

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

STREAM: Fall Creek Tributary A (MS-276)
BASIN: Coos River
SURVEY TYPE: Post-Tx
DATE: July 18, 2005
SURVEY CREW: Kevin Cellura, Eric Himmelreich
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.9 km²
USGS MAPS: Tioga
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Fall Creek Tributary A habitat survey extended 1,270 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.8 (range: 2.8-7.3). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 4.0 percent. Riffles (49%) and rapids (25%) dominated stream habitat. Gravel (41%) and sand (20%) dominated stream substrate. Wood volume was low at 17.5 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

T25S-R10W-S25SE

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	4.8	VWI Range:	2.8 - 7.3

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	1,270	2,719	0
Secondary Channel	43	36	0
Off-Channel Units	27	66	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.1	Width: 5.4	6.5 (4 - 11.5)	8.1 (4.1 - 16.5)
Depth: 0.21	Height: 0.4	0.8 (0.3 - 1.6)	1.5 (0.5 - 2.8)

W:D ratio: 19.1

Entrenchment (ACW:FPW ratio): 1.2

Stream Flow Type: LF

Habitat Units/100m (total channel length): 4.4

Average Unit Gradient: 4.0%

Habitat Units/100m (primary channel length): 4.6

Water temperature (°C): 14.5 - 14.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D15	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	18%	Reach avg: 96%
Undercut Banks:	2%	Range: 64 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	211	16.6
Volume (m ³):	223	17.5
Key pieces (>=12m x 0.60m):	9	0.7

OREGON DEPT OF FISH AND WILDLIFE FALL CREEK TRIBUTARY A POST-TX (3-MS, 276)

HABITAT INVENTORY Report Date: 4/26/2006 Survey Date: 7/18/2005

REACH 1		T25S-R10W-S25SE					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	10	258	1.6	0.15	409	117	25	18	38	14	5	0
CULVERT CROSSING	1	22	2.1	0.05	47	0	0	0	30	0	70	0
POOL-LATERAL SCOUR	6	63	3.1	0.51	214	6	25	40	31	1	2	2
POOL-PLUNGE	4	13	3.7	0.63	47	0	24	49	26	1	0	0
POOL-STRAIGHT SCOUR	1	9	3.2	0.70	30	0	0	15	60	5	0	20
RAPID/BEDROCK	1	29	5.1	0.20	147	2	0	10	10	0	0	80
RAPID/BOULDERS	11	335	1.6	0.11	545	118	10	12	44	26	8	0
RIFFLE	17	554	2.3	0.15	1,326	68	6	16	49	20	3	6
RIFFLE W/ POCKETS	1	49	1.0	0.15	49	13	0	15	55	20	5	5
STEP/BEDROCK	1	1	0.4	0.03	0	0	15	10	75	0	0	0
STEP/BOULDERS	4	4	0.9	0.06	6	14	10	10	11	1	68	0
STEP/LOG	2	3	0.5	0.08	2	1	0	25	75	0	0	0
Total:	59	1,339	2.1	0.21	2,821	339	Avg: 13	20	41	14	9	4

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	0	0			0	0.00%	0	0.0	
Scour Pools	11	85	3.4	0.57	291	10.30%	6	2.1	
Glides	0	0			0	0.00%	0	0.0	
Riffles	18	603	2.2	0.15	1,375	48.72%	81	5.9	
Rapids	12	364	1.9	0.12	692	24.54%	120	17.3	
Cascades	10	258	1.6	0.15	409	14.51%	117	28.6	
Step/Falls	7	7	0.7	0.06	8	0.27%	15	198.7	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	22	2.1	0.05	47	1.65%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	11	8.2	8.7
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	3	2.2	2.4
Pool frequency (channel widths/pool):	22.7		
Residual pool depth (avg):	0.49		

Survey Date 7/18/2005

RIPARIAN ZONE

Report Date: 4/26/2006

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1626
Total conifers/1000 ft	488
Total conifers >20" dbh/1000 ft	20
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	1.7	0.3	5.3	0.0	8.3	0.3	15.3
15-30cm	0.0	6.0	2.0	1.7	1.3	2.3	3.3	10.0
30-50cm	0.7	0.7	1.3	0.3	2.0	0.3	4.0	1.3
50-90cm	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	8.3	3.7	7.3	3.7	11.0	2.7	8.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	78		86		91	
Shrub cover	7		16		14	
Grass/forb cover	68		53		38	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		67		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		0		17	
Riprap	0		0		0	
Surface slope (%)	37		43		34	

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	1626
Total conifers/1000 ft	488
Total conifers >20" dbh/1000 ft	20
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	0.3	15.3
15-30cm	3.3	10.0
30-50cm	4.0	1.3
50-90cm	0.3	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	
17	RT	1	HT	10	20	10	80	Conifer					
								Hardwood					
17	RT	2	HT	10	60	25	50		8		1		
								Conifer					
								Hardwood					
17	RT	3	RB	0	80	0	30				2		
								Conifer					
								Hardwood					
17	LF	2	HS	60	85	10	60			2			
								Conifer					
								Hardwood					
17	LF	1	HS	60	80	10	75				2		0433246 / 4801606
								Conifer					
								Hardwood					
17	LF	3	HS	50	85	10	30			1	1		
								Conifer					
								Hardwood					
24	RT	3	HS	30	95	0	70			1	1	1	
								Conifer					
								Hardwood					
24	LF	1	HS	60	90	5	70						0432960 / 4801681
								Conifer					
								Hardwood					
24	RT	2	HS	60	90	5	75		2	3			
								Conifer					
								Hardwood					
24	RT	1	HT	5	90	5	75						
								Conifer					
								Hardwood					
24	LF	3	HS	60	95	0	40		1	2			
								Conifer					
								Hardwood					
24	LF	2	HS	60	90	5	60			1	1		
								Conifer					
								Hardwood					
34	RT	2	HS	60	95	50	20			3			
								Conifer					
								Hardwood					
34	LF	3	HT	5	95	5	45						
								Conifer					
								Hardwood					
34	RT	3	HS	60	95	70	10		1	2	1		
								Conifer					
								Hardwood					
34	LF	2	HT	5	95	0	55		12	3			
								Conifer					
								Hardwood					
34	RT	1	HS	75	95	5	50		1	2			
								Conifer					
								Hardwood					ESTIMATED RIGHT SIDE
34	LF	1	HT	10	95	5	60		15				0432791 / 4801845
								Conifer					
								Hardwood					
								2	2				
								Conifer					
								Hardwood					
								2	5				

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **276** FALL CREEK TRIBUTARY A POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	SP	00	9.3		TEMP 14.5C	TEMP 15C
5	RI	00	124	SS/	FRY	
7	LP	00	146.2	HS		
9	RI	01	234.4	HS, /TJ	0433875 / 4801637	TEMP 15C
10	RI	11	234.4		TEMP 14.5C	RT FORK OF TRIB A, TEMP 1
12	PP	00	239.6		COHO FRY	
13	SB	00	240.5	HS	H=0.35M	
14	RB	00	255.6	HS		
15	CC	00	277.8	CC	DIA 1.7M X 2.5M, NO STE	ONLY 5 PER. OF CC W/ SUB
16	RB	00	324.9	HS		
17	RI	00	375.1	HS		HEAVY EROSION ON SIDES,
18	RI	00	425.3	HS		
20	LP	00	475.1		FRY	
22	RI	00	554.7	HS		
24	RB	00	655.1			RIPARIAN 2
26	RB	00	713.9	HS, DJ		
31	LP	00	796.2		FRY	
33	RB	00	896.6	HS		
34	RI	00	928.8			RIPARIAN 3
36	SB	00	931.8		H=0.4M	
37	CB	00	982	/SS, /SS		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **276** FALL CREEK TRIBUTARY A POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
40	SL	00	1009.6		H=0.8M	
43	SL	00	1026.7		H=0.5M	
44	CB	01	1059.4	TJ/		0432649 / 4801915, TEMP 13.
45	CB	11	1059.4		TEMP 12C	TRIB 2, TEMP 12C
47	CB	00	1103.2	HS		
50	RB	01	1157.8	RF		
51	SR	01	1158.3		H=0.6M	
52	RI	01	1166.3	BV		
54	SB	02	1166.3		H=0.6M	
58	CB	01	1269.6	/SS		
59	CB	02	1269.6			NO GPS COVERAGE

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

STREAM: Fall Creek Tributary A (MS-276)
BASIN: Coos River
SURVEY TYPE: Post-Tx
DATE: February 22, 2005
SURVEY CREW: Jennifer Schmitt, Neil Jensen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.9 km²
USGS MAPS: Tioga
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Fall Creek Tributary A habitat survey extended 1,319 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 4.2 (range: 2.1-7.0). Land use for the reach was second growth (15-30 cm dbh) and large (50-90 cm dbh) trees. The average unit gradient was 5.3 percent. Cascades (49%) and scour pools (21%) dominated stream habitat. Gravel (65%) dominated stream substrate. Wood volume was moderate at 25.2 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

T25S-R10W-S25SE

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	4.2	VWI Range:	2.1 - 7

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	1,319	2,821	0
Secondary Channel	0	0	0
Off-Channel Units	34	84	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 4
Width: 2.2	Width: 4.8	9.3 (5.2 - 19.2)	9.5 (6.4 - 16.1)
Depth: 0.25	Height: 0.5	1.0 (0.9 - 1.1)	2.0 (1.4 - 2.8)

W:D ratio: 9.7
 Stream Flow Type: LF
 Average Unit Gradient: 5.3%
 Water temperature (°C): 6.0 - 6.0

Entrenchment (ACW:FPW ratio): 1.9
 Habitat Units/100m (total channel length): 6.2
 Habitat Units/100m (primary channel length): 6.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D15	D30

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	238	18.0
Volume (m ³):	333	25.2
Key pieces (>=12m x 0.60m):	16	1.2

OREGON DEPT OF FISH AND WILDLIFE FALL CREEK TRIBUTARY A POST-TX (3-MS, 276)

HABITAT INVENTORY Report Date: 11/29/2005 Survey Date: 2/22/2005

REACH 1		T25S-R10W-S25SE					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	28	781	1.8	0.12	1,413	0	3	2	69	15	9	1
CULVERT CROSSING	1	22	0.9	0.10	19	0	0	0	5	0	0	95
POOL-BACKWATER	3	8	1.3	0.33	10	0	24	65	10	0	0	2
POOL-DAMMED	1	6	4.2	0.40	26	0	5	5	84	5	0	0
POOL-LATERAL SCOUR	18	180	2.6	0.42	518	0	8	13	69	4	1	6
POOL-PLUNGE	7	29	3.0	0.79	85	0	12	8	69	3	4	4
POOL-STRAIGHT SCOUR	1	8	1.7	0.30	13	0	11	0	53	5	0	32
RAPID/BEDROCK	3	49	1.9	0.17	131	0	2	0	28	7	0	64
RAPID/BOULDERS	8	148	3.5	0.11	385	0	2	2	78	13	4	1
RIFFLE	5	94	2.1	0.11	200	0	7	12	69	8	1	3
RIFFLE W/ POCKETS	1	18	4.8	0.20	86	0	5	11	68	11	0	5
STEP/BEDROCK	2	1	0.6	0.05	0	0	0	0	3	0	10	88
STEP/COBBLE	3	7	1.8	0.09	15	0	0	7	85	9	0	0
STEP/LOG	3	4	0.7	0.07	2	0	0	0	87	7	7	0
Total:	84	1,353	2.2	0.25	2,905	0	Avg: 6	8	65	9	5	8

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	4	14	2.0	0.35	36	1.24%	0	0.0	
Scour Pools	26	216	2.7	0.51	616	21.21%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	6	112	2.6	0.13	286	9.85%	0	0.0	
Rapids	11	196	3.1	0.12	517	17.78%	0	0.0	
Cascades	28	781	1.8	0.12	1,413	48.64%	0	0.0	
Step/Falls	8	11	1.1	0.07	18	0.63%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	22	0.9	0.10	19	0.65%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	30	22.2	22.7
Pools >=1m deep:	1	0.7	0.8
Complex pools (LWD pieces>=3):	7	5.2	5.3
Pool frequency (channel widths/pool):	9.4		
Residual pool depth (avg):	0.38		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **276** FALL CREEK TRIBUTARY A POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
8	SC	00	104.6	SS/		
9	LP	00	128	SS/		
10	RB	00	140.4	SS/SS		
11	LP	00	152.5	HS	PLACED WOOD	
16	RP	00	211	SS/, HS	PLACED WOOD	
17	LP	00	220	SS/		
19	LP	01	239.3	/TJ		
20	CB	11	239.3		CC UPSTREAM, NO STEP	
23	SR	00	249.5	HS	PLACED WOOD, H = 0.3	
24	CB	00	265.1	WL, HS	SCULPIN, PLACED ROCKS	
25	CC	00	287.3	CC	2.4 x 1.75, FISH LADDERS	
26	RB	00	323.1	HS	PUSHED IN LOGS	
27	LP	00	329	HS	PUSHED IN LOGS	
28	CB	01	350.7	HS, WL, LA/	PUSHED IN LOGS, ELK TRACKS	
29	BW	10	350.7	HS	PUSHED IN LOGS	
30	LP	00	358.2	HS, LA/	PUSHED IN LOGS	
31	CB	00	369.8	HS, /LA	PUSHED IN TREES	
32	LP	00	375.5	HS	PUSHED IN TREES	
33	RB	00	420.8	HS	PUSHED IN TREES	
35	BW	10	438.9	SS/		
36	RB	00	457.3	SS/		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **276** **FALL CREEK TRIBUTARY A POST-TX**

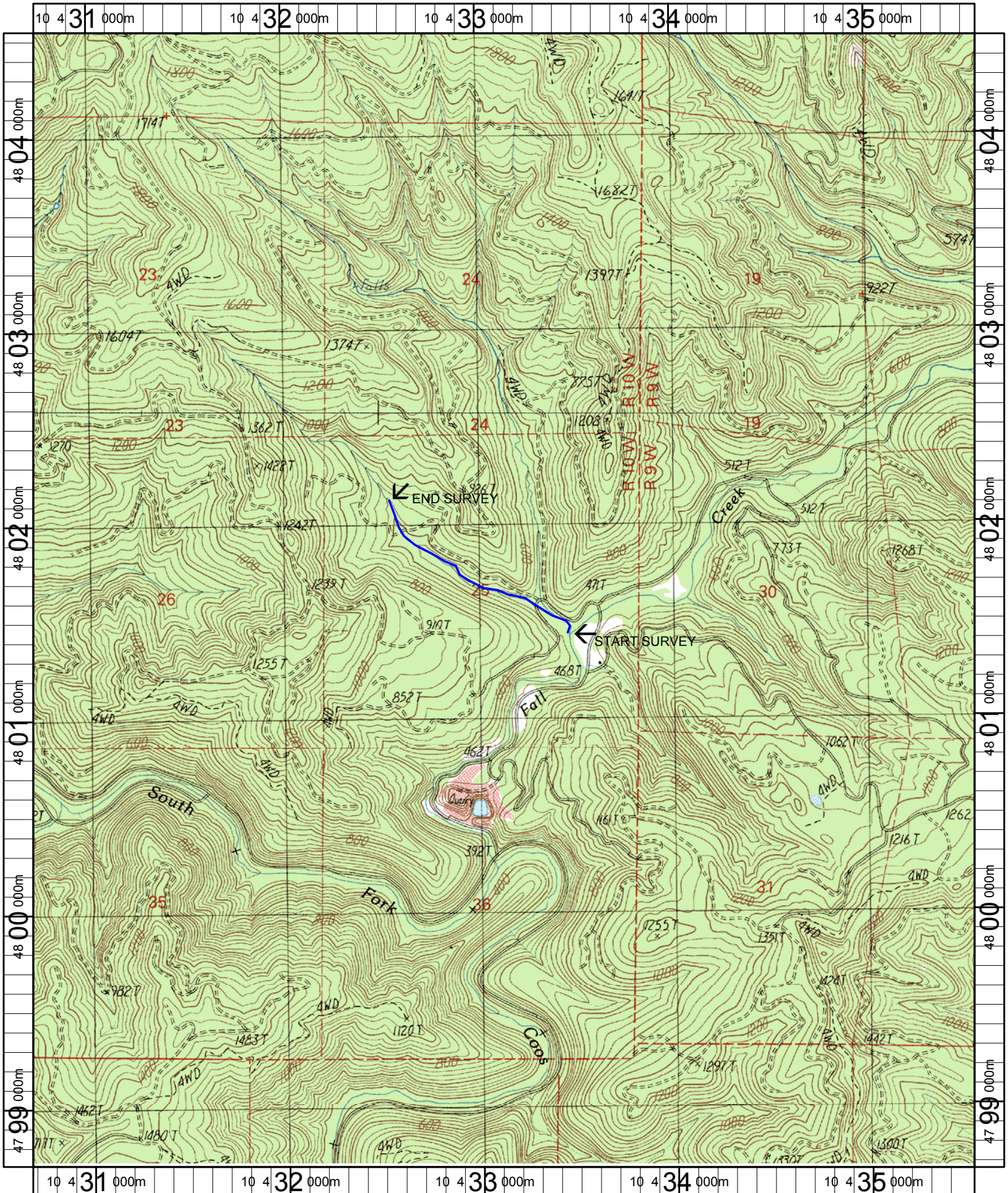
<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
38	CB	00	478.8	LI/		
39	LP	00	486.5	HS	PUSHED IN TREES	
43	CB	00	585.3	HS, /LA	PUSHED IN TREES	
44	RI	00	608.4		REDD	
46	CB	00	656.9	LS/		
47	LP	00	663.2	WL	REDD	
48	CB	00	709.2	WL	REDD	
49	DP	00	715.3	HS, DJ	PLACED WOOD	
50	CB	00	745.8	WL, HS, DJ	SS/, REDD	
51	RI	00	766.3	WL	STEELHEAD SMOLT	
53	CB	00	782.9	SS/		
56	LP	00	829.3	WL	STEELHEAD SMOLT	
57	CB	00	853.3	SS/		
58	SP	00	861.1	WL	WILDLIFE TRAIL	
62	SR	00	962.95		H=0.45m	
63	CB	00	1012.95	WL/SS	REDD	
64	CB	00	1035.75	SS/	CT, CT D15, D30 ST, LT	
66	SL	00	1041.45		H=0.95	
68	BW	10	1053.85	WL	REDD	
69	PP	00	1058.95	SS/		
70	SL	00	1060.25		H=0.5m	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **276** FALL CREEK TRIBUTARY A 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>
71	CB	01	1091.35	SS,TJ/		
72	CB	11	1091.35		ACH=0.3, ACW=2.8	
74	PP	00	1151.05	WL	REDD	
75	SL	00	1151.25		H=0.35m	
76	CB	00	1190.95	SS/		
77	CB	00	1201.25	BV RF		
78	SC	00	1201.55	BV	H=0.45m	
79	RI	00	1213.85	WL BV	ELK TRACKS	
82	CB	00	1286.55		US, WF D30, D15 ST, LT	
84	CB	00	1319.15	WL/SS	REDD, CH, MV D15, G ST	



Name: TIOGA
 Date: 1/6/2005
 Scale: 1 inch equals 2000 feet

Location: 10 433126 E 4801608 N
 Caption: FALL CREEK TRIBUTARY A RESTORATION SITE - COOS BASIN