

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

STREAM: GALES CREEK
 GCG: 8-W
 SITE ID: 424
 BASIN: TUALATIN RIVER
 TREATMENT DATE: 2010
 SURVEY DATE: 4/12/2011
 SURVEY CREW: Frank Drake, Charlie Stein, and Matt Strickland
 USGS MAPS: TIMBER
 ECOREGION: Prairie Terraces
 REPORT PREPARED BY: Matt Strickland / Charles Stein

REACH: 1 LOCATION: T02N-R05W-S20NE

SURVEY DESCRIPTION:

Channel morphology: Constrained by 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 (m²): 1,567 : 15,978
 Secondary channel length (meters) and area (m²) 158 : 363
 VWI average: 2.5 VWI Range: 1 - 6.5 Average Gradient: 2.7%
 Pieces LWD per 100m: 12.7 Wood Volume (m³) per 100m: 12.4
 Percent pools: 14% Complex pools (LWD pieces>=3): 4 Pools >=1m deep:9
 Percent substrate (avg):

	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	6	12	18	49	9	6
Pool units	3	13	24	43	8	9
Fast water units	0	5	18	59	12	5

SURVEY COMMENTS:

This is a post treatment restoration survey. Reach 1 encompassed approximately 1600 meters and ended at the confluence with North Fork Gales Creek. The crew noted large wood stream habitat structures, debris jams, and several active landslides within reach 1. The crew also noted an adult winter steelhead and redd.

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 SITE ID: 424
 BASIN: TUALATIN RIVER
 TREATMENT DATE: 2010
 SURVEY DATE: 4/13/2011
 SURVEY CREW: Frank Drake, Charlie Stein, and Matt Strickland
 USGS MAPS: TIMBER
 ECOREGION: Prairie Terraces
 REPORT PREPARED BY: Matt Strickland / Charles Stein

REACH: 2 LOCATION: T02N-R05W-S20NW

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 (m²): 2,156 : 21,086

Secondary channel length (meters) and area (m²): 1,176 : 3,637

VWI average: 6.6 VWI Range: 1 - 15 Average Gradient: 3.3%

Pieces LWD per 100m: 19.6 Wood Volume (m³) per 100m: 50.6

Percent pools: 10% Complex pools (LWD pieces>=3): 8 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	8	18	35	33	4	2
Pool units	6	25	41	22	3	3
Fast water units	1	11	38	40	7	3

SURVEY COMMENTS:

Reach 2 of the Gales Creek post treatment restoration survey encompassed approximately 2100 meters and ended just upstream of the confluence with Low Divide Creek. The crew noted large wood habitat structures, numerous debris jams, and riparian plantings within the reach. The crew also noted beaver activity near the end of the survey.

Survey Date: 4/12/2011

Report Date: 9/14/2011

T02N-R05W-S20NE

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	2.5	VWI Range:	1 - 6.5

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	1,567	15,978	0
Secondary	158	363	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 6	<u>First Terrace</u> n = 1
Width: 7.6	Width: 15.4	21.6 (15.6 - 30.4)	33.6 (33.6 - 33.6)
Depth: 0.71	Height: 0.9	1.8 (1.7 - 1.8)	2.1 (2.05 - 2.05)

W:D ratio: 17.6

Stream Flow Type: MF

Average Unit Gradient: 2.7%

Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio): 1.4

Habitat Units/100m (total channel length): 2.4

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

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	PT
Riparian Vegetation:	D30	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	10%	Reach avg: 90%
Undercut Banks:	7%	Range: 61 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	199	12.7
Volume (m ³):	195	12.4
Key pieces (>=12m x 0.60m):	5	0.3

Survey Date: 4/13/2011

Report Date: 9/14/2011

T02N-R05W-S20NW

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	6.6	VWI Range:	1 - 15

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	2,156	21,086	0
Secondary	1,176	3,637	13

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 6
Width: 6.0	Width: 16.1	24.4 (14.8 - 30)	27.3 (19 - 33)
Depth: 0.46	Height: 0.7	1.5 (1.2 - 1.6)	2.2 (1.8 - 2.6)

W:D ratio: 22.3

Stream Flow Type: MF

Average Unit Gradient: 3.3%

Water temperature (°C): 7.0 - 7.0

Entrenchment (ACW:FPW ratio): 1.6

Habitat Units/100m (total channel length): 3.2

Habitat Units/100m (primary channel length): 5.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	11%	Reach avg: 79%
Undercut Banks:	2%	Range: 50 - 92

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	422	19.6
Volume (m ³):	1,090	50.6
Key pieces (>=12m x 0.60m):	49	2.3

Survey Date: 4/12/2011

Report Date: 9/14/2011

T02N-R05W-S20NE

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	7	280	6.9	0.41	2,913	33	0	3	12	66	14	5
POOL-ALCOVE	1	20	3.0	0.40	60	0	100	0	0	0	0	0
POOL-BACKWATER	4	21	3.6	0.83	80	0	25	34	9	29	0	4
POOL-ISOLATED	1	7	3.0	0.15	21	0	0	90	0	0	0	10
POOL-LATERAL SCOUR	5	128	9.7	1.20	1,245	10	5	15	23	46	5	6
POOL-STRAIGHT SCOUR	2	60	10.0	1.50	579	10	0	8	25	45	23	0
POOL-TRENCH	2	51	10.6	2.20	537	0	0	15	28	33	0	25
PUDDLED UNIT	1	21	1.0	0.25	21	0	20	30	20	30	0	0
RAPID/BOULDERS	11	664	8.4	0.50	6,347	38	0	5	19	58	12	6
RIFFLE	7	413	8.5	0.51	4,007	72	0	6	22	56	10	6
RIFFLE W/ POCKETS	1	59	9.0	0.55	531	0	0	5	20	60	15	0
Total:	42	1,725	7.6	0.71	16,340	163	Avg: 6	12	18	49	9	6

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	6	48	3.4	0.64	161	0.99%	0	0.0
Scour Pools	9	240	9.9	1.49	2,361	14.45%	20	0.8
Glides	0	0			0	0.00%	0	0.0
Riffles	8	472	8.6	0.51	4,538	27.77%	72	1.6
Rapids	11	664	8.4	0.50	6,347	38.84%	38	0.6
Cascades	7	280	6.9	0.41	2,913	17.82%	33	1.1
Step/Falls	0	0			0	0.00%	0	0.0
Dry	1	21	1.0	0.25	21	0.13%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

HABITAT INVENTORY

GCG: 8-W

SITE ID: 424

Survey Date: 4/13/2011

Report Date: 9/14/2011

T02N-R05W-S20NW

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
CASCADE/BEDROCK	1	58	7.0	0.80	406	6	0	10	20	35	5	30
CASCADE/BOULDERS	9	268	4.9	0.34	2,161	12	0	11	28	41	14	7
DRY CHANNEL	5	358	3.7	0.00	1,317	0	14	27	26	25	8	0
DRY UNIT	3	61	3.8	0.00	252	2	13	16	35	33	3	0
POOL-BACKWATER	2	13	2.3	0.43	23	0	25	55	15	5	0	0
POOL-ISOLATED	4	30	2.0	0.36	54	0	60	28	10	3	0	0
POOL-LATERAL SCOUR	27	361	5.0	0.80	2,042	26	7	27	40	22	2	2
POOL-PLUNGE	3	22	13.3	1.13	290	3	7	12	53	25	3	0
POOL-TRENCH	1	24	5.0	1.10	120	3	0	15	40	10	10	25
PUDDLED UNIT	5	124	2.2	0.19	392	0	32	28	12	28	0	0
RAPID/BOULDERS	17	1,242	8.8	0.49	12,098	17	0	8	37	45	8	2
RIFFLE	16	376	3.9	0.18	1,539	8	3	17	44	33	3	0
RIFFLE W/ POCKETS	5	358	10.2	0.59	3,680	10	0	8	39	48	5	0
STEP/COBBLE	6	30	7.4	0.23	232	0	0	7	37	57	0	0
STEP/LOG	4	8	14.0	0.24	119	0	0	8	45	48	0	0
Total:	108	3,331	6.0	0.46	24,723	87	Avg: 8	18	35	33	4	2

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	6	43	2.1	0.38	77	0.31%	0	0.0
Scour Pools	31	407	5.8	0.84	2,452	9.92%	32	1.3
Glides	0	0			0	0.00%	0	0.0
Riffles	21	734	5.4	0.27	5,219	21.11%	18	0.3
Rapids	17	1,242	8.8	0.49	12,098	48.94%	17	0.1
Cascades	10	326	5.1	0.39	2,567	10.38%	18	0.7
Step/Falls	10	37	10.0	0.24	351	1.42%	0	0.0
Dry	13	543	3.2	0.07	1,960	7.93%	2	0.1
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

GCG: 8-W GALES CREEK
SITE ID: 424

Survey Date: 4/12/2011

Report Date: 9/14/2011

T02N-R05W-S20NE

REACH 1

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	15	8.7	9.6
Pools >=1m deep:	9	5.2	5.7
Complex pools (LWD pieces>=3):	4	2.3	2.6
Pool frequency (channel widths/pool):	7.5		
Residual pool depth (avg):	1.01		

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

GALES CREEK
GCG: 8-W SITE ID: 424

Survey Date: 4/13/2011

Report Date: 9/14/2011

T02N-R05W-S20NW

REACH 2

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	37	11.1	17.2
Pools >=1m deep:	12	3.6	5.6
Complex pools (LWD pieces>=3):	8	2.4	3.7
Pool frequency (channel widths/pool):	5.6		
Residual pool depth (avg):	0.56		

Survey Date 4/12/2011

Report Date: 9/14/2011

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

Summary of Riparian Zone (0-30m) 5 transects

Total hardwoods/1000	390
Total conifers/1000 ft	244
Total conifers >20" dbh/1000 f	24
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	0.2	0.0	0.8	0.2	0.2	0.2	1.2
15-30cm	0.2	1.6	0.4	0.2	1.0	1.0	1.6	2.8
30-50cm	0.6	1.6	0.0	0.2	1.2	0.6	1.8	2.4
50-90cm	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.8	3.4	0.8	1.2	2.4	1.8	1.3	2.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	55		43		49	
Shrub cover	21		17		8	
Grass/forb cover	71		54		65	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	70		30		80	
High terrace	20		10		10	
Low terrace	10		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		60		10	
Riprap	0		0		0	
Surface slope (%)	46		22		48	

Survey Date 4/12/2011
Report Date: 9/14/2011

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 2

Summary of Riparian Zone (0-30m) 6 transects

Total hardwoods/1000	630
Total conifers/1000 ft	284
Total conifers >20" dbh/1000 f	30
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	1.5	0.0	2.3	0.0	1.7	0.0
15-30cm	0.2	0.7	0.3	0.8	1.2	1.0	1.7	2.5
30-50cm	0.3	1.5	1.0	0.5	1.2	0.3	2.5	2.3
50-90cm	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.5	3.7	1.8	3.7	2.3	3.0	1.6	3.4

Canopy closure and ground cover

	Zone 1 0-10 meters	Zone 2 10 - 20 meters	Zone 3 20 - 30 meters
	(%)	(%)	(%)
Canopy closure	44	56	63
Shrub cover	20	27	30
Grass/forb cover	67	70	70

Predominant landform in each zone

	Zone 1 0-10 meters	Zone 2 10 - 20 meters	Zone 3 20 - 30 meters
	(%)	(%)	(%)
Hillslope	33	42	50
High terrace	42	50	33
Low terrace	17	8	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	8	0	0
Roadbed/Railroad	0	0	17
Riprap	0	0	0
Surface slope (%)	38	16	23

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

11 transects

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

Total hardwoods/1000	955
Total conifers/1000 ft	488
Total conifers >20" dbh/1000 f	51
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	0.2	6.5
15-30cm	3.0	4.8
30-50cm	4.0	4.3
50-90cm	0.8	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		
10	LF	1	HS	70	40	60	30	Conifer				1			4474901 E 5054973 N
								Hardwood		1					
10	LF	2	RB	0	20	0	0	Conifer							HWY 6
								Hardwood							
10	LF	3	HS	75	30	5	70	Conifer							
								Hardwood							
10	RT	1	HS	60	70	20	80	Conifer							
								Hardwood				2			
10	RT	2	RB	0	40	10	90	Conifer							DECOMMISSION ED RD
								Hardwood	3						
10	RT	3	HS	40	80	5	80	Conifer			1				
								Hardwood	1	1					
16	LF	1	HS	90	60	10	90	Conifer			1	1			474568 E 5054976 N
								Hardwood							
16	LF	2	RB	0	0	0	10	Conifer							HWY 6
								Hardwood							
16	LF	3	HS	70	50	5	95	Conifer				1			
								Hardwood							
16	RT	1	HS	60	40	30	50	Conifer							
								Hardwood	1						
16	RT	2	RB	0	20	60	20	Conifer							
								Hardwood							
16	RT	3	HS	35	60	10	50	Conifer			1	1			
								Hardwood							
20	LF	1	HS	70	60	10	40	Conifer							474407 E 5054876 N
								Hardwood		1	2				
20	LF	2	HS	70	50	10	20	Conifer							
								Hardwood	1						
20	LF	3	RB	50	30	0	10	Conifer		1					HWY 6
								Hardwood							
20	RT	1	HS	40	50	20	80	Conifer							
								Hardwood			2				
20	RT	2	RB	0	50	30	70	Conifer			1				RECENTLY THINNED FOREST
								Hardwood			1				
20	RT	3	HS	50	50	20	80	Conifer							
								Hardwood							
28	LF	1	HT	0	40	20	80	Conifer							474147 E 5054968 N
								Hardwood			1				
28	LF	2	HS	45	60	40	60	Conifer					1		
								Hardwood				1			

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		
28	LF	3	HS	60	40	10	30	Conifer							TIMBER HARVEST/REPLANTED
								Hardwood							
28	RT	1	HS	70	50	5	95	Conifer							
								Hardwood		3	2				
28	RT	2	RB	0	30	0	80	Conifer							
								Hardwood							
28	RT	3	HS	70	40	5	50	Conifer				1			
								Hardwood		2					
31	LF	1	HT	0	80	5	95	Conifer				1			474003 E 5054997 N
								Hardwood							
31	LF	2	HS	60	80	5	95	Conifer		1			1		
								Hardwood							
31	LF	3	HS	30	60	10	90	Conifer		3	2				
								Hardwood							
31	RT	1	LT	0	60	30	70	Conifer							
								Hardwood		1	1				
31	RT	2	HT	45	80	10	90	Conifer							
								Hardwood							
31	RT	3	HT	0	50	10	90	Conifer				1			
								Hardwood		2	3				

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		
47	LF	1	LT	0	5	30	20	Conifer							
								Hardwood							
47	LF	2	LT	0	5	40	20	Conifer							
								Hardwood							
47	LF	3	HS	60	30	60	40	Conifer							
								Hardwood							
47	RT	1	HT	80	60	5	90	Conifer						473632 E	
								Hardwood		1				5055117 N	
47	RT	2	HT	0	60	10	90	Conifer				1			
								Hardwood	2						
47	RT	3	HT	0	60	30	60	Conifer			2				
								Hardwood							
63	LF	1	SC	0	0	0	20	Conifer						473386 E	
								Hardwood						5055052 N	
63	LF	2	HT	0	80	60	40	Conifer				1	1		
								Hardwood			1				
63	LF	3	HT	0	80	60	40	Conifer							
								Hardwood		2					
63	RT	1	HT	60	80	10	90	Conifer			1				
								Hardwood	2	1					
63	RT	2	HT	0	80	20	80	Conifer			2				
								Hardwood	1						
63	RT	3	RB	0	80	10	90	Conifer				1			
								Hardwood	2						
69	LF	1	HS	65	40	10	90	Conifer						473162 E	
								Hardwood			2			5054904 N	
69	LF	2	HS	60	50	20	80	Conifer					1		
								Hardwood							
69	LF	3	HS	60	60	30	70	Conifer			2				
								Hardwood							
69	RT	1	HT	45	20	40	40	Conifer							
								Hardwood	4						
69	RT	2	HT	0	30	50	50	Conifer							
								Hardwood	5	1					
69	RT	3	HT	0	60	40	60	Conifer							
								Hardwood	3	2					
82	LF	1	HS	70	75	10	90	Conifer				1		472912 E	
								Hardwood	1					5054734 N	
82	LF	2	HS	40	75	5	95	Conifer				1	1		
								Hardwood		1					

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		
82	LF	3	HS	40	75	5	95	Conifer		1	2				
								Hardwood		1					
82	RT	1	HT	0	60	30	70	Conifer							
								Hardwood	1	1	3				
82	RT	2	HT	0	60	20	80	Conifer							
								Hardwood	1	3	2				
82	RT	3	HS	20	60	30	70	Conifer		2	1				
								Hardwood	1						
94	LF	1	LT	0	30	40	60	Conifer						472560 E	
								Hardwood		1				5054442 N	
94	LF	2	HS	50	60	20	80	Conifer			1				
								Hardwood	1						
94	LF	3	HS	50	70	20	80	Conifer			2				
								Hardwood							
94	RT	1	HT	0	60	30	70	Conifer							
								Hardwood	1		3				
94	RT	2	HT	0	50	30	70	Conifer							
								Hardwood	4						
94	RT	3	HT	0	50	30	70	Conifer							
								Hardwood	4	1					
133	LF	1	HS	80	30	30	70	Conifer						472317 E	
								Hardwood			1			5054296 N	
133	LF	2	HS	30	40	40	60	Conifer							
								Hardwood							
133	LF	3	HS	25	60	30	70	Conifer							
								Hardwood			2				
133	RT	1	HS	60	70	5	95	Conifer			1				
								Hardwood							
133	RT	2	HS	15	80	10	90	Conifer			2				
								Hardwood							
133	RT	3	RB	20	70	10	90	Conifer			1				
								Hardwood							

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OREGON PLAN MONITORING SITE
SURVEY DATE: 4/12/2011

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RI	01	105	CS/TJ	NO MORE TERRACE DUE TO HWY 6. 475163 E 5054970 N
1	2	PD	02	105		ACW 1.7
1	4	CB	11	105		TEMP 8 C
1	5	BW	10	105	CS/	
1	6	RI	00	143.5	CS/	
1	7	LP	00	157.2	CS/	
1	8	RB	00	238.2	CS/	
1	9	LP	00	269.2	/LA, DJ	
1	10	CB	01	344.2	CS/	LA/SS
1	12	RI	00	405.2	/CS	
1	14	RB	01	576.1	LA/	
1	16	RI	00	665.1	CS/	CH/MV, D15/S, LT/

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OREGON PLAN MONITORING SITE
SURVEY DATE: 4/12/2011

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	17	CB	00	728.1	HS,DJ,CS/	SS/ OUT OF CULVERT FROM HWY
1	18	RB	01	786.1	TJ/	
1	19	CB	11	786.1		TEMP 7 C ACW 4.1
1	20	RI	00	832.1		CH/MV, D15/S, PT/LT
1	22	TP	00	907.6	SS/	
1	24	TP	00	950.1	SS/	
1	25	RB	00	999.1	SS/	
1	26	LP	00	1026.6		STW & REDD
1	27	CB	00	1081.6	DJ	
1	28	SP	00	1125.6		CH/MV, D15/S, PT/LT
1	29	CB	00	1197.6	DJ	
1	30	RB	00	1249.6	/SS	

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OREGON PLAN MONITORING SITE
SURVEY DATE: 4/12/2011

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	31	RI	01	1307.6	TJ/	TJ/
1	32	RI	11	1307.6		ACW=1.5. TEMP 8 C
1	34	RB	01	1441	/TJ, HS	TJ/, /SS
1	35	CB	11	1441	LA/	ACW1.3. TEMP 9 C
1	36	BW	10	1441	LA/, HS	
1	38	RB	00	1485	LA/, DJ	
1	39	LP	00	1508	SS/, LA/	
1	40	RP	01	1567	/TJ, LA/	
1	41	RB	11	1567		N. FK. GALES CREEK. N FK GALES CR TEMP 7.5 C
1	42	RB	12	1567		TEMP 7.5 C, ACW=5.5
2	43	CB	00	1592	DJ	
2	47	RB	01	1737.5	DJ	

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	48	PD	02	1737.5	DJ, /SS	
2	49	DU	02	1737.5	HS	ACW 2.9
2	50	RP	00	1774.5	HS	
2	51	LP	01	1808.5	DJ, HS	
2	52	CB	01	1862.5	DJ, HS	
2	53	RI	02	1862.5	LS/, SS/	ACW 2.7
2	54	DU	03	1862.5		ACW 2.5
2	57	RB	01	1912.5	HS,DJ	
2	58	RI	02	1912.5		3.8 ACW
2	59	LP	02	1912.5	DJ	
2	60	RB	02	1912.5	DJ	
2	62	PD	02	1958.5	DJ	ACW=2.1. ACW 2.1, POOLS 3X1

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OREGON PLAN MONITORING SITE
SURVEY DATE: 4/12/2011

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	63	LP	01	1968.5	BV,SS,HS	
2	64	PD	02	1968.5	BV	ACW=3.5
2	65	RB	00	2029.5	HS,DJ	
2	66	RP	00	2104.5	HS,SS/	
2	67	RB	00	2161.5	HS,DJ	SUB-POOL POCKETS AROUND WOOD
2	68	RB	00	2252.5	DJ	
2	70	RB	01	2372.5	BV,TJ	
2	71	PD	02	2372.5	BV	ACW 2.5
2	72	DC	02	2372.5	DJ,HS	ACW=4.1. ACW 4.1
2	73	CB	11	2372.5	DJ	ACW=2.8. ACW 3.2, TEMP 8C
2	74	LP	01	2386.5	HS	
2	75	CB	01	2451.5	TJ/, HS	

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	76	CB	11	2451.5		TEMP 7.5 C
2	77	RI	01	2484.5	HS	
2	78	DC	02	2484.5	DJ	ACW=2.5
2	79	RP	01	2543.5	HS,DJ	
2	81	CB	00	2615.5	HS	
2	82	RP	00	2730.5	LA/, HS	
2	83	LP	00	2743.5	HS	PLANTINGS ON RIGHT TERRACE
2	84	RB	00	2868.5	HS	
2	85	TP	00	2892.5	HS	
2	86	CR	00	2950.5	HS	
2	87	RB	01	3130.5	TJ/,LA/	
2	88	CB	11	3130.5		TEMP 8C

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OREGON PLAN MONITORING SITE
SURVEY DATE: 4/12/2011

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	89	DC	02	3130.5	DJ	ACW=3.0
2	90	LP	02	3130.5	DJ	
2	92	BW	10	3130.5	DJ	
2	93	CB	11	3130.5		TEMP 7.5C
2	97	RB	00	3189.5	DJ	
2	98	PP	00	3195.5	DJ	
2	99	SL	00	3200	DJ	H=1.3
2	100	LP	01	3214	LI/DJ	
2	101	RP	01	3286	DJ	
2	102	SC	03	3286	DJ	
2	103	RI	02	3286	DJ	
2	104	LP	02	3286	DJ	

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	105	CB	02	3286	DJ	
2	107	LP	01	3307	DJ	
2	108	RB	01	3375	DJ	
2	110	SL	01	3383.5		H=.3
2	111	RB	01	3440.5	DJ	
2	112	RI	04	3440.5	DJ	
2	113	LP	04	3440.5	/SS	
2	115	IP	10	3440.5	DJ	
2	116	LP	02	3440.5	DJ	
2	117	RI	02	3440.5	DJ	
2	118	LP	02	3440.5	DJ	
2	119	RI	02	3440.5	DJ	

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	120	LP	02	3440.5	DJ	
2	121	SL	02	3440.5	DJ	H=.45
2	122	LP	02	3440.5	DJ	
2	124	LP	02	3440.5	DJ	
2	125	IP	10	3440.5	DJ	
2	126	RI	02	3440.5	DJ	
2	127	RI	03	3440.5	DJ	
2	129	SC	03	3440.5	DJ	
2	131	SC	03	3440.5	DJ	
2	134	PP	01	3481.5	LA,DJ	
2	135	SL	01	3482	DJ	H=.6M
2	137	DC	03	3537	DJ	ACW=4.0

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 424 STREAM: GALES CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	139	RB	01	3722.5	/TJ,HS	
2	140	RI	11	3722.5		TEMP 7C
2	142	RI	02	3722.5	DJ	
2	143	BW	10	3722.5	DJ	
2	145	LP	02	3722.5	DJ, TJ/	
2	146	RI	02	3722.5	DJ	
2	147	LP	11	3722.5		TEMP 7C
2	149	PD	02	3722.5	BV,DJ	ACW=6.0
2	150	DC	02	3722.5	DJ	ACW=3.0

8-W 424 Gales Creek (Tualatin Basin) 2011 Winter Restoration Survey Photographs



Upstream view of large wood placement.



Upstream view of large wood placement.



Downstream view of large wood placement and floodplain.



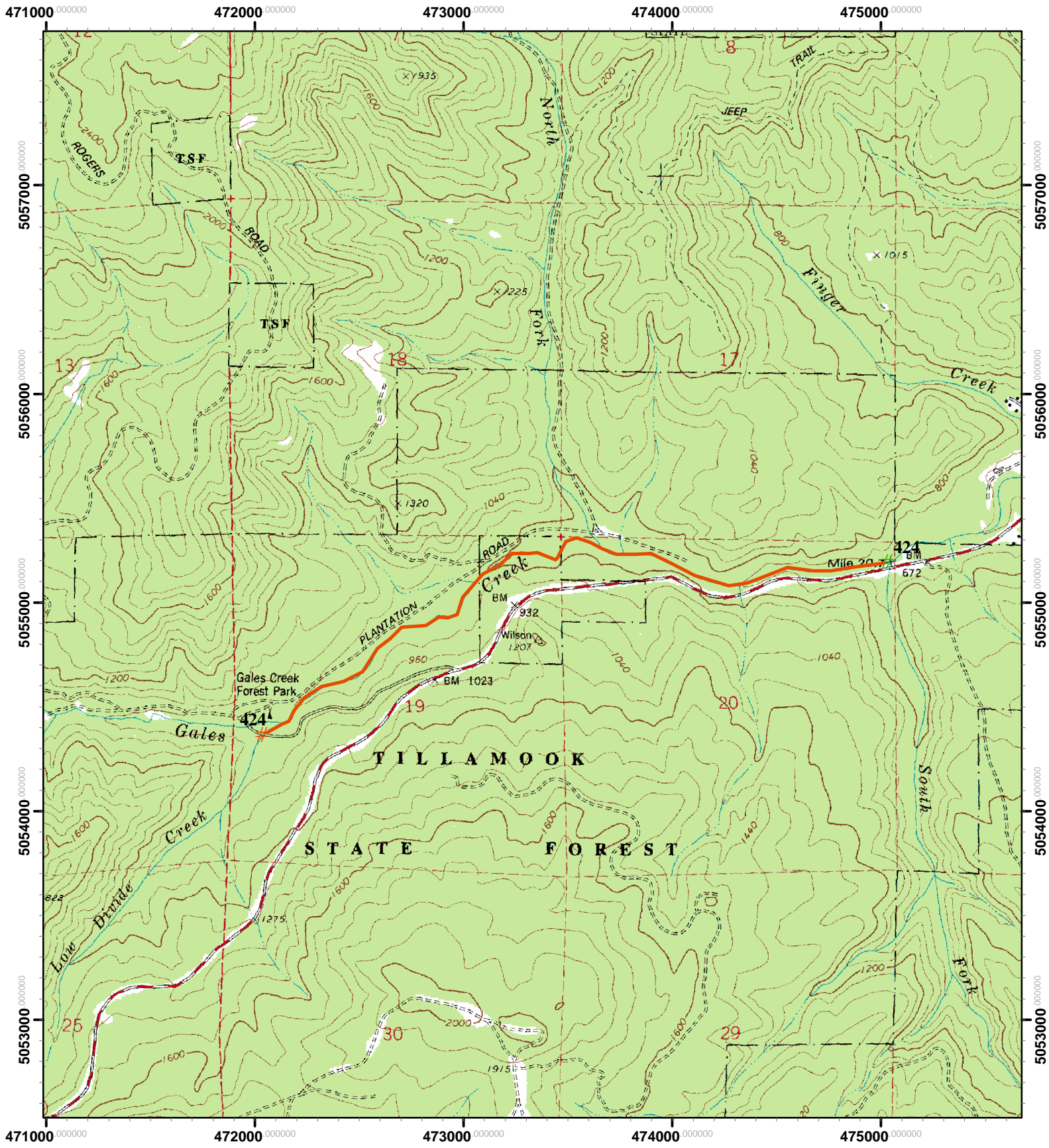
View of large wood placement and riparian zone.



Upstream view of stream reach.



Downstream view of stream reach.



Restoration Site ID:424
 Stream: Gales Creek
 T02N - R05W - S20
 USGS Map: Timber



- # Approximate Start Point
- # Approximate End Point
- Approximate Location of Each Survey

