Table 8. Candidate metrics considered for inclusion in index development. The scoring formula for 'decreaser' metrics = 100(Metric value – minimum possible value)/(95th percentile-minimum) and the formula for 'increaser' metrics = 100*(95th percentile-metric value)/(95th percentile-5th percentile). The minimum possible value for these metrics is 0. To simplify the formulas, the 0's in the 'decreaser' formulas are not shown. All values that calculate to < 0 or >100 are re-set to the 0-100 scale.*

Metric code	Metric description	In MA Project	Category	Trend	5th	95th	Scoring formula	*Z*-score	DE
pi_EPT	percent indivs - Orders Ephemeroptera, Plecoptera and Trichoptera	YES	COMP	Dec.	1.3	41.0	100*(metric)/41	1.46	82.6
pi_OET	percent indivs - Orders Odonata, Ephemeroptera, and Trichoptera	YES	COMP	Dec.	3.8	41.4	100*(metric)/41.4	1.28	78.3
pi_NonIns	percent indivs - Class not Insecta	YES	COMP	Inc.	10.7	79.8	100*(79.8-metric)/69.2	-1.41	78.3
nt_ffg_pred	number taxa - Functional Feeding Group - predator	YES	FFG	Dec.	4.0	13.8	100*(metric)/13.8	1.36	69.6
pt_ffg_col	percent taxa - Functional Feeding Group - collector-gatherer	NO	FFG	Inc.	32.6	48.3	100*(48.3-metric)/15.7	-1.17	69.6
pi_habit_swim	percent indivs - Habit - swimmers	YES	HABIT	Dec.	0.0	10.4	100*(metric)/10.4	0.74	87.0
pt_habit_climb	percent taxa - Habit - climbers	YES	HABIT	Inc.	6.3	22.7	100*(22.7-metric)/16.4	-1.59	69.6
nt_EPT	number taxa - Orders Ephemeroptera, Plecoptera, and Trichoptera	NO	RICH	Dec.	2.1	10.8	100*(metric)/10.8	1.56	91.3
nt_POET	number taxa - Orders Plecoptera, Odonata, Ephemeroptera, and Trichoptera	YES	RICH	Dec.	3.0	12.0	100*(metric)/12	1.43	82.6
pt_EPT	percent taxa - Orders Ephemeroptera, Plecoptera, and Trichoptera	YES	RICH	Dec.	5.5	26.3	100*(metric)/26.3	1.66	87.0
nt_CruMol	number taxa - Phylum Mollusca and SubPhylum Crustacea	NO	RICH	Inc.	5.0	9.9	100*(9.9-metric)/4.9	-1.90	95.7
pt_Amph	percent taxa - Order Amphipoda	NO	RICH	Inc.	2.0	9.1	100*(9.1-metric)/7.1	-2.24	91.3
pt_NonIns	percent taxa - not Class Insecta	YES	RICH	Inc.	24.3	46.3	100*(46.3-metric)/21.9	-2.21	95.7
pt_tv_intol	percent taxa - tolerance value - intolerant	YES	TOL	Dec.	0.0	0.0	100*(metric)/0	1.58	100.0
x_Becks	Becks Biotic Index	NO	TOL	Dec.	0.0	0.0	100*(metric)/0	1.34	100.0
pt_tv_toler	percent taxa - tolerance value - tolerant	YES	TOL	Inc.	11.6	28.3	100*(28.3-metric)/16.6	-2.72	100.0
x_HBI	Hilsenhoff Biotic Index	YES	TOL	Inc.	5.2	6.8	100*(6.8-metric)/1.6	-2.13	95.7
pt_volt_semi	percent taxa - semivoltine	YES	VOLT	Dec.	0.0	5.5	100*(metric)/5.5	1.21	87.0
pt_volt_multi	percent taxa - multivoltine	YES	VOLT	Inc.	11.7	30.3	100*(30.3-metric)/18.6	-1.39	69.6

In MA project: indicates that the same metric was under consideration in the MA multihabitat IBI development project; **Trend:** Decreasing (Dec.) or increasing (Inc.) trend with increasing stress; **5th**: 5th percentile of all sample metrics in the site class; **95th**: 95th percentile of all sample metrics in the site class; **Scoring Formula:** Replace "metric" with the sample metric value for calculation of an index; **DE:** Discrimination Efficiency.

Table 9. Spearman rho correlation among candidate metrics. Coefficients ≥ 0.80 are emphasized with bold type.

		Metric #																		
#	Metric	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	nt_CruMol	1																		
2	nt_EPT	-0.39	1																	
3	nt_ffg_pred	-0.07	0.46	1																
4	nt_POET	-0.33	**0.97**	0.57	1															
5	pi_EPT	-0.31	0.77	0.25	0.71	1														
6	pi_habit_swim	-0.14	0.52	0.48	0.53	0.44	1													
7	pi_NonIns	0.50	-0.60	-0.29	-0.57	-0.53	-0.24	1												
8	pi_OET	-0.20	0.72	0.30	0.69	**0.96**	0.45	-0.49	1											
9	pt_Amph	0.52	-0.58	-0.43	-0.54	-0.48	-0.25	0.50	-0.39	1										
10	pt_EPT	-0.47	**0.91**	0.22	**0.85**	0.78	0.41	-0.53	0.72	-0.49	1									
11	pt_ffg_col	0.27	-0.41	-0.35	-0.40	-0.39	-0.28	0.29	-0.39	0.36	-0.45	1								
12	pt_habit_climb	0.64	-0.26	0.02	-0.21	-0.26	-0.08	0.23	-0.16	0.20	-0.33	0.05	1							
13	pt_NonIns	0.67	-0.74	-0.34	-0.72	-0.51	-0.39	0.69	-0.44	0.51	-0.72	0.41	0.46	1						
14	pt_tv_intol	-0.49	0.59	0.47	0.59	0.37	0.34	-0.54	0.31	-0.57	0.49	-0.25	-0.34	-0.59	1					
15	pt_tv_toler	0.49	-0.78	-0.49	-0.77	-0.61	-0.47	0.59	-0.57	0.61	-0.74	0.45	0.34	**0.80**	-0.66	1				
16	pt_volt_multi	0.21	-0.50	-0.53	-0.53	-0.43	-0.35	0.27	-0.43	0.45	-0.41	0.21	0.15	0.28	-0.51	0.52	1			
17	pt_volt_semi	-0.46	0.61	0.33	0.62	0.45	0.18	-0.58	0.43	-0.48	0.61	-0.41	-0.34	-0.64	0.56	-0.66	-0.31	1		
18	x_Becks	-0.46	0.62	0.52	0.62	0.38	0.38	-0.54	0.32	-0.57	0.48	-0.24	-0.33	-0.59	0.99	-0.66	-0.51	0.54	1	
19	x_HBI	0.44	-0.66	-0.43	-0.65	-0.59	-0.30	**0.86**	-0.57	0.64	-0.58	0.35	0.21	0.65	-0.62	0.71	0.38	-0.66	-0.62	1