

ODFW AQUATIC INVENTORY PROJECT

STREAM REPORT

STREAM: Mad Creek

BASIN: Santiam

DATES: June 26 to July 17, 1996

CREW: Jessica Mair / Paul Asbury

PREPARED BY: Chris Massingill

STREAM ORDER: 3 BASIN AREA: 16.6 sq km NUMBER TRIBS: 12

USGS MAPS: Mill City South, Mill City North, Lawhead Creek

ECOREGION: Cascades Western North

GENERAL DESCRIPTION:

The Mad Creek survey begins at the confluence with the North Santiam River and extends 9,414 meters upstream to end at a 40 percent unnamed tributary junction in the head waters. The valley is narrow with constraining hillslopes for the length of the survey with the exception of reach 2 which is terrace constrained. Land use in the lower reaches is rural residential and agricultural, while in the upper reaches it is predominantly timber industry. Riparian vegetation is dominated by small trees (15-30 cm dbh) with deciduous trees in the lower reaches, conifers in the middle reaches (4 and 5) and very small deciduous trees (3-15 cm dbh) and shrubs in the upper two reaches. Large woody debris is very limited in reaches 1-3, and typically ranges from moderate to adequate in reaches 4-7. Active bank erosion ranges from 0 to 35 percent, with higher values found in reaches 1-3. Large riparian conifers were recorded in low numbers for all but reach 7.

REACH DESCRIPTIONS:

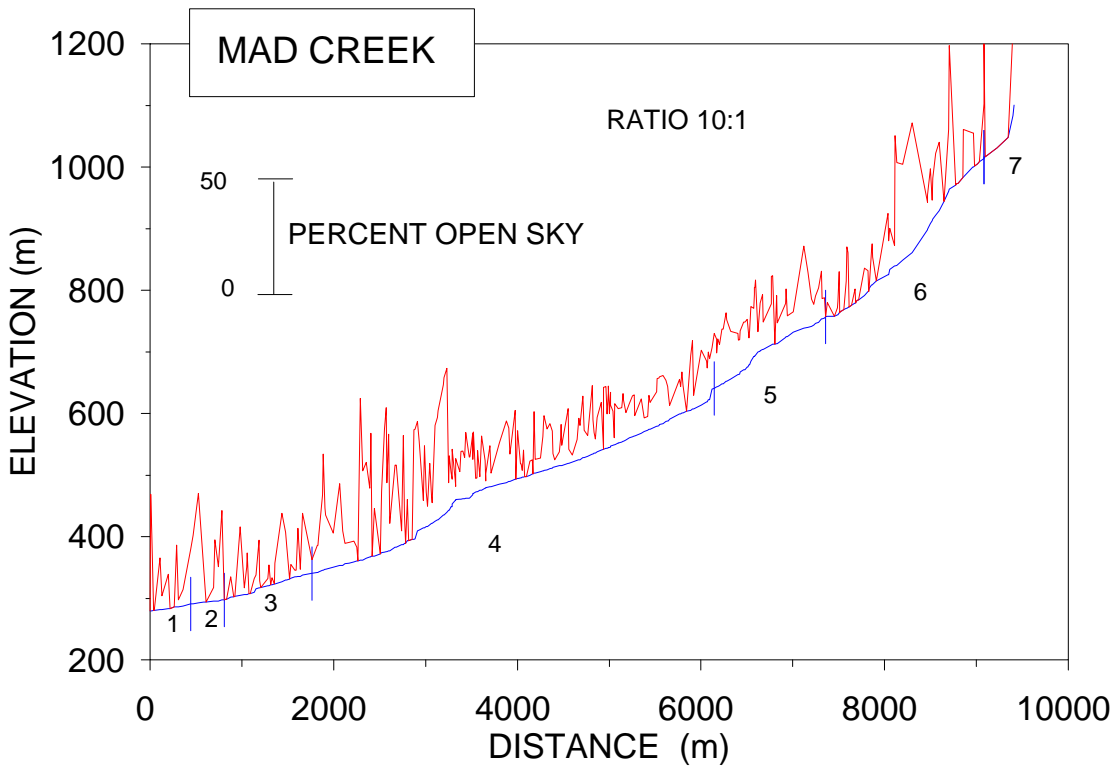
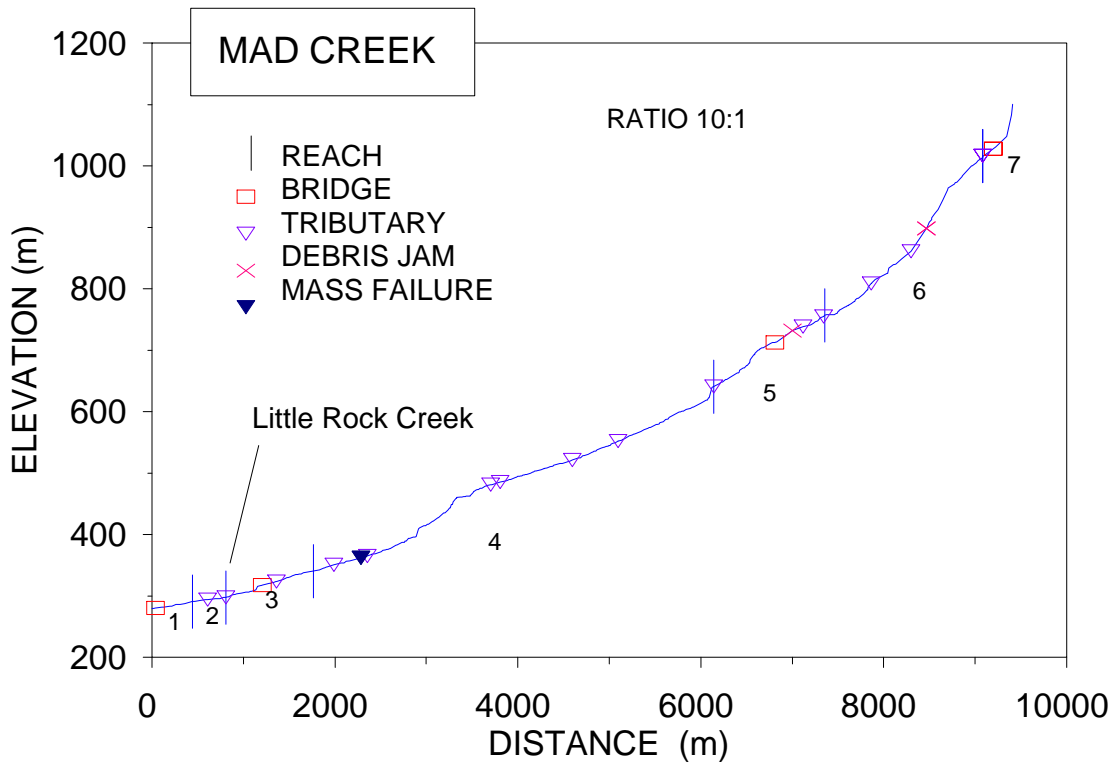
Reach 1: (T9S-R3E-35NE) Reach 1 begins at the confluence with the North Santiam River and extends 443 meters upstream to end where the valley widens. The average unit gradient is 2.5 percent with habitat area composed of rapids (68%) and scour pools (14%). Substrate is dominated by cobble (35%), fines (silt, sand and organic matter - 26%), and gravel (21%). No complex pools were identified in this reach. Values for open sky average 13 percent.

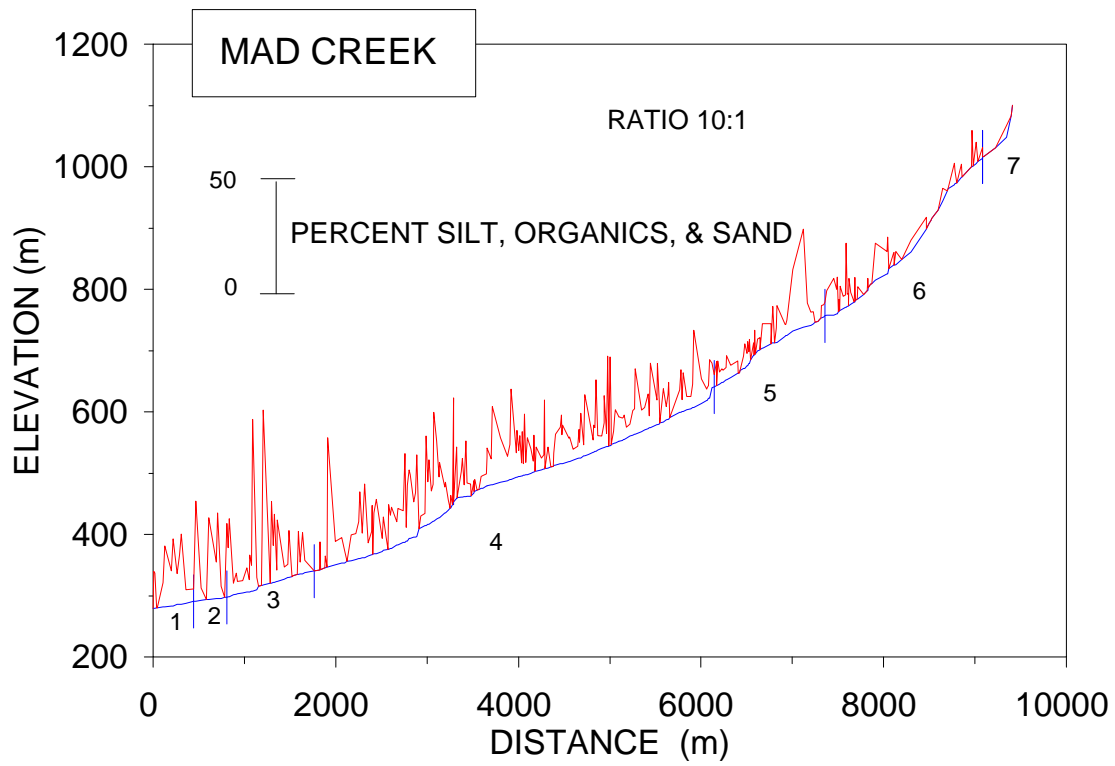
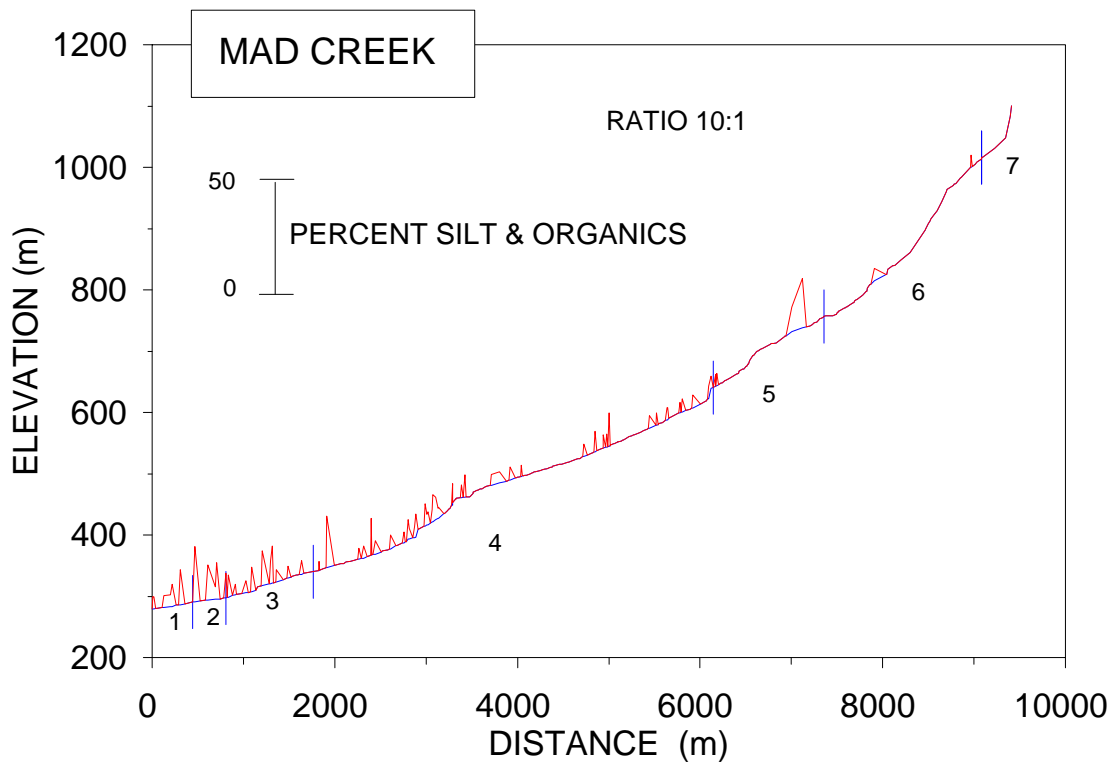
Reach 2: (T9S-R3E-35NE) Reach 2 begins where the valley widens and the channel becomes constrained by terraces. The reach extends 367 meters upstream to end at the confluence with Little Rock Creek. The average unit gradient is 1.9 percent with habitat composed of rapids (45%), dry channel (34%), and scour pools (12%). Substrate is a mix of cobble (33%), gravel (29%), and fines (24%). No complex pools were identified in this reach, and open sky values average 20 percent. Active bank erosion composes 35 percent of the reach length.

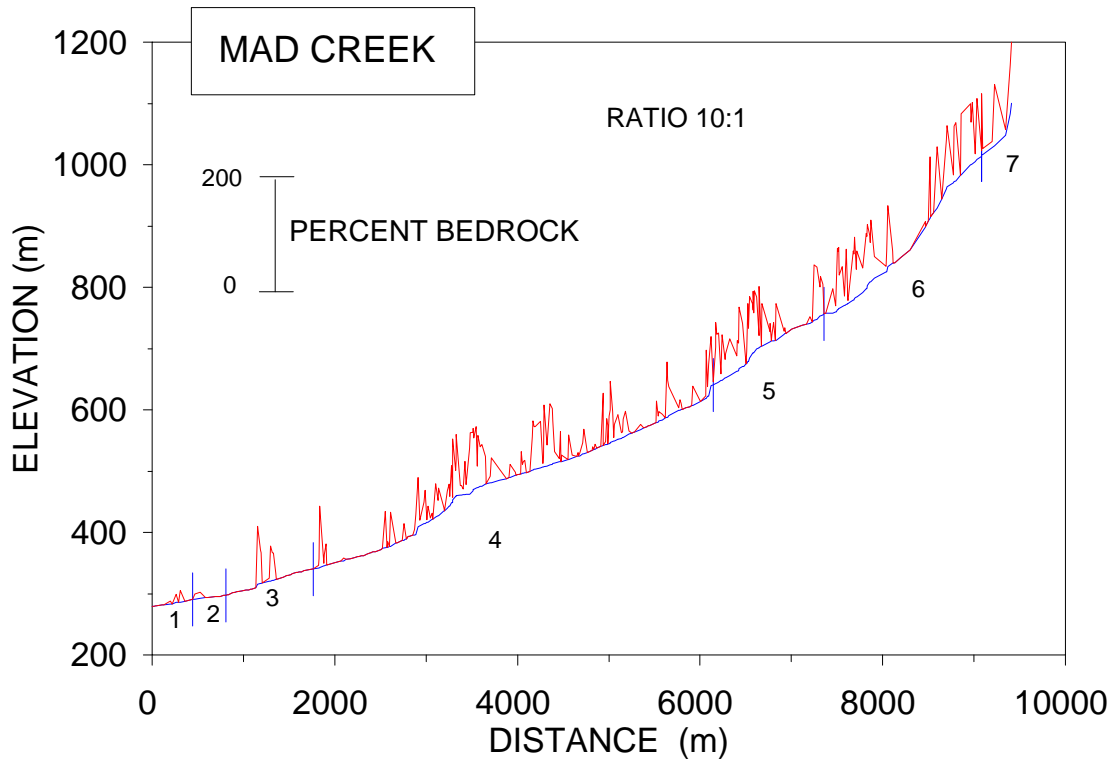
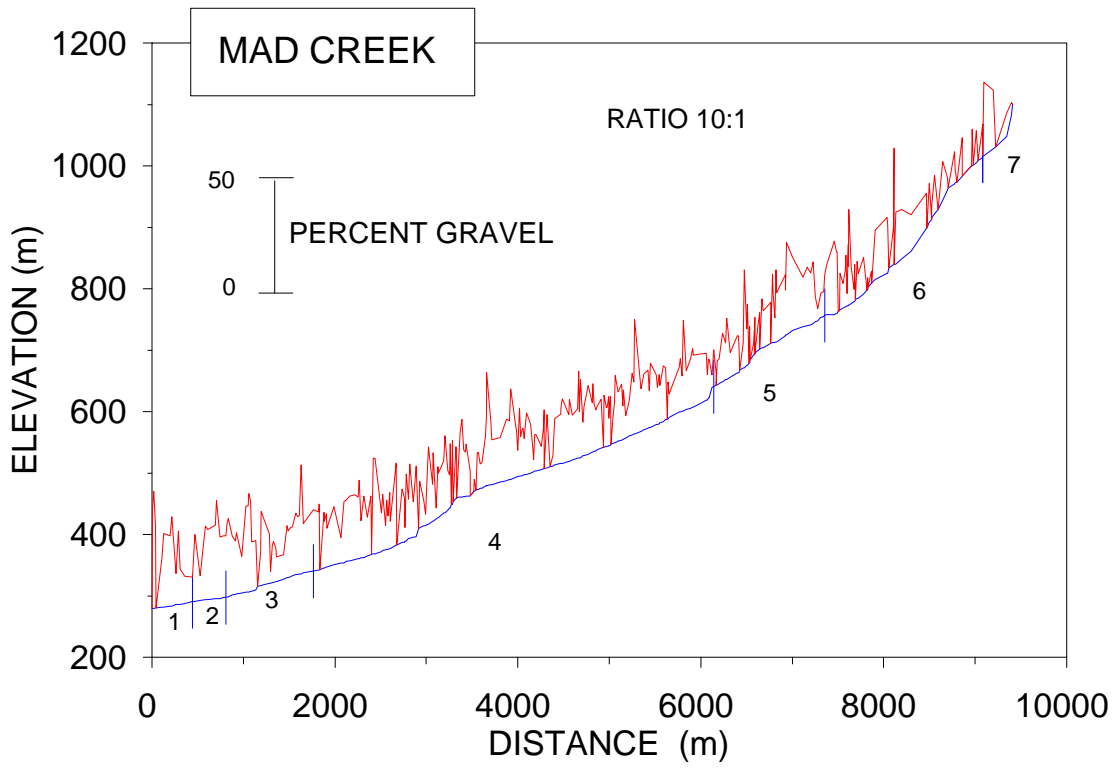
- Reach 3: (T9S-R3E-36NW) Reach 3 begins at the confluence with Little Rock Creek and extends 967 meters upstream to end at the State Forest boundary. The average unit gradient is 4.5 percent with habitat composed of rapids (50%), cascades (32%) and scour pools (11%). Substrate is a mix of cobble (24%), boulder (24%), gravel (21%), and fines (19%). Fourteen percent of the reach length is identified with actively eroding banks.
- Reach 4: (T9S-R3E-36SE) Reach 4 begins at the State Forest boundary and extends 4,379 meters upstream to end at an unnamed tributary contributing 40 percent of the stream flow. The average unit gradient is 6.9 percent with habitat area dominated by cascades (54%), rapids (27%), and scour pools (13%). Substrate is a mix of all size classes. No complex pools were identified and values for open sky average 17 percent.
- Reach 5: (T10S-R4E-7NE) Reach 5 begins at the confluence with a 40 percent tributary and extends 1,214 meters upstream to end at the forest boundary. The average unit gradient is 9.6 percent with habitat area composed of cascades (43%), and dry channel (43%). Substrate is dominated by bedrock (47%), and an even mix of gravel cobble and boulder (15-17%). Open sky averages 17 percent and no complex pools are reported. Values for large woody debris are high in this reach.
- Reach 6: (T10S-R4E-17NW) Reach 6 begins at the forest boundary and extends 1,727 meters upstream to end at a second unnamed tributary contributing 40 to the stream flow. The average unit gradient is 15 percent with habitat area composed of cascades (73%) and scour pools (20%). Substrate is dominated by bedrock (48%), boulder (19%), and cobble (11%). No complex pools are reported, and open sky averages 12 percent. Active bank erosion is reported at 9 percent.
- Reach 7: (T10S-R4E-16NW) Reach 7 begins at an unnamed tributary contributing 40 percent to the stream flow and a culvert crossing and extends 327 meters upstream to end in the head waters. The average unit gradient is 25.7 percent with habitat area almost entirely cascades (95%). Substrate is predominantly bedrock (44%) with boulder (22%) and cobble (20%). No pools were recorded, and values for open sky average 25 percent.

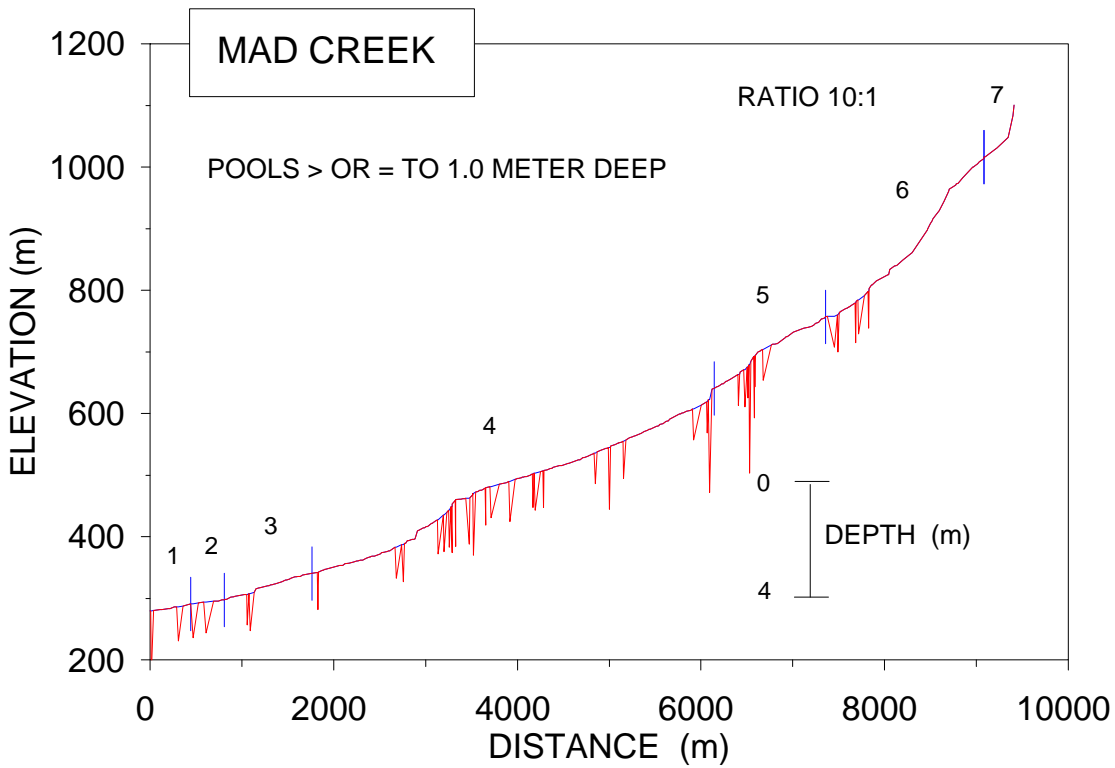
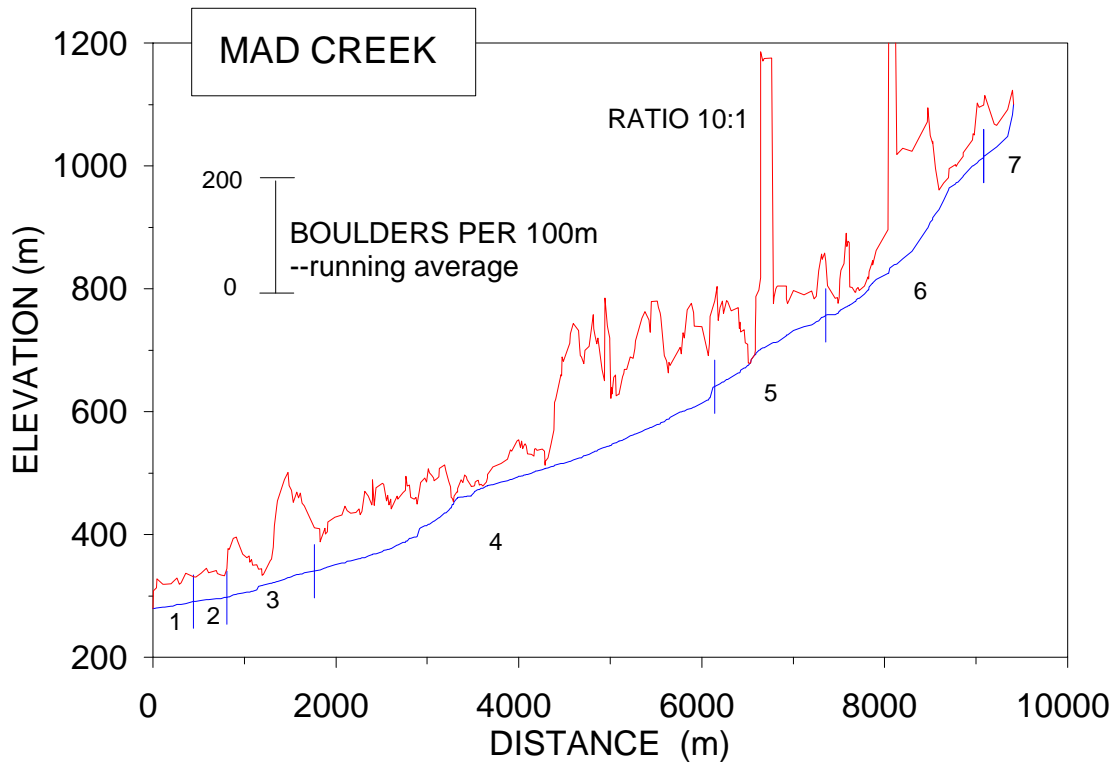
FLOOD EFFECTS: Flood impacts in Mad Creek were well mixed, with most reaches dominated by low impact classes, but reaches 2-6 all show some evidence of torrent activity. Reaches 1, 2, and 4 have the majority of the reach length contained within the channel modified category.

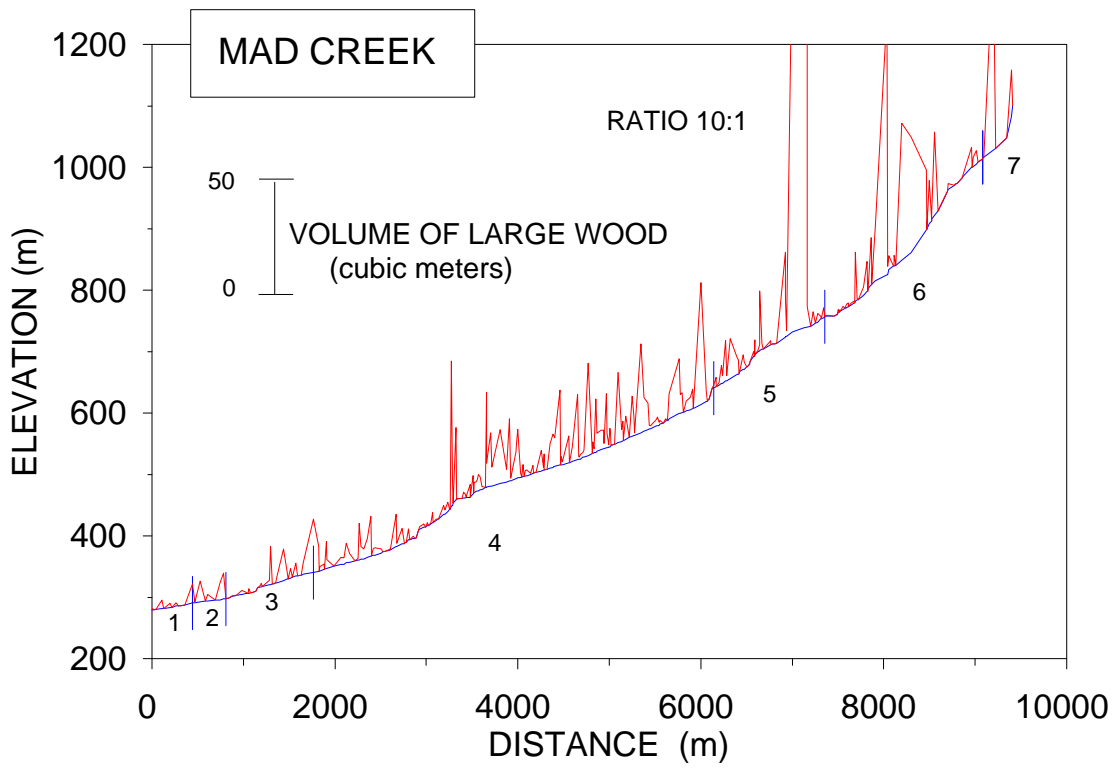
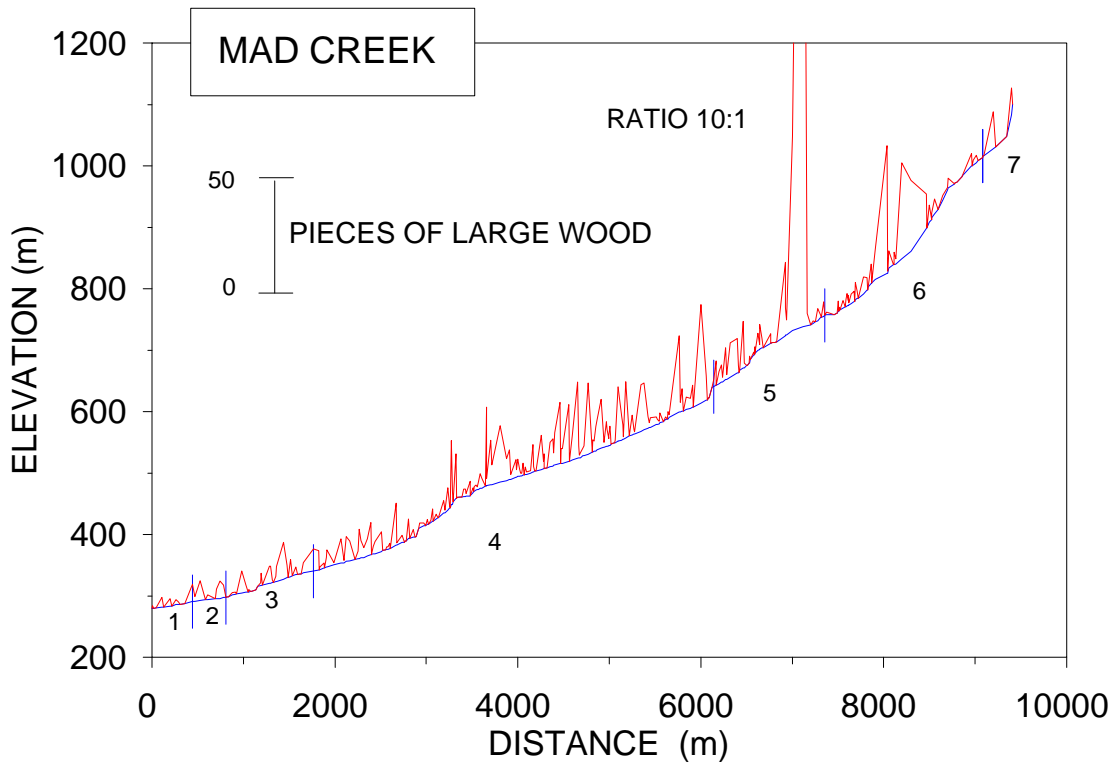
COMMENTS:

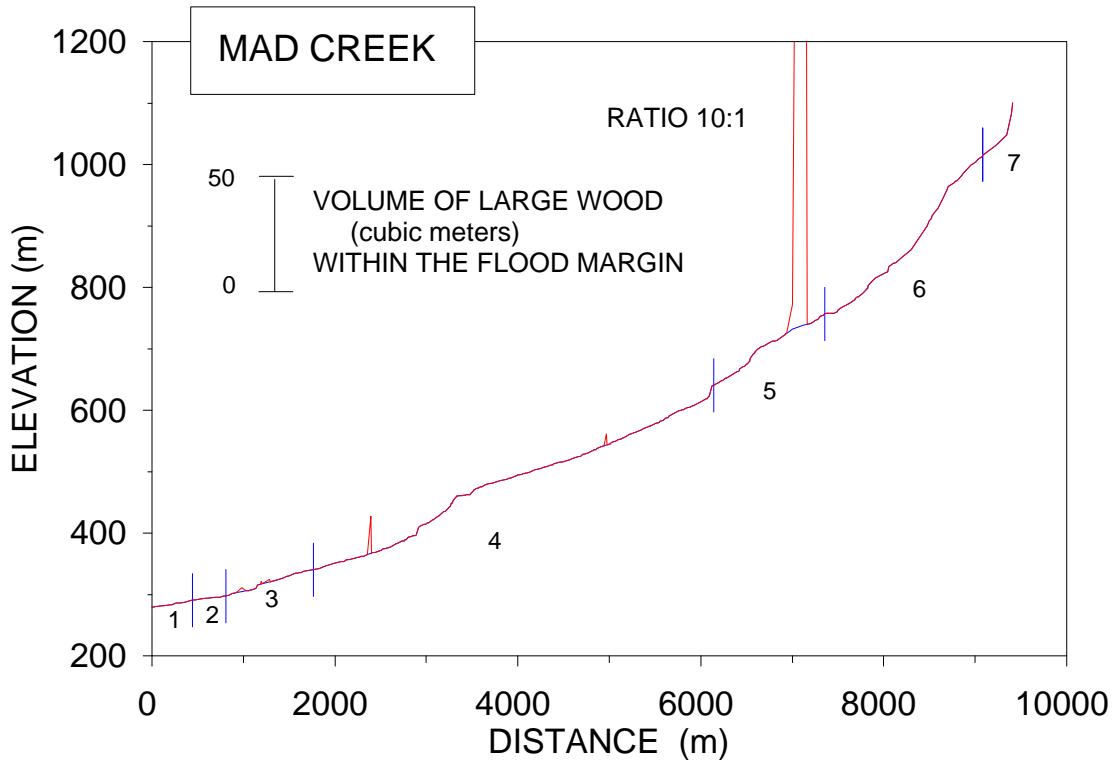
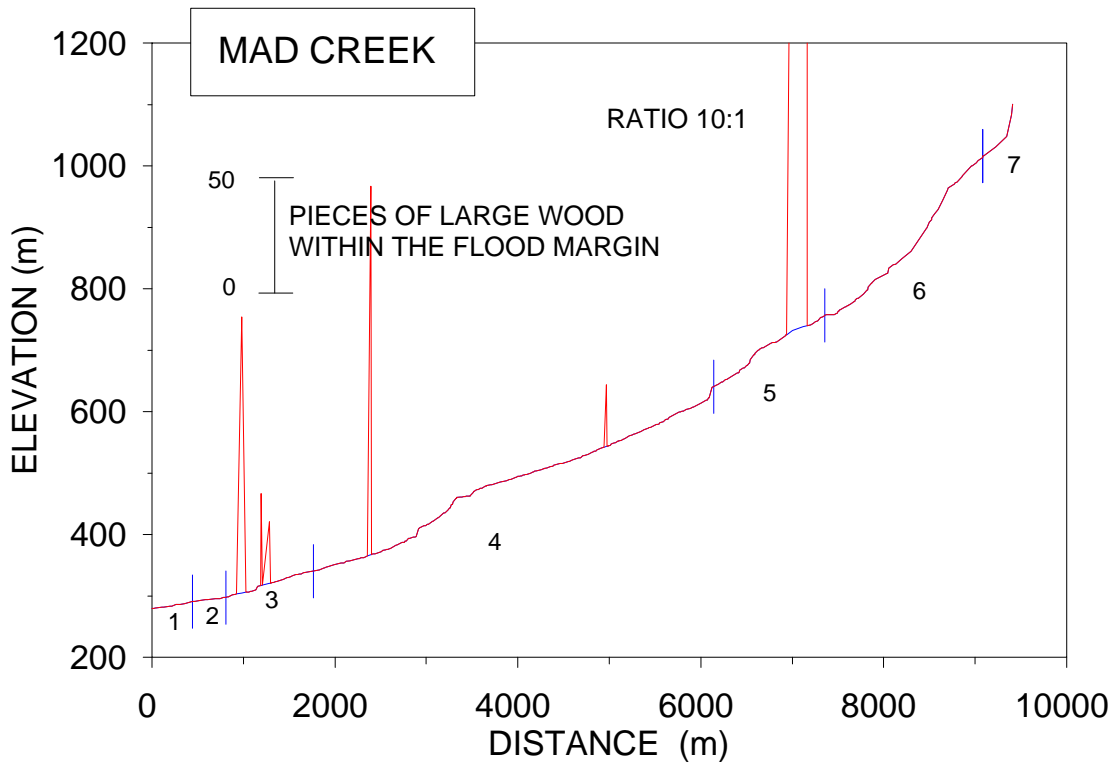












OREGON DEPARTMENT OF FISH AND WILDLIFE

MAD CREEK

HABITAT INVENTORY

Report Date: 3/22/2011

Survey Date:

6/26/1996

REACH 1

T9S-R3E-35NE

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	1	42	8.9	0.70	372	25	0	13	13	50	13	13
CULVERT CROSSING	1	23	2.2	0.25	51	0	0	0	33	67	0	0
DRY UNITS	1	9	4.5	0.00	42	0	11	74	11	5	0	0
POOL-LATERAL SCOUR	4	63	9.5	1.10	599	5	24	12	23	25	9	7
PUDDLED CHANNEL	1	63	1.4	0.10	88	0	84	0	5	11	0	0
RAPID/BOULDERS	5	294	9.9	0.43	2,839	129	1	10	20	51	17	1
RIFFLE	2	28	6.4	0.35	197	14	7	14	38	34	7	0
STEP/STRUCTURE	1	2	1.2	0.20	2	2	0	0	0	10	90	0
Total:	16	523	7.4	0.53	4,189	175	Avg: 13	13	21	35	15	3

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	4	63	9.5	1.10	599	14.29%	5	0.8
Glides	0	0			0	0.00%	0	0.0
Riffles	2	28	6.4	0.35	197	4.70%	14	7.1
Rapids	5	294	9.9	0.43	2,839	67.76%	129	4.5
Cascades	1	42	8.9	0.70	372	8.88%	25	6.7
Step/Falls	1	2	1.2	0.20	2	0.05%	2	87.0
Dry	2	72	3.0	0.05	130	3.11%	0	0.0
Culverts	1	23	2.2	0.25	51	1.21%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	Total	# / Km	# / Km
All Pools:	4	7.6	9.0
Pools >=1m deep:	2	3.8	4.5
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	8.6		
Residual pool depth (avg):			

OREGON DEPARTMENT OF FISH AND WILDLIFE

MAD CREEK

HABITAT INVENTORY

Report Date: 3/22/2011

Survey Date:

6/26/1996

REACH 2

T9S-R3E-35NE

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/BOULDERS	1	39	5.6	0.50	217	15	0	0	25	40	35	0
DRY CHANNEL	2	146	9.8	0.00	1,503	6	3	15	38	40	5	0
GLIDE	1	26	7.2	0.65	188	3	10	20	25	40	5	0
POOL-LATERAL SCOUR	2	52	8.4	1.05	436	3	19	19	28	28	2	5
POOL-STRAIGHT SCOUR	1	17	8.4	0.90	140	6	15	20	40	20	5	0
PUDDLED CHANNEL	1	47	1.8	0.35	85	3	68	5	14	14	0	0
RAPID/BOULDERS	4	233	8.6	0.44	2,119	148	1	5	24	39	29	3
RIFFLE	1	23	1.2	0.05	28	0	10	20	45	25	0	0
Total:	13	583	7.3	0.48	4,715	184	Avg: 12	12	29	33	13	1

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	3	69	8.4	1.00	576	12.22%	9	1.6
Glides	1	26	7.2	0.65	188	3.99%	3	1.6
Riffles	1	23	1.2	0.05	28	0.59%	0	0.0
Rapids	4	233	8.6	0.44	2,119	44.95%	148	7.0
Cascades	1	39	5.6	0.50	217	4.60%	15	6.9
Step/Falls	0	0			0	0.00%	0	0.0
Dry	3	193	7.1	0.12	1,587	33.66%	9	0.6
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	Total	# / Km	# / Km
All Pools:	3	5.1	8.2
Pools >=1m deep:	2	3.4	5.5
Complex pools (LWD pieces>=3):	1	1.7	2.7
Pool frequency (channel widths/pool):	16.2		
Residual pool depth (avg):			

OREGON DEPARTMENT OF FISH AND WILDLIFE

MAD CREEK

HABITAT INVENTORY

Report Date: 3/22/2011

Survey Date:

6/26/1996

REACH 3

T9S-R3E-36NW

REACH 3

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	2	43	5.1	0.30	218	7	8	0	8	10	5	70
CASCADE/BOULDERS	10	275	6.9	0.41	1,846	389	0	4	23	35	37	1
CULVERT CROSSING	1	9	1.1	0.10	10	0	14	57	29	0	0	0
DRY UNITS	2	45	2.1	0.00	91	0	32	16	16	24	11	0
POOL-LATERAL SCOUR	8	102	4.6	0.82	476	47	9	25	24	22	14	6
POOL-STRAIGHT SCOUR	3	35	7.4	0.75	254	16	3	20	19	6	16	36
PUDDLED CHANNEL	1	23	0.9	0.10	21	20	15	25	20	0	40	0
RAPID/BEDROCK	1	31	7.8	0.30	244	25	0	0	14	23	9	55
RAPID/BOULDERS	10	468	5.8	0.33	2,947	352	9	5	23	33	29	1
RIFFLE	1	58	5.6	0.30	322	25	0	5	15	60	20	0
Total:	39	1,089	5.5	0.45	6,430	881	Avg: 7	12	21	26	24	9

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	11	137	5.3	0.80	730	11.35%	63	8.6
Glides	0	0			0	0.00%	0	0.0
Riffles	1	58	5.6	0.30	322	5.01%	25	7.8
Rapids	11	499	6.0	0.33	3,191	49.63%	377	11.8
Cascades	12	318	6.6	0.39	2,065	32.11%	396	19.2
Step/Falls	0	0			0	0.00%	0	0.0
Dry	3	68	1.7	0.03	112	1.74%	20	17.9
Culverts	1	9	1.1	0.10	10	0.16%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	Total	# / Km	# / Km
All Pools:	11	10.1	11.5
Pools >=1m deep:	2	1.8	2.1
Complex pools (LWD pieces>=3):	2	1.8	2.1
Pool frequency (channel widths/pool):	9.8		
Residual pool depth (avg):			

OREGON DEPARTMENT OF FISH AND WILDLIFE

MAD CREEK

HABITAT INVENTORY

Report Date: 3/22/2011

Survey Date:

7/1/1996

REACH 4

T10S-R4E-6NW

REACH 4

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	29	631	4.2	0.32	2,982	274	1	5	10	12	12	60
CASCADE/BOULDERS	61	1,965	5.0	0.35	10,028	2,792	1	8	19	31	36	4
DRY CHANNEL	4	108	7.0	0.00	583	27	3	26	32	28	11	0
POOL-BACKWATER	2	12	5.3	0.40	61	4	21	31	13	3	3	30
POOL-ISOLATED	2	20	3.9	0.80	73	7	17	44	23	16	0	0
POOL-LATERAL SCOUR	21	243	4.9	0.80	1,196	135	4	16	24	21	14	20
POOL-PLUNGE	7	61	6.9	1.50	444	10	3	16	21	21	5	34
POOL-STRAIGHT SCOUR	25	260	4.8	0.89	1,280	120	5	19	19	16	13	28
POOL-TRENCH	3	69	4.7	1.43	315	8	3	8	11	7	0	71
PUDDLED CHANNEL	1	21	3.9	0.20	82	4	5	16	21	37	21	0
RAPID/BEDROCK	4	141	4.3	0.24	705	31	1	4	6	6	4	79
RAPID/BOULDERS	27	1,101	5.0	0.31	5,795	831	1	12	23	34	25	5
RIFFLE	2	31	4.5	0.45	140	6	3	14	30	38	8	8
RIFFLE W/ POCKETS	5	82	4.3	0.46	372	74	2	16	29	31	15	6
STEP/BEDROCK	8	30	3.4	0.14	128	16	0	1	2	3	5	89
STEP/BOULDERS	3	16	4.9	0.22	77	50	0	4	13	25	53	5
STEP/LOG	2	2	4.5	0.02	7	5	0	8	29	35	29	0
Total:	206	4,791	4.9	0.49	24,268	4,394	Avg: 2	12	18	23	21	24

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	31	4.6	0.60	135	0.55%	11	8.2
Scour Pools	56	633	5.1	0.96	3,235	13.33%	273	8.4
Glides	0	0			0	0.00%	0	0.0
Riffles	7	113	4.4	0.46	512	2.11%	80	15.6
Rapids	31	1,242	4.9	0.30	6,500	26.78%	862	13.3
Cascades	90	2,596	4.8	0.34	13,010	53.61%	3,066	23.6
Step/Falls	13	47	3.9	0.14	212	0.87%	71	33.4
Dry	5	129	6.4	0.04	665	2.74%	31	4.7
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPARTMENT OF FISH AND WILDLIFE

MAD CREEK

HABITAT INVENTORY

Report Date: 3/22/2011

Survey Date:

7/1/1996

REACH 4

T10S-R4E-6NW

REACH 4

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	60	12.5	13.7
Pools >=1m deep:	22	4.6	5.0
Complex pools (LWD pieces>=3):	21	4.4	4.8
Pool frequency (channel widths/pool):	9.3		
Residual pool depth (avg):			

OREGON DEPARTMENT OF FISH AND WILDLIFE

MAD CREEK

HABITAT INVENTORY

Report Date: 3/22/2011

Survey Date:

7/10/1996

REACH 5

T10S-R4E-7NE

REACH 5

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	14	348	2.1	0.23	786	200	0	3	7	10	7	73
CASCADE/BOULDERS	15	572	3.0	0.22	1,782	764	1	8	22	31	31	7
CULVERT CROSSING	1	21	0.7	0.03	15	0	0	0	10	30	30	30
DRY UNITS	1	115	22.3	0.00	2,562	0	20	20	20	20	20	0
POOL-LATERAL SCOUR	1	10	3.3	0.60	34	10	0	10	25	15	10	40
POOL-PLUNGE	4	22	7.4	1.88	169	1	0	9	16	20	3	53
POOL-STRAIGHT SCOUR	8	57	4.5	0.85	251	31	0	8	19	11	8	53
RAPID/BEDROCK	2	24	2.3	0.15	56	0	3	3	10	3	0	83
RAPID/BOULDERS	2	84	1.9	0.15	153	65	0	7	22	35	30	5
RIFFLE	1	13	3.3	0.20	41	2	0	6	38	44	13	0
STEP/BEDROCK	7	20	2.7	0.07	64	5	0	0	0	0	0	100
STEP/LOG	2	4	2.1	0.04	11	16	0	2	9	33	36	20
Total:	58	1,290	3.5	0.40	5,924	1,094	Avg: 1	6	14	17	15	47

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	13	90	5.3	1.15	454	7.66%	42	9.3
Glides	0	0			0	0.00%	0	0.0
Riffles	1	13	3.3	0.20	41	0.70%	2	4.8
Rapids	4	108	2.1	0.15	209	3.53%	65	31.1
Cascades	29	920	2.6	0.23	2,568	43.35%	964	37.5
Step/Falls	9	24	2.5	0.06	75	1.26%	21	28.1
Dry	1	115	22.3	0.00	2,562	43.25%	0	0.0
Culverts	1	21	0.7	0.03	15	0.25%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	Total	# / Km	# / Km
All Pools:	13	10.1	10.7
Pools >=1m deep:	7	5.4	5.8
Complex pools (LWD pieces>=3):	3	2.3	2.5
Pool frequency (channel widths/pool):	10.8		
Residual pool depth (avg):			

OREGON DEPARTMENT OF FISH AND WILDLIFE

MAD CREEK

HABITAT INVENTORY

Report Date: 3/22/2011

Survey Date:

7/11/1996

REACH 6

T10S-R4E-17NW

REACH 6

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	19	622	1.4	0.15	882	177	0	2	5	9	7	77
CASCADE/BOULDERS	17	977	1.3	0.16	1,331	1,033	0	6	17	33	36	7
DRY UNITS	1	16	2.8	0.00	44	30	0	0	10	35	35	20
POOL-LATERAL SCOUR	3	93	3.1	0.80	388	8	0	10	15	7	5	63
POOL-PLUNGE	4	23	4.6	0.80	104	14	0	6	19	15	13	46
POOL-STRAIGHT SCOUR	4	28	3.9	0.73	105	10	1	13	21	12	4	48
POOL-TRENCH	2	10	1.8	1.25	19	1	0	13	20	5	3	60
PUDDLED CHANNEL	1	21	0.6	0.40	13	5	0	10	25	35	10	20
RAPID/BEDROCK	1	16	1.1	0.05	17	6	0	0	0	0	5	95
RAPID/BOULDERS	2	33	2.0	0.28	67	35	0	8	23	33	25	13
STEP/BEDROCK	6	24	1.4	0.06	33	0	0	0	0	0	0	100
STEP/BOULDERS	3	7	2.3	0.07	15	20	0	0	7	14	76	4
STEP/LOG	1	1	1.1	0.03	1	8	0	0	0	44	56	0
STEP/STRUCTURE	1	3	0.3	0.03	1	0	0	0	0	0	0	100
Total:	65	1,873	1.9	0.28	3,019	1,347	Avg: 0	5	11	17	19	48

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	13	154	3.6	0.85	617	20.42%	33	5.4
Glides	0	0			0	0.00%	0	0.0
Riffles	0	0			0	0.00%	0	0.0
Rapids	3	49	1.7	0.20	84	2.79%	41	48.8
Cascades	36	1,599	1.4	0.16	2,213	73.30%	1,210	54.7
Step/Falls	11	35	1.5	0.06	49	1.62%	28	57.1
Dry	2	37	1.7	0.20	57	1.87%	35	61.9
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	13	6.9	7.5
Pools >=1m deep:	5	2.7	2.9
Complex pools (LWD pieces>=3):	2	1.1	1.2
Pool frequency (channel widths/pool):	29.0		
Residual pool depth (avg):			

OREGON DEPARTMENT OF FISH AND WILDLIFE

MAD CREEK

HABITAT INVENTORY

Report Date: 3/22/2011

Survey Date:

7/15/1996

REACH 7

T10S-R4E-16NW

REACH 7

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	2	73	0.3	0.04	17	44	0	0	3	3	5	90
CASCADE/BOULDERS	3	242	0.4	0.04	103	127	0	2	19	34	39	6
CULVERT CROSSING	1	14	0.3	0.10	4	40	0	0	30	30	30	10
STEP/BEDROCK	1	10	0.2	0.02	2	0	0	0	0	0	0	100
Total:	7	340	0.3	0.05	126	211	Avg: 0	1	13	20	22	44

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	0	0			0	0.00%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	0	0			0	0.00%	0	0.0
Rapids	0	0			0	0.00%	0	0.0
Cascades	5	316	0.4	0.04	120	95.09%	171	142.5
Step/Falls	1	10	0.2	0.02	2	1.66%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	1	14	0.3	0.10	4	3.25%	40	975.6

POOL SUMMARY

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

STREAM SUMMARY

MAD CREEK

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Large Boulders (#>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
404	10,489	4.3	0.43	48,671	3	10	17	22	19	28	8,286

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	135	0.28%
Scour Pools	6,210	12.76%
Glides	188	0.39%
Riffles	1,100	2.26%
Rapids	14,942	30.70%
Cascades	20,564	42.25%
Step/Falls	340	0.70%
Dry	5,112	10.50%
Culverts	80	0.16%

REACH 1

T9S-R3E-35NE

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	1.5	VWI Range:	1.5 - 1.5

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	443	4,042	0
Secondary	80	147	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 0</i>	<u>First Terrace</u>	<i>n = 1</i>
Width: 7.4	Width: 15.2	(-)		20.0 (20 - 20)	
Depth: 0.53	Height: 1.5	(-)		0.7 (0.7 - 0.7)	

W:D ratio: 10.1

Stream Flow Type: Not Available

Average Unit Gradient: 2.5%

Water temperature (°C): 10.0 - 10.0

Entrenchment (ACW:FPW ratio):

Habitat Units/100m (total channel length): 3.1

Habitat Units/100m (primary channel length): 3.6

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	AG	LT
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	14%	Reach avg: 87%
Undercut Banks:	3%	Range: 53 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	18	4.1
Volume (m ³):	15	3.3
Key pieces (>=12m x 0.60m):	0	0.0

REACH 2

T9S-R3E-35NE

REACH 2

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	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	6.0	VWI Range:	6 - 6

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	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	367	3,100	0
Secondary	216	1,615	3

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 0</i>	<u>First Terrace</u>	<i>n = 1</i>
Width: 7.3	Width: 12.0	(-)		17.0 (17 - 17)	
Depth: 0.48	Height: 1.4	(-)		1.5 (1.5 - 1.5)	

W:D ratio: 8.6

Stream Flow Type: Not Available

Average Unit Gradient: 1.9%

Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio):

Habitat Units/100m (total channel length): 2.2

Habitat Units/100m (primary channel length): 3.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	AG	RR
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	35%	Reach avg: 79%
Undercut Banks:	11%	Range: 46 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	30	8.2
Volume (m ³):	34	9.2
Key pieces (>=12m x 0.60m):	1	0.3

REACH 3

T9S-R3E-36NW

REACH 3

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	2.5	VWI Range:	1.5 - 4.5

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	957	6,112	0
Secondary	133	317	3

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 0</i>	<u>First Terrace</u>	<i>n = 4</i>
Width: 5.5	Width: 10.1	(-)		16.0 (12 - 20)	
Depth: 0.45	Height: 0.9	(-)		1.2 (0.5 - 1.9)	

W:D ratio: 11.5

Stream Flow Type: Not Available

Average Unit Gradient: 4.5%

Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio):

Habitat Units/100m (total channel length): 3.6

Habitat Units/100m (primary channel length): 4.1

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	14%	Reach avg: 92%
Undercut Banks:	1%	Range: 72 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	73	7.6
Volume (m ³):	74	7.7
Key pieces (>=12m x 0.60m):	2	0.2

REACH 4

T9S-R3E-36SE

REACH 4

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	13%	Constraining Terraces	0%
Moderate V-shape	87%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	1.2	VWI Range:	1 - 2.5

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	87%	Single Channel	0%
Bedrock	13%	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	4,379	23,111	0
Secondary	412	1,157	5

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 0</i>	<u>First Terrace</u>	<i>n = 8</i>
Width: 4.9	Width: 8.5	(-)		13.0 (9 - 18)	
Depth: 0.49	Height: 0.7	(-)		0.7 (0.2 - 1)	

W:D ratio: 12.8

Stream Flow Type: Not Available

Average Unit Gradient: 6.9%

Water temperature (°C): 10.0 - 12.5

Entrenchment (ACW:FPW ratio):

Habitat Units/100m (total channel length): 4.3

Habitat Units/100m (primary channel length): 4.7

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	
Riparian Vegetation:	M15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 83%
Undercut Banks:	1%	Range: 31 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	975	22.3
Volume (m ³):	1,052	24.0
Key pieces (>=12m x 0.60m):	20	0.5

REACH 5

T10S-R4E-7NE

REACH 5

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	1.0	VWI Range:	1 - 1.2

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	1,214	5,845	1
Secondary	76	79	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 0</i>	<u>First Terrace</u>	<i>n = 1</i>
Width: 3.5	Width: 9.2	(-)		8.0 (8 - 8)	
Depth: 0.40	Height: 0.6	(-)		0.2 (0.2 - 0.2)	

W:D ratio: 15.5

Stream Flow Type: Not Available

Average Unit Gradient: 9.6%

Water temperature (°C): 11.0 - 11.0

Entrenchment (ACW:FPW ratio):

Habitat Units/100m (total channel length): 4.5

Habitat Units/100m (primary channel length): 4.8

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	
Riparian Vegetation:	C15	

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	6%	Reach avg: 83%
Undercut Banks:	0%	Range: 67 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	484	39.9
Volume (m ³):	1,136	93.7
Key pieces (>=12m x 0.60m):	74	6.1

REACH 6

T10S-R4E-17NW

REACH 6

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	1.0	VWI Range:	1 - 1.2

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	1,727	2,937	0
Secondary	146	82	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 0</i>	<u>First Terrace</u>	<i>n = 1</i>
Width: 1.9	Width: 5.0	(-)		7.0 (7 - 7)	
Depth: 0.28	Height: 0.6	(-)		0.2 (0.2 - 0.2)	

W:D ratio: 11.5

Stream Flow Type: Not Available

Average Unit Gradient: 15.0%

Water temperature (°C): 10.0 - 10.0

Entrenchment (ACW:FPW ratio):

Habitat Units/100m (total channel length): 3.5

Habitat Units/100m (primary channel length): 3.8

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D3	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	9%	Reach avg: 87%
Undercut Banks:	2%	Range: 42 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	271	15.7
Volume (m ³):	431	25.0
Key pieces (>=12m x 0.60m):	6	0.3

REACH 7

T10S-R4E-16NW

REACH 7

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	1.0	VWI Range:	1 - 1

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	327	121	0
Secondary	13	5	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 0</i>	<u>First Terrace</u>	<i>n = 0</i>
Width: 0.3	Width: 3.5	(-)		(- 0)	
Depth: 0.05	Height: 0.2	(-)		(- 0)	

W:D ratio: 17.5

Stream Flow Type: Not Available

Average Unit Gradient: 25.7%

Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio):

Habitat Units/100m (total channel length): 2.1

Habitat Units/100m (primary channel length): 2.1

Riparian, Bank, and Wood Summary

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

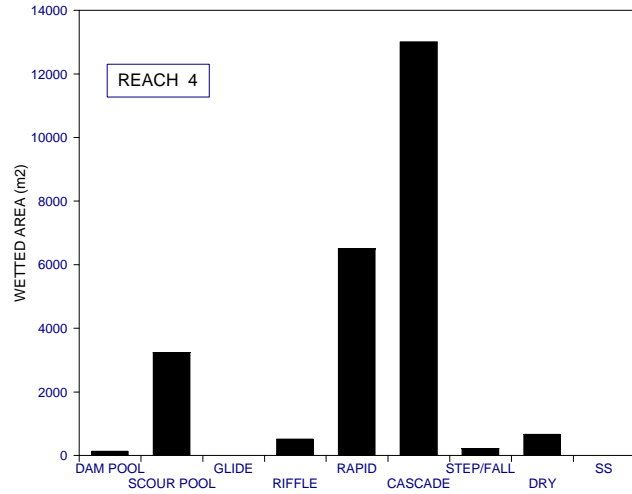
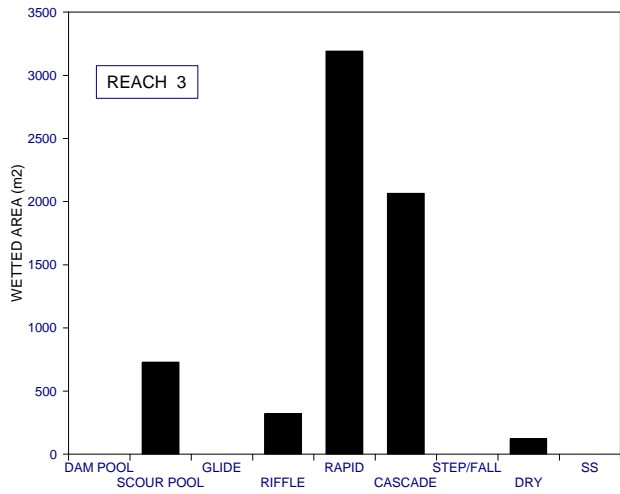
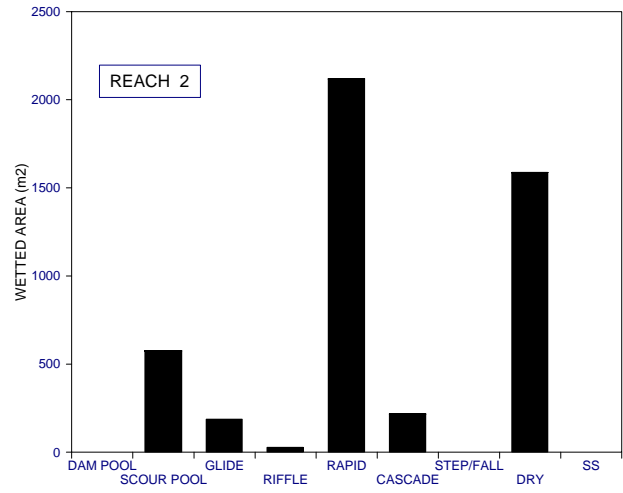
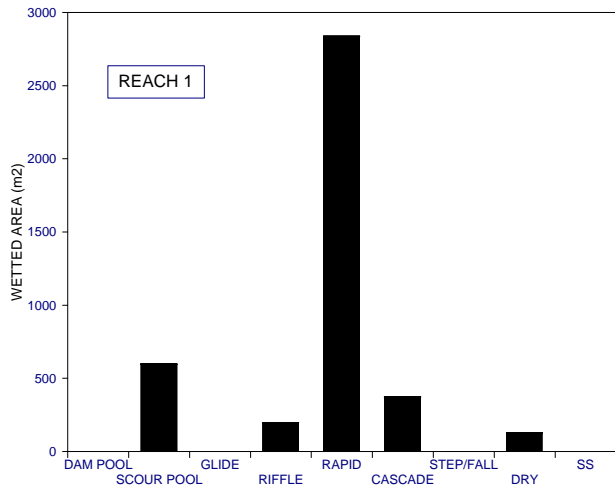
Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 89%
Undercut Banks:	0%	Range: 22 - 100

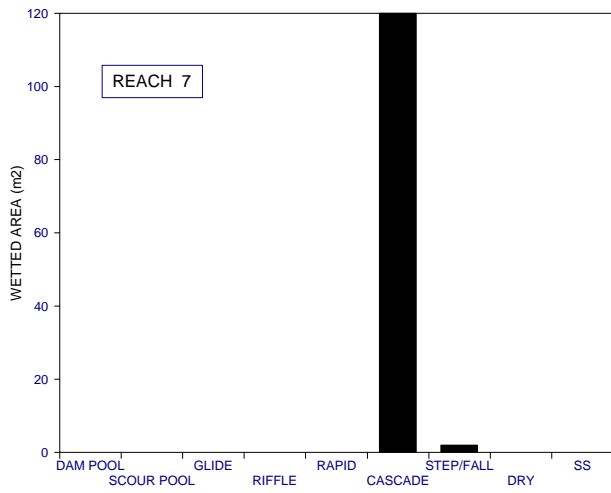
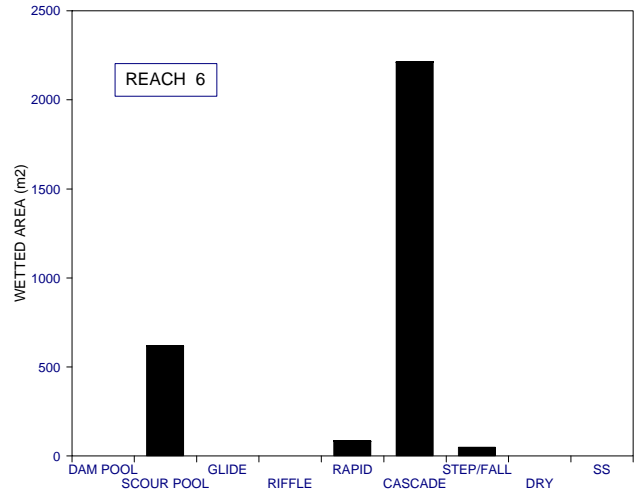
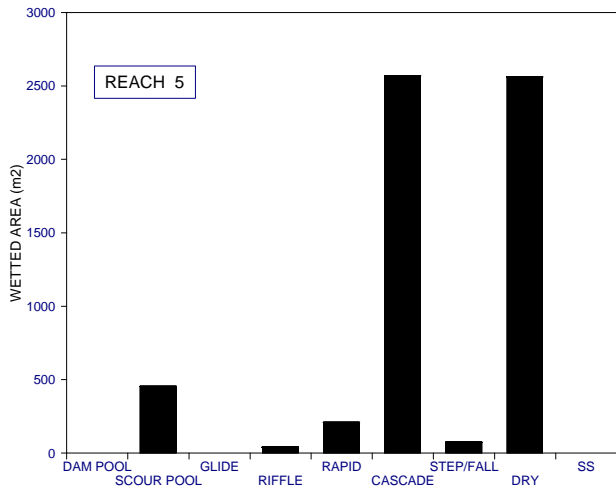
Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	26	8.0
Volume (m ³):	106	32.3
Key pieces (>=12m x 0.60m):	2	0.6

HABITAT DISTRIBUTION: MAD CREEK



HABITAT DISTRIBUTION: MAD CREEK



RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

REACH 1

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

Total hardwoods/1000	2377
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	61
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	2.0	7.0	0.0	27.0	1.0	3.0	3.0	37.0
15-30cm	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
30-50cm	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
50-90cm	1.0	2.0	0.0	0.0	0.0	0.0	1.0	2.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	5.0	9.0	0.0	27.0	1.0	3.0	2.0	13.0

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	80	58	75
Shrub cover	35	65	70
Grass/forb cover	50	35	30

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	0	100	100
High terrace	50	0	0
Low terrace	50	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 (%)	28	40	50

RIPARIAN ZONE VEGETATION SUMMARY

REACH 2

REACH 2

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

Total hardwoods/1000	3475
Total conifers/1000 ft	244
Total conifers >20" dbh/1000 ft	61
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	6.0	1.0	35.0	0.0	4.0	1.0	45.0
15-30cm	0.0	2.0	0.0	1.0	0.0	3.0	0.0	6.0
30-50cm	1.0	0.0	0.0	2.0	1.0	1.0	2.0	3.0
50-90cm	1.0	1.0	0.0	2.0	0.0	0.0	1.0	3.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.0	9.0	1.0	40.0	1.0	8.0	1.3	19.0

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	80	65	48
Shrub cover	18	33	58
Grass/forb cover	58	68	40

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	0	0	50
High terrace	50	50	0
Low terrace	50	50	50
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 (%)	15	4	15

RIPARIAN ZONE VEGETATION SUMMARY

REACH 3

REACH 3

Summary of Riparian Zone (0-30m) 2 transects

Total hardwoods/1000	1341
Total conifers/1000 ft	274
Total conifers >20" dbh/1000 ft	91
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	7.5	0.5	7.0	1.5	3.5	2.0	18.0
15-30cm	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
30-50cm	0.5	1.5	0.0	0.5	0.5	0.0	1.0	2.0
50-90cm	0.5	0.0	1.0	1.0	0.0	0.0	1.5	1.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.0	9.0	1.5	8.5	2.0	4.5	1.5	7.3

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	68		61		41	
Shrub cover	80		40		39	
Grass/forb cover	20		49		39	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		50		25	
High terrace	25		25		25	
Low terrace	75		25		25	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		25	
Riprap	0		0		0	
Surface slope (%)	11		23		17	

RIPARIAN ZONE VEGETATION SUMMARY

REACH 4

REACH 4

Summary of Riparian Zone (0-30m) 7 transects

Total hardwoods/1000	1533
Total conifers/1000 ft	671
Total conifers >20" dbh/1000 ft	148
Total conifers >35" dbh/1000 ft	26

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	0.7	8.9	0.6	7.3	2.0	5.7	3.3	21.9
15-30cm	0.6	0.6	0.6	1.3	1.4	0.4	2.6	2.3
30-50cm	0.6	0.7	0.7	0.0	1.4	0.1	2.7	0.9
50-90cm	0.1	0.0	0.9	0.0	1.0	0.1	2.0	0.1
>90cm	0.3	0.0	0.1	0.0	0.0	0.0	0.4	0.0
Total/100m2	2.3	10.1	2.9	8.6	5.9	6.4	3.7	8.4

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	50		44		52	
Shrub cover	43		41		48	
Grass/forb cover	51		44		43	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	71		86		100	
High terrace	7		0		0	
Low terrace	21		7		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		7		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	54		58		51	

RIPARIAN ZONE VEGETATION SUMMARY

REACH 5

REACH 5

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

Total hardwoods/1000	0
Total conifers/1000 ft	1158
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	1.0	0.0	5.0	0.0	6.0	0.0	12.0	0.0
15-30cm	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
30-50cm	3.0	0.0	0.0	0.0	2.0	0.0	5.0	0.0
50-90cm	0.0	0.0	0.0	0.0	1.0	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	0.0	5.0	0.0	10.0	0.0	6.3	0.0

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	40		23		40	
Shrub cover	25		23		35	
Grass/forb cover	53		78		65	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	100		100		100	
High terrace	0		0		0	
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 (%)	70		68		60	

RIPARIAN ZONE VEGETATION SUMMARY

REACH 6

REACH 6

Summary of Riparian Zone (0-30m)

3 transects

Total hardwoods/1000	955
Total conifers/1000 ft	2154
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	17.3	4.7	4.7	3.0	4.0	6.3	26.0	14.0
15-30cm	2.3	0.7	1.7	0.0	2.0	0.0	6.0	0.7
30-50cm	0.3	1.0	0.3	0.0	2.0	0.0	2.7	1.0
50-90cm	0.0	0.0	0.3	0.0	0.3	0.0	0.7	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	20.0	6.3	7.0	3.0	8.3	6.3	11.8	5.2

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	66	54	58
Shrub cover	36	53	46
Grass/forb cover	53	29	45

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	67	100	100
High terrace	0	0	0
Low terrace	33	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 (%)	47	48	43

RIPARIAN ZONE VEGETATION SUMMARY

REACH 7

REACH 7

Summary of Riparian Zone (0-30m)

1 transects

Total hardwoods/1000	1585
Total conifers/1000 ft	0
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	4.0	0.0	12.0	0.0	10.0	0.0	26.0
15-30cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-50cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	4.0	0.0	12.0	0.0	10.0	0.0	8.7

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	0		0		0	
Shrub cover	100		100		100	
Grass/forb cover	0		0		0	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	100		100		100	
High terrace	0		0		0	
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 (%)	43		38		35	

Summary of Riparian Zone (0-30m) for all reaches**16 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	1482
Total conifers/1000 ft	842
Total conifers >20" dbh/1000 ft	95
Total conifers >35" dbh/1000 ft	11

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	7.6	21.2
15-30cm	2.4	1.6
30-50cm	2.3	1.0
50-90cm	1.4	0.5
>90cm	0.2	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	LF	1	LT	5	60	30	50	Conifer							PHOTO
								Hardwood	2				1		11/1103, 20% DIRT,CBL
6	LF	2	HS	50	20	80	20	Conifer							
								Hardwood	2						
6	LF	3	HS	60	75	80	20	Conifer							
								Hardwood							
6	RT	1	HT	50	100	40	50	Conifer	2	1	1	1		10% CBL	
								Hardwood	5				1		
6	RT	2	HS	30	95	50	50	Conifer							HUMMINGBIR D
								Hardwood	25						
6	RT	3	HS	40	75	60	40	Conifer	1						
								Hardwood	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	
25	LF	1	LT	3	90	15	85	Conifer			1	1		PHOTO 15/1438
								Hardwood	2	2				
25	LF	2	LT	3	80	0	100	Conifer						
								Hardwood	19	1	2	2		
25	LF	3	LT	12	70	15	80	Conifer			1			5% TRIB CHNL
								Hardwood	2	1	1			
25	RT	1	HT	26	70	20	30	Conifer						50% DIRT
								Hardwood	4			1		
25	RT	2	HT	5	50	65	35	Conifer	1					
								Hardwood	16					
25	RT	3	HS	18	25	100	0	Conifer						TRAIL
								Hardwood	2	2				

RIPARIAN ZONE VEGETATION

Reach 3

Reach 3

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
34	LF	1	LT	0	90	75	25	Conifer			1				
								Hardwood	1		1				
34	LF	2	HS	40	80	50	40	Conifer				2		10% DIRT	
								Hardwood	10			1			
34	LF	3	RB	0	80	15	15	Conifer			1			70% RD, DIRT, WOOD	
								Hardwood	3						
34	RT	1	LT	7	20	95	5	Conifer						PHOTO 19/0851	
								Hardwood	1						
34	RT	2	HS	50	85	15	50	Conifer						35% DIRT	
								Hardwood	2			1			
34	RT	3	HS	65	80	30	50	Conifer	1					20% DIRT	
								Hardwood	1	2					
64	LF	1	HT	35	90	90	10	Conifer							
								Hardwood	10						
64	LF	2	HT	0	40	15	85	Conifer	1					TRAIL XING TO PICNIC TABLE	
								Hardwood	1						
64	LF	3	HT	0	5	10	90	Conifer	2						
								Hardwood	3						
64	RT	1	LT	2	70	60	40	Conifer				1		PHOTO 24/1231	
								Hardwood	3		2				
64	RT	2	LT	2	40	80	20	Conifer							
								Hardwood	1		1				
64	RT	3	LT	2	0	100	0	Conifer							
								Hardwood							

RIPARIAN ZONE VEGETATION

Reach 4

Reach 4

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
97	LF	1	HS	60	25	90	10	Conifer	1						PHOT 28/1017, LOGGED 20
								Hardwood	4						
97	LF	2	HS	55	95	40	45	Conifer		1	1				
								Hardwood	5	3					
97	LF	3	HS	40	100	50	50	Conifer	2	3					2M STUMP
								Hardwood	4	3					
97	RT	1	LT	0	100	60	20	Conifer							20% DIRT, ROCKS
								Hardwood	6	1	1				
97	RT	2	LT	4	100	80	5	Conifer							15% OLD GROWN OVER 02
								Hardwood	14	5					
97	RT	3	HS	15	100	35	25	Conifer							30% DIRT, LITTER
								Hardwood	16						
127	LF	1	HS	60	60	20	70	Conifer							10% ROCK, PHOTO 29/1325
								Hardwood	8						
127	LF	2	HS	110	0	0	30	Conifer							70% ROCK
								Hardwood	7						
127	LF	3	HS	100	5	30	20	Conifer							50% ROCK
								Hardwood	6						
127	RT	1	HS	50	25	80	20	Conifer							
								Hardwood	3	2	1				
127	RT	2	HS	80	5	20	80	Conifer	1						
								Hardwood	1						
127	RT	3	HS	70	0	20	70	Conifer	3						10% ROCK
								Hardwood	3						
141	LF	1	HS	110	5	15	85	Conifer							PHOTO 33/1444
								Hardwood		1					
141	LF	2	HS	110	0	30	70	Conifer							
								Hardwood		1					
141	LF	3	HS	100	0	40	60	Conifer							
								Hardwood	1						
141	RT	1	HS	125	5	40	60	Conifer							
								Hardwood	2						
141	RT	2	HS	90	20	60	40	Conifer	1				1		
								Hardwood	2						
141	RT	3	HS	30	50	100	0	Conifer	1				1		
								Hardwood							
171	LF	1	HT	5	50	70	30	Conifer		2	1	1			
								Hardwood	1		1				

171	LF	2	HS	30	5	100	0	Conifer		1				
								Hardwood						
171	LF	3	HS	60	30	100		Conifer						
								Hardwood						
171	RT	1	LT	1	65	60	30	Conifer		1	1			10% DIRY, PHOTO 37/1250
								Hardwood			2			50% 02 CHNL
171	RT	2	SC	2	30	40	10	Conifer						
								Hardwood	2					
171	RT	3	HS	45	80	85	15	Conifer		1	2			
								Hardwood				1		
201	LF	1	HS	80	60	10	90	Conifer			2		1	PHOTO 6/1011
								Hardwood	3					
201	LF	2	HS	75	60	10	90	Conifer			1	1		
								Hardwood						
201	LF	3	HS	40	45	10	90	Conifer	1	2	1	1		
								Hardwood						
201	RT	1	LT	7	70	25	60	Conifer					1	15% WOOD
								Hardwood	11					
201	RT	2	HS	10	80	20	70	Conifer	0	1	3	1		10% DWD
								Hardwood	7					
201	RT	3	HS	12	60	40	35	Conifer		1	1	2		25% TREES DOWN, EDGE OF CLRCUT
								Hardwood	2					1.5M CUT STUMP
231	LF	1	HS	60	60	40	60	Conifer	3	1				
								Hardwood	2					
231	LF	2	HS	60	50	10	90	Conifer	1	1				
								Hardwood	4					
231	LF	3	HS	45	50	5	70	Conifer			3			25% DIRT, EDGE OF CLCUT
								Hardwood						20% WOOD, PHOTO 8/1350
231	RT	1	HS	65	70	60	20	Conifer	1					
								Hardwood	4					
231	RT	2	HS	55	70	50	20	Conifer				2		30% DIRT- WOOD
								Hardwood	3					
231	RT	3	HS	60	60	60	20	Conifer	5	2	1	1		20% DIRT, 1.8M CUT STUMP
								Hardwood	3		1			PHOTO 10/1110
261	LF	1	HS	18	95	20	80	Conifer						
								Hardwood	14					
261	LF	2	HS	25	95	60	20	Conifer				1	1	20% WOOD, DIRT
								Hardwood	6					
261	LF	3	HS	30	95	30	70	Conifer			1	1		2M CUT STUMP
								Hardwood	4					
261	RT	1	HS	120	5	15	85	Conifer						
								Hardwood	4					
261	RT	2	HS	100	0	50	50	Conifer	1					
								Hardwood						
261	RT	3	HS	60	50	60	40	Conifer	2	1	1	1		
								Hardwood	1					

RIPARIAN ZONE VEGETATION

Reach 5

Reach 5

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
291	LF	1	HS	55	15	25	75	Conifer			1				
								Hardwood							
291	LF	2	HS	50	0	20	80	Conifer	1						
								Hardwood							
291	LF	3	HS	40	5	50	50	Conifer	1						
								Hardwood							
291	RT	1	HS	85	65	25	30	Conifer	1		2			PHOTO	
								Hardwood						13/1423, 45%	
														TREES DOWN	
291	RT	2	HS	85	45	25	75	Conifer	4						
								Hardwood							
291	RT	3	HS	80	75	20	80	Conifer	5	1	2	1		2M NATURAL	
								Hardwood						STUMP	

RIPARIAN ZONE VEGETATION

Reach 6

Reach 6

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
333	LF	1	LT	20	90	15	85	Conifer	13	1	1			2*1.5M CUT STUMPS
								Hardwood						
333	LF	2	HS	50	50	90	10	Conifer	2					
								Hardwood						
333	LF	3	HS	50	40	100	0	Conifer						
								Hardwood	3					
333	RT	1	LT	4	90	10	80	Conifer	10	2				PHOTO 19/1016, 10% DIRT
								Hardwood			1			
333	RT	2	HS	65	70	25	60	Conifer	5					
								Hardwood						
333	RT	3	HS	65	75	15	70	Conifer	4	2				15% DIRT
								Hardwood						
363	LF	1	HS	55	95	60	10	Conifer	16	4				30% DOWN TREES
								Hardwood			1			
363	LF	2	HS	55	95	30	40	Conifer	2					30% DIRT+GRV
								Hardwood	5					
363	LF	3	HS	50	90	40	60	Conifer	1	2	2	1		2*1M CUT STUMPS
								Hardwood	16					
363	RT	1	HS	60	50	20	50	Conifer	9					30% DIRT, WOOD
								Hardwood	2	1	1			
363	RT	2	HS	35	20	0	50	Conifer	4	3				50% DIRT, WOOD
								Hardwood						
363	RT	3	HS	20	50	10	60	Conifer	7	2				30% DIRT
								Hardwood						
393	LF	1	HS	40	20	60	40	Conifer	3					PHOTO 26/1149
								Hardwood	4	1				
393	LF	2	HS	40	0	95	0	Conifer						NO TREES; CUT+BURNED TREES
								Hardwood						10% WOOD
393	LF	3	HS	35	80	10	80	Conifer			4			
								Hardwood						
393	RT	1	HS	105	50	50	50	Conifer	1					
								Hardwood	8					
393	RT	2	HS	45	90	80	15	Conifer	1	2	1	1		5% DIRT
								Hardwood	4					
393	RT	3	HS	40	10	100	0	Conifer						
								Hardwood						

RIPARIAN ZONE VEGETATION

Reach 7

Reach 7

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
402	LF	1	HS	40	0	100	0	Conifer							1.5M CUT STUMP
								Hardwood							
402	LF	2	HS	30	0	100	0	Conifer							
								Hardwood							
402	LF	3	HS	30	0	100	0	Conifer							
								Hardwood							
402	RT	1	HS	45	0	100	0	Conifer							
								Hardwood	4						
402	RT	2	HS	45	0	100	0	Conifer							
								Hardwood	12						
402	RT	3	HS	40	0	100	0	Conifer							
								Hardwood	10						

MAD CREEK: COMMENT SUMMARY

Reach	Unit #	Type	Channel	Distance (m)	Code	Note 1	Note 2
1	1	RI	00	7		N.SANT R. T=8.5, MAD CR T=10	CONFL W/N. SANTIAM
1	2	LP	00	20		CULVERT DIAM=4.5, H=.4	
1	3	CC	00	43	BC	INSIDE CULVERT	GATES SCHOOL RD
1	4	SS	00	45		H=.5-STRUCTURE	END OF CULVERT IS BENT DOWN
1	5	RB	00	113		PHOTO 10/1020=SHOWS FLOOD	
1	6	LP	00	134		RIP-PHOTO 11/1103	RIP
1	7	RB	01	202			MANY DEEP POCKETS
1	8	RI	01	223		LITTER IN CR	
1	11	LP	02		WL		RACCOON
1	12	PD	02		/SS		
1	15	RB	00	365		METAL ION CR	
1	16	RB	01	443	/SS		
2	17	LP	01	470	/SS		T=12C
2	18	RB	01	532	WL	2",4" FISH	DEER TRACKS
2	20	DC	02			PHOT 13/1344, DEER TRACKS	
2	21	DC	03			PHOTO 14/1347	
2	22	RB	00	584		LOTS OF METAL,CABLES, ETC IN C	DEPTH TO .7M
2	23	LP	01	611	TJ, WL	15" ST	ST
2	24	RI	11		FC,SS	FC	
2	25	RB	00	694	WL	FENCE/, RIP PHOTO 15/1438	
2	26	SP	00	711			RIP, DEER TRACKS
2	27	RB	00	745		SM DEEP POCKET W/UNDERCUT	
2	29	GL	01	810	TJ	/TJ=LITTLE ROCK CR	ROCK CR
3	30	RB	11			PHOTO 16+17/1521	
3	31	RB	00	822		1.5" SALMONID, T=13C @1520	
3	34	RB	00	916		RIP, PHOTO 19/0851	T=11C @0850, RIP
3	35	CB	00	927		T=11C @0850	
3	36	RI	00	985	SS/	PHOTO 20/0902	
3	37	RB	00	1032		LITTER	
3	38	RB	00	1058		MANY SCREENS WASHED DOWN	
3	39	LP	00	1064	/SS	/FENCE ALNOG CR	
3	41	LP	00	1092	WL	4" TROUT	4" TROUT
3	43	CR	00	1159	FC	FENCE XING-BACKYARD	
3	44	RR	01	1190	FC	IRRIGATION PIPE/PUMP	
3	47	DU	02			PHOTO 21/1005-CULVERT	
3	48	CC	00	1208	RC	CULVERT=.2M HIGH, DIAM=1.8	UNNAMED
3	49	RB	00	1287		PHOTO 22/1033	
3	52	LP	00	1332		BACKYARD/	
3	54	LP	01	1365	TJ/		
3	56	RB	00	1438	SS/		
3	59	CB	00	1521			.7M POOLS
3	60	CB	00	1537		IRRIGATION PIPE	
3	61	CB	00	1579		T=11C @1150	T=11C @1150
3	63	CB	00	1615	UD/	UD-10% FLOW	.5M WIDE, .1M DEEP, MOSTLY GRV
3	64	LP	00	1636		RIP, PHOTO 23/1220	
3	65	CB	01	1662	WL	LAWNCHAIRS/	RS NEWT
3	67	PD	02			2" RS NEWT	T=11C @1312
4	70	LP	00	1832			POOL IS A BRK BOWL
4	71	CR	00	1837			SM 1.2M DEEP POOL IN MIDDLE
4	77	RB	01	1996	/TJ	11C @1400	T=11C @1400

MAD CREEK: COMMENT SUMMARY

Reach	Unit #	Type	Channel	Distance (m)	Code	Note 1	Note 2
4	78	CB	11			TRIB T=11C @1400	
4	87	CB	00	2291	LI/	PHOTO 26/0845	
4	88	RP	00	2318		T=11C @0900	T=11C @0900
4	89	CB	01	2360	TJ/		
4	90	SP	11		WL	2" FRY	3-3" FISH
4	91	CB	00	2397		T=11C @0900	
4	93	SB	00	2407		H=1, ALSO CM	
4	97	CB	00	2524		RIP-PHOTO 28/1017	RIP
4	98	RR	00	2558		ELK TRACKS	
4	99	CB	00	2573	LA/		
4	101	CB	00	2604	SS/		
4	105	CB	00	2740			W/.7M POCKETS
4	109	CB	00	2809			W/POCKETS
4	113	CR	00	2891			W/DEEP POCKETS
4	114	CR	00	2917		H=1.8	
4	116	CR	00	2976			W/DEEP POCKETS UP TO .7M
4	121	CB	00	3068		T=12C @1220	T=12C @1220, W/DEEP POCKETS
4	122	LP	00	3078	/SS		
4	123	CR	00	3109			W/DEEP POCKETS
4	124	CB	00	3131			W/TWO POCKETS
4	127	IP	10			RIP-PHOTO 29/1325	
4	128	LP	00	3204		5" RS NEWT	
4	132	CR	01	3279		PHOTO 31/1358, 30/1355=BARRIER	
4	135	SR	00	3296		PHOTO 32/1407, H=8.5	
4	138	SR	00	3334		H=4	
4	140	RI	00	3391	/SS		2*/SS
4	141	RB	00	3412		RIP-PHOTO OF LEFT @1444	
4	143	SR	11			PHOTO 34/1455	
4	145	TP	00	3483			PHOTO 35/1502
4	146	SR	00	3484		T=12C @1020, H=2	INACCESSIBLE PART OF CR-STEEP
4	147	CR	00	3515			BRK CLIFFS
4	150	CR	00	3548			T=12C @1025
4	151	CB	00	3560		T=12C @1020	
4	152	SP	00	3572	SS/		
4	155	CR	00	3651	DJ		
4	156	PP	00	3662		DEER TRACKS	
4	157	SL	00	3663	DJ	H=1.1	LG JAM
4	158	RB	01	3704	TJ/		
4	160	LP	00	3719	SS/		FRY
4	161	RB	01	3808	TJ/		
4	170	LP	01	3990			T=12.5C @1320
4	171	CB	01	4003		RIP-PHOTO 37/1250	RIP
4	173	RI	00	4020		PHOTO 1/1320	
4	178	CB	00	4084			W/POCKETS
4	181	CR	00	4169		T=13C @1400	T=13C @1400
4	184	LP	00	4199	SS/	PHOTO 2/1409	
4	188	SR	00	4293		H=1.6	
4	191	CR	01	4356		PHOTO 3/1437-BRK	W/BRK POCKETS
4	192	CR	11				T=12C @0904
4	193	RR	01	4385		T=12C @0904	WATER LEVEL HAS DROPPED

MAD CREEK: COMMENT SUMMARY

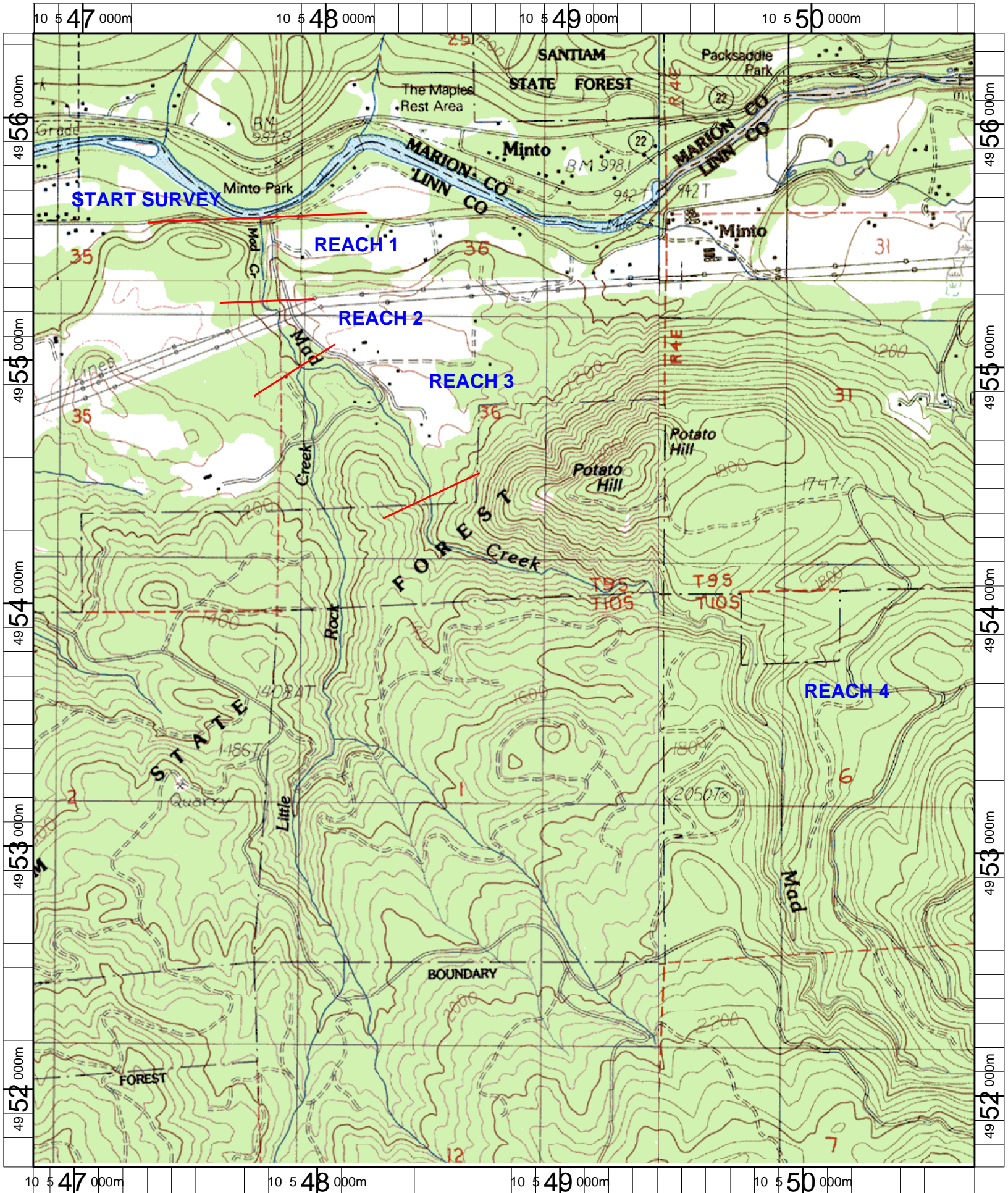
Reach	Unit #	Type	Channel	Distance (m)	Code	Note 1	Note 2
4	194	CR	01	4392			SM .5M DEEP POOL
4	198	RB	00	4464		PHOTO 4+5/0945-TORRENT DEPOSIT	
4	199	LP	00	4473	WL	9 TROUT FRY-3+4"	DEAD CF, TROUT
4	200	SB	00	4479		DEAD CF	DEER TRACKS
4	201	LP	00	4490		RIP-PHOTO 6/1011	RIP
4	202	CB	00	4557		2" TROUT FRY	
4	203	LP	01	4565	/SS,WL		2 UNKNOWN TROUT
4	204	CB	01	4602	TJ/		
4	209	CB	00	4675	WL		TROUT-3 CM
4	211	CB	00	4717		T=12C @1120	
4	212	SP	00	4730	WL	TROUT FRY	TROUT-8*5CM
4	213	CB	00	4772		CLEARCUT/	
4	217	LP	00	4854	WL	7" TROUT,3" TROUT	10CM,5CM TROUT
4	219	CB	00	4916		2" FRY	
4	220	CR	00	4939	WL	3*3" FRY	3CM TROUT
4	221	LP	00	4945		5",2*4" TROUT	
4	222	CB	00	4971	WL		
4	223	SP	00	4978	WL	FISH	3*4CM TROUT
4	224	CR	00	4994		FRY	
4	225	SL	00	4995		H=.9	
4	226	SP	00	5008	WL	15 FISH UP TO 5"	
4	227	CR	00	5018		PHOTO 7/1321 LOOKING D/S	
4	228	SR	00	5020		H=1.5	
4	230	CB	00	5058		FRY	
4	231	SP	00	5065		RIP PHOTO 8/1350-RT SIDE	RIP
4	232	CR	01	5101	/TJ	T=12C @1400	T=12C
4	233	CB	11			T=12C @1400	12C
4	234	RB	00	5138	/SS	FRY	EF
4	239	RB	00	5254		2" FRY	
4	241	SP	00	5282		T=12C @1500, 2" FRY	
4	246	SP	00	5449		T=10C @0930	T=10C @0926
4	250	SB	00	5555		H=1.5	
4	251	RB	01	5591		T=10C @1005	
4	252	CB	11		/TJ	T=11C @1005	T=10C @0956, ELK TRACKS
4	253	CB	01	5621			T=11C @0956
4	255	RR	01	5642			BRK TRENCH
4	260	SP	00	5780	WL		3*6CM TROUT
4	261	CB	00	5797		RIP-PHOTO 10/1110	RIP
4	266	SP	00	5923		4" TROUT	
4	267	CB	00	6007		FRY	
4	268	CB	01	6064			POOL-STEP-POOL
4	270	SP	00	6073		PHOTO 11/1244=SERIES STEP/POOL	
4	271	SR	00	6086		T=11C @1255	
4	272	PP	00	6097		7" TROUT	
4	273	CR	00	6125		FRY	
4	274	CB	01	6146	TJ/		
5	275	RR	11			T=11C @1305	T=11C
5	283	SP	00	6243		FRY	
5	285	LP	00	6285		FRY	
5	288	SP	00	6412	/SS		

MAD CREEK: COMMENT SUMMARY

Reach	Unit #	Type	Channel	Distance (m)	Code	Note 1	Note 2
5	290	SR	00	6428		H=3.3	
5	291	CR	00	6469		PHOTO 13/1423	RIP
5	295	CR	00	6529		PHOTO 14/1450	
5	297	SR	00	6544		H=4	
5	298	CR	01	6581			W/POOL .5M DEEP
5	301	SR	00	6587		T=11.5C @1505, H=2	
5	303	SR	00	6594		H=3	
5	306	SR	00	6649		H=1.5	
5	308	SP	00	6682	/SS		2*/SS
5	310	SL	00	6771		H=1.5	
5	312	SP	00	6791		CULVERT DIAM=2, H=.5	
5	313	CC	00	6812	BC	MAD CR RD	
5	314	CB	00	6826		T=9.5C @0800	T=9.5C @0800
5	317	SL	00	6930		H=3	
5	318	RI	00	6943		PHOTO 15/0834, TORRENT JAM	
5	319	CB	00	7005	DJ	5" RS NEWT	
5	320	DU	01	7120	/TJ	PHOTO 16/0839	2*/TJ
5	322	CB	11				WATER SEEPS INTO GROUND
5	323	RB	00	7167		TRICKLE W/SLOPE	
5	324	RB	00	7204			STEP-POOL SUBUNIT
5	330	CR	01	7345	/TJ		
5	331	CR	11			T=10C @1000	
5	332	CB	00	7359		PHOTO 19/1016	
6	333	RB	00	7380			RIP
6	340	LP	00	7528			W/SM POOLS .4M DEEP
6	346	SB	00	7617		H=1.5	
6	347	SP	00	7625	WL	10" PG SALAMANDER	PG SALAMANDER
6	354	CR	00	7786	/SS		
6	357	SR	00	7833			SM .4M POOL IN MIDDLE
6	358	CR	01	7864	TJ/		
6	361	SR	00	7871		T=10C @1230	T=10C @1230
6	363	PD	02			RIP PHOTO 21/1244	
6	364	CB	00	8038	/SS		
6	366	CR	00	8058			15M FALLS
6	367	CR	00	8111	WL		SM RODENT
6	372	CB	01	8303	TJ/	T=12C @0924	OPEN VALLEY FILLED W/RIPRAP
6	373	DU	02				T=12C @0924
6	374	CB	00	8471	DJ		CR VERY OVERGROWN W/SHRUB
6	375	SB	00	8473		H=2.3	POOLS
6	376	CB	00	8504			POOLS
6	378	SB	00	8527		H=4	
6	379	CB	00	8558	/SS		
6	383	SR	00	8705		H=16, PHOTO 23/1048	CLIFF
6	384	CB	01	8778		PHOTO 24/1105 LOOKING D/S	
6	388	CB	01	8858			LOTS OF SHRUBS
6	391	CR	00	8964		T=12.5C @1130	T=12.5C @1130
6	393	CR	00	8985		RIP PHOTO 25/1149	
6	397	SS	00	9086		PHOTO 26/1240	
7	398	CC	00	9100	RC	PHOTO 27/1249	
7	399	CB	01	9204		CULVERT HT=5M, DIAM=1.2	

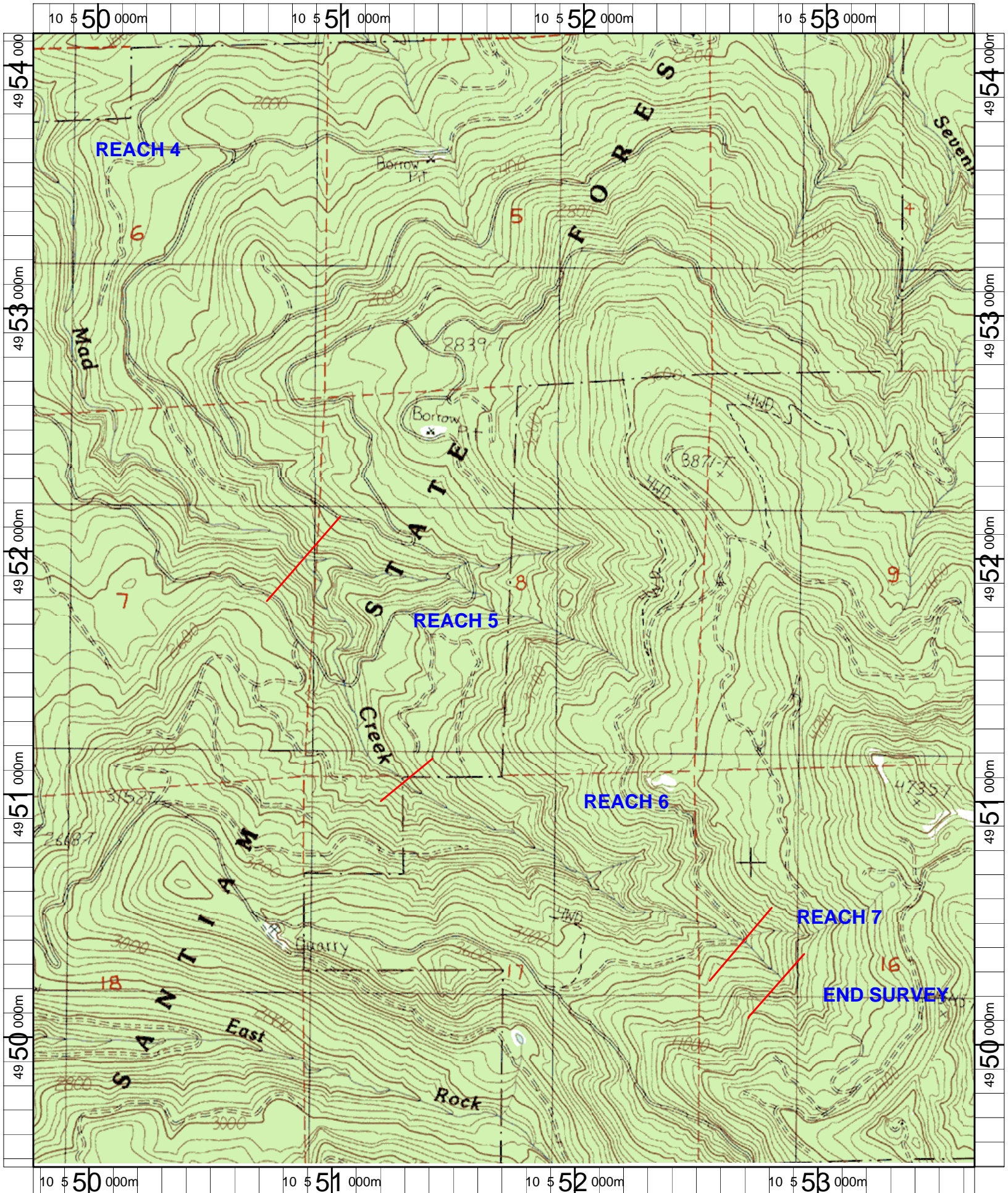
MAD CREEK: COMMENT SUMMARY

Reach	Unit #	Type	Channel	Distance (m)	Code	Note 1	Note 2
7	403	CR	00	9403		PHOTO 28/1327	
7	404	SR	00	9413		H=30	



Name: LAWHEAD CREEK (OR)
 Date: 3/22/2011
 Scale: 1 inch equals 1600 feet

Location: 10 0548751 E 4954027 N NAD 83
 Caption: MAD CREEK (NORTH SANTIAM RIVER BASIN)
 1996 SUMMER HABITAT SURVEY



Name: LAWHEAD CREEK (OR)
 Date: 3/22/2011
 Scale: 1 inch equals 1600 feet

Location: 10 0551689 E 4951814 N NAD 83
 Caption: MAD CREEK (NORTH SANTIAM RIVER BASIN)
 1996 SUMMER HABITAT SURVEY