

Project

Twisp to Carlton Reach Assessment, Methow River, WA

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Submitted to:

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Submitted by:

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Workbook Description

This workbook contains data from individual habitat units along the Twisp to Carlton Reach of the Methow River. The data were collected by CCFEG and Cardno in September (2016), and subsequently processed by Cardno, in support of the Twisp to Carlton Reach Assessment.

Sub-reach TC3 Habitat Unit Data
Twisp to Carlton Reach Assessment

Sub-Reach	Sequence Order Number	Channel Unit Type Code	Channel Unit Type	Forcing Agent	Flow Split ?	Upper Boundary RM	Channel Unit Length (ft, along thalweg)	Wetted Channel Dimensions				Woody Material Counts			Bankfull Dimensions				Eroding Banks (length, ft)			Riparian Vegetation Info				Water Temp		Substrate % (Visual Est.)										
								Wet Width (ft)	Max Depth	Avg Depth	Pool Crest Depth	Residual Pool Depth	S	M	L	BF Width (feet)	Max BFD (feet)	Avg BFD (feet)	Area (acres)	W/D	Floodprone Width (ft)	Total	Left Bank	Right Bank	Left Bank Size Class	Left Bank Overshoot Type	Right Bank Size Class	Right Bank Overshoot Type	degC	Time	SA	GR	CO	BO	BR			
TC3	1	FT	Riffle	-	-	41.20	995	75	3.5	2.5	NA	NA	0	1	0	198	8.5	5.2	5.2	38.0	590	269	0	269	LT	HC	LT	HC	14.5	1450	10	20	40	30	0			
TC3	2	S	Pool	-	-	41.02	595	105	5.5	4	2.2	3.3	0	0	0	186	NA	NA	2.3	NA	NA	0	0	0	0	ST	HC	ST	HC	15	1606	10	20	40	29	1		
TC3	3	FT	Riffle	-	-	40.91	1015	129	4	2.5	NA	NA	0	0	0	198	10.5	8.5	4.3	23.3	392	0	0	0	ST	HC	ST	HC	14.5	1628	10	20	40	30	0			
TC3	4	S	Pool	-	-	40.72	1485	75	5	3	2.1	2.9	5	0	1	NA	NA	NA	5.2	NA	NA	0	0	0	0	ST	HC	ST	HC	15	1650	10	25	60	5	0		
TC3	5	FT	Riffle	-	-	40.45	795	90	2.5	1.5	NA	NA	0	0	0	225	7.8	5.6	3.9	40.5	432	0	0	0	ST	HC	ST	HC	15	1656	10	40	50	0	0			
TC2	6	S	Pool	Bedrock	-	40.30	520	111	12	6	1.5	10.5	0	0	0	NA	NA	NA	2.3	NA	NA	0	0	0	0	ST	HC	ST	HC	14.5	1702	22	11	11	11	44		
TC2	7	FT	Riffle	-	-	40.20	240	72	3	1.5	NA	NA	0	3	3	207	8.5	6.2	1.1	33.7	452	238	238	0	0	ST	HC	ST	HC	14.5	1705	9	45	36	9	0		
TC2	8	FN	Glide	-	-	40.15	1020	114	4	3	NA	NA	1	3	2	159	8.0	5.4	4.2	36.9	428	247	247	0	0	ST	HC	ST	HC	15	1710	17	44	28	11	0		
TC2	9	FT	Riffle	-	-	39.97	945	69	2.5	1.5	NA	NA	6	3	1	339	7.5	5.6	4.5	61.1	2303	300	0	300	ST	HC	ST	HC	15.5	1721	10	35	50	5	0			
TC2	10	FN	Glide	-	-	39.81	630	114	3.5	2.5	NA	NA	2	0	1	348	9.5	7.6	2.8	45.8	2212	219	0	219	ST	HC	ST	HC	15	1735	10	50	40	0	0			
TC2	11	S	Pool	-	-	39.69	625	135	6.5	3.5	2.75	3.75	3	1	0	NA	NA	NA	2.8	NA	NA	237	237	0	0	ST	HC	ST	HC	15	1745	10	45	35	10	0		
TC2	12	FT	Riffle	-	-	39.58	400	102	2.5	1.5	NA	NA	4	0	0	330	6.7	4.5	1.8	72.7	2090	356	356	0	0	ST	HC	ST	HC	15	1755	10	50	30	10	0		
TC2	13	FN	Glide	-	-	39.50	850	120	3.75	2.75	NA	NA	3	0	0	165	8.5	6.1	4.8	27.1	1506	0	0	0	0	ST	HC	ST	HC	15	1800	-	-	-	-	-		
TC2	14	S	Pool	Bedrock	-	39.35	495	102	12	4	2	10	1	1	1	186	NA	NA	2.4	NA	NA	0	0	0	0	LT	CP	LT	HC	11	843	15	35	27	15	8		
TC2	15	FT	Riffle	-	-	39.25	435	90	2.25	1.25	NA	NA	0	0	0	186	6.5	4.3	3.0	42.9	662	0	0	0	0	LT	CP	LT	HC	11	851	10	20	30	40	0		
TC2	16	S	Pool	-	-	39.17	725	159	5.75	3	1.5	4.25	20	7	1	159	NA	NA	5.0	NA	NA	0	0	0	0	LT	HC	ST	HC	10.5	908	10	40	50	0	0		
TC2	17	FT	Riffle	-	-	39.04	560	117	3.5	1.75	NA	NA	0	1	0	195	6.5	4.0	2.5	49.2	263	314	314	0	0	LT	HC	LT	HC	11	917	10	35	50	5	0		
TC2	18	S	Pool	-	-	38.93	830	120	6	2.75	1.2	4.8	0	0	2	NA	NA	NA	3.4	NA	NA	0	0	0	0	ST	HW	LT	HC	11	922	10	30	50	10	0		
TC2	19	FT	Riffle	-	-	38.78	490	108	2.8	1.5	NA	NA	0	0	0	270	6.7	4.0	2.5	68.1	536	0	0	0	0	LT	C	LT	HC	11	932	5	45	40	10	0		
TC2	20	FN	Glide	-	-	38.69	475	108	4	2.5	NA	NA	0	1	1	270	7.5	4.3	2.3	62.5	706	0	0	0	0	LT	C	LT	HC	11	941	10	20	50	20	0		
TC2	21	FT	Riffle	-	Y	38.60	485	75	3	1.5	NA	NA	0	0	1	315	7.0	3.6	3.2	87.5	877	0	0	0	0	LT	C	LT	HC	11.5	956	15	40	50	5	0		
TC2	22	S	Pool	-	-	38.51	1215	120	6	3	1.3	4.7	92	28	23	NA	NA	NA	9.4	NA	NA	0	0	0	0	LT	C	LT	HC	11	1002	20	35	40	5	0		
TC2	23	FT	Riffle	-	Y	38.29	605	75	2	1	NA	NA	0	2	4	285	6.0	5.3	3.3	53.8	540	0	0	0	0	LT	C	LT	HC	11	1023	10	50	30	10	0		
TC2	24	FN	Glide	-	-	38.17	420	105	2.75	1.75	NA	NA	3	0	1	285	6.0	5.3	1.9	53.8	1080	0	0	0	0	LT	C	LT	HC	11	1040	10	50	30	10	0		
TC2	25	FT	Riffle	-	-	38.10	425	120	2.5	1.5	NA	NA	0	2	2	285	6.0	5.3	2.1	53.8	934	418	418	0	0	NV	NV	LT	HC	11	1043	11	53	32	5	0		
TC2	26	FN	Glide	-	-	38.02	220	132	2.75	1.75	NA	NA	3	0	2	225	9.0	5.4	1.0	41.8	1013	0	0	0	0	LT	C	LT	HC	11	1045	5	45	45	5	0		
TC2	27	FT	Riffle	-	-	37.98	590	123	6.5	3	NA	NA	0	1	0	237	6.0	3.8	2.6	62.4	908	0	0	0	0	SP	HC	LT	HC	11.5	1059	5	40	45	5	5		
TC2	28	S	Pool	Bedrock	-	37.87	1180	105	10	4.5	1.4	8.6	3	0	0	NA	NA	NA	7.5	NA	NA	103	103	0	0	NV	NV	LT	HC	11.5	1100	5	45	40	5	5		
TC2	29	FT	Riffle	-	Y	37.65	440	84	2.5	1.25	NA	NA	0	0	1	270	5.0	2.1	2.6	128.6	492	479	479	0	0	ST	HC	LT	CP	15	1108	5	45	45	5	0		
TC2	30	FN	Glide	-	-	37.57	460	84	1	0.5	NA	NA	0	0	0	270	5.0	2.1	3.0	128.6	475	455	455	0	0	LT	C	SS	HC	12	1113	10	40	40	10	0		
TC2	31	FT	Riffle	-	-	37.48	695	69	2.75	1.75	NA	NA	2	3	2	246	7.0	4.8	4.8	51.8	632	642	642	0	0	NV	V	ST	HC	12	1117	10	40	40	10	0		
TC2	32	S	Pool	-	-	37.35	1820	96	10	3	1.7	8.3	3	1	2	NA	NA	NA	9.2	NA	NA	0	0	0	0	LT	HC	ST	HC	12	1129	10	40	40	10	0		
TC2	33	FT	Riffle	-	-	37.01	440	81	2.75	1.5	NA	NA	8	5	270	6.0	3.7	3.3	73.0	1000	0	0	0	0	0	LT	HC	LT	HC	12	1140	10	45	40	5	0		
TC2	34	S	Pool	-	-	36.93	830	129	5.2	2.75	1.4	3.8	25	3	4	NA	NA	NA	5.0	NA	NA	0	0	0	0	LT	HC	NV	NV	LT	HC	12.5	1233	10	40	40	10	0
TC2	35	FT	Riffle	-	-	36.78	420	192	1.75	0.75	NA	NA	40	11	7	246	5.4	4.2	2.5	58.5	1897	0	0	0	0	ST	HC	LT	HC	12.5	1257	20	40	40	0	0		
TC2	36	FN	Glide	-	-	36.70	540	138	3.25	1.5	NA	NA	25	8	3	255	5.5	3.6	3.4	70.1	1932	0	0	0	0	LT	HC	LT	HC	12.5	1302	20	30	50	0	0		
TC2	37	FT	Riffle	-	-	36.60	540	99	3	1.25	NA	NA	50	7	9	330	7.8	4.2	4.0	78.6	2072	0	0	0	0	ST	HC	LT	HC	14	1311	33	33	30	3	0		
TC2	38	FN	Glide	-	-	36.50	1475	120	5	2.75	NA	NA	3	1	2	390	8.0	3.3	12.5	117.0	3733	0	0	0	0	LT	HC	LT	HC	13.5	1319	32	33	30	5	0		
TC2	39	FT	Riffle	-	-	36.23	395	81	3	1.5	NA	NA	2	0	4	180	8.9	7.0	2.1	25.8	3741	0	0	0	0	ST	HC	LT	HC	14	1327	5	40	50	5	0		
TC2	40	FN	Glide	-	-	36.15	375	150	4.5	2.25	NA	NA	3	1	3	210	10.0	7.5	2.6	28.0	3525	0	0	0	0	LT	HC	ST	HC	14	1337	10	40	50	0	0		
TC2	41	FT	Riffle	-	-	36.08	610	81	5	2.5	NA	NA	0	0	0	225	7.5	4.9	3.9	45.9	1543	112	112	0	0	LT	HC	LT	HC	14	1342	10	40	40	10	0		
TC2	42	S	Pool	-	-	35.97	605	75	5.75	3	1.1	4.65	0	0	0	NA	NA	NA	3.5	NA	NA	77	77	0	0	LT	HC	LT	HC	14	1348	30	33	33	3	0		
TC2	43	FT	Riffle	-	-	35.86	195	60	6	3	NA	NA	1	0	0	345	9.0	4.9	1.3	70.2	716	0	0	0	0	LT	HC	ST	HC	14	1352	20	35	40	5	0		
TC2	44	S	Pool	-	-	35.82	995	129	6.2	3.5	1.5	4.7	1	1	0	NA	NA	NA	5.0	NA	NA	270	0	270	0	0	LT	HC	LT	CP	14	1358	40	10	20	30	0	
TC2	45	FT	Riffle	-	-	35.64	475	75	2.5	1.5	NA	NA	30	12	5	360	7.5	4.6	4.5	78.9	625	0	0	0	0	LT	HC	LT	HC	14	1406	10	45	45	0	0		
TC2	46	S	Pool	-	-	35.55	1000	135	9	3.5	1.4	7.6	52	17	14	NA	NA	NA	6.2	NA	NA	6	6	0	0	LT	HC											

Sub-reach TC3 Habitat Unit Data
 Twisp to Carlton Reach Assessment

Sub-Reach	Sequence Order Number	Channel Unit Type Code	Channel Unit Type	Forcing Agent	Flow Split ?	Upper Boundary RM	Channel Unit Length (ft, along thalweg)	Wetted Channel Dimensions					Woody Material Counts			Bankfull Dimensions					Eroding Banks (length, ft)			Riparian Vegetation Info				Water Temp		Substrate % (Visual Est.)					
								Wet Width (ft)	Max Depth	Avg Depth	Pool Crest Depth	Residual Pool Depth	S	M	L	BF Width (feet)	Max BFD (feet)	Avg BFD (feet)	Area (acres)	W/D	Floodprone Width (ft)	Total	Left Bank	Right Bank	Left Bank Size Class	Left Bank Overstory Type	Right Bank Size Class	Right Bank Overstory Type	degC	Time	SA	GR	CO	BO	BR
TC1	231	S	Pool	-	-	30.67	880	111	5	2.5	1.9	3.1	0	2	0	NA	NA	NA	4.6	NA	NA	122	122	0	ST	HC	LT	CP	14.5	1448	20	30	50	0	0
TC1	232	FT	Riffle	-	-	30.51	1000	165	1.75	1.25	NA	NA	20	8	5	225	5.5	5.0	4.7	45.0	446	484	484	0	ST	HC	LT	HC	14.5	1450	10	45	40	5	0
TC1	233	S	Pool	-	-	30.33	995	135	7.5	3	1.4	6.1	4	1	0	NA	NA	NA	3.1	NA	NA	0	0	0	ST	HC	ST	HC	15	1458	10	35	50	5	0
TC1	234	FT	Riffle	-	-	30.14	635	129	3	0.75	NA	NA	0	0	0	195	7.0	5.3	2.3	36.8	282	0	0	0	LT	HC	LT	HC	15	1505	10	30	40	20	0
TC1	235	S	Pool	-	-	30.02	525	111	7.5	3.5	2	5.5	3	0	0	NA	NA	NA	1.8	NA	NA	0	0	0	LT	HC	LT	HC	15	1512	20	20	40	20	0
TC1	236	FT	Riffle	-	-	29.93	485	111	2.5	1.25	NA	NA	0	0	0	195	7.0	5.3	1.7	36.8	259	0	0	0	LT	CP	LT	HC	15	1516	20	20	40	20	0
TC1	237	S	Pool	-	-	29.84	1100	120	8	4	2.1	5.9	1	0	0	NA	NA	NA	4.1	NA	NA	0	0	0	LT	HC	LT	HC	15	1517	15	25	40	20	0
TC1	238	FN	Glide	-	-	29.63	500	195	2.5	1.5	NA	NA	4	1	1	201	6.5	5.6	2.6	35.7	348	992	0	992	LT	CP	LT	HC	15	1527	10	38	50	2	0
TC1	239	FT	Riffle	-	-	29.54	1625	270	2.5	1.75	NA	NA	2	1	0	270	4.2	3.2	8.5	83.9	316	0	0	0	LT	CP	LT	HC	15.5	1538	10	45	40	5	0
TC1	240	S	Pool	-	-	29.24	1705	156	8	4	1.4	6.6	3	2	1	NA	NA	NA	7.7	NA	NA	0	0	0	LT	CP	LT	HC	15.5	1618	10	40	40	10	0
TC1	241	FT	Riffle	-	-	28.92	945	99	3.5	1.75	NA	NA	2	2	4	315	7.3	4.3	5.5	73.6	836	217	217	0	LT	HC	LT	HC	15.5	1630	10	35	40	15	0
TC1	242	S	Pool	-	-	28.75	710	135	5.3	3	1.7	3.6	25	10	5	NA	NA	NA	2.8	NA	NA	67	67	0	LT	HC	LT	HC	15.5	1639	5	25	35	35	0
TC1	243	FT	Riffle	-	-	28.62	1285	117	4	2	NA	NA	4	0	0	219	6.0	4.0	6.6	54.8	278	0	0	0	LT	CP	LT	HC	15.5	1649	10	35	35	20	0
TC1	244	S	Pool	-	-	28.38	285	108	4.5	2	2.2	2.3	0	0	0	NA	NA	NA	1.0	NA	NA	224	0	224	LT	HC	LT	HC	15.5	1700	15	20	25	40	0
TC1	245	FT	Riffle	-	-	28.33	770	120	2.5	1.5	NA	NA	0	0	0	180	6.3	4.3	2.3	41.5	280	0	0	0	ST	HC	ST	HC	15.5	1705	10	20	30	40	0
TC1	246	S	Pool	-	-	28.18	325	75	9	5	2	7	1	0	0	NA	NA	NA	1.0	NA	NA	0	0	0	LT	HC	NV	NV	15.5	1715	20	10	40	30	0

Sub-reach TC1 Habitat Unit Data
Twisp to Carlton Reach Assessment

Sub-Reach	Sequence Order Number	Channel Unit Type Code	Channel Unit Type	Forcing Agent	Flow Split ?	Upper Boundary RM	Channel Unit Length (ft, along thalweg)	Wetted Channel Dimensions					Woody Material Counts			Bankfull Dimensions					Eroding Banks (length, ft)			Riparian Vegetation Info					Water Temp		Substrate % (Visual Est.)				
								Wet Width (ft)	Max Depth	Avg Depth	Pool Crest Depth	Residual Pool Depth	S	M	L	BF Width (feet)	Max BFD (feet)	Avg BFD (feet)	Area (acres)	W/D	Floodprone Width (ft)	Total	Left Bank	Right Bank	Left Bank Size Class	Left Bank Overstory Type	Right Bank Size Class	Right Bank Overstory Type	degC	Time	SA	GR	CO	BO	BR
TC1	208	FT	Riffle	-	-	33.55	950	150	2.25	1.5	NA	NA	1	0	0	171	4.3	3.3	3.5	52.5	193	0	0	0	LT	CP	LT	CP	12.5	1130	10	25	60	5	0
TC1	209	S	Pool	-	-	33.38	380	147	5.5	2.5	2.4	3.1	2	0	0	NA	NA	NA	1.1	NA	NA	0	0	0	LT	HC	LT	CP	12.5	1135	10	40	40	10	0
TC1	210	FT	Riffle	-	-	33.30	740	150	2.5	1.5	NA	NA	1	0	0	165	5.7	4.2	2.3	39.6	193	251	0	251	LT	HC	LT	CP	12.5	1213	10	25	60	5	0
TC1	211	FN	Slide	-	-	33.17	285	129	2.75	2	NA	NA	1	0	0	162	7.8	5.4	1.0	29.8	214	0	0	0	LT	CP	LT	CP	12.5	1230	30	35	35	0	0
TC1	212	FT	Riffle	-	-	33.11	765	129	1.75	1	NA	NA	1	0	0	162	7.8	5.4	2.4	29.8	179	0	0	0	LT	CP	LT	CP	13	1240	10	40	40	10	0
TC1	213	S	Pool	Bedrock	-	32.97	790	129	4.8	3	1.75	3.05	0	0	0	162	NA	NA	2.7	NA	NA	0	0	0	LT	CP	LT	CP	13	1245	10	30	30	30	0
TC1	214	FN	Slide	-	-	32.83	795	150	3.6	2.25	NA	NA	2	0	0	165	7.3	5.4	3.0	30.3	187	0	0	0	LT	CP	LT	CP	13	1250	15	30	45	10	0
TC1	215	FT	Riffle	-	-	32.68	170	156	3	1.5	NA	NA	0	0	0	171	7.3	5.4	0.7	31.4	236	0	0	0	LT	CP	LT	CP	13	1255	10	40	50	0	0
TC1	216	FN	Slide	-	-	32.65	590	171	3.5	1.75	NA	NA	0	0	0	171	6.8	5.1	2.1	33.3	203	0	0	0	ST	CP	LT	HC	13	1256	10	40	45	5	0
TC1	217	S	Pool	-	-	32.54	585	132	10	4.5	2	8	0	0	0	NA	NA	NA	1.9	NA	NA	0	0	0	ST	CP	LT	HC	13	1305	30	20	30	20	0
TC1	218	FT	Riffle	-	-	32.43	740	180	3.5	2	NA	NA	2	2	0	210	7.0	4.9	3.4	42.7	332	0	0	0	LT	HC	LT	HC	13	1315	10	35	40	15	0
TC1	219	S	Pool	-	-	32.29	535	135	4.5	3	2.25	2.25	2	1	1	NA	NA	NA	1.9	NA	NA	0	0	0	ST	HC	LT	HC	13	1320	10	20	50	20	0
TC1	220	FT	Riffle	-	-	32.19	1340	132	3	2	NA	NA	5	2	1	165	7.0	5.9	6.7	27.9	358	301	301	0	LT	CP	LT	HC	13.5	1320	15	30	50	5	0
TC1	221	S	Pool	-	-	31.94	555	117	5.75	2.75	2.1	3.65	3	1	0	NA	NA	NA	2.0	NA	NA	18	18	0	LT	CP	LT	HC			20	25	50	5	0
TC1	222	FT	Riffle	-	-	31.84	335	120	1.5	0.75	NA	NA	0	0	0	135	8.0	6.3	1.2	21.4	201	0	0	0	LT	CP	LT	HC			15	40	40	5	0
TC1	223	S	Pool	-	-	31.78	845	132	7	3	1.2	5.8	1	0	2	NA	NA	NA	2.8	NA	NA	106	106	0	ST	HC	LT	CP	14	1343	15	50	30	5	0
TC1	224	FT	Riffle	-	-	31.62	490	159	3	1.25	NA	NA	0	1	0	165	6.5	5.2	1.8	31.7	204	91	0	91	ST	HC	NV	14	1345	20	40	40	0	0	
TC1	225	S	Pool	-	-	31.53	910	120	10	5	1.6	8.4	0	0	0	NA	NA	NA	3.8	NA	NA	0	0	0	LT	CP	LT	CP	14	1350	10	15	40	20	15
TC1	226	FT	Riffle	-	-	31.36	1685	120	3	1.25	NA	NA	20	20	40	210	8.5	5.2	6.3	40.4	333	69	69	0	ST	HW	LT	HC	14	1359	10	25	60	5	0
TC1	227	SIDEF	Side Channel - Fast	-	-	31.32	605	42	2.75	1.5	NA	NA	0	0	0	48	NA	NA	0.9	NA	333	0	0	0	ST	HW	LT	HC			5	30	50	15	0
TC1	228	FN	Slide	-	-	31.05	580	162	4.5	2.5	NA	NA	0	0	0	180	8.5	6.3	1.9	28.8	253	0	0	0	LT	CP	LT	CP	14	1415	20	30	40	10	0
TC1	229	S	Pool	-	-	30.94	605	150	4.5	3	0.9	3.6	0	0	0	NA	NA	NA	2.0	NA	NA	0	0	0	LT	CP	LT	CP	14	1419	30	40	20	10	0
TC1	230	FT	Riffle	-	-	30.83	845	198	1.5	0.5	NA	NA	0	0	0	210	7.0	6.0	3.1	35.0	288	0	0	0	LT	CP	LT	CP	14.5	1419	20	50	30	0	0
TC1	231	S	Pool	-	-	30.67	880	111	5	2.5	1.9	3.1	0	2	0	NA	NA	NA	4.6	NA	NA	122	122	0	ST	HC	LT	CP	14.5	1448	20	30	50	0	0
TC1	232	FT	Riffle	-	-	30.51	1000	165	1.75	1.25	NA	NA	20	8	5	225	5.5	5.0	4.7	45.0	446	484	484	0	ST	HC	LT	HC	14.5	1450	10	45	40	5	0
TC1	233	S	Pool	-	-	30.33	995	135	7.5	3	1.4	6.1	4	1	0	NA	NA	NA	3.1	NA	NA	0	0	0	ST	HC	ST	HC	15	1458	10	35	50	5	0
TC1	234	FT	Riffle	-	-	30.14	635	129	3	0.75	NA	NA	0	0	0	195	7.0	5.3	2.3	36.8	282	0	0	0	LT	HC	LT	HC	15	1505	10	30	40	20	0
TC1	235	S	Pool	-	-	30.02	525	111	7.5	3.5	2	5.5	3	0	0	NA	NA	NA	1.8	NA	NA	0	0	0	LT	HC	LT	HC	15	1512	20	20	40	20	0
TC1	236	FT	Riffle	-	-	29.93	485	111	2.5	1.25	NA	NA	0	0	0	195	7.0	5.3	1.7	36.8	259	0	0	0	LT	CP	LT	HC	15	1516	20	20	40	20	0
TC1	237	S	Pool	-	-	29.84	1100	120	8	4	2.1	5.9	1	0	0	NA	NA	NA	4.1	NA	NA	0	0	0	LT	HC	LT	HC	15	1517	15	25	40	20	0
TC1	238	FN	Slide	-	-	29.63	500	195	2.5	1.5	NA	NA	4	1	1	201	6.5	5.6	2.6	35.7	344	992	0	992	LT	CP	LT	HC	15	1527	10	38	50	2	0
TC1	239	FT	Riffle	-	-	29.54	1625	270	2.5	1.75	NA	NA	2	1	0	270	4.2	3.2	8.5	83.9	316	0	0	0	LT	CP	LT	HC	15.5	1538	10	45	40	5	0
TC1	240	S	Pool	-	-	29.24	1705	156	8	4	1.4	6.6	3	2	1	NA	NA	NA	7.7	NA	NA	0	0	0	LT	CP	LT	HC	15.5	1618	10	40	40	10	0
TC1	241	FT	Riffle	-	-	28.92	945	99	3.5	1.75	NA	NA	2	2	4	315	7.3	4.3	5.5	73.6	836	217	217	0	LT	HC	LT	HC	15.5	1630	10	35	40	15	0
TC1	242	S	Pool	-	-	28.75	710	135	5.3	3	1.7	3.6	25	10	5	NA	NA	NA	2.8	NA	NA	67	67	0	LT	HC	LT	HC	15.5	1639	5	25	35	35	0
TC1	243	FT	Riffle	-	-	28.62	1285	117	4	2	NA	NA	4	0	0	219	6.0	4.0	6.6	54.8	278	0	0	0	LT	CP	LT	HC	15.5	1649	10	35	35	20	0
TC1	244	S	Pool	-	-	28.38	285	108	4.5	2	2.2	2.3	0	0	0	NA	NA	NA	1.0	NA	NA	224	0	224	LT	HC	LT	HC	15.5	1700	15	20	25	40	0
TC1	245	FT	Riffle	-	-	28.33	770	120	2.5	1.5	NA	NA	0	0	0	180	6.3	4.3	2.3	41.5	280	0	0	0	ST	HC	ST	HC	15.5	1705	10	20	30	40	0
TC1	246	S	Pool	-	-	28.18	325	75	9	5	2	7	1	0	0	NA	NA	NA	1.0	NA	NA	0	0	0	LT	HC	NV	NV	15.5	1715	20	10	40	30	0

Sub-reach TC2 Habitat Unit Data
Twisp to Carlton Reach Assessment

Sub-Reach	Sequence Order Number	Channel Unit Type Code	Channel Unit Type	Forcing Agent	Flow Split ?	Upper Boundary RM	Channel Unit Length (ft, along thalweg)	Wetted Channel Dimensions					Woody Material Counts			Bankfull Dimensions				Eroding Banks (length, ft)			Riparian Vegetation Info				Water Temp		Substrate % (Visual Est.)						
								Wet Width (ft)	Max Depth	Avg Depth	Pool Crest Depth	Residual Pool Depth	S	M	L	BF Width (feet)	Max BFD (feet)	Avg BFD (feet)	Area (acres)	W/D	Floodprone Width (ft)	Total	Left Bank	Right Bank	Left Bank Size Class	Left Bank Overstory Type	Right Bank Size Class	Right Bank Overstory Type	degC	Time	SA	GR	CO	BO	BR
TC2	6	S	Pool	Bedrock	-	40.30	520	111	12	6	1.5	10.5	0	0	0	NA	NA	NA	2.3	NA	NA	0	0	0	ST	HC	ST	HC	14.5	1702	22	11	11	11	44
TC2	7	FT	Riffle	-	-	40.20	240	72	3	1.5	NA	NA	0	3	3	207	8.5	6.2	1.1	33.7	452	238	238	0	ST	HC	ST	HC	14.5	1705	9	45	36	9	0
TC2	8	FN	Glide	-	-	40.16	1020	114	4	3	NA	NA	1	3	2	198	8.0	5.4	4.2	36.9	428	247	247	0	ST	HC	ST	HC	15	1710	17	44	28	11	0
TC2	9	FT	Riffle	-	-	39.97	845	63	2.5	1.5	NA	NA	6	3	1	339	7.5	5.6	4.5	61.1	2303	300	0	300	ST	HC	ST	HC	15.5	1721	10	35	50	5	0
TC2	10	FN	Glide	-	-	39.81	630	114	3.5	2.5	NA	NA	2	0	1	348	9.5	7.6	2.8	45.8	2212	219	0	219	ST	HC	ST	HC	15	1735	10	50	40	0	0
TC2	11	S	Pool	-	-	39.69	625	135	6.5	3.5	2.75	3.75	3	1	0	NA	NA	NA	2.8	NA	NA	237	237	0	ST	HC	ST	HC	15	1745	10	45	35	10	0
TC2	12	FT	Riffle	-	-	39.58	400	102	2.5	1.5	NA	NA	4	0	0	330	6.7	4.5	1.8	72.7	2090	356	356	0	ST	HC	ST	HC	15	1755	10	50	30	10	0
TC2	13	FN	Glide	-	-	39.50	850	120	3.75	2.75	NA	NA	3	0	0	165	8.5	6.1	4.8	27.1	1506	0	0	0	ST	HC	ST	HC	15	1800	-	-	-	-	-
TC2	14	S	Pool	Bedrock	-	39.35	495	102	12	4	2	10	1	1	1	186	NA	NA	2.4	NA	NA	0	0	0	LT	CP	LT	HC	11	843	15	35	27	15	8
TC2	15	FT	Riffle	-	-	39.25	435	90	2.25	1.25	NA	NA	0	0	0	186	6.5	4.3	3.0	42.9	662	0	0	0	LT	CP	LT	HC	11	851	10	20	30	40	0
TC2	16	S	Pool	-	-	39.17	725	159	5.75	3	1.5	4.25	20	7	1	159	NA	NA	5.0	NA	NA	0	0	0	LT	HC	ST	HC	10.5	908	10	40	50	0	0
TC2	17	FT	Riffle	-	-	39.04	560	117	3.5	1.75	NA	NA	0	1	0	159	6.5	4.0	2.5	49.2	263	314	314	0	LT	HC	LT	HC	11	917	10	35	50	5	0
TC2	18	S	Pool	-	-	38.93	830	120	6	2.75	1.2	4.8	0	0	2	NA	NA	NA	3.4	NA	NA	0	0	0	ST	HW	LT	HC	11	922	10	30	50	10	0
TC2	19	FT	Riffle	-	-	38.78	490	108	2.8	1.5	NA	NA	0	0	0	270	6.7	4.0	2.5	68.1	536	0	0	0	LT	C	LT	HC	11	932	5	45	40	10	0
TC2	20	FN	Glide	-	-	38.69	475	108	4	2.5	NA	NA	0	1	1	270	7.5	4.3	2.3	62.5	706	0	0	0	LT	C	LT	HC	11	941	10	20	50	20	0
TC2	21	FT	Riffle	-	Y	38.60	485	75	3	1.5	NA	NA	0	0	1	315	7.0	3.6	3.2	87.5	877	0	0	0	LT	C	LT	HC	11.5	956	15	40	40	5	0
TC2	22	S	Pool	-	-	38.51	1215	120	6	3	1.3	4.7	92	28	23	NA	NA	NA	9.4	NA	NA	0	0	0	LT	C	LT	HC	11	1002	20	35	40	5	0
TC2	23	FT	Riffle	-	Y	38.29	605	75	2	1	NA	NA	0	2	4	285	6.0	5.3	3.3	53.8	540	0	0	0	LT	C	LT	HC	11	1023	10	50	30	10	0
TC2	24	FN	Glide	-	-	38.17	420	105	2.75	1.75	NA	NA	3	0	1	285	6.0	5.3	1.9	53.8	1080	0	0	0	LT	C	LT	HC	11	1040	10	50	30	10	0
TC2	25	FT	Riffle	-	-	38.10	425	120	2.5	1.5	NA	NA	0	0	2	285	6.0	5.3	2.1	53.8	934	418	418	0	NV	NV	LT	HC	11	1043	11	53	32	5	0
TC2	26	FN	Glide	-	-	38.02	220	132	2.75	1.75	NA	NA	3	0	2	225	9.0	5.4	1.0	41.8	1013	0	0	0	LT	C	LT	HC	11	1045	5	45	45	5	0
TC2	27	FT	Riffle	-	-	37.98	590	123	6.5	3	NA	NA	0	1	0	237	6.0	3.8	2.6	62.4	908	0	0	0	SP	HC	LT	HC	11.5	1059	5	40	45	5	5
TC2	28	S	Pool	Bedrock	-	37.87	1180	105	10	4.5	1.4	8.6	3	0	0	NA	NA	NA	7.5	NA	NA	103	103	0	NV	NV	LT	HC	11.5	1100	5	45	40	5	5
TC2	29	FT	Riffle	-	Y	37.85	440	84	2.5	1.25	NA	NA	0	0	1	270	5.0	2.1	2.6	128.6	492	479	479	0	ST	HC	LT	CP	15	1108	5	45	45	5	0
TC2	30	FN	Glide	-	-	37.57	460	84	1	0.5	NA	NA	0	0	0	270	5.0	2.1	3.0	128.6	475	455	455	0	LT	C	SS	HC	12	1113	10	40	40	10	0
TC2	31	FT	Riffle	-	-	37.48	695	69	2.75	1.75	NA	NA	2	3	2	246	7.0	4.8	4.8	51.8	632	642	642	0	NV	V	ST	HC	12	1117	10	40	40	10	0
TC2	32	S	Pool	-	-	37.35	1820	96	10	3	1.7	8.3	3	1	2	NA	NA	NA	9.2	NA	NA	0	0	0	LT	HC	ST	HC	12	1129	10	40	40	10	0
TC2	33	FT	Riffle	-	-	37.01	440	81	2.75	1.5	NA	NA	8	8	5	270	6.0	3.7	3.3	73.0	1000	0	0	0	LT	HC	LT	HC	12	1140	10	45	40	5	0
TC2	34	S	Pool	-	-	36.93	830	129	5.2	2.75	1.4	3.8	25	3	4	NA	NA	NA	5.0	NA	NA	0	0	0	LT	HC	NV	NV	12.5	1233	10	40	40	10	0
TC2	35	FT	Riffle	-	-	36.78	420	192	1.75	0.75	NA	NA	40	11	7	246	5.4	4.2	2.5	58.5	1897	0	0	0	ST	HC	LT	HC	12.5	1257	20	40	40	0	0
TC2	36	FN	Glide	-	-	36.70	540	138	3.25	1.5	NA	NA	25	8	3	255	5.5	3.6	3.4	70.1	1932	0	0	0	LT	HC	LT	HC	12.5	1302	20	30	50	0	0
TC2	37	FT	Riffle	-	-	36.60	540	99	3	1.25	NA	NA	50	7	9	330	7.8	4.2	4.0	78.6	2072	0	0	0	ST	HC	LT	HC	14	1311	33	33	30	3	0
TC2	38	FN	Glide	-	-	36.50	1475	120	5	2.75	NA	NA	3	1	2	390	8.0	3.3	12.5	117.0	3733	0	0	0	LT	HC	LT	HC	13.5	1319	32	33	30	5	0
TC2	39	FT	Riffle	-	-	36.23	395	81	3	1.5	NA	NA	2	0	4	180	8.9	7.0	2.1	25.8	3741	0	0	0	ST	HC	LT	HC	14	1327	5	40	50	5	0
TC2	40	FN	Glide	-	-	36.15	375	150	4.5	2.25	NA	NA	3	1	3	210	10.0	7.5	2.6	28.0	3525	0	0	0	LT	HC	ST	HC	14	1337	10	40	50	0	0
TC2	41	FT	Riffle	-	-	36.08	610	81	5	2.5	NA	NA	0	0	0	225	7.5	4.9	3.9	45.9	1543	112	112	0	LT	HC	LT	HC	14	1342	10	40	40	10	0
TC2	42	S	Pool	-	-	35.97	605	75	5.75	3	1.1	4.65	0	0	0	NA	NA	NA	3.5	NA	NA	77	77	0	LT	HC	LT	HC	14	1348	30	33	33	3	0
TC2	43	FT	Riffle	-	-	35.86	195	60	6	3	NA	NA	1	0	0	345	9.0	4.9	1.3	70.2	716	0	0	0	LT	HC	ST	HC	14	1352	20	35	40	5	0
TC2	44	S	Pool	-	-	35.82	995	129	6.2	3.5	1.5	4.7	1	1	0	NA	NA	NA	5.0	NA	NA	270	0	270	LT	HC	LT	CP	14	1358	40	10	20	30	0
TC2	45	FT	Riffle	-	-	35.64	475	75	2.5	1.5	NA	NA	30	12	5	360	7.5	4.6	4.5	78.9	625	0	0	0	LT	HC	LT	HC	14	1406	10	45	45	0	0
TC2	46	S	Pool	-	-	35.55	1000	135	9	3.5	1.4	7.6	52	17	14	NA	NA	NA	6.2	NA	NA	6	6	0	LT	HC	LT	HC	14.5	1418	10	35	35	20	0
TC2	47	FT	Riffle	-	Y	35.36	855	48	3.25	1.75	NA	NA	16	12	5	390	6.5	4.1	6.9	96.1	1938	794	700	94	LT	HC	LT	HC	14.5	1428	10	40	50	0	0
TC2	48	FN	Glide	-	-	35.21	385	150	3.75	1.25	NA	NA	3	1	0	210	6.5	4.8	2.0	44.2	2429	7	0	7	LT	HC	LT	HC	14.5	1452	10	50	40	0	0
TC2	49	FT	Riffle	-	-	35.13	850	105	3.5	1.5	NA	NA	2	0	0	495	6.8	3.7	6.9	132.6	2275	976	976	0	LT	CP	NV	NV	15	1500	10	50	40	0	0
TC2	50	S	Pool	-	-	34.98	900	120	6.5	4	2	4.5	10	12	10	NA	NA	NA	13.5	NA	NA	750	750	0	LT	CP	NV	NV	15	1502	10	40	50	0	0
TC2	200	FT	Riffle	-	-	34.81	770	120	3	2	NA	NA	34	12	10	690	9.0	5.1	11.7	135.3	2905	0	0	0	LT	CP	LT	HW	11	930	10	25	50	15	0
TC2	201	S	Pool	Bedrock	-	34.67	275	120	10	4	1.75	8.25	33	8	11	NA	NA	NA	1.5	NA	NA	0	0												

Sub-reach TC3 Habitat Unit Data
 Twisp to Carlton Reach Assessment

Sub-Reach	Sequence Order Number	Channel Unit Type Code	Channel Unit Type	Forcing Agent	Flow Split ?	Upper Boundary RM	Channel Unit Length (ft, along thalweg)	Wetted Channel Dimensions					Woody Material Counts			Bankfull Dimensions					Eroding Banks (length, ft)			Riparian Vegetation Info				Water Temp		Substrate % (Visual Est.)					
								Wet Width (ft)	Max Depth	Avg Depth	Pool Crest Depth	Residual Pool Depth	S	M	L	BF Width (feet)	Max BFD (feet)	Avg BFD (feet)	Area (acres)	W/D	Floodprone Width (ft)	Total	Left Bank	Right Bank	Left Bank Size Class	Left Bank Overstory Type	Right Bank Size Class	Right Bank Overstory Type	degC	Time	SA	GR	CO	BO	BR
TC3	1	FT	Riffle	-	-	41.20	995	75	3.5	2.5	NA	NA	0	1	0	198	8.5	5.2	5.2	38.0	590	269	0	269	LT	HC	LT	HC	14.5	1450	10	20	40	30	0
TC3	2	S	Pool	-	-	41.02	595	105	5.5	4	2.2	3.3	0	0	0	186	NA	NA	2.3	NA	NA	0	0	0	ST	HC	ST	HC	15	1606	10	20	40	29	1
TC3	3	FT	Riffle	-	-	40.91	1015	129	4	2.5	NA	NA	0	0	0	198	10.5	8.5	4.3	23.3	392	0	0	0	ST	HC	ST	HC	14.5	1628	10	20	40	30	0
TC3	4	S	Pool	-	-	40.72	1485	75	5	3	2.1	2.9	5	0	1	NA	NA	NA	5.2	NA	NA	0	0	0	ST	HC	ST	HC	15	1650	10	25	60	5	0
TC3	5	FT	Riffle	-	-	40.45	795	90	2.5	1.5	NA	NA	0	0	0	225	7.8	5.6	3.9	40.5	432	0	0	0	ST	HC	ST	HC	15	1656	10	40	50	0	0