

## Appendix D. Riparian Assessments

**Table D.1.** Riparian assessment locations and scores.

Stream	Lat	Long	Date Assessed	RAP No.	Section No.	Percent total score
Conneaut Outlet	-80.299333	41.602591	9/23/2009	1	1	77
Conneaut Outlet	-80.299126	41.598212	9/23/2009	2	2	73
Conneaut Outlet	-80.298927	41.596308	9/23/2009	3	3	98
Conneaut Outlet	-80.298026	41.592057	9/23/2009	4	4	76
Conneaut Outlet	-80.294188	41.590121	9/23/2009	5	5	88
Conneaut Outlet	-80.288598	41.587290	9/23/2009	6	6	68
Conneaut Outlet	-80.283326	41.586161	9/23/2009	7	7	67
Conneaut Outlet	-80.274403	41.587423	9/23/2009	8	8	92
Conneaut Outlet	-80.128453	41.541019	10/5/2009	9	1	65
Conneaut Outlet	-80.122023	41.544435	10/5/2009	10	2	68
Conneaut Outlet	-80.112730	41.546346	10/5/2009	11	3	67
Conneaut Outlet	-80.110353	41.541474	10/5/2009	12	4	77
Conneaut Outlet	-80.105287	41.539906	10/5/2009	13	5	68
Conneauttee Creek	-80.077643	41.822471	5/25/2006	14	1	72
Conneauttee Creek	-80.077609	41.819583	5/25/2006	15	2	72
Conneauttee Creek	-80.076748	41.814280	5/25/2006	16	3	61
Conneauttee Creek	-80.132546	41.871814	10/9/2008	17	1	66
Conneauttee Creek	-80.128523	41.866067	10/9/2008	18	2	63
Conneauttee Creek	-80.124610	41.862843	10/9/2008	19	3	70
Conneauttee Creek	-80.097203	41.849774	10/1/2009	20	1	73
Conneauttee Creek	-80.092514	41.848801	10/6/2009	21	2	76
Conneauttee Creek	-80.087460	41.848057	10/6/2009	22	3	85
Conneauttee Creek	-80.081997	41.845464	10/6/2009	23	4	77
Conneauttee Creek	-80.081363	41.841682	10/6/2009	24	5	76
Conneauttee Creek	-80.083566	41.829438	10/6/2009	25	6	66
Conneauttee Creek	-80.078829	41.825372	10/6/2009	26	7	78
Conneauttee Creek	-80.077507	41.821964	10/6/2009	27	8	76
Conneauttee Creek	-80.079273	41.818669	10/6/2009	28	9	75
Conneauttee Creek	-80.076821	41.814233	10/6/2009	29	10	79
Conneauttee Creek	-80.076880	41.811917	10/6/2009	30	11	64
Cussewago Creek	-80.213766	41.672468	7/1/2006	31	1	58
Cussewago Creek	-80.212977	41.667675	7/1/2006	32	2	74
Cussewago Creek	-80.205245	41.661444	7/1/2006	33	3	55
Cussewago Creek	-80.197219	41.655494	7/1/2006	34	4	72
Cussewago Creek	-80.189896	41.651146	7/1/2006	35	5	69
Cussewago Creek	-80.169764	41.646802	7/1/2006	36	6	55
Cussewago Creek	-80.214387	41.672076	10/15/2008	37	1	73
Cussewago Creek	-80.212877	41.668440	10/15/2008	38	2	71
Cussewago Creek	-80.211414	41.663136	10/15/2008	39	3	73
Cussewago Creek	-80.204984	41.658117	10/15/2008	40	4	74
Cussewago Creek	-80.197824	41.655069	10/15/2008	41	5	82
Cussewago Creek	-80.190498	41.653413	10/15/2008	42	6	80
Cussewago Creek	-80.183792	41.649859	10/15/2008	43	7	72

Cussewago Creek	-80.172133	41.647277	10/15/2008	44	8	57
LeBoeuf Creek	-79.977231	41.923570	5/1/2006	45	1	60
LeBoeuf Creek	-79.976603	41.920036	5/1/2006	46	2	69
LeBoeuf Creek	-79.979506	41.919452	5/1/2006	47	3	74
LeBoeuf Creek	-79.981226	41.916717	5/1/2006	48	4	75
LeBoeuf Creek	-79.984373	41.914763	5/1/2006	49	5	73
LeBoeuf Creek	-79.986479	41.912312	5/1/2006	50	6	58
LeBoeuf Creek	-79.985175	41.906381	5/1/2006	51	7	55
LeBoeuf Creek	-79.977110	41.922017	10/8/2008	52	1	82
LeBoeuf Creek	-79.984565	41.915444	10/8/2008	53	2	81
LeBoeuf Creek	-79.986295	41.909819	10/8/2008	54	3	75
LeBoeuf Creek	-79.972302	41.961214	9/22/2009	55	1	84
LeBoeuf Creek	-79.966397	41.959372	9/22/2009	56	2	96
LeBoeuf Creek	-79.962970	41.954552	9/22/2009	57	3	83
LeBoeuf Creek	-79.965907	41.947145	9/22/2009	58	4	88
LeBoeuf Creek	-79.964422	41.944529	9/22/2009	59	5	97
LeBoeuf Creek	-79.964496	41.941232	9/22/2009	60	6	89
LeBoeuf Creek	-79.966152	41.938335	9/22/2009	61	7	93
LeBoeuf Creek	-79.968610	41.935211	9/22/2009	62	8	91
LeBoeuf Creek	-79.970847	41.932786	9/22/2009	63	9	82
LeBoeuf Creek	-79.973852	41.936940	9/22/2009	64	10	78
Little Sugar Creek	-80.012087	41.537420	10/10/2008	65	1	82
Little Sugar Creek	-80.013486	41.532352	10/10/2008	66	2	79
Little Sugar Creek	-80.023325	41.526987	10/10/2008	67	3	85
Little Sugar Creek	-80.030690	41.525239	10/10/2008	68	4	88
Little Sugar Creek	-80.039194	41.526932	10/10/2008	69	5	83
Little Sugar Creek	-80.043686	41.522477	10/10/2008	70	6	78
Little Sugar Creek	-80.049405	41.522463	10/10/2008	71	7	78
Muddy Creek	-79.931741	41.760420	5/30/2006	72	1	77
Muddy Creek	-79.936111	41.764223	5/30/2006	73	2	80
Muddy Creek	-79.948290	41.771372	5/30/2006	74	3	84
Muddy Creek	-79.953410	41.779780	5/30/2006	75	4	80
Muddy Creek	-79.960958	41.782801	5/30/2006	76	5	87
Muddy Creek	-79.969133	41.786840	5/30/2006	77	6	79
Muddy Creek	-79.907757	41.750038	10/7/2009	78	1	70
Muddy Creek	-79.969901	41.786531	10/7/2009	79	1	78
Muddy Creek	-79.976450	41.787449	10/7/2009	80	2	73
Muddy Creek	-79.980155	41.786767	10/7/2009	81	3	79
Muddy Creek	-79.984428	41.788284	10/7/2009	82	4	86
Muddy Creek	-79.986224	41.792359	10/7/2009	83	5	84
Muddy Creek	-79.988354	41.797216	10/7/2009	84	6	82
Muddy Creek	-79.990790	41.799966	10/7/2009	85	7	81
South Branch	-79.846550	41.899301	8/26/2008	86	1	67
South Branch	-79.851431	41.901466	8/26/2008	87	2	73
South Branch	-79.858480	41.902464	8/26/2008	88	3	67
South Branch	-79.864927	41.901150	8/26/2008	89	4	78
South Branch	-79.870324	41.902716	8/26/2008	90	5	63
South Branch	-79.875741	41.899043	8/26/2008	91	6	85

South Branch	-79.881158	41.900864	8/26/2008	92	7	85
South Branch	-79.885479	41.902381	8/26/2008	93	8	79
South Branch	-79.897194	41.902826	8/26/2008	94	9	73
South Branch	-79.795933	41.888697	10/9/2008	95	1	84
South Branch	-79.807637	41.892807	10/9/2008	96	2	72
South Branch	-79.815814	41.896816	10/9/2008	97	3	85
South Branch	-79.823991	41.893199	10/9/2008	98	4	82
South Branch	-79.832031	41.893092	10/9/2008	99	5	80
South Branch	-79.837828	41.897462	10/9/2008	100	6	76
South Branch	-79.844726	41.897119	10/9/2008	101	7	84
Sugar Creek	-79.897445	41.454265	5/9/2006	102	1	61
Sugar Creek	-79.897759	41.447130	5/9/2006	103	2	61
Sugar Creek	-79.896948	41.439361	5/9/2006	104	3	63
Sugar Creek	-79.880297	41.428881	5/9/2006	105	4	64
Sugar Creek	-79.898455	41.448652	10/16/2008	106	1	73
Sugar Creek	-79.894933	41.435522	10/16/2008	107	2	67
Sugar Creek	-79.882608	41.431027	10/16/2008	108	3	76
Sugar Creek	-79.874798	41.420422	10/16/2008	109	4	68
Sugar Creek	-79.881283	41.480392	9/24/2009	110	1	87
Sugar Creek	-79.880741	41.472213	9/24/2009	111	2	98
Sugar Creek	-79.885841	41.467858	9/24/2009	112	3	98
Sugar Creek	-79.891019	41.461657	9/24/2009	113	4	92
Sugar Creek	-79.893071	41.454012	9/24/2009	114	5	79
West Branch	-79.846425	42.068799	5/4/2006	115	1	55
West Branch	-79.846967	42.067092	5/4/2006	116	2	52
West Branch	-79.847293	42.064043	5/4/2006	117	3	56
West Branch	-79.841915	42.064165	5/4/2006	118	4	68
West Branch	-79.839187	42.060738	5/4/2006	119	5	54
West Branch	-79.840268	42.055911	5/4/2006	120	6	56
West Branch	-79.836972	42.052690	5/4/2006	121	7	69
West Branch	-79.837388	42.044197	5/4/2006	122	8	55
West Branch	-79.827200	42.031164	5/4/2006	123	9	55
West Branch	-79.831650	42.028101	5/4/2006	124	10	62
West Branch	-79.817819	42.025069	5/4/2006	125	11	55
West Branch	-79.814912	42.021422	5/4/2006	126	12	68
West Branch	-79.812722	42.016358	5/4/2006	127	13	69
West Branch	-79.811831	42.008657	5/4/2006	128	14	57
West Branch	-79.812435	42.000883	5/4/2006	129	15	63
West Branch	-79.847021	42.069633	8/27/2008	130	1	62
West Branch	-79.847109	42.067082	8/27/2008	131	2	75
West Branch	-79.845287	42.064432	8/27/2008	132	3	73
West Branch	-79.840640	42.063192	8/27/2008	133	4	73
West Branch	-79.839963	42.058382	8/27/2008	134	5	73
West Branch	-79.837003	42.052667	8/27/2008	135	6	70
West Branch	-79.834628	42.046549	8/27/2008	136	7	76
West Branch	-79.832016	42.039389	8/27/2008	137	8	73
Woodcock Creek	-79.964963	41.664892	9/14/2007	138	1	72
Woodcock Creek	-79.965530	41.678204	9/14/2007	139	2	80

Woodcock Creek	-79.966839	41.691194	9/14/2007	140	3	75
Woodcock Creek	-79.968784	41.693359	10/14/2008	141	1	78
Woodcock Creek	-79.975186	41.696057	10/14/2008	142	2	72
Woodcock Creek	-79.981065	41.696810	10/14/2008	143	3	73
Woodcock Creek	-79.988553	41.698036	10/14/2008	144	4	75
Woodcock Creek	-79.994550	41.698890	10/14/2008	145	5	91
Woodcock Creek	-80.114020	41.696180	9/30/2009	146	0	70
Woodcock Creek	-80.002671	41.698700	9/30/2009	147	1	67
Woodcock Creek	-80.007175	41.700376	9/30/2009	148	2	66
Woodcock Creek	-80.010177	41.697398	9/30/2009	149	3	78
Woodcock Creek	-80.016797	41.697401	9/30/2009	150	4	78
Woodcock Creek	-80.022602	41.697749	9/30/2009	151	5	76
Woodcock Creek	-80.031484	41.695332	9/30/2009	152	6	94
Woodcock Creek	-80.126863	41.702810	10/8/2009	153	1	73
Woodcock Creek	-80.129437	41.704077	10/8/2009	154	2	81
Woodcock Creek	-80.136268	41.709081	10/8/2009	155	3	86
Woodcock Creek	-80.144116	41.709604	10/8/2009	156	4	87

## RIPARIAN ASSESSMENT

Schnier, Melissa D. 2003. Assessment of riparian areas: Tool development, implementation, and evaluation. M.S. thesis, The Pennsylvania State University, University Park, PA.

### Riparian Buffer Width

Poor		Marginal		Moderate		Good		Excellent	
0-3 meters		3-10 meters		10-25 meters		25-50 meters		50+ meters	
1	2	3	4	5	6	7	8	9	10

### Riparian Vegetation Type

Poor		Marginal			Good			Excellent	
Grasses/herbaceous plants (grazed or mowed short)		Grasses/herbaceous plants (full height)			Shrub or shrub and grasses mix			Forested or forest mixed with shrubs and/or grasses	
1	2	3	4	5	6	7	8	9	10

### Riparian Vegetation Thickness

Poor		Marginal			Good			Excellent	
Vegetation very sparse, covers less than 25% of the ground. Large bare spots are visible.		Vegetation somewhat sparse, several bare spots are visible. Covers 25-50% of ground.			Vegetation fairly thick, a few gaps or bare spots. Covers 50-80% of ground.			Vegetation very thick and well-developed. No gaps or bare spots. Coverage nearly 100%.	
1	2	3	4	5	6	7	8	9	10

### Bank Vegetation Type

Poor		Marginal			Good			Excellent	
Grasses/herbaceous plants (grazed or mowed short)		Grasses and other herbaceous material (full height)			Shrub or shrub and grasses mix			Trees or tree mix	
1	2	3	4	5	6	7	8	9	10

### Bank Vegetation Thickness

Poor		Marginal			Good			Excellent	
Vegetation very sparse, covers less than 25% of the banks.		Vegetation somewhat sparse, several bare spots are visible. Covers 25-50% of banks.			Vegetation fairly thick, a few gaps or bare spots. Covers 50-80% of banks.			Vegetation very thick and well-developed. No gaps or bare spots. Coverage nearly 100%.	
1	2	3	4	5	6	7	8	9	10

### Bank Stability

Poor		Marginal			Good			Excellent	
Unstable; eroded or "raw" areas frequent, bare roots visible, slopes nearly vertical.		Largely unstable; almost half of the bank has areas of erosion, bare roots visible.			Moderately stable; some small area of erosion, mostly healed over.			Stable; no evidence of erosion or bank failure, bank slopes are moderate.	
1	2	3	4	5	6	7	8	9	10

### Water Pathways

Poor		Marginal			Good			Excellent	
Many rills and gullies visible-banks are deeply scarred with gullies all along the stream.		Breaks in the vegetation frequent with some rills or scars every 50 meters.			Very few rills or gullies visible, breaks in the vegetation occur less than every 50 meters.			No rills or gullies visible. Riparian area intact, with no breaks in the vegetation.	
1	2	3	4	5	6	7	8	9	10

### Channel Modification

Poor		Marginal			Good			Excellent	
Channel is highly modified. Stream is confined to a concrete channel or both sides are modified.		Channel has been slightly modified. One side of channel has been rip rapped or stabilized.			Channel has slight alteration, occasional modifications are present, but overall free-flowing.			Channel is not modified. Stream is completely free-flowing on both sides.	
1	2	3	4	5	6	7	8	9	10

### Shading (Canopy Cover)

Poor			Good				Excellent		
Little to no canopy cover (<25% of the stream is shaded).			Partial canopy cover (25-75% of the stream is shaded).				Nearly complete canopy cover (>75% of the stream is shaded).		
1	2	3	4	5	6	7	8	9	10

### In-stream Cover

Poor		Marginal			Good			Excellent	
Not much fish habitat-lack of habitat is obvious.		Some stable habitat, but examples are infrequent, further than 25 meters apart.			There are several examples of habitat or cover within 10 meters of each other.			Habitat examples are frequent, and are continuous throughout the stream.	
1	2	3	4	5	6	7	8	9	10

### Embeddedness

Poor		Marginal			Good			Excellent	
Rocks are deeply stuck into sand, silt or mud. Rocks barely visible.		Rocks are more than half surrounded by fine sediments. Kicking does not dislodge rocks.			Rocks are partially surrounded by fine sediment. Rocks are easily flipped over.			Rocks free from fine sediments-little sand, silt or mud on stream bottom.	
1	2	3	4	5	6	7	8	9	10

### Aquatic Vegetation

Poor			Good				Excellent		
Aquatic vegetation is abundant on or below the surface of the water.			Some aquatic vegetation is present, mainly under the water surface.				No aquatic vegetation is present.		
1	2	3	4	5	6	7	8	9	10

### Land Use Outside the Buffer

Urban (pavement, roads, parking lots)	Row-crow agriculture	Residential lawn, golf course, sports fields or parks	Pasture or fallow agriculture	Forest
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