

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

STREAM: OJALLA CREEK
 GCG: 2-MC
 SITE ID: 459
 BASIN: SILETZ
 TREATMENT DATE: 2011
 SURVEY DATE: 3/3/2011
 SURVEY CREW: Nick Chambers and Aaron McAlexander
 USGS MAPS: MOWREY LANDING
 ECOREGION: Mid-Coastal Sedimentary
 REPORT PREPARED BY: Matt Strickland / Charles Stein

REACH: 1 LOCATION: T09S-R10W-S29NE

SURVEY DESCRIPTION:

Channel morphology: Constrained by hillslopes

Dominant landuse(s): Agricultural crop or dairy land.

Dominant riparian vegetation: Conifers: size class 50-90cm dbh

Primary channel length (meters) and area (m²): 1,220 : 4,917

Secondary channel length (meters) and area (m²): 12 : 21

VWI average: 4.8 VWI Range: 1 - 20 Average Gradient: 1.7%

Pieces LWD per 100m: 12.3 Wood Volume (m³) per 100m: 8.7

Percent pools: 14% Complex pools (LWD pieces>=3): 4 Pools >=1m deep:4

<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	5	26	40	7	4	18
Pool units	3	31	39	5	0	22
Fast water units	3	18	50	10	0	19

SURVEY COMMENTS:

This is a pre treatment restoration survey. The crew noted beaver activity consisting of chewed sticks throughout the survey. They also noted observing a frog, but were unable to identify a species.

Survey Date: 3/3/2011

Report Date: 9/14/2011

T09S-R10W-S29NE

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	0%
Open V-shape	100%	Wide Floodplain	0%
Valley Width Index	4.8	VWI Range:	1 - 20

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	1,220	4,917	0
Secondary	12	21	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 1
Width: 3.6	Width: 6.3	7.4 (6 - 9.8)	10.0 (10 - 10)
Depth: 0.54	Height: 0.8	1.5 (1.3 - 1.8)	2.1 (2.1 - 2.1)

W:D ratio: 8.6

Stream Flow Type: MF

Average Unit Gradient: 1.7%

Water temperature (°C): 9.0 - 9.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 2.8

Habitat Units/100m (primary channel length): 2.9

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	AG	RR
Riparian Vegetation:	C50	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 87%
Undercut Banks:	7%	Range: 53 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	150	12.3
Volume (m ³):	106	8.7
Key pieces (>=12m x 0.60m):	1	0.1

Survey Date: 3/3/2011

Report Date: 9/14/2011

T09S-R10W-S29NE

REACH 2

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.5	VWI Range:	4 - 7

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 ²)	Dry Units
Primary	263	1,032	0
Secondary	5	7	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 2	<u>First Terrace</u> n = 2
Width: 3.6	Width: 6.4	11.0 (9.6 - 12.3)	13.0 (12.1 - 13.9)
Depth: 0.32	Height: 0.6	1.3 (1.2 - 1.3)	1.7 (1.6 - 1.7)

W:D ratio: 10.3

Stream Flow Type: MF

Average Unit Gradient: 1.4%

Water temperature (°C): 9.0 - 9.0

Entrenchment (ACW:FPW ratio): 1.8

Habitat Units/100m (total channel length): 2.6

Habitat Units/100m (primary channel length): 2.7

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	AG	RR
Riparian Vegetation:	C50	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 95%
Undercut Banks:	3%	Range: 78 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	24	9.1
Volume (m ³):	14	5.4
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

OJALLA CREEK

HABITAT INVENTORY

GCG: 2-MC SITE ID: 459

Survey Date: 3/3/2011

Report Date: 9/14/2011

T09S-R10W-S29NE

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
CULVERT CROSSING	1	15	1.5	0.15	23	0	0	9	9	14	68	0
POOL-BACKWATER	3	12	1.8	0.47	21	0	24	62	14	0	0	0
POOL-DAMMED	1	17	3.5	1.10	60	0	11	58	32	0	0	0
POOL-LATERAL SCOUR	11	136	4.0	0.85	559	2	2	30	39	6	1	22
POOL-STRAIGHT SCOUR	1	13	4.8	0.75	62	0	0	13	47	0	0	40
RAPID/BEDROCK	1	49	3.0	0.45	147	0	0	10	33	14	0	43
RIFFLE	15	986	4.0	0.36	4,057	1	3	18	52	9	0	17
STEP/LOG	1	4	2.5	0.10	9	0	0	43	24	0	0	33
STEP/STRUCTURE	1	1	1.4	0.15	1	5	0	0	16	21	63	0
Total:	35	1,233	3.6	0.54	4,938	8	Avg: 5	26	40	7	4	18

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	29	2.2	0.63	80	1.63%	0	0.0
Scour Pools	12	149	4.1	0.84	621	12.58%	2	0.3
Glides	0	0			0	0.00%	0	0.0
Riffles	15	986	4.0	0.36	4,057	82.17%	1	0.0
Rapids	1	49	3.0	0.45	147	2.98%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	2	4	2.0	0.13	9	0.19%	5	52.9
Dry	0	0			0	0.00%	0	0.0
Culverts	1	15	1.5	0.15	23	0.46%	0	0.0

Survey Date: 3/3/2011

Report Date: 9/14/2011

T09S-R10W-S29NE

REACH 2

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	
POOL-LATERAL SCOUR	1	10	3.3	0.90	31	0	6	39	56	0	0	0	
RAPID/BEDROCK	1	30	4.0	0.30	120	0	0	10	10	5	0	75	
RIFFLE	4	228	3.3	0.24	886	0	3	12	80	3	0	2	
STEP/LOG	1	1	4.5	0.10	2	0	10	60	30	0	0	0	
Total:		7	268	3.6	0.32	1,039	0	Avg: 4	23	60	2	0	12

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	1	10	3.3	0.90	31	3.02%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	4	228	3.3	0.24	886	85.22%	0	0.0
Rapids	1	30	4.0	0.30	120	11.55%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	1	1	4.5	0.10	2	0.22%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OJALLA CREEK
GCG: 2-MC SITE ID: 459

Survey Date: 3/3/2011

Report Date: 9/14/2011

T09S-R10W-S29NE

REACH 1

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	16	13.0	13.1
Pools >=1m deep:	4	3.2	3.3
Complex pools (LWD pieces>=3):	4	3.2	3.3
Pool frequency (channel widths/pool):	12.3		
Residual pool depth (avg):	0.58		

Survey Date: 3/3/2011

Report Date: 9/14/2011

T09S-R10W-S29NE

REACH 2

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	1	3.7	3.8
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	41.9		
Residual pool depth (avg):	0.70		

Survey Date 3/3/2011
Report Date: 9/14/2011

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	792
Total conifers/1000 ft	442
Total conifers >20" dbh/1000 f	61
Total conifers >35" dbh/1000 f	15

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	0.3	1.0	0.8	4.8	3.5	3.3	4.5	9.0
15-30cm	0.0	0.3	0.3	0.0	1.3	1.8	1.5	2.0
30-50cm	0.0	0.8	0.0	0.3	0.3	1.0	0.3	2.0
50-90cm	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.0
>90cm	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0
Total/100m2	1.0	2.0	1.3	5.0	5.0	6.0	2.4	4.3

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	94		93		68	
Shrub cover	26		52		36	
Grass/forb cover	69		42		53	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	100		75		50	
High terrace	0		25		50	
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 (%)	66		21		6	

Survey Date 3/3/2011
Report Date: 9/14/2011

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 2

Summary of Riparian Zone (0-30m) 1 transects

Total hardwoods/1000	427
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 f	61
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	1.0	0.0	0.0	2.0	0.0	0.0	1.0	2.0
15-30cm	0.0	2.0	0.0	0.0	1.0	0.0	1.0	2.0
30-50cm	2.0	2.0	0.0	1.0	1.0	0.0	3.0	3.0
50-90cm	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	4.0	4.0	0.0	3.0	2.0	0.0	2.0	2.3

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	90		45		45	
Shrub cover	5		5		5	
Grass/forb cover	83		95		90	

Predominant landform in each zone

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

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

5 transects

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

Total hardwoods/1000	3597
Total conifers/1000 ft	2134
Total conifers >20" dbh/1000 f	305
Total conifers >35" dbh/1000 f	61

Average number of trees in a 5-m wide band

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u> <u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	19.0	38.0
15-30cm	7.0	10.0
30-50cm	4.0	11.0
50-90cm	4.0	0.0
>90cm	1.0	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	
6	LT	1	HS	45	70	60	40	Conifer						
								Hardwood						
6	LT	2	HS	25	100	70	30	Conifer						
								Hardwood					3	
6	LT	3	HS	5	100	60	40	Conifer					12 2	
								Hardwood					4 1 1	
6	RT	1	HS	125	100	20	80	Conifer						
								Hardwood					1 1	
6	RT	2	HS	50	100	40	60	Conifer					3 1	
								Hardwood					3 1	
6	RT	3	HS	15	100	50	45	Conifer					2 1	
								Hardwood					6 1	
13	LT	1	HS	80	90	0	90	Conifer					1 3	
								Hardwood						
13	LT	2	HT	0	100	80	20	Conifer						
								Hardwood					4	
13	LT	3	HT	0	80	60	40	Conifer						
								Hardwood					1 2 1	
13	RT	1	HS	80	100	10	80	Conifer						
								Hardwood					1	
13	RT	2	HT	0	75	70	30	Conifer						
								Hardwood					6	
13	RT	3	HT	0	70	60	40	Conifer						
								Hardwood					2 2	
15	LT	1	HS	120	100	0	80	Conifer						
								Hardwood						
15	LT	2	HS	20	100	0	60	Conifer					1	
								Hardwood						
15	LT	3	HT	0	0	0	100	Conifer						
								Hardwood						
15	RT	1	HS	40	100	5	95	Conifer						
								Hardwood						
15	RT	2	HS	40	100	5	90	Conifer						
								Hardwood						
15	RT	3	HS	25	95	5	95	Conifer					2 1	
								Hardwood						
24	LT	1	HS	30	100	50	50	Conifer						
								Hardwood					1	
24	LT	2	HS	30	80	80	20	Conifer						
								Hardwood					2	

SURVEY IS
2MC-459
OJALLA

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		
24	LT	3	HT	0	0	0	10	Conifer							ROAD
								Hardwood							
24	RT	1	HS	10	95	60	40	Conifer							
								Hardwood	1		3				
24	RT	2	HS	5	90	70	25	Conifer							
								Hardwood	1						
24	RT	3	HS	5	100	50	50	Conifer							
								Hardwood		1	2				

RIPARIAN ZONE VEGETATION

Reach 2

Reach 2

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
36	LT	1	HS	40	100	5	70	Conifer	1		2	1		
								Hardwood						
36	LT	2	HT	0	0	0	100	Conifer						
								Hardwood						
36	LT	3	HT	0	0	0	100	Conifer						
								Hardwood						
36	RT	1	HT	0	80	5	95	Conifer						
								Hardwood		2	2			
36	RT	2	HS	5	90	10	90	Conifer						
								Hardwood	2		1			
36	RT	3	HS	5	90	10	80	Conifer		1	1			
								Hardwood						

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

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

COMMENT SUMMARY

MONITORING AREA: 2-MC SITE ID: 459 STREAM: OJALLA CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RI	00	49		STREAM IS HIGH WITH 2.5 FOOT VISIBILITY. START SIGN ALDER SURVEY IS 2-MC 459 OJALLA CREEK
1	3	BW	10	147	SS/	
1	4	RI	00	194.5	LA/	
1	9	RI	01	429.8	SS/	
1	11	LP	00	443.8	/SS	
1	15	RI	00	752.8	BV SS/SS	BV IS CHEWED STICKS
1	16	SL	00	756.3		H=1.2
1	18	RI	00	832.2	SS/	
1	22	RI	00	987.3	BV	BV IS CHEWED TREES
1	24	RI	00	1039.5	BV	
1	25	LP	00	1055.9	BV AM	UNKNOWN FROG
1	26	SS	00	1056.4	CS	H=.45. CS IS RIP RAP AROUND CC

COMMENT SUMMARY

MONITORING AREA: 2-MC SITE ID: 459 STREAM: OJALLA CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	27	CC	00	1071.4	CC	OJALLA ROAD CROSSING
1	28	RI	00	1086.8		BEDROCK IS HARDPAN
1	33	LP	00	1201.9	BC	PRIVATE ROAD BRIDGE
2	38	RI	11	1320.1		ACH .3 ACW 2.4
2	39	SL	00	1320.6		H=.60
2	42	RI	00	1483.1		END SIGN ON LB ALDER

2-MC 459 Ojalla Creek (Siletz Basin) 2011 Winter Restoration Survey Photographs



Downstream view at that start of the survey.
Confluence with Siletz River.



Upstream view at the start of the survey.



Upstream view at unit 6. Nick Chambers in photo.



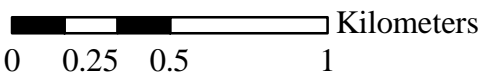
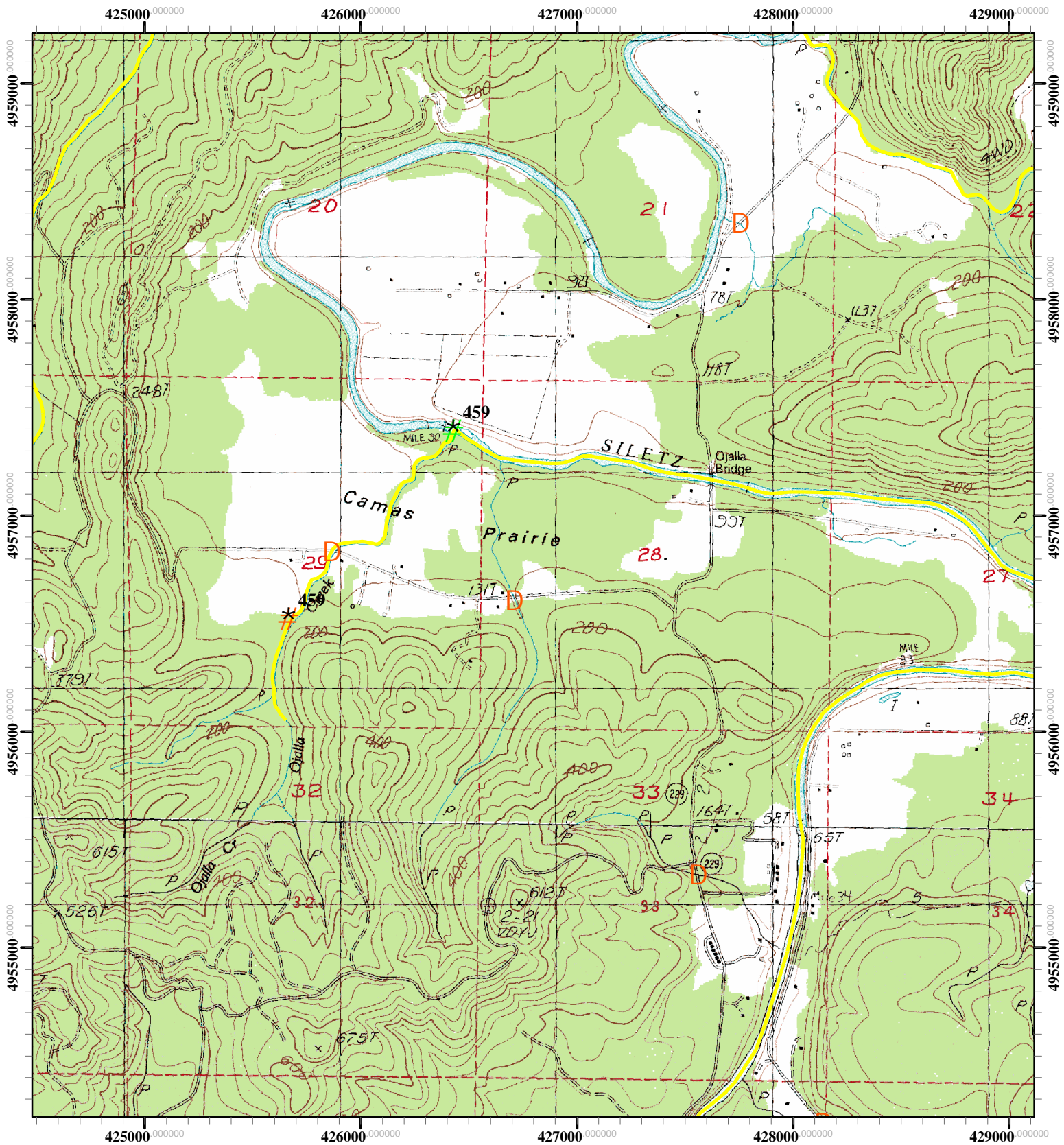
Step over a log at unit 16.







Culvert crossing at unit 26.
Nick Chambers in photo.



Downstream view of a step over a log at unit 39.



Restoration Site ID: 459
 Stream: Ojalla Creek
 T09S- R10W - S29
 USGS Map: Mowrey Landing
 Basin: Siletz

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

