

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

STREAM: Canyon Creek (L-12)  
BASIN: Molalla River  
SURVEY TYPE: Pre-Tx  
DATE: June 29, 2000  
SURVEY CREW: Tally Fisher, David Mann  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 12.2 km<sup>2</sup>  
USGS MAPS: Colton, Elwood  
ECOREGION: Willamette Valley Foothills

**GENERAL DESCRIPTION:**

The Canyon Creek habitat survey extended 543 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 7.8 (range: 5.0 – 10.0). Land use for the reach was timber harvest and second growth (15-30 cm dbh) trees. The average unit gradient was 4.2 percent. Rapids (52%) and cascades (26%) dominated stream habitat. Cobble (38%) and boulders (30%) dominated stream substrate. Wood volume was low at 6.2 m<sup>3</sup>/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

T5S-R3E-24NE

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 avg: 7.8 range: 5.0-10.0

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	543	2,497	0
Secondary	19	31	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	4.8	Width	6.2	8.6	8.7
Depth	0.34	Height	0.6	1.2	1.4
		W:D ratio	10.0	Entrenchment	1.4

Stream Flow Type: MF Water Temp: 12.0-12.0°C  
 Avg. Unit Gradient: 4.2% Habitat Units/100m: 7.5

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	1%	Reach avg: 85%
Undercut Banks	8%	Range: 61-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	43	7.9
Volume (m <sup>3</sup> )	34	6.2
Key pieces (≥10m x 0.6m)	0	0.0

REACH 1

T5S-R3E-24NE

REACH 1

HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbbl	Bldr	Bdrk
CASCADE/BOULDERS	6	145	4.6	0.31	667	155	0	3	21	42	34	0
POOL-DAMMED	1	7	4.4	0.60	29	5	0	11	16	47	26	0
POOL-LATERAL SCOUR	6	48	3.7	0.58	186	20	0	8	30	42	14	7
POOL-PLUNGE	6	38	4.0	0.49	160	10	5	11	32	36	15	1
RAPID/BOULDERS	14	286	6.0	0.26	1,317	256	1	4	23	37	33	3
RIFFLE	1	29	4.2	0.20	120	10	0	10	20	55	15	0
STEP/BOULDERS	5	10	4.5	0.27	49	36	0	0	9	22	69	0
STEP/LOG	2	0	2.7	0.01	1	0	7	21	25	41	7	0
STEP/STRUCTURE	1	0	6.2	0.01	1	3	0	0	5	57	38	0
<b>Total:</b>	<b>42</b>	<b>562</b>	<b>4.8</b>	<b>0.34</b>	<b>2,528</b>	<b>495</b>	<b>Avg: 1</b>	<b>6</b>	<b>23</b>	<b>38</b>	<b>30</b>	<b>2</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m <sup>2</sup> )	Percent	Large Boulders Number	Boulders #/100m <sup>2</sup>
Dammed & BW Pools	1	7	4.4	0.60	29	1.15	5	17.2
Scour Pools	12	86	3.9	0.54	345	13.65	30	8.7
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	1	29	4.2	0.20	120	4.75	10	8.3
Rapids	14	286	6.0	0.26	1,317	52.10	256	19.4
Cascades	6	145	4.6	0.31	667	26.36	155	23.3
Step/Falls	8	10	4.3	0.17	50	1.99	39	77.7
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

	<u>Total</u>	<u>#/Km</u>
All Pools	13	23.1
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	1	1.8
Pool Frequency (channel widths/pool):	7.0	
Residual pool depth (avg)	0.38m	

STREAM SUMMARY

CANYON CREEK (PRE-TX)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
42	562	4.8	0.34	2,528	1	6	23	38	30	2	495

Wetted Area

Habitat Group	(m <sup>2</sup> )	Percent
Scour Pool	345	13.7
Backwater Pools	29	1.1
Glide	0	0.0
Riffle	120	4.8
Rapid	1,317	52.1
Cascade	667	26.4
Step	50	2.0
Dry	0	0.0

---

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	4,796
Total conifers/1000 ft	264
Total conifers >20" dbh/1000 ft	41
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	27.3	0.0	18.0	1.3	23.3	1.3	68.7
15-30cm	0.0	3.0	0.3	1.3	0.0	1.7	0.3	6.0
30-50cm	0.0	1.0	0.7	0.7	1.3	1.0	2.0	2.7
50-90cm	0.0	0.7	0.0	0.3	0.7	0.0	0.7	1.0
>90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
Total/100m <sup>2</sup>	0.0	32.3	1.0	20.3	3.3	26.0	1.4	26.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	93		88		93	
Shrub cover	43		48		34	
Grass/forb cover	48		45		56	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	0		0		33
High terrace	83		67		50	
Low terrace	17		17		17	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		0	
Riprap	0		0		0	
Surface slope (%)	6		3		12	

---

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

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

Total hardwoods/1000 ft	4,796
Total conifers/1000 ft	264
Total conifers >20" dbh/1000 ft	41

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zones 1-3	
	Conifer	Hardwood
3-15cm	1.3	68.7
15-30cm	0.3	6.0
30-50cm	2.0	2.7
50-90cm	0.7	1.0
>90cm	0.0	0.3

---

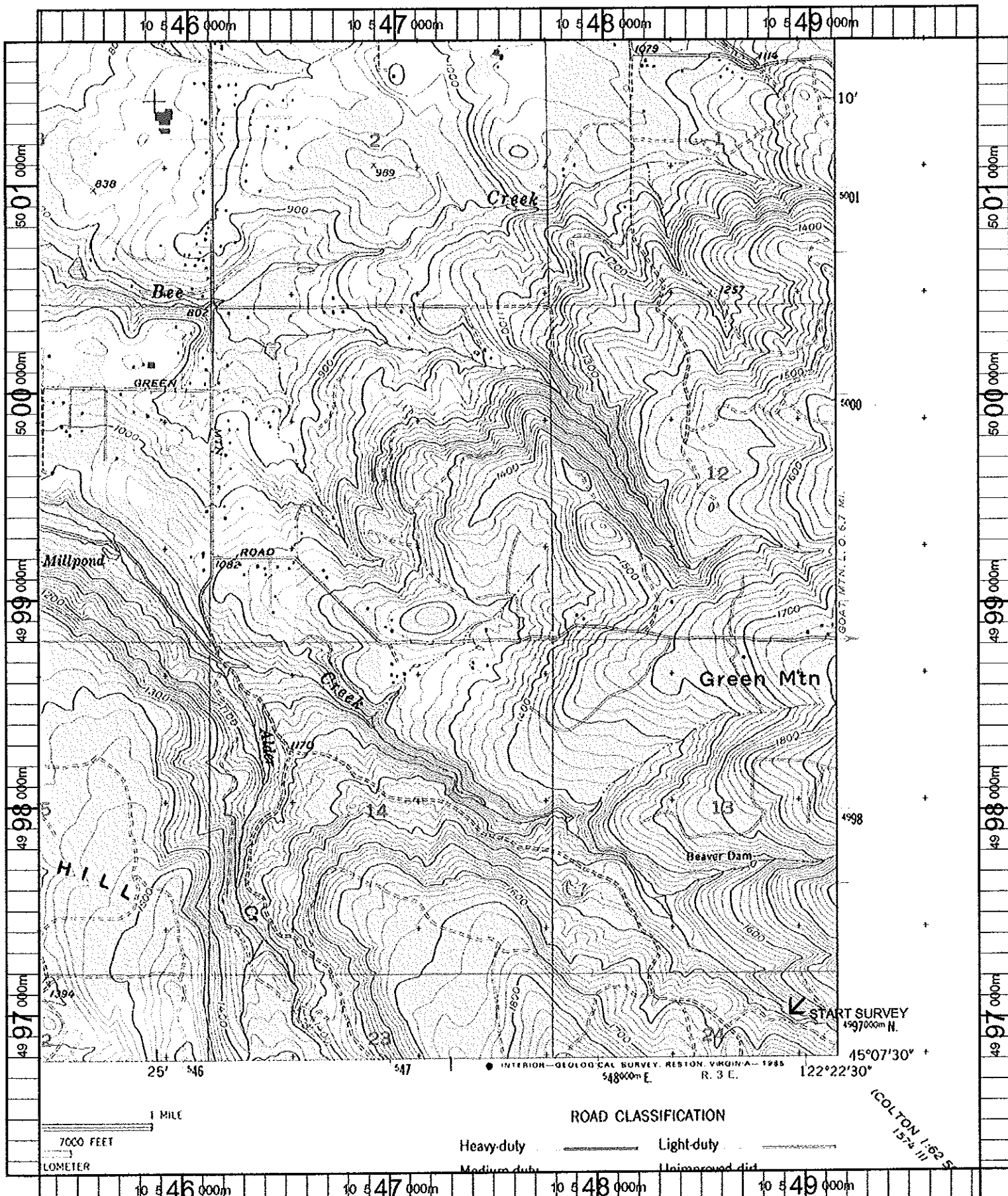
RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

VEGETATION DETAIL

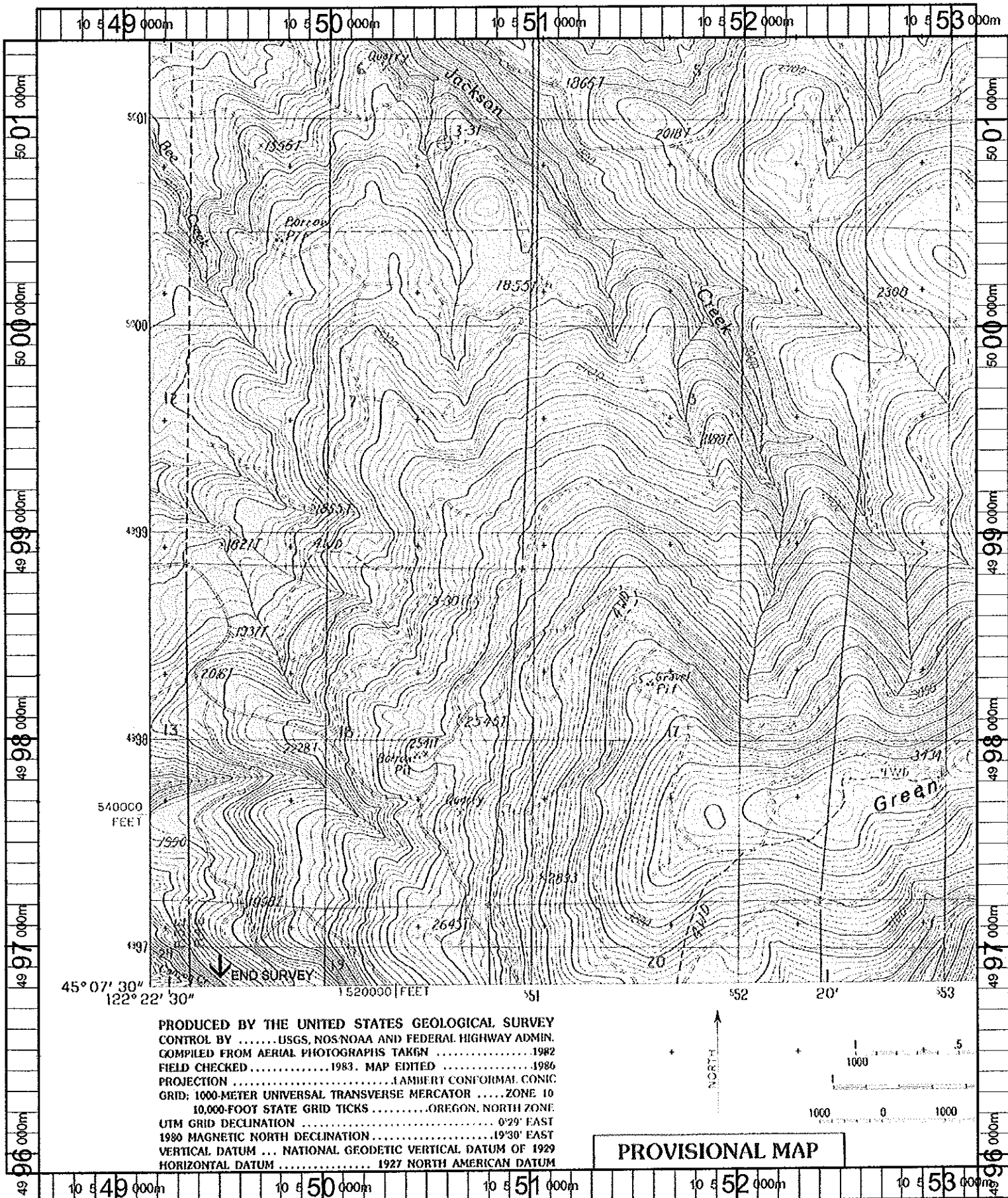
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
8	LF	1	LT	2.0	95	35	65	Conifer	0	0	0	0	0	
								Hardwood	25	0	0	0	0	BIRCH/ALDER
8	LF	2	LT	1.0	55	65	35	Conifer	0	1	0	0	0	
								Hardwood	7	0	0	0	0	CEDAR
8	LF	3	LT	5.0	100	30	70	Conifer	2	0	0	0	0	
								Hardwood	14	0	0	0	0	HEMLOCK, ALDER, V.
8	RT	1	HT	2.5	100	75	25	Conifer	0	0	0	0	0	
								Hardwood	15	4	0	0	0	SALMONBERRY, ALDER,
8	RT	2	HT	5.0	100	60	40	Conifer	0	0	0	0	0	
								Hardwood	17	0	0	0	0	MAPLE
8	RT	3	HT	2.0	100	30	50	Conifer	0	0	0	0	0	
								Hardwood	30	0	0	0	0	HEAVILY OVERGROWN
18	LF	1	HT	25.0	85	60	30	Conifer	0	0	0	0	0	
								Hardwood	10	0	0	0	1	COTTONWOOD
18	LF	2	RB	0.0	85	10	50	Conifer	0	0	2	0	0	
								Hardwood	0	0	2	0	0	HEMLOCK, BIGLEAF MA
18	LF	3	HS	40.0	100	15	65	Conifer	0	0	4	0	0	
								Hardwood	10	2	1	0	0	20% BARE
18	RT	1	HT	1.0	85	10	50	Conifer	0	0	0	0	0	
								Hardwood	22	0	1	1	0	BIG LEAF MAPLE
18	RT	2	HT	0.0	100	65	35	Conifer	0	0	0	0	0	
								Hardwood	11	0	0	1	0	VINE MAPLE
18	RT	3	HT	0.0	70	80	20	Conifer	0	0	0	0	0	
								Hardwood	0	1	2	0	0	ALDER
33	LF	1	HT	3.0	95	10	90	Conifer	0	0	0	0	0	
								Hardwood	9	5	1	0	0	
33	LF	2	HT	7.5	90	20	75	Conifer	0	0	0	0	0	
								Hardwood	16	3	0	0	0	ALDER, VINEMAPLE
33	LF	3	HT	2.0	100	15	75	Conifer	2	0	0	2	0	
								Hardwood	4	0	0	0	0	HEMLOCKS, VINE MAPL
33	RT	1	HT	1.0	100	70	30	Conifer	0	0	0	0	0	
								Hardwood	1	0	1	1	0	ALDER, SALMONBERRY
33	RT	2	HT	2.0	95	65	35	Conifer	0	0	0	0	0	
								Hardwood	3	1	0	0	0	DOWNED DEBRIS, STUM
33	RT	3	HS	24.0	90	35	55	Conifer	0	0	0	0	0	
								Hardwood	12	2	0	0	0	SMALL SPRING, CLEAR



Name: COLTON  
 Date: 10/23/100  
 Scale: 1 inch equals 2000 feet

Location: 10 547464 E 4998963 N  
 Caption: CANYON CREEK RESTORATION SITE - CLACKAMAS BASIN





Name: ELWOOD  
 Date: 10/23/100  
 Scale: 1 inch equals 2000 feet

Location: 10 550777 E 4998638 N  
 Caption: CANYON CREEK RESTORATION SITE - CLACKAMAS BASIN