

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

STREAM: BROWNSON CREEK
 GCG: 3-MS
 SITE ID: 453
 BASIN: COQUILLE
 TREATMENT DATE: 2011
 SURVEY DATE: 3/24/2011
 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-R11W-S11SE

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 50-90cm dbh

Primary channel length (meters) and area (m²): 1,667 : 7,668

Secondary channel length (meters) and area (m²) 53 : 91

VWI average: 7.8 VWI Range: 1.5 - 14 Average Gradient: 0.8%

Pieces LWD per 100m: 17.6 Wood Volume (m³) per 100m: 18.6

Percent pools: 60% Complex pools (LWD pieces>=3): 24 Pools >=1m deep: 3

<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	3	26	64	3	1	4
Pool units	4	36	54	2	1	4
Fast water units	1	17	76	5	0	2

SURVEY COMMENTS:

This is a pre treatment restoration survey. The crew noted numerous large wood habitat structures throughout the survey. The crew also noted observing juvenile coho salmon and a salmon carcass. Evidence of amphibians included a rough skinned newt.

Survey Date: 3/24/2011

Report Date: 9/14/2011

T29S-R11W-S11SE

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	7.8	VWI Range:	1.5 - 14

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	1,667	7,668	0
Secondary	53	91	0

Channel Dimensions (m)

Wetted	Active	Floodprone <i>n</i> = 8	First Terrace <i>n</i> = 8
Width: 4.3	Width: 4.7	5.5 (4 - 7.2)	6.5 (5.3 - 7.9)
Depth: 0.55	Height: 0.4	0.8 (0.6 - 1.1)	1.4 (1 - 1.9)

W:D ratio: 11.5

Stream Flow Type: HF

Average Unit Gradient: 0.8%

Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio): 1.2

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

Habitat Units/100m (primary channel length): 8.1

Riparian, Bank, and Wood Summary

	Primary	Secondary
Land Use:	ST	TH
Riparian Vegetation:	D50	G

Bank Condition and Shade

Bank Status	Percent Reach Length	Shade (% of 180)
Actively Eroding:	25%	Reach avg: 90%
Undercut Banks:	16%	Range: 58 - 100

Large Wood Debris

	Total	Total / 100m primary channel
All pieces (>=3m x 0.15m):	293	17.6
Volume (m ³):	311	18.6
Key pieces (>=12m x 0.60m):	5	0.3

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

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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
POOL-BACKWATER	4	29	2.1	0.46	62	0	43	29	29	0	0	0
POOL-DAMMED	2	16	5.1	0.53	80	0	0	28	73	0	0	0
POOL-LATERAL SCOUR	67	908	4.9	0.83	4,486	7	4	37	53	2	1	4
POOL-PLUNGE	2	31	4.1	0.68	124	0	5	18	53	10	15	0
RAPID/BEDROCK	1	12	2.7	0.25	32	0	0	10	40	0	0	50
RAPID/BOULDERS	1	3	0.4	0.02	1	0	0	0	10	90	0	0
RIFFLE	43	665	3.9	0.26	2,658	0	1	16	79	3	0	0
RIFFLE W/ POCKETS	1	23	7.9	0.45	182	0	0	60	30	0	0	10
STEP/BEDROCK	1	2	0.9	0.05	1	0	0	0	0	0	0	100
STEP/COBBLE	11	32	3.8	0.22	129	0	0	8	90	1	0	1
STEP/LOG	2	0	4.9	0.13	2	0	0	10	90	0	0	0
Total:	135	1,721	4.3	0.55	7,759	7	Avg: 3	26	64	3	1	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	6	45	3.1	0.48	142	1.83%	0	0.0
Scour Pools	69	939	4.8	0.82	4,610	59.41%	7	0.2
Glides	0	0			0	0.00%	0	0.0
Riffles	44	688	4.0	0.27	2,841	36.62%	0	0.0
Rapids	2	15	1.6	0.14	33	0.43%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	14	34	3.7	0.19	133	1.71%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

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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:	75	43.6	45.0
Pools >=1m deep:	13	7.6	7.8
Complex pools (LWD pieces>=3):	24	13.9	14.4
Pool frequency (channel widths/pool):	4.9		
Residual pool depth (avg):	0.56		

Survey Date 3/23/2011

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Report Date: 9/14/2011

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

Total hardwoods/1000	884
Total conifers/1000 ft	81
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	1.2	0.2	1.0	0.0	1.2	0.2	3.3
15-30cm	0.0	1.5	0.2	1.3	0.3	4.3	0.5	7.2
30-50cm	0.2	0.8	0.2	1.2	0.3	1.0	0.7	3.0
50-90cm	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Total/100m2	0.2	3.7	0.5	3.5	0.7	7.3	0.4	4.8

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	75		68		71	
Shrub cover	15		31		23	
Grass/forb cover	80		64		67	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	42		58		58	
High terrace	58		42		33	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		8	
Riprap	0		0		0	
Surface slope (%)	23		19		12	

Summary of Riparian Zone (0-30m) for all reaches**6 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	884
Total conifers/1000 ft	81
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	0.2	3.3
15-30cm	0.5	7.2
30-50cm	0.7	3.0
50-90cm	0.0	0.7
>90cm	0.0	0.3

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		
21	LT	1	HS	100	75	20	80	Conifer							ESTIMATED
								Hardwood	1			1			
21	LT	2	HS	40	40	75	10	Conifer							ESTIMATED
								Hardwood	2						
21	LT	3	HS	30	80	45	55	Conifer							ESTIMATED
								Hardwood	2	1					
21	RT	1	HT	0	75	20	80	Conifer							
								Hardwood							
21	RT	2	HS	5	90	10	80	Conifer	1	1	1				
								Hardwood	3	1					
21	RT	3	HS	10	95	0	70	Conifer			2	2			
								Hardwood							
39	LT	1	HT	0	85	0	95	Conifer							
								Hardwood							
39	LT	2	HT	0	80	0	100	Conifer							
								Hardwood							
39	LT	3	HT	0	80	10	90	Conifer							
								Hardwood							
39	RT	1	HT	0	70	20	70	Conifer				1			
								Hardwood							
39	RT	2	HT	0	55	70	20	Conifer							
								Hardwood				1			
39	RT	3	HS	10	70	35	65	Conifer							
								Hardwood	2	5					
66	LT	1	HS	50	80	20	80	Conifer							
								Hardwood	3	1	1				
66	LT	2	HS	5	85	5	95	Conifer							
								Hardwood		1	2				
66	LT	3	HS	5	95	10	90	Conifer							
								Hardwood	1	1					
66	RT	1	HS	30	45	20	80	Conifer							
								Hardwood							
66	RT	2	HS	25	10	0	100	Conifer							
								Hardwood							
66	RT	3	HS	10	30	40	60	Conifer							
								Hardwood			1	1			
83	LT	1	HT	0	90	10	90	Conifer							
								Hardwood	1	2	1				
83	LT	2	HT	0	60	80	20	Conifer							
								Hardwood							

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		
83	LT	3	HT	0	30	75	25	Conifer							
								Hardwood							
83	RT	1	HT	0	90	15	80	Conifer							
								Hardwood							
83	RT	2	HS	40	75	25	70	Conifer							
								Hardwood		3	2				
83	RT	3	RB	0	55	10	20	Conifer							BLM RD 29-11-11;PAVED
								Hardwood							
104	LT	1	HS	40	90	10	70	Conifer							
								Hardwood		1	1				
104	LT	2	HS	60	85	45	40	Conifer							
								Hardwood							
104	LT	3	HS	30	75	20	70	Conifer							
								Hardwood	1	5	2				
104	RT	1	HT	0	50	25	75	Conifer							
								Hardwood	2	2					
104	RT	2	HT	0	75	30	70	Conifer							
								Hardwood		1	1				
104	RT	3	HT	0	80	10	90	Conifer							
								Hardwood		1		1	2		
123	LT	1	HS	60	70	20	75	Conifer							
								Hardwood		3					
123	LT	2	HS	50	90	10	85	Conifer							
								Hardwood	1	2	1				
123	LT	3	HS	50	80	5	90	Conifer							
								Hardwood		10					
123	RT	1	HT	0	80	5	85	Conifer							
								Hardwood			2				
123	RT	2	HT	0	70	20	75	Conifer							
								Hardwood							
123	RT	3	HT	0	80	20	80	Conifer							
								Hardwood	1	2	3	2			

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OREGON PLAN MONITORING SITE
SURVEY DATE: 3/23/2011

COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 453 STREAM: BROWNSON CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	2	RI	00	18.2		TEMP=8 C; METRIC FOR START OF SURVEY
1	3	LP	00	43.1		OLD SALMONID CARCASS
1	7	LP	00	105.4	HS	HS LOGS
1	13	LP	00	189.6	HS	HS LOGS W/ DJ
1	15	LP	01	214.9	TJ/; HS	
1	16	RB	11	214.9		TEMP=8 C
1	21	RI	01	268	TJ/	
1	22	SR	11	268		H=1.5 TEMP=9 C; HARDPAN
1	26	LP	00	301.9	HS	HS LOGS
1	32	LP	00	411.4	SS/	
1	34	LP	00	448.6	HS	HS LOGS
1	36	LP	00	478.2	HS	HS LOGS

COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 453 STREAM: BROWNSON CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	37	RI	01	497.3	TJ/	
1	38	RI	11	497.3	AM	TEMP=8.5; RSN
1	39	LP	00	509.3	/SS	
1	41	BW	10	521.1		COHO FRY
1	42	LP	00	538	HS	HS LOGS
1	43	LP	00	544.5	HS	HS LOGS
1	48	LP	00	575.4	HS	HS LOGS
1	50	LP	00	593.2	AM	RSN
1	56	LP	00	665.4		COHO FRY
1	62	RI	00	721.4	/SS	
1	66	RI	00	767.1		BRIDGE CROSSING FOR BROWNSON CRK RD; WETTED \ IS 4.7
1	67	LP	00	802.3	CS/CS	UNIT STARTED UNDER THE BROWNSON CRK RD BRIDGE

COMMENT SUMMARY

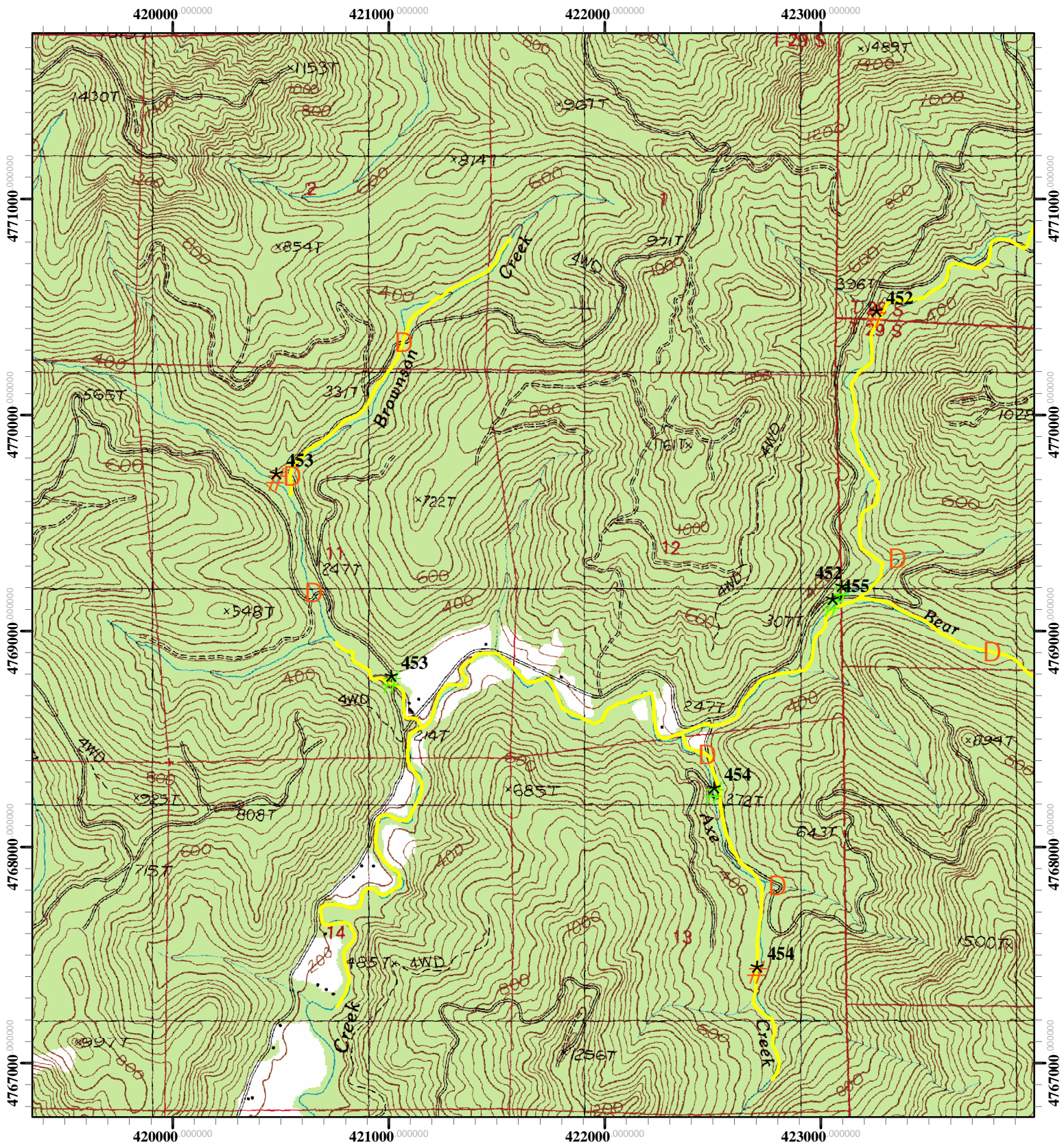
MONITORING AREA: 3-MS SITE ID: 453 STREAM: BROWNSON CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	73	LP	01	868.9	/TJ	
1	74	SC	11	868.9		TEMP=8.5 C
1	76	LP	00	898.7	HS	HS LOGS
1	80	LP	00	928.3	SS/	
1	82	LP	01	994.2	/TJ; HS	POSSIBLE HS LOGS
1	85	RI	01	1052.5	TJ/	
1	86	RI	11	1052.5		TEMP=9 C
1	91	LP	00	1124.6	HS	HS LOGS W/ DJ
1	99	SL	00	1206.8		H=.30
1	104	RI	00	1269.9		WETTED WIDTH IS 5.6
1	105	LP	00	1289.8		LARGE TREE W/ A 3.5 M DIAM ROOTWAD FELL IN STREA RECENTLY
1	107	LP	00	1343.9	HS	HS LOGS





COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 453 STREAM: BROWNSON CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	112	LP	00	1397.2		FRY
1	113	LP	00	1407.9	AM	RSN; FRY
1	117	LP	01	1464.3	/TJ	
1	118	RI	11	1464.3		TEMP=8 C
1	120	RP	00	1495.5	DJ	RP POCKETS CAUSED BY DOWNED TREES W/ BRANCHE
1	125	LP	00	1549.5	SS/	
1	130	RI	01	1625.6	DJ	
1	133	SL	00	1635.1		H=.30
1	135	LP	00	1667.4	HS	HS LOGS



Restoration Site ID: 453
 Stream: Brownson Creek
 T29S- R11W - S11
 USGS Map: Remote
 Basin: Coquille

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

