

10-23-1991

## Ex. 280-US-448

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ODFW AQUATIC INVENTORY PROJECT

STREAM REPORT

STREAM: Trout Creek\

BASIN: Klamath

DATES: October 15-23, 1994

CREW: Ron Lefler / David Lowe

STREAM ORDER:\_\_\_ BASIN AREA:\_\_\_\_\_ NUMBER OF TRIBUTARIES:

USGS MAPS:

GENERAL DESCRIPTION: The Trout Creek survey progressed from its confluence with the Sprague River to the spring-source of its North Fork, for a total of 6,528 meters. During the survey the South Fork of Trout Creek was dry near its mouth. Stream habitat was dominated by backwater pools (46%), and riffles (33%). Stream substrate was dominated by silt and organics (49%).

REACH DESCRIPTIONS:

Reach 1: (T35S-R9E-NW36) Length 1,457 meters. This reach was in a broad valley floor, and was constrained 100 percent by terraces. The border for USFS land is marked by a fence near the end of this reach. The average unit gradient was 0.5 percent, and the valley width index was well over 20 (VWI is the ratio of the active channel width to the width of the valley floor). Stream habitat was dominated by three large backwater pools caused by beaver dams (85%), and silt and organics (80%) dominated the substrate. The principle landuse was light grazing, and 42 percent of the stream banks were classed as actively eroding.

Reach 2: (T35S-9E-35NE) Length 664 meters. This reach ends at the confluence of the north and south forks of Trout Creek. This reach was constrained 100 percent by hillslopes in an open v-shaped valley with a VWI of 1.0. The average unit gradient was 1.4 percent. Stream habitat was dominated by riffles (76%), and scour pools (19%). Stream substrate was dominated by silt and organics (72%), and cobble (13%). The dominant land use was light grazing and mature timber forest. Twenty six percent of the length of stream banks were classed as actively eroding.

Reach 3: (T35S-R9E-35SE) Length 2,442 meters. This was the first reach of the North Fork of Trout Creek. About 1/4 of

the length of this reach was contained within a private land holding bordered by fence. This reach was unconstrained, and was set between terraces in a broad valley floor. The average unit gradient was 1.5 percent. Stream habitat was dominated by riffle habitat (88%), and substrate was dominated by silt and organics (44%), sand (25%), and gravel (21%). Grazing and mature timber forest were the dominant land uses.

Reach 4: (T36S-R9E-NW3) Length 531 meters. This was the second reach of the North Fork of Trout Creek. A private land holding, bordered by a fence, starts in this reach and continues into reach 6. This reach was confined 100 percent by hillslopes within a steep v-shaped valley. The VWI was 2.0 and the average unit gradient was 2.4. Stream habitat was dominated by riffles (50%), and rapids (42%), and stream substrate was composed primarily of sand (32%), silt and organics (30%), and gravel (22%). The dominant land use was mature timber, and 100 percent of the stream banks were classed as being stabilized by vegetation.

Reach 5: (T36S-R9E-4NE) Length 338 meters. This was the third reach of the North Fork of Trout Creek. It was contained within a private land holding. This reach was unconstrained and was set between terraces within a broad valley floor. The average unit gradient was 2.1 percent. Stream habitat was dominated by riffles (76%), and rapids (15%). The substrate was dominated by sand (33%), silt and organics (29%), and gravel (33%). The dominant land use was mature timber.

Reach 6: (T36S-R9E-NE4) Length 457 meters. This was the fourth reach of the North Fork of Trout Creek. The end of a private land holding is bordered by a fence in the lower portion of this reach. This reach was constrained 100 percent by steep v-shaped hillslopes, with a VWI of 1.5. The average unit gradient was 2.7 percent. Stream habitat was dominated by riffles (77%), and cascades (12%). Stream substrate was dominated by sand (32%), and gravel (21%). Mature timber was the dominant land use.

Reach 7: (T36S-R9E-SW4) Length 639 meters. This was the fifth and final reach surveyed in the North Fork of Trout Creek. It was 100 percent constrained by steep v-shaped hillslopes, with a VWI of 1.5. The average unit gradient was 17 percent. Stream habitat was dominated by cascade (85%), and riffle habitat (14%). Stream substrate was dominated by bedrock (46%). The dominant land use was mature timber. This reach ends at a spring source.

CONCERNS/RECOMMENDATIONS:

COMMENTS:

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: 99.9

Channel Morphology (Percent Reach Length)

<u>Unconstrained</u>		<u>Constrained</u>	
Single Channel	0	Hillslope	0
Multiple Channel	0	Bedrock	0
Braided Channel	0	Terrace	100
		Alt. Terrace/Hill	0

Channel Characteristics

<u>Type</u>	<u>Length</u>	<u>Area</u>	<u>Dry Units</u>
Primary	1,457	8,975	0
Secondary	0	0	0

Channel Dimensions

<u>Wetted Surface</u>		<u>Active Channel</u>		<u>First Terrace</u>	
Width	2.7	Width	7.6	Width	14.2
Depth	0.3	Height	0.5	Height	1.6

Stream Flow: LF                      Water Temp: 4.0-4.0  
 Avg. Unit Gradient: 0.5              Habitat Units/100m: 4.1

Riparian, Bank, and Wood Summary

Land Use:                      LG                      Riparian Veg.: G/S

Bank Stability

<u>Bank Class</u>	<u>Percent Reach Length</u>	<u>Undercut Banks</u>
Non-Erodible	0.0	Unit Average: 0.33%
Vegetation Stabilized	57.5	
Actively Eroding	42.5	

Wood Complexity

<u>Wood Complexity</u>		<u>Open Sky Above Stream (% of 180°)</u>	
Average Unit Score:	1.1	Unit Average:	82
Average Wood Cover:	1.3%	Range:	22-89

REACH 1

35S-9E-36NW

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
GLIDE	4	64	3.6	0.2	204	0	88	0	13	0	0	0
POOL-DAMMED	3	309	21.3	1.3	7,585	0	100	0	0	0	0	0
POOL-LATERAL SCOUR	19	229	1.5	0.3	303	0	90	2	6	2	0	0
POOL-PLUNGE	1	3	2.3	0.3	7	0	95	0	0	5	0	0
POOL-STRAIGHT SCOUR	4	90	0.9	0.3	74	0	90	1	6	3	0	0
RIFFLE	9	80	1.0	0.1	72	0	47	7	28	17	2	0
RIFFLE W/ POCKETS	17	673	0.9	0.2	669	0	75	6	17	2	0	0
STEP/LOG	3	9	7.7	0.2	61	0	100	0	0	0	0	0
<b>Total:</b>	<b>60</b>	<b>1,457</b>	<b>2.7</b>	<b>0.3</b>	<b>8,975</b>	<b>0</b>	<b>Avg:80</b>	<b>3</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>0</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		Wood
					(m <sup>2</sup> )	Percent	Number	#/100m <sup>2</sup>	Class
Dammed & EW Pools	3	309	21.3	1.3	7585	84.51	0	0.00	1.0
Scour Pools	24	322	1.4	0.3	385	4.28	0	0.00	1.1
Glides	4	64	3.6	0.2	204	2.27	0	0.00	1.0
Riffles	26	753	0.9	0.1	741	8.26	0	0.00	1.1
Rapids	0	0	.	.	0	0.00	0	0.00	.
Cascades	0	0	.	.	0	0.00	0	0.00	.
Step/Falls	3	9	7.7	0.2	61	0.68	0	0.00	1.0

REACH 2

35S-9E-35NE

REACH 2

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
GLIDE	2	32	2.1	0.2	64	4	85	0	3	5	8	0
POOL-LATERAL SCOUR	7	76	2.1	0.3	163	13	87	0	2	6	5	0
POOL-PLUNGE	3	30	2.3	0.4	67	11	88	0	0	5	7	0
POOL-STRAIGHT SCOUR	1	14	1.7	0.3	25	3	85	0	0	10	5	0
RIFFLE	3	27	2.0	0.1	48	2	45	0	13	37	5	0
RIFFLE W/ POCKETS	10	484	2.0	0.2	973	199	62	2	9	14	15	0
<b>Total:</b>	<b>26</b>	<b>664</b>	<b>2.1</b>	<b>0.2</b>	<b>1,340</b>	<b>232</b>	<b>Avg:72</b>	<b>1</b>	<b>6</b>	<b>13</b>	<b>9</b>	<b>0</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		Wood
					(m <sup>2</sup> )	Percent	Number	#/100m <sup>2</sup>	Class
Dammed & BW Pools	0	0	.	.	0	0.00	0	0.00	.
Scour Pools	11	120	2.1	0.4	254	18.96	27	10.63	1.0
Glides	2	32	2.1	0.2	64	4.80	4	6.22	1.0
Riffles	13	511	2.0	0.2	1021	76.24	201	19.68	1.2
Rapids	0	0	.	.	0	0.00	0	0.00	.
Cascades	0	0	.	.	0	0.00	0	0.00	.
Step/Falls	0	0	.	.	0	0.00	0	0.00	.

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: 1.0

Channel Morphology (Percent Reach Length)			
<u>Unconstrained</u>		<u>Constrained</u>	
Single Channel	0	Hillslope	100
Multiple Channel	0	Bedrock	0
Braided Channel	0	Terrace	0
		Alt. Terrace/Hill	0

Channel Characteristics			
<u>Type</u>	<u>Length</u>	<u>Area</u>	<u>Dry Units</u>
Primary	664	1,340	0
Secondary	0	0	0

Channel Dimensions					
<u>Wetted Surface</u>		<u>Active Channel</u>		<u>First Terrace</u>	
Width	2.1	Width	4.5	Width	9.0
Depth	0.2	Height	0.4	Height	2.0

Stream Flow: LF                      Water Temp: 9.0-9.0  
 Avg. Unit Gradient: 1.4            Habitat Units/100m: 3.9

Riparian, Bank, and Wood Summary

Land Use:                      LG/MT                      Riparian Veg.: G/CM

Bank Stability		
<u>Bank Class</u>	<u>Percent Reach Length</u>	<u>Undercut Banks</u>
Non-Erodible	0.0	Unit Average: 0.19%
Vegetation Stabilized	73.5	
Actively Eroding	26.5	

<u>Wood Complexity</u>		<u>Open Sky Above Stream (% of 180°)</u>	
Average Unit Score:	1.1	Unit Average:	76
Average Wood Cover:	1.3%	Range:	64-89



REACH 3

35S-9E-35SE

REACH 3

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
GLIDE	3	36	1.2	0.2	42	2	85	12	3	0	0	0
POOL-DAMMED	2	15	1.5	0.3	22	1	60	30	5	5	0	0
POOL-LATERAL SCOUR	9	52	1.4	0.3	68	2	64	23	11	1	1	0
POOL-PLUNGE	3	11	1.8	0.3	21	1	63	17	17	3	0	0
POOL-STRAIGHT SCOUR	1	7	1.0	0.3	7	0	60	30	10	0	0	0
RAPID/BOULDERS	4	94	1.3	0.2	132	40	15	16	33	25	11	0
RIFFLE	9	561	1.0	0.1	559	18	27	25	40	6	2	0
RIFFLE W/ POCKETS	20	1,701	1.0	0.2	1,668	32	41	31	23	5	1	0
STEP/BOULDERS	2	2	3.7	0.1	7	0	0	0	0	0	100	0
<b>Total:</b>	<b>53</b>	<b>2,478</b>	<b>1.3</b>	<b>0.2</b>	<b>2,526</b>	<b>96</b>	<b>Avg:44</b>	<b>25</b>	<b>21</b>	<b>5</b>	<b>5</b>	<b>0</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		Wood
					(m <sup>2</sup> )	Percent	Number	#/100m <sup>2</sup>	Class
Dammed & BW Pools	2	15	1.5	0.3	22	0.88	1	4.50	1.0
Scour Pools	13	70	1.5	0.3	96	3.81	3	3.12	1.5
Glides	3	36	1.2	0.2	42	1.65	2	4.80	1.3
Riffles	29	2,262	1.0	0.2	2227	88.16	50	2.25	1.7
Rapids	4	94	1.3	0.2	132	5.21	40	30.37	1.8
Cascades	0	0	.	.	0	0.00	0	0.00	.
Step/Falls	2	2	3.7	0.1	7	0.29	0	0.00	1.0

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: 99.9

Channel Morphology (Percent Reach Length)

<u>Unconstrained</u>		<u>Constrained</u>	
Single Channel	100	Hillslope	0
Multiple Channel	0	Bedrock	0
Braided Channel	0	Terrace	0
		Alt. Terrace/Hill	0

Channel Characteristics

<u>Type</u>	<u>Length</u>	<u>Area</u>	<u>Dry Units</u>
Primary	2,442	2,504	0
Secondary	36	22	0

Channel Dimensions

<u>Wetted Surface</u>		<u>Active Channel</u>		<u>First Terrace</u>	
Width	1.3	Width	3.0	Width	11.6
Depth	0.2	Height	0.5	Height	2.2

Stream Flow: LF                      Water Temp: 9.5-9.5  
 Avg. Unit Gradient: 1.5              Habitat Units/100m: 2.1

Riparian, Bank, and Wood Summary

Land Use:                      G/MT                      Riparian Veg.: G/CM

Bank Stability

<u>Bank Class</u>	<u>Percent Reach Length</u>	<u>Undercut Banks</u>
Non-Erodible	0.3	Unit Average: 0.00%
Vegetation Stabilized	91.0	
Actively Eroding	8.7	

Wood Complexity

Average Unit Score: 1.6  
 Average Wood Cover: 4.8%

Open Sky Above Stream (% of 180°)

Unit Average: 68  
 Range: 33-89

REACH 4

36S-9E-3NW

REACH 4

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
POOL-DAMMED	1	9	1.9	0.3	18	0	60	30	10	0	0	0
POOL-LATERAL SCOUR	4	23	1.9	0.4	43	2	58	28	13	0	3	0
POOL-PLUNGE	1	3	2.1	0.4	7	3	5	5	20	50	20	0
RAPID/BOULDERS	3	191	1.7	0.2	331	42	0	17	30	37	17	0
RIFFLE	2	191	1.0	0.1	197	3	30	45	20	5	0	0
RIFFLE W/ POCKETS	6	204	1.0	0.2	197	3	26	42	27	5	0	0
<b>Total:</b>	<b>17</b>	<b>620</b>	<b>1.4</b>	<b>0.2</b>	<b>793</b>	<b>53</b>	<b>Avg:30</b>	<b>32</b>	<b>22</b>	<b>12</b>	<b>5</b>	<b>0</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		Wood
					(m <sup>2</sup> )	Percent	Number	#/100m <sup>2</sup>	Class
Dammed & BW Pools	1	9	1.9	0.3	18	2.23	0	0.00	1.0
Scour Pools	5	26	1.9	0.4	50	6.28	5	10.04	1.4
Glides	0	0	.	.	0	0.00	0	0.00	.
Riffles	8	394	1.0	0.2	395	49.78	6	1.52	2.3
Rapids	3	191	1.7	0.2	331	41.70	42	12.71	3.3
Cascades	0	0	.	.	0	0.00	0	0.00	.
Step/Falls	0	0	.	.	0	0.00	0	0.00	.

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	100	Constraining Terraces	0
Moderate V-shape	0	Multiple Terraces	0
Open V-shape	0	Wide Floodplain	0

Valley Width Index: 2.0

Channel Morphology (Percent Reach Length)

<u>Unconstrained</u>		<u>Constrained</u>	
Single Channel	0	Hillslope	100
Multiple Channel	0	Bedrock	0
Braided Channel	0	Terrace	0
		Alt. Terrace/Hill	0

Channel Characteristics

<u>Type</u>	<u>Length</u>	<u>Area</u>	<u>Dry Units</u>
Primary	531	741	0
Secondary	89	52	0

Channel Dimensions

<u>Wetted Surface</u>		<u>Active Channel</u>		<u>First Terrace</u>	
Width	1.4	Width	2.8	Width	***.*
Depth	0.2	Height	0.7	Height	**.*

Stream Flow: LF                      Water Temp: 6.0-6.0  
 Avg. Unit Gradient: 2.4              Habitat Units/100m: 2.7

Riparian, Bank, and Wood Summary

Land Use:                      MT                                      Riparian Veg.: G/MM

Bank Stability

<u>Bank Class</u>	<u>Percent Reach Length</u>	<u>Undercut Banks</u>
Non-Erodible	0.0	Unit Average: 0.00%
Vegetation Stabilized	100.0	
Actively Eroding	0.0	

Wood Complexity

Average Unit Score: 2.1  
 Average Wood Cover: 6.2%

Open Sky Above Stream (% of 180°)

Unit Average: 52  
 Range: 28-69

REACH 5

36S-9E-4NE

REACH 5

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
POOL-LATERAL SCOUR	3	13	1.8	0.3	22	0	40	37	20	3	0	0
POOL-PLUNGE	4	12	2.0	0.4	21	0	55	24	13	9	0	0
RAPID/BOULDERS	2	51	1.9	0.2	82	4	10	20	30	40	0	0
RIFFLE	3	83	1.5	0.2	125	0	17	47	20	17	0	0
RIFFLE W/ POCKETS	4	180	1.7	0.2	281	9	15	35	38	11	1	0
<b>Total:</b>	<b>16</b>	<b>338</b>	<b>1.8</b>	<b>0.3</b>	<b>530</b>	<b>13</b>	<b>Avg:29</b>	<b>33</b>	<b>24</b>	<b>14</b>	<b>0</b>	<b>0</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		Wood
					(m <sup>2</sup> )	Percent	Number	#/100m <sup>2</sup>	Class
Dammed & BW Pools	0	0	.	.	0	0.00	0	0.00	.
Scour Pools	7	24	1.9	0.3	43	8.15	0	0.00	1.6
Glides	0	0	.	.	0	0.00	0	0.00	.
Riffles	7	264	1.6	0.2	406	76.47	9	2.22	2.6
Rapids	2	51	1.9	0.2	82	15.39	4	4.90	2.0
Cascades	0	0	.	.	0	0.00	0	0.00	.
Step/Falls	0	0	.	.	0	0.00	0	0.00	.

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: 90.0

Channel Morphology (Percent Reach Length)

<u>Unconstrained</u>		<u>Constrained</u>	
Single Channel	100	Hillslope	0
Multiple Channel	0	Bedrock	0
Braided Channel	0	Terrace	0
		Alt. Terrace/Hill	0

Channel Characteristics

<u>Type</u>	<u>Length</u>	<u>Area</u>	<u>Dry Units</u>
Primary	338	530	0
Secondary	0	0	0

Channel Dimensions

<u>Wetted Surface</u>		<u>Active Channel</u>		<u>First Terrace</u>	
Width	1.8	Width	9.0	Width	27.5
Depth	0.3	Height	0.7	Height	1.9

Stream Flow: LF                      Water Temp: 5.5-5.5  
 Avg. Unit Gradient: 2.1              Habitat Units/100m: 4.7

Riparian, Bank, and Wood Summary

Land Use:                      MT                                      Riparian Veg.: G/MM

Bank Stability

<u>Bank Class</u>	<u>Percent Reach Length</u>	<u>Undercut Banks</u>
Non-Erodible	0.0	Unit Average: 6.56%
Vegetation Stabilized	84.5	
Actively Eroding	15.5	

Wood Complexity

Average Unit Score: 2.1  
 Average Wood Cover: 8.1%

Open Sky Above Stream (% of 180°)

Unit Average: 55  
 Range: 42-67

REACH 6

36S-9E-4NE

REACH 6

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	62	1.7	0.2	111	31	8	32	27	17	15	2
GLIDE	1	7	2.1	0.2	15	0	30	40	30	0	0	0
POOL-LATERAL SCOUR	1	6	2.1	0.4	13	0	90	5	5	0	0	0
POOL-PLUNGE	6	16	1.9	0.5	31	8	26	38	15	4	8	8
RAPID/BOULDERS	2	37	1.0	0.2	37	10	10	33	25	23	5	5
RIFFLE	8	171	1.5	0.1	278	12	15	44	25	14	3	0
RIFFLE W/ POCKETS	6	320	1.7	0.2	456	20	13	37	32	13	6	0
STEP/BOULDERS	4	6	2.1	0.1	13	0	0	0	0	13	63	25
<b>Total:</b>	<b>34</b>	<b>626</b>	<b>1.7</b>	<b>0.2</b>	<b>954</b>	<b>81</b>	<b>Avg:16</b>	<b>32</b>	<b>21</b>	<b>12</b>	<b>13</b>	<b>5</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		Wood
					(m <sup>2</sup> )	Percent	Number	#/100m <sup>2</sup>	Class
Dammed & EW Pools	0	0	.	.	0	0.00	0	0.00	.
Scour Pools	7	22	1.9	0.4	44	4.59	8	18.26	1.9
Glides	1	7	2.1	0.2	15	1.58	0	0.00	1.0
Riffles	14	491	1.6	0.2	734	77.01	32	4.36	2.2
Rapids	2	37	1.0	0.2	37	3.89	10	26.95	3.0
Cascades	6	62	1.7	0.2	111	11.61	31	28.00	3.8
Step/Falls	4	6	2.1	0.1	13	1.32	0	0.00	1.3

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	100	Constraining Terraces	0
Moderate V-shape	0	Multiple Terraces	0
Open V-shape	0	Wide Floodplain	0

Valley Width Index: 1.5

Channel Morphology (Percent Reach Length)

<u>Unconstrained</u>		<u>Constrained</u>	
Single Channel	0	Hillslope	100
Multiple Channel	0	Bedrock	0
Braided Channel	0	Terrace	0
		Alt. Terrace/Hill	0

Channel Characteristics

<u>Type</u>	<u>Length</u>	<u>Area</u>	<u>Dry Units</u>
Primary	457	810	0
Secondary	169	144	0

Channel Dimensions

<u>Wetted Surface</u>	<u>Active Channel</u>		<u>First Terrace</u>
Width 1.7	Width	17.0	Width ***.*
Depth 0.2	Height	0.8	Height **.*

Stream Flow: MF                      Water Temp: 4.0-4.0  
 Avg. Unit Gradient: 2.7              Habitat Units/100m: 5.4

Riparian, Bank, and Wood Summary

Land Use:                      MT                                      Riparian Veg.: G/CM

Bank Stability

<u>Bank Class</u>	<u>Percent Reach Length</u>	<u>Undercut Banks</u>
Non-Erodible	1.8	Unit Average: 8.09%
Vegetation Stabilized	78.3	
Actively Eroding	19.9	

Wood Complexity                      Open Sky Above Stream (% of 180°)

Average Unit Score: 2.3	Unit Average: 26
Average Wood Cover: 10.4%	Range: 11-53



REACH 7

36S-9E-4SW

REACH 7

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/BEDROCK	2	132	2.2	0.2	297	15	0	5	5	8	10	73
CASCADE/BOULDERS	3	410	2.3	0.2	901	26	7	17	23	27	20	7
RAPID/BOULDERS	1	93	2.2	0.2	204	11	10	30	30	20	10	0
STEP/BEDROCK	2	4	2.3	0.1	10	0	0	0	0	0	0	100
<b>Total:</b>	<b>8</b>	<b>639</b>	<b>2.3</b>	<b>0.2</b>	<b>1,412</b>	<b>52</b>	<b>Avg: 4</b>	<b>11</b>	<b>14</b>	<b>14</b>	<b>11</b>	<b>46</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		Wood
					(m <sup>2</sup> )	Percent	Number	#/100m <sup>2</sup>	Class
Dammed & BW Pools	0	0	.	.	0	0.00	0	0.00	.
Scour Pools	0	0	.	.	0	0.00	0	0.00	.
Glides	0	0	.	.	0	0.00	0	0.00	.
Riffles	0	0	.	.	0	0.00	0	0.00	.
Rapids	1	93	2.2	0.2	204	14.44	11	5.39	4.0
Cascades	5	542	2.3	0.2	1199	84.88	41	3.42	3.4
Step/Falls	2	4	2.3	0.1	10	0.68	0	0.00	1.0

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)			
<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	100	Constraining Terraces	0
Moderate V-shape	0	Multiple Terraces	0
Open V-shape	0	Wide Floodplain	0

Valley Width Index: 1.5

Channel Morphology (Percent Reach Length)			
<u>Unconstrained</u>		<u>Constrained</u>	
Single Channel	0	Hillslope	100
Multiple Channel	0	Bedrock	0
Braided Channel	0	Terrace	0
		Alt. Terrace/Hill	0

Channel Characteristics			
<u>Type</u>	<u>Length</u>	<u>Area</u>	<u>Dry Units</u>
Primary	639	1,412	0
Secondary	0	0	0

Channel Dimensions			
<u>Wetted Surface</u>	<u>Active Channel</u>		<u>First Terrace</u>
Width 2.3	Width	6.0	Width ***.*
Depth 0.2	Height	0.8	Height **.*

Stream Flow: MF                      Water Temp: 4.0-4.0  
 Avg. Unit Gradient: 17.1          Habitat Units/100m: 1.3

Riparian, Bank, and Wood Summary

Land Use:                      MT                                      Riparian Veg.: G/CM

Bank Stability		
<u>Bank Class</u>	<u>Percent Reach Length</u>	<u>Undercut Banks</u>
Non-Erodible	0.0	Unit Average: 0.00%
Vegetation Stabilized	100.0	
Actively Eroding	0.0	

<u>Wood Complexity</u>		<u>Open Sky Above Stream (% of 180°)</u>	
Average Unit Score:	2.9	Unit Average:	12
Average Wood Cover:	11.3%	Range:	11-17

*Trout Creek*

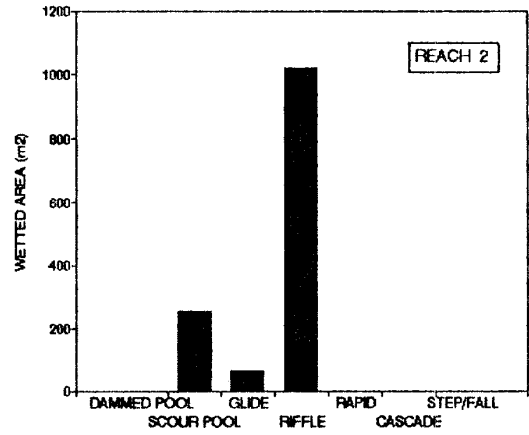
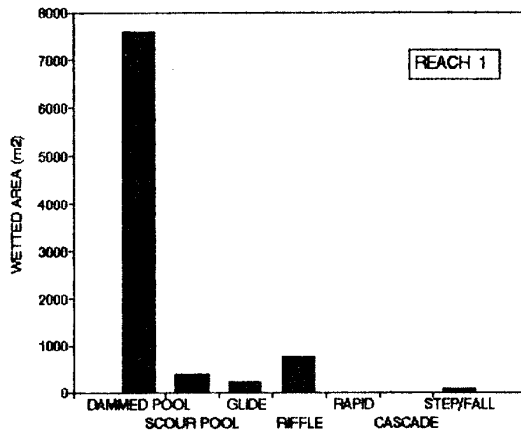
*E* NORTH FORK TROUT CREEK

STREAM SUMMARY

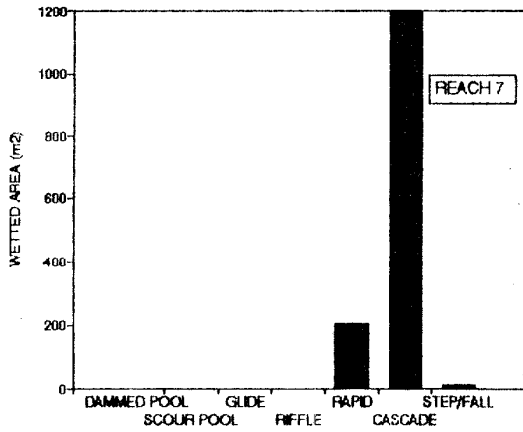
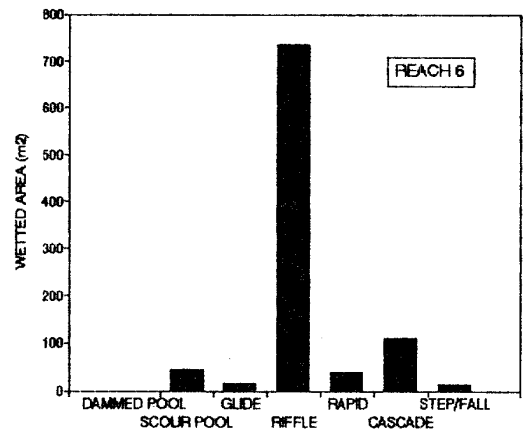
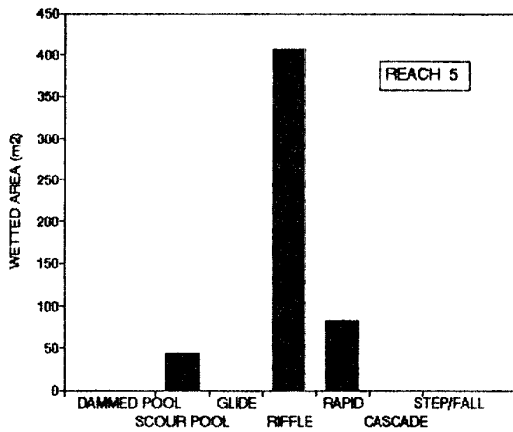
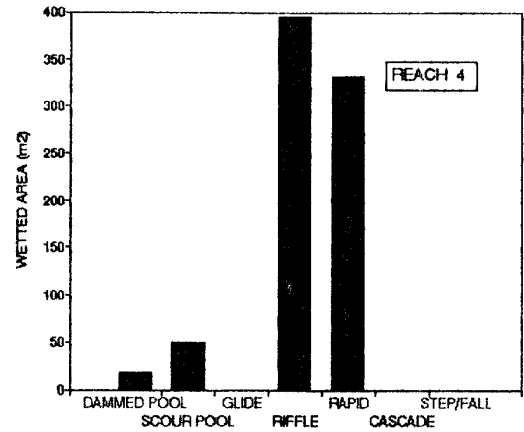
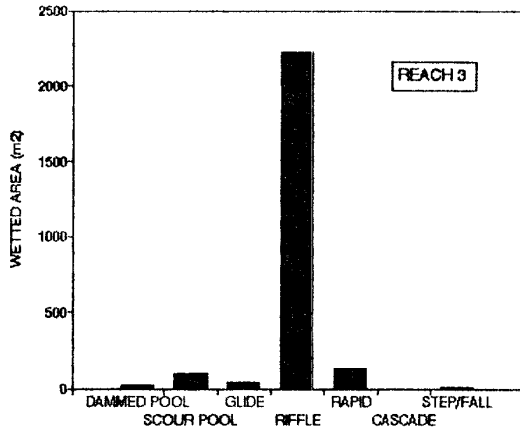
Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
214	6,821	1.9	0.2	16,529	49	18	17	8	5	3	527

Habitat Group	Wetted Area	
	(m <sup>2</sup> )	Percent
Scour Pool	872	5.3
Backwater Pools	7625	46.1
Glide	325	2.0
Riffle	5523	33.4
Rapid	785	4.7
Cascade	1309	7.9
Step	91	0.5

# TROUT CREEK: HABITAT DISTRIBUTION 1 of 2

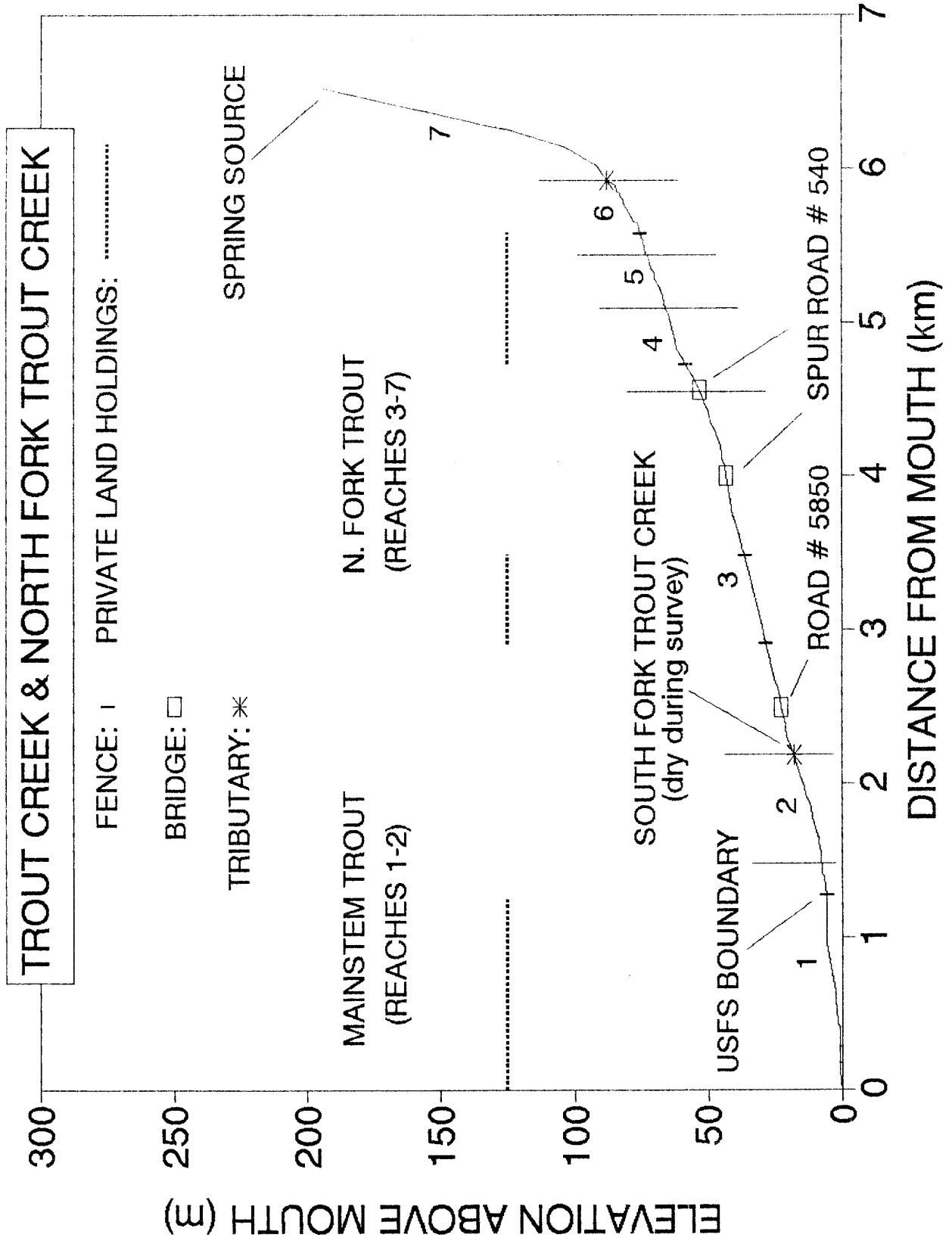


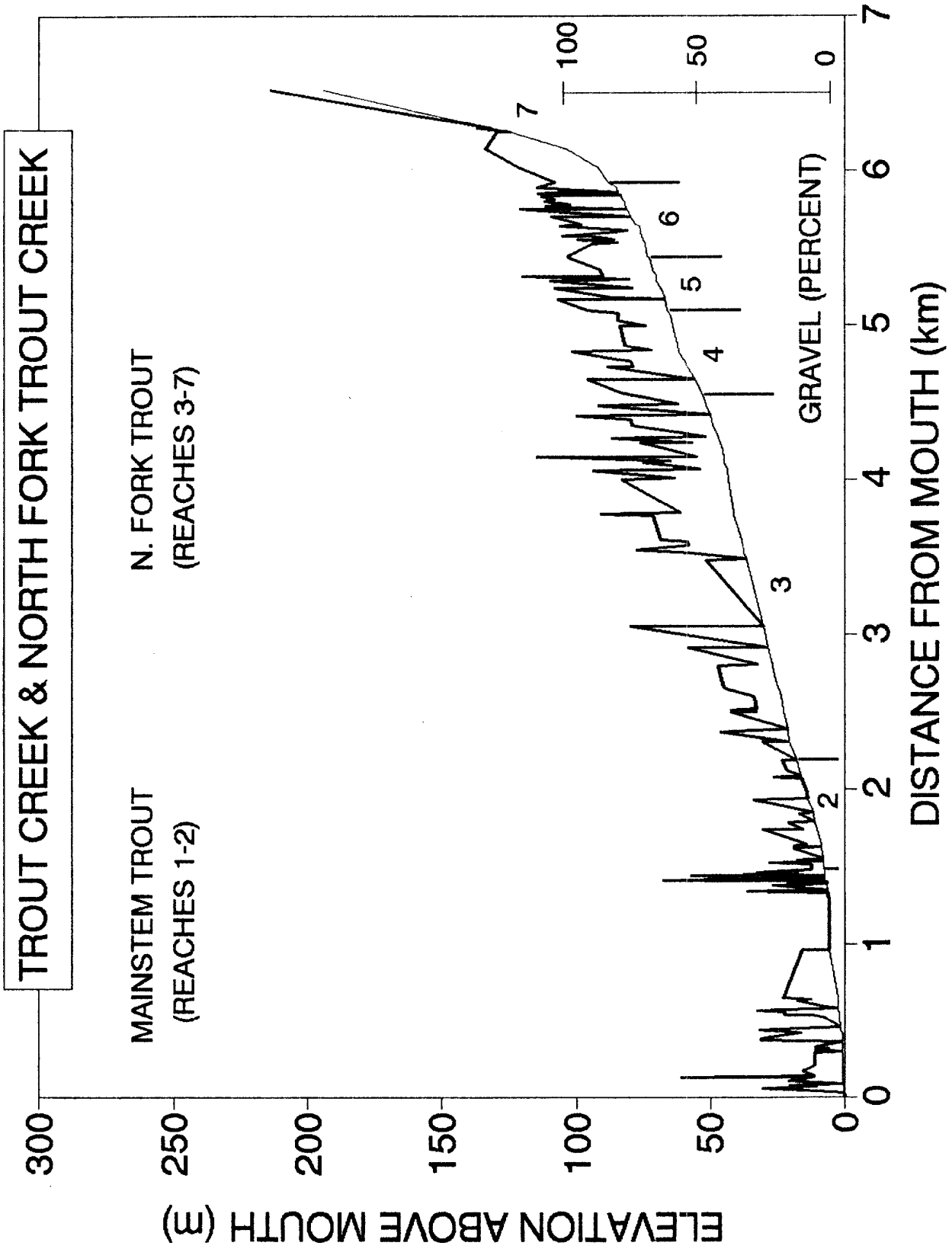
NORTH FORK TROUT CREEK: HABITAT DISTRIBUTION 2 of 2



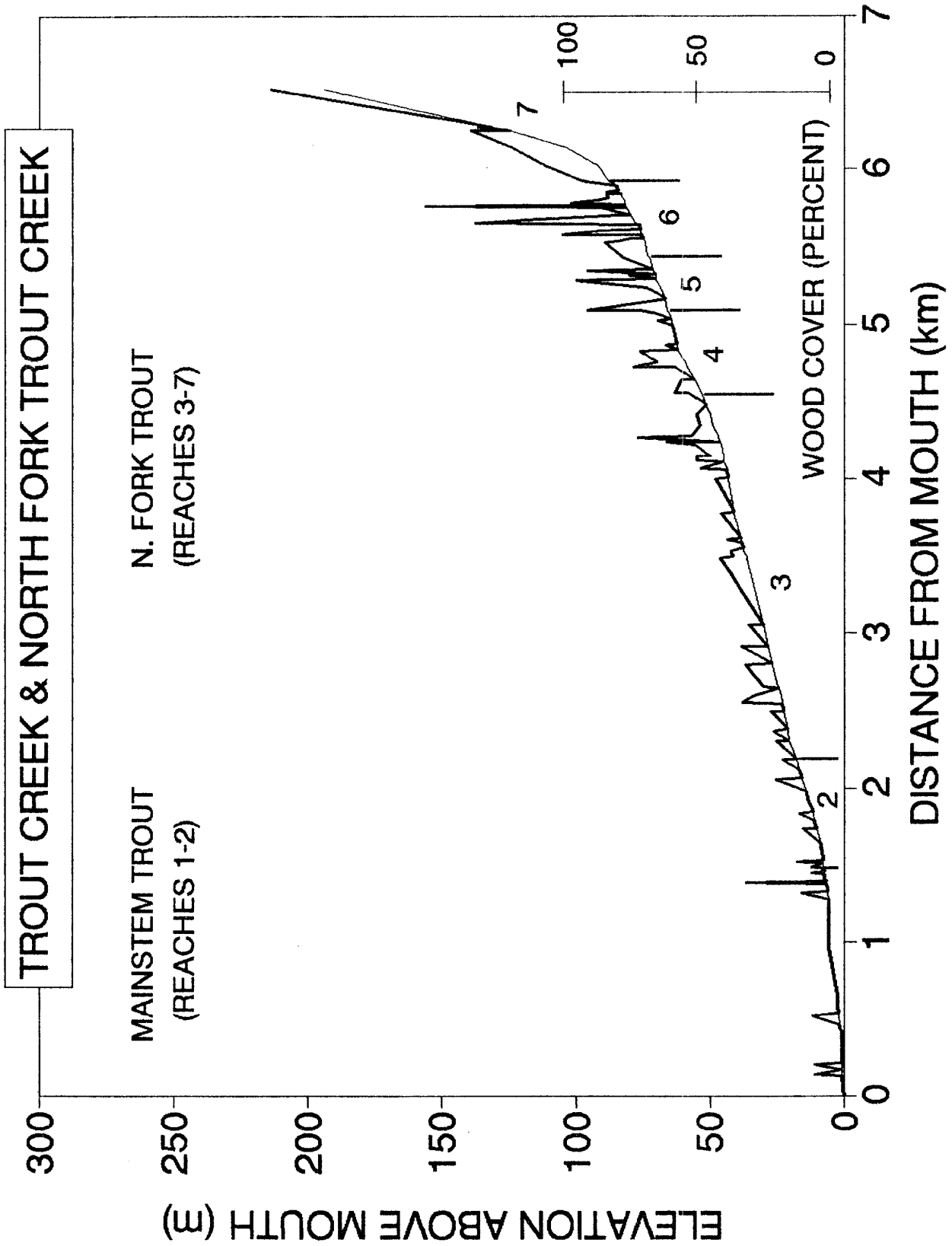
TROUT CREEK, WOOD SUMMARY

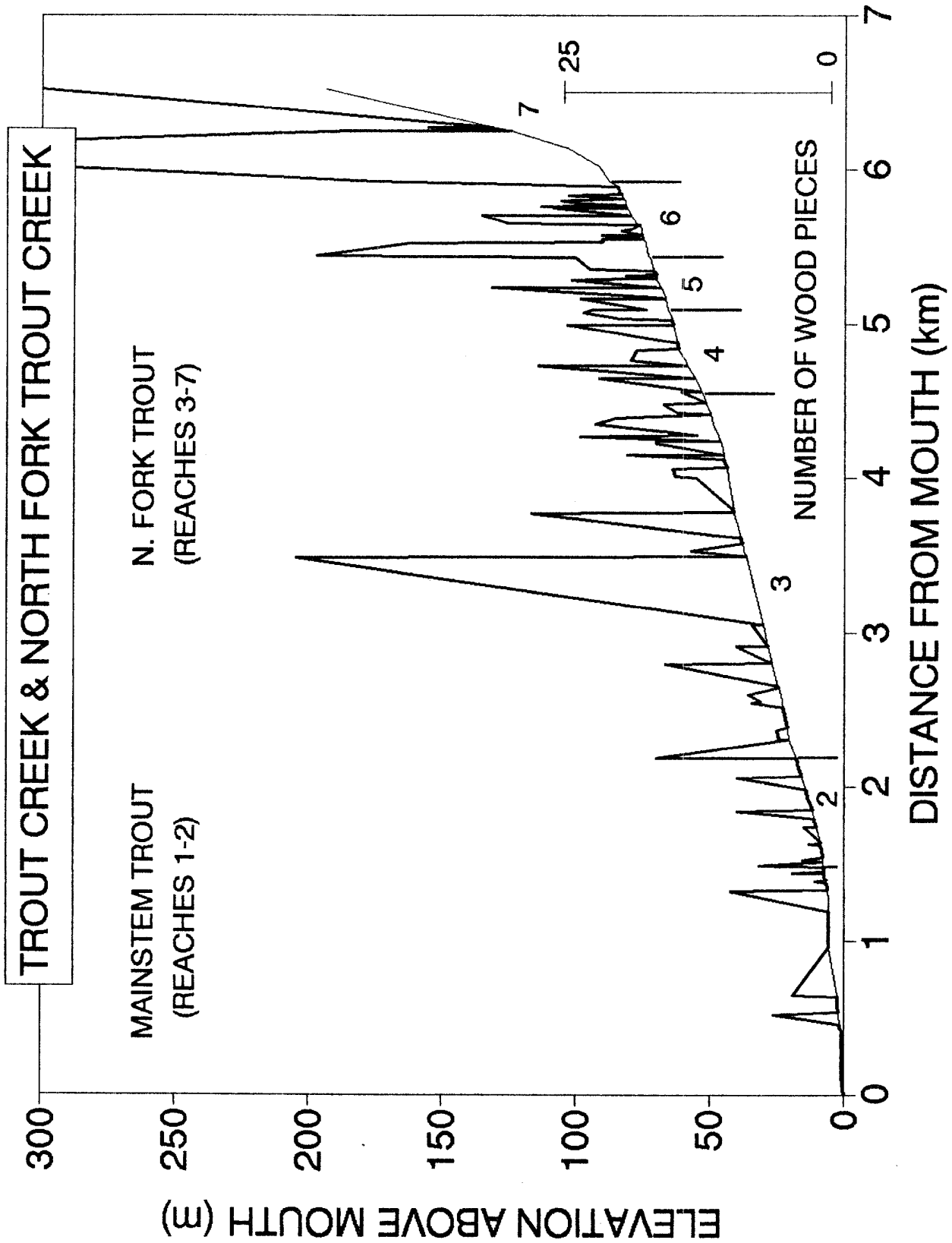
REACH	(m) DISTANCE	PIECES	(m <sup>3</sup> ) VOLUME	PIECES /100m	VOLUME /100m
1	1457	29	13	2	0.9
2	664	24	5	4	0.8
3	2440	184	72	8	3
4	533	62	16	12	3
5	338	55	26	16	8
6	457	124	37	27	8
7	639	196	85	31	13

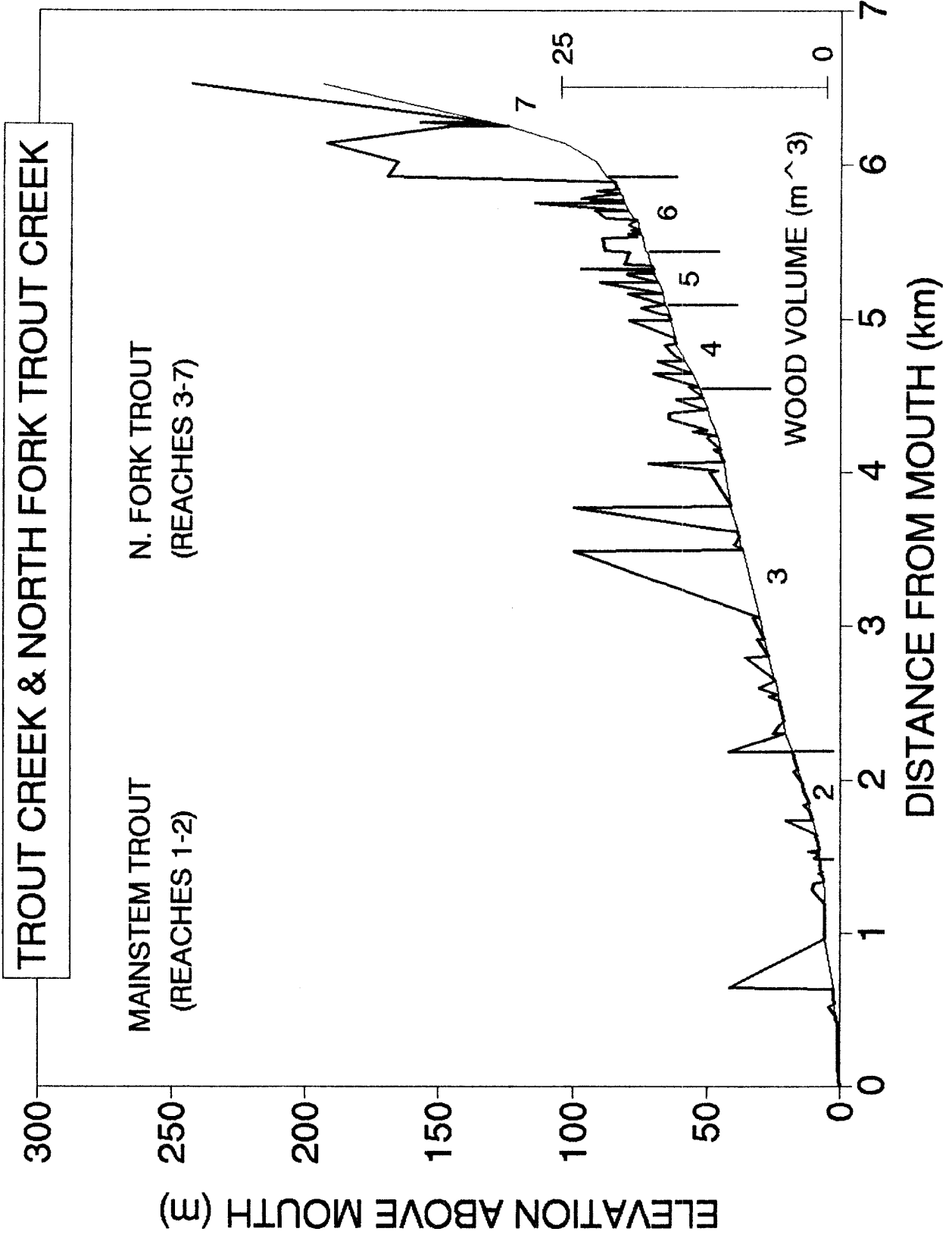


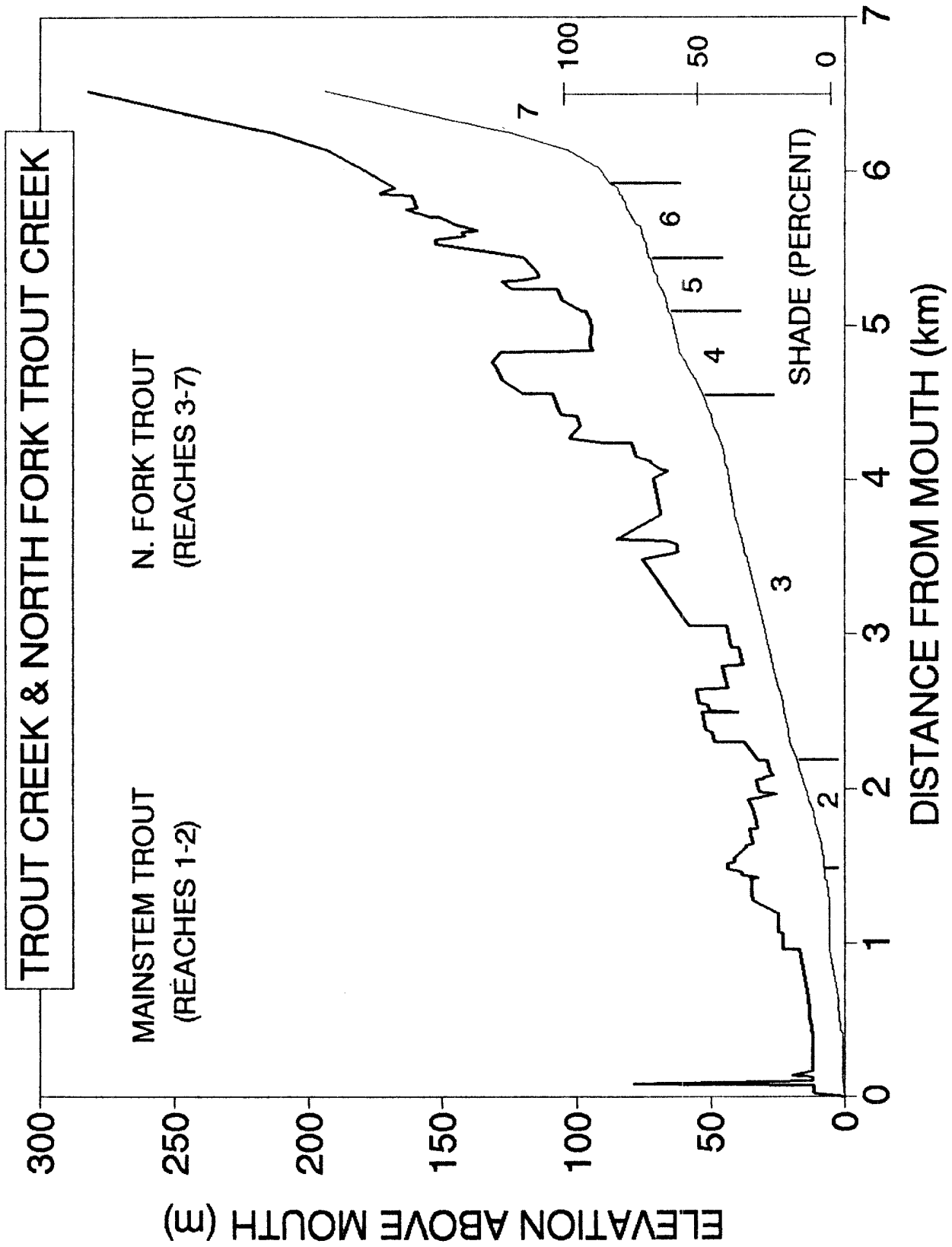


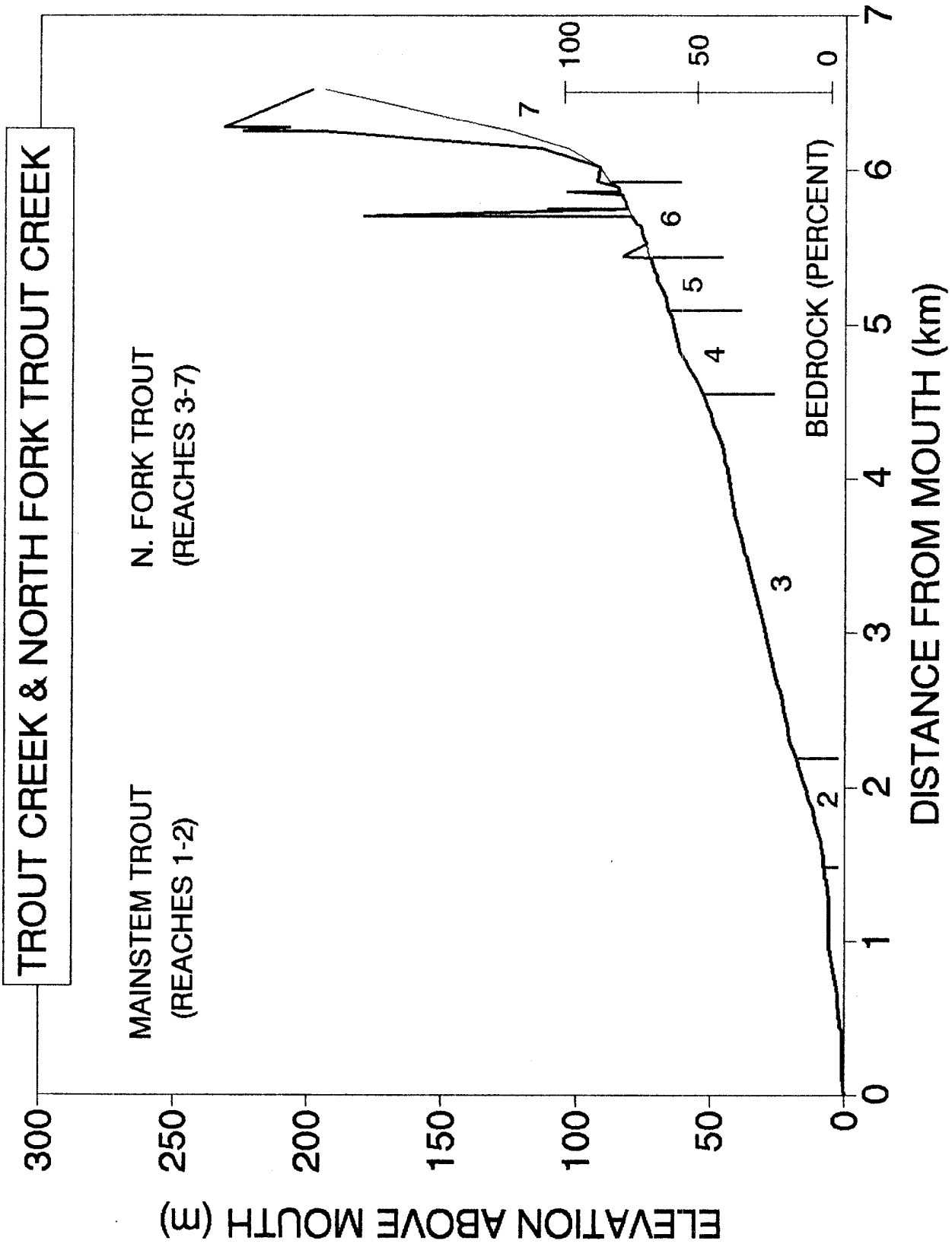












UNIT NUMB	UNIT LENG	UNIT WIDTH	VER LENGTH	VER WIDTH
10	4.0	0.5	4.2	0.6
20	6.5	0.7	8.2	0.9
30	12.0	1.0	14.0	1.3
55	10.0	2.0	11.6	1.6
60	4.5	1.7	5.3	1.8
70	10.5	2.0	15.4	2.3
80	25.0	2.0	25.2	2.2
90	3.1	2.1	3.6	2.5
100	41.0	1.0	36.5	1.0
120	16.0	1.0	16.8	1.2
130	24.0	1.3	21.1	1.5
149	5.0	1.8	5.4	1.5
160	4.5	1.3	4.6	1.5
190	26.0	1.1	27.6	1.0
200	21.0	2.0	20.1	1.6
SUM	215.1	21.5	221.6	22.5
LENGTH RATIO (RATIO: VERIFIED / ESTIMATED)	1.030	WIDTH RATIO	1.047	

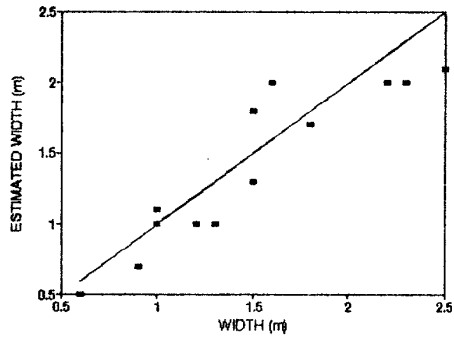
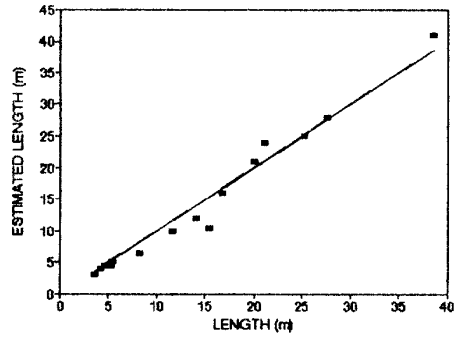
LENGTH

Regression Output:  
 Constant 0  
 Std Err of Y Est 1.904174  
 R Squared 0.971257  
 No. of Observations 15  
 Degree of Freedom 14  
 X Coefficient(s) 1.00476  
 Std Err of Coef. 0.027616

WIDTH

Regression Output:  
 Constant 0  
 Std Err of Y Est 0.250625  
 R Squared 0.783048  
 No. of Observations 15  
 Degree of Freedom 14  
 X Coefficient(s) 0.948399  
 Std Err of Coef. 0.040789

TROUT CREEK, SPRAGUE RIVER/KLAMATH BASIN



TROUT & NORTH FORK TROUT CREEK, COMMENT SUMMARY: 1991 HABITAT SURVEY

UNIT	TYPE	CHANL	(km) DISTANCE	REACH	CODE	NOTE 1	NOTE 2
29	RP	00	0.52	1		OLD CULVERT IN STREAM	
35	LP	00	0.60	1		FOOT BRIDGE	
39	RP	00	0.96	1	BD	FORD,CULVERT 200M AT TREE	33,34/10:57
40	SL	00	0.96	1	BD	BEAVER DAM	35
41	DP	00	1.07	1	BP		
42	SL	00	1.07	2	BD	60M AC AT REACH CHANGE	36,37/11:13,11:15
43	DP	00	1.19	2	BP		FLOODPLAIN BETWEEN BP'S
45	DP	00	1.26	2	BP	NF BOUNDARY FENCE	
72	RP	00	1.73	2		30 TO LOG	AT HIGH FLOW IT'S RB
74	RP	00	1.77	2			T=6C
83	LP	00	2.07	2		GAUGE .5	
85	GL	00	2.08	2	GS		
86	RP	00	2.12	2		CONFL N.FK+S.FK- SOUTH IS DRY	CREEK FORKS 2/13:27
87	RP	00	2.18	3		NORTH FORK 100% FLOW	NORTH FORK
89	RP	00	2.30	3			5,8/13:53,10:54
90	LP	00	2.30	3		FIRE IN ENTIRE DRAINAGE 2-5	
91	RP	00	2.37	3		YEARS AGO	
94	PP	00	2.50	3	CC	RD 5850 STOPPED SURVEY AT CC	RD 5850
95	RI	00	2.51	3		SMALL STREAM UNIT LONG RP	
100	RI	00	2.64	3			WATER T=5C/AIR T=6.5C
104	RP	00	2.92	3		FENCE LINE	
105	SB	00	2.92	3	MM	HAND MADE ROCK DAM	ROCK DAM MANMADE 26/10:43
107	SB	00	3.05	3	MM	HAND MADE DAM PHOTO	ROCK DAM 27/11:00
108	RP	00	3.49	3		FENCE LINE NF BOUNDARY	NF
112	RP	00	3.58	3			FORK
119	RI	00	4.00	3	CC		MID UNIT
124	LP	00	4.12	3			31/12:34 DOWN STREAM
126	SP	00	4.15	3			32/12:37 NOTE WOOD DEBRIS
129	DP	00	4.24	3		SHADING-FULL	
132	RP	00	4.35	3	WL		MINIK
138	RP	00	4.56	3	CC		33/13:18 BROOK TROUT PRESENT
141	LP	00	4.64	4			T=6C
142	RB	00	4.73	4		NF BOUNDARY	
144	RB	00	4.76	4			35/13:43
173	RB	01	5.44	6	RF		CREEK DIVIDES
181	RP	02					LF OF CREEK
183	CB	02					ROOT SYSTEMS
185	PP	02				NF BOUNDARY	ROOTS
191	SB	00	5.71	6		AC WIDTH INCLUDES FLOOD PLAIN	
192	RP	00	5.75	6		CANOPY IS FULL BUT THIN	
197	CB	00	5.79	6		AC WIDTH INCLUDES FLOOD PLAIN	
207	CB	00	5.93	7	2-TJ		
210	CR	00	6.25	7		STREAM IS HIGH GRADIENT	
211	SR	00	6.25	7		FROM HERE UP	
214	CB	00	6.53	7		STREAM ENDS IN BOULDER	BOULDERS ALL WAY TO THE TOP
						COVERED SPRING	







