

River Mile	QHEI	Gradient (ft/mile)	WWH Attributes										MWH Attributes																					
			Key QHEI Components										High Influence					Moderate Influence					Total MLL MWH Attributes	(MWH+H+1)/(MWH+1) Ratio	(MWH+ML+1)/(MWH+1) Ratio									
			No Channelization or Recovered Boulder/Cobble/Gravel Substrates	Silt Free Substrates	Good/Excellent Substrates	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Overall Embeddedness	Max Depth > 40 cm	Low/Normal Riffle Embeddedness	Total WWH Attributes	Channelized or No Recovery Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40 cm (WD, HW)	Total HLI MWH Attributes	Recovering Channel	Heavy/Moderate Silt Cover	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development				Low Sinuosity	Only 1-2 Cover Types	Intermittent and Poor Pools	No Fast Current	High/Med. Overall Embeddedness	High/Med. Riffle Embeddedness	No Riffle		
(11-001) Little Miami River													Year: 1998																					
51.2	85.5	4.57	■	■	■	■	■	■	■	■	■	8						0													1	0.11	0.22	
53.6	65.0	3.28	■			■	■		■	■	■	5						0			▲				▲		▲				3	0.17	0.67	
54.0	76.5	3.28	■	■		■	■	■	■	■	■	8						0									▲	▲			2	0.11	0.33	
59.8	77.0	4.44	■	■		■	■	■	■	■	■	8						0	▲									▲			2	0.11	0.33	
63.3	78.0	2.60	■	■		■	■	■	■	■	■	8						0									▲	▲			2	0.11	0.33	
64.2	74.5	2.60	■	■		■	■	■	■	■	■	8						0	▲								▲	▲			3	0.11	0.44	
65.6	77.0	2.60	■	■		■	■	■	■	■	■	8						0	▲									▲			2	0.11	0.33	
69.3	79.0	3.06	■	■		■	■	■	■	■	■	8						0										▲			1	0.11	0.22	
72.3	82.0	4.78	■	■		■	■	■	■	■	■	8						0										▲			1	0.11	0.22	
76.8	79.5	5.13	■	■		■	■	■	■	■	■	8						0									▲	▲			2	0.11	0.33	
80.6	79.0	2.96	■	■		■	■	■	■	■	■	9						0										▲			1	0.10	0.20	
83.1	81.5	25.00	■	■		■	■	■	■	■	■	9						0										▲			1	0.10	0.20	
85.9	68.0	4.90	■						■	■	■	4					●	1	▲			▲	▲				▲	▲			5	0.40	1.40	
92.2	67.0	5.59	■	■		■	■	■		■	■	7						0				▲					▲	▲	▲		4	0.13	0.63	
98.3	54.0	8.33	■			■				■		3					●	1	▲			▲	▲			▲	▲	▲			6	0.50	2.00	
101.3	44.5	6.58	■	■						■		3					●	●	2	▲	▲		▲	▲	▲		▲	▲	▲		8	0.75	2.75	
104.9	47.5	8.33	■			■				■		3	●		●	●	3	▲	▲		▲	▲			▲	▲	▲			7	1.00	2.75		
(11-030) Newman Run													Year: 1998																					
0.3	61.5	41.67	■	■		■	■	■	■	■	■	8					●	1									▲				1	0.22	0.33	
(11-031) Mill Run													Year: 1998																					
0.9	61.5	22.99	■	■		■	■	■	■	■		6					●	●	2							▲	▲		▲			3	0.43	0.86
(11-032) Glady Run													Year: 1998																					
2.1	67.5	37.04	■	■		■	■	■	■	■	■	7						0								▲	▲		▲	▲	4	0.13	0.63	
4.0	66.5	26.32	■	■		■	■	■	■	■	■	6					●	●	2							▲			▲	▲	3	0.43	0.86	
5.8	51.5	12.66	■							■	■	3					●	●	●	3	▲			▲	▲		▲				4	1.00	2.00	
(11-033) Sugar Creek													Year: 1998																					
0.4	71.5	8.13	■	■		■	■	■	■	■	■	7						0									▲	▲			2	0.13	0.38	

River Mile	QHEI	Gradient (ft/mile)	WWH Attributes							MWH Attributes							Total MLL MWH Attributes	(MWH HL+1)/(MWH+1) Ratio	(MWH ML+1)/(MWH+1) Ratio							
			Key QHEI Components							High Influence				Moderate Influence												
			No Channelization or Recovered Boulder/Cobble/Gravel Substrates	Silt Free Substrates	Good/Excellent Substrates	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Overall Embeddedness	Max Depth > 40 cm	Low/Normal Riffle Embeddedness	Total WWH Attributes	Channelized or No Recovery Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40 cm (WD, HW)				Total HL MWH Attributes	Recovering Channel	Heavy/Moderate Silt Cover	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity
<b>(11-033) Sugar Creek</b>																										
Year: 1998																										
2.4	71.5	9.43	■	■	■	■	■	■	■	7	■	■	■	■	0	▲	▲	▲	3	0.13	0.50					
<b>(11-034) Little Sugar Creek</b>																										
Year: 1998																										
0.5	56.5	33.33	■	■	■	■	■	■	5	■	●	●	2	▲	▲	▲	▲	4	0.50	1.17						
<b>(11-035) Beaver Creek</b>																										
Year: 1998																										
0.3	70.5	7.25	■	■	■	■	■	■	7	■	■	■	0	▲	▲	▲	▲	4	0.13	0.63						
0.5	76.0	15.38	■	■	■	■	■	■	7	■	■	■	0	▲	▲	▲	▲	4	0.13	0.63						
1.6	57.0	5.21	■	■	■	■	■	5	■	●	■	1	▲	▲	▲	▲	5	0.33	1.17							
3.9	37.5	4.29	■	■	■	■	■	1	●	●	●	3	▲	▲	▲	▲	7	2.00	5.50							
6.1	35.0	10.10	■	■	■	■	2	●	●	●	●	4	▲	▲	▲	▲	7	1.67	4.00							
<b>(11-036) Little Beaver Creek</b>																										
Year: 1998																										
0.1	62.0	15.38	■	■	■	■	3	■	■	■	0	▲	▲	▲	▲	6	0.25	1.75								
3.5	60.0	15.63	■	■	■	■	■	5	■	●	●	2	▲	▲	▲	▲	5	0.50	1.33							
4.7	58.5	16.13	■	■	■	■	3	■	●	●	2	▲	▲	▲	▲	7	0.75	2.50								
<b>(11-037) Ludlow Creek</b>																										
Year: 1998																										
0.2	42.5	8.70	■	■	■	■	2	●	●	●	3	▲	▲	▲	▲	7	1.33	3.67								
<b>(11-038) Conner Branch</b>																										
Year: 1998																										
0.1	76.5	26.32	■	■	■	■	■	■	8	■	■	■	0	▲	▲	▲	2	0.11	0.33							
<b>(11-039) Jacoby Branch</b>																										
Year: 1998																										
0.3	67.5	50.00	■	■	■	■	■	■	8	■	■	■	0	▲	▲	▲	▲	4	0.11	0.56						
<b>(11-040) Yellow Springs Creek</b>																										
Year: 1998																										
0.1	70.5	35.71	■	■	■	■	■	6	■	■	■	0	▲	▲	▲	3	0.14	0.57								
<b>(11-041) North Fork Little Miami River</b>																										
Year: 1998																										
2.6	43.0	6.41	■	■	■	■	4	●	●	■	2	▲	▲	▲	▲	8	0.60	2.20								
7.1	54.0	6.45	■	■	■	■	4	■	■	■	0	▲	▲	▲	▲	7	0.20	1.60								

River Mile	QHEI	Gradient (ft/mile)	WWH Attributes							MWH Attributes							Total MLL MWH Attributes	(MWH HL+1)/(MWH+1) Ratio	(MWH LL+1)/(MWH+1) Ratio												
			No Channelization or Recovered Boulder/Cobble/Gravel Substrates	Silt Free Substrates	Good/Excellent Substrates	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Overall Embeddedness	Max Depth > 40 cm	Low/Normal Riffle Embeddedness	Total WWH Attributes	Channelized or No Recovery Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40 cm (WD, HW)				Total HL MWH Attributes	Recovering Channel	Heavy/Moderate Silt Cover	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1-2 Cover Types	Intermittent and Poor Pools	No Fast Current	High/Mod. Overall Embeddedness	High/Mod. Riffle Embeddedness
(11-043) Lisbon Fork																															
Year: 1998																															
0.4	52.0	10.20	■	■		■		■	4			●	●	●	3	▲		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	7	0.80	2.20
(11-044) Gilroy Ditch																															
Year: 1998																															
0.5	49.0	11.63	■			■		■	3			●	●	●	3	▲					▲	▲		▲	▲	▲	▲	▲	6	1.00	2.50
1.3	59.0	22.73	■	■	■	■	■	■	7			●			1	▲					▲	▲		▲	▲	▲	▲	▲	6	0.25	1.00
1.5	62.0	19.23	■	■	■	■	■	■	6			●			1	▲	▲				▲	▲		▲	▲	▲	▲	▲	7	0.29	1.29
(11-045) Shawnee Creek																															
Year: 1998																															
0.7	85.5	15.38	■	■	■	■	■	■	8						0												▲		1	0.11	0.22
(11-053) Trib. to Little Miami R. (RM 60.50)																															
Year: 1998																															
0.2	71.0	62.50	■	■	■	■	■	■	8			●			1						▲			▲					2	0.22	0.44
(11-054) Trib. to Little Miami R. (RM 62.01)																															
Year: 1998																															
0.6	67.0	34.48	■	■		■	■	■	6			●			1						▲			▲					2	0.29	0.57
(11-300) Caesar Creek																															
Year: 1998																															
0.2	95.0	8.20	■	■	■	■	■	■	9						0														0	0.10	0.10
16.6	72.0	5.21	■	■	■	■	■	■	8						0										▲				1	0.11	0.22
23.1	70.5	13.70	■		■	■	■	■	7						0										▲				1	0.13	0.25
26.5	65.5	12.66	■	■	■	■	■	■	7						0	▲		▲				▲	▲	▲	▲	▲	▲	▲	5	0.13	0.75
(11-301) Flat Fork																															
Year: 1998																															
1.7	44.0	31.25	■			■		■	3			●	●		2						▲	▲	▲	▲	▲	▲	▲	▲	6	0.75	2.25
(11-302) Jonahs Run																															
Year: 1998																															
1.3	40.5	32.35	■						1			●	●	●	3						▲	▲	▲	▲	▲	▲	▲	▲	7	2.00	5.50
(11-303) Trace Run																															
Year: 1998																															
1.8	67.0	33.33	■	■	■	■	■	■	7			●			1						▲			▲	▲				3	0.25	0.63
(11-305) Buck Run																															
Year: 1998																															

River Mile	QHEI	Gradient (ft/mile)	WWH Attributes										MWH Attributes									Total MLL MWH Attributes	(MWH(HL+1) / (MWH+1)) Ratio	(MWH (HL+1) / (MWH+1)) Ratio		
			No Channelization or Recovered Boulder/Cobble/Gravel Substrates	Silt Free Substrates	Good/Excellent Substrates	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low-Normal Overall Embeddedness	Max Depth > 40 cm	Low-Normal Riffle Embeddedness	Total WWH Attributes	Channelized or No Recovery Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40 cm (WD, HW)	Total HL MWH Attributes	Recovering Channel	Heavy/Moderate Silt Cover	Sand Substrates (Boat)	Hardpan Substrate Origin				Fair/Poor Development	Low Sinuosity
(11-305) Buck Run																										
Year: 1998																										
1.6	73.5	27.78	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	7	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	0	▲ ▲ ▲	3	0.13	0.50																
(11-306) Anderson Fork																										
Year: 1998																										
5.0	63.0	7.35	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	6	●	1	▲ ▲ ▲ ▲ ▲	5	0.29	1.00																
9.4	74.5	13.16	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	6		0	▲ ▲ ▲ ▲ ▲	4	0.14	0.71																
13.9	65.0	6.94	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	8		0	▲ ▲ ▲ ▲ ▲	5	0.11	0.67																
18.8	46.5	3.55	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	4	● ● ●	3	▲ ▲ ▲ ▲ ▲	5	0.80	1.80																
(11-307) Painters Creek																										
Year: 1998																										
0.4	64.5	18.52	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	8		0	▲ ▲ ▲ ▲ ▲	2	0.11	0.33																
(11-311) South Branch Caesar Creek																										
Year: 1998																										
2.1	67.0	9.43	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	8	●	1	▲ ▲ ▲ ▲ ▲	4	0.22	0.67																
(11-312) North Branch Caesar Creek																										
Year: 1998																										
1.2	56.0	12.66	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	3	● ●	2	▲ ▲ ▲ ▲ ▲	7	0.75	2.50																
6.1	63.5	32.26	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	7		0	▲ ▲ ▲ ▲ ▲	5	0.13	0.75																
(11-400) Massies Creek																										
Year: 1998																										
1.2	80.5	11.11	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	9		0		0	0.10	0.10																
4.3	88.0	10.75	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	9		0		0	0.10	0.10																
5.6	82.5	11.24	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	9		0	▲	1	0.10	0.20																
7.7	88.0	11.76	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	9		0		0	0.10	0.10																
(11-401) Oldtown Creek																										
Year: 1998																										
0.1	61.5	17.24	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	8	●	1	▲ ▲ ▲ ▲ ▲	5	0.22	0.78																
(11-402) Clark Run																										
Year: 1998																										
0.5	74.0	50.00	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	8		0	▲ ▲	2	0.11	0.33																
(11-403) North Fork Massies Creek																										
Year: 1998																										
1.2	63.5	7.04	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	7		0	▲ ▲ ▲ ▲ ▲	4	0.13	0.63																

River Mile	QHEI	Gradient (ft/mile)	WWH Attributes										MWH Attributes										Total MLL MWH Attributes	(MWH HL+1)/(WWH+1) Ratio	(MWH LL+1)/(MWH+1) Ratio					
			Key QHEI Components										High Influence					Moderate Influence												
			No Channelization or Recovered Boulder/Cobble/Gravel Substrates	Silt Free Substrates	Good/Excellent Substrates	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low-Normal Overall Embeddedness	Max Depth > 40 cm	Low-Normal Riffle Embeddedness	Total WWH Attributes	Channelized or No Recovery Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40 cm (WD, HW)	Total HL MWH Attributes	Recovering Channel	Heavy/Moderate Silt Cover	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development				Low Sinuosity	Only 1-2 Cover Types	Intermittent and Poor Pools	No Fast Current	High/Mod. Overall Embeddedness
(11-403) North Fork Massies Creek																														
Year: 1998																														
5.9	33.5	5.26	[Progressive bars]										0	●●●●●	●●●●●	4	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	7	5.00	*. **
(11-404) South Fork Massies Creek																														
Year: 1998																														
0.3	56.0	23.81	[Progressive bars]										4	●●●●●	●●●●●	1	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	3	0.40	1.00	
2.3	44.5	5.81	[Progressive bars]										2	●●●●●	●●●●●	3	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	▲▲▲▲▲	6	1.33	3.33