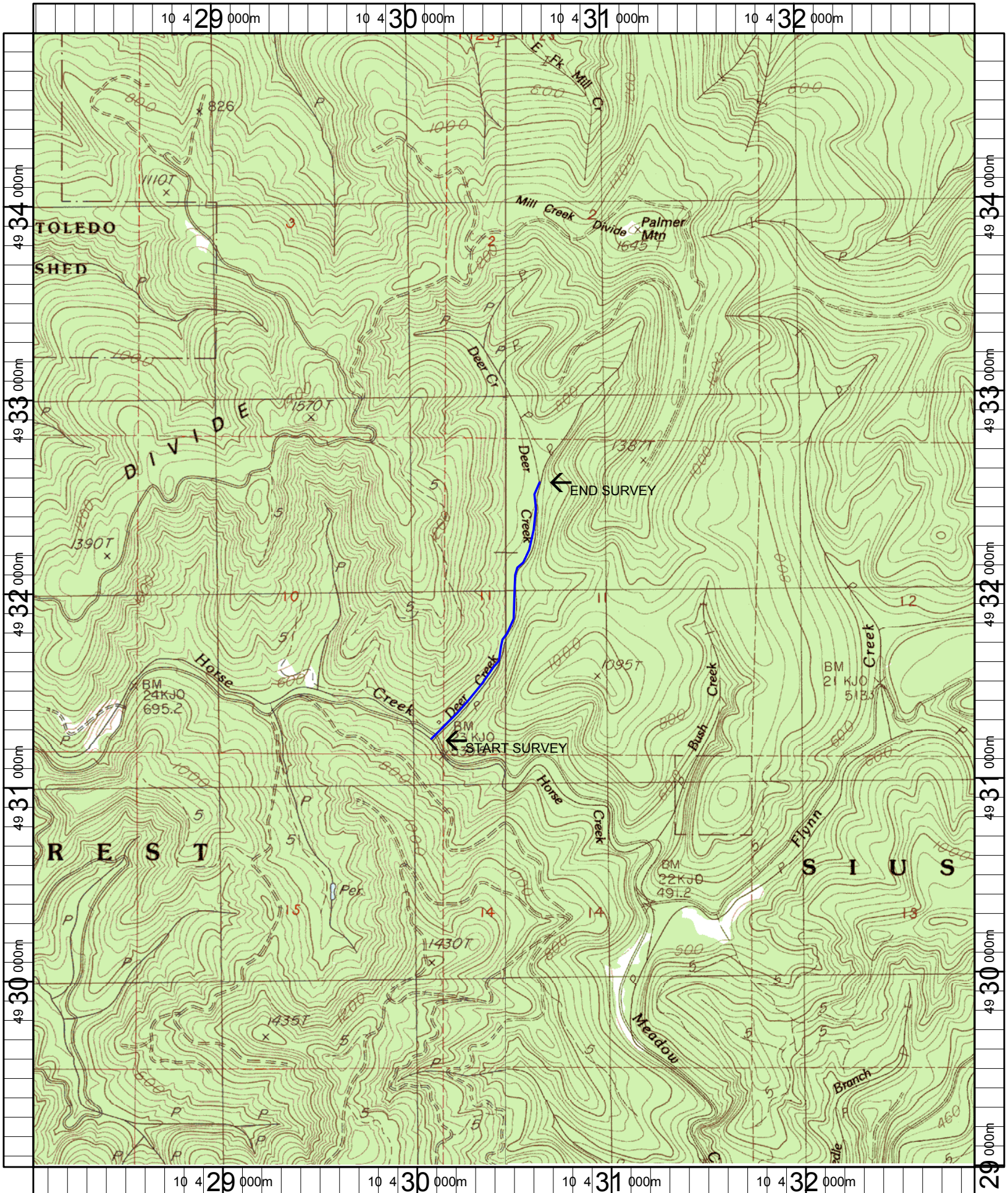
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
129	LP	00	1613.6	/SS	/SS	COHO
130	RI	01	1619.6		TJ/	
131	RI	11	1619.6		T=10.0C	
132	LP	00	1626.6	WL		
134	LP	00	1665.6	GS		WATER GAGE, COHO
136	RI	00	1681.6			COHO
137	LP	00	1694.6			COHO
138	RI	00	1714.6		RIPARIAN #7	
139	LP	01	1731.6	BV, TJ/	TJ/	
140	RI	11	1731.6			T=10.5C
142	LP	00	1739	BV		
143	SL	00	1739.5	BV	H=0.30M	
144	LP	00	1756.5	BV		
145	LP	00	1769.5	BV		
146	RI	00	1784.5	BV		
147	LP	00	1799.5	BV		
148	RI	00	1804	BV		
150	RI	00	1824	BV		
151	LP	00	1853	BV		COHO
155	LP	00	1876.1	BV		COHO, OLD BV DAM BLO
156	RI	00	1896.1	BV		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **301** DEER CREEK POST-TX

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
157	LP	00	1900.4	BV		
158	RI	00	1911.4	BV		
159	LP	01	1922.4	BV, WL		ELK
160	IP	10	1922.4	BV		
161	RI	00	1946.4	BV		COHO
162	LP	00	1957.4	BV		LOTS OF COHO
163	RI	01	1964.4	BV, /TJ	/TJ	
164	RI	11	1964.4	BV	T=12.0C, END SIGN /ALDER9	T=12.0C



Name: TOLEDO SOUTH
 Date: 6/13/2005
 Scale: 1 inch equals 2000 feet

Location: 10 430476 E 4931943 N
 Caption: DEER CREEK RESTORATION SITE - ALSEA BASIN