

Significant indicator species (p<0.05) of the macroinvertebrate community groups. SPA group common name. OIV =Observed Indicator Value of that taxon.

Taxon	Group	OIV	Average	Std Dev	p-value
Medium Coolwater Transitional Assemblage					
Hydropsyche sp	1	34.4	9.8	2.86	0.001
Optioservus sp	1	52.1	10.4	3.25	0.001
Baetis tricaudatus	1	46.4	10.3	2.52	0.001
Brachycentrus occidentalis	1	34.1	8.7	3.59	0.001
Eukiefferiella sp	1	30.2	8.2	2.93	0.001
Skwala	1	22.5	7.6	3.44	0.005
Parametriocnemus	1	19.4	7.4	2.86	0.008
Hydroptila sp	1	17.1	7.5	2.77	0.012
Tvetenia sp.	1	16.9	7.6	3.25	0.021
Zaitzevia parvula	1	17.6	7.7	3.65	0.026
Oecetis sp.	1	14.5	6.8	3.03	0.027
Wormaldia sp.	1	12.4	4.8	2.85	0.031
Attenella margarita	1	6.3	3.1	1.86	0.051
Malenka sp.	1	10.8	5.3	3.17	0.053
Transitional Prairie River Assemblage					
Cricotopus sp.	3	40.6	11.8	3.83	0.001
Rheotanytarsus	3	31.7	8.8	3.6	0.002
Tricorythodes	3	26.5	10	3.47	0.003
Cricotopus trifascia grp	3	31.5	7.9	3.79	0.003
Naididae	3	24.2	7.3	3.61	0.004
Oecetis avara grp	3	19	5.5	3.53	0.009
Monodiamesa sp.	3	14.1	4.8	3.04	0.015
Camelobatidius	3	15.5	5.3	3.16	0.015
Stenelmis sp.	3	21.4	7.8	4.3	0.016
Leucotrichia pictipes	3	13.9	4.6	2.91	0.017
Neotrichia sp.	3	13.9	5	3.19	0.022
Psychomyia sp.	3	11.2	4.7	2.93	0.039
Fallceon quilleri	3	13.7	6.8	3.34	0.041
Acentrella insignificans	3	15	7.1	3.62	0.043
Ephoron album	3	13.7	6.1	3.61	0.044
Travarella albertana	3	10.1	5.3	3.08	0.051
Traditional Trout Stream Assemblage					
Antocha	4	32.3	7.1	2.95	0.001
Brachycentrus americanus	4	56.2	9.2	3.74	0.001
Lepidostoma	4	47	9.4	3.97	0.001
Ephemerella inermis	4	57.6	7.9	3.4	0.001
Glossosoma sp.	4	70.5	8.1	3.59	0.001
Pteronarcys californica	4	24.4	4.5	3.13	0.001
Hesperoperla pacifica	4	25.1	6.9	2.92	0.002

Bibiocephela sp.	4	22.7	3.9	2.46	0.002
Hexatoma	4	21	7.9	2.92	0.007
Chelifera sp.	4	15	5.7	2.79	0.019
Atherix sp.	4	17.9	7.2	3.6	0.02
Lymnaeidae	4	11.9	5	2.84	0.029
Prodiamesa	4	10.1	4.1	2.78	0.036
Cricotopus Nostococcladius	4	13.7	5.9	3.48	0.037
Diura	4	9.1	4.1	2.45	0.051

Prairie Stream Assemblage

Caenis latipennis	9	66.5	7.7	3.37	0.001
Ceratopogon sp.	9	37.1	8.5	3.94	0.001
Coenagrion	9	52.3	6.3	3.37	0.001
Labrundinia	9	26.2	3.9	2.51	0.001
Dubiraphia	9	21.1	3.8	2.48	0.002
Enallagma civile	9	17.6	3.8	2.35	0.003
Physella	9	27.7	11.1	3.52	0.005
Enallagma sp.	9	16.6	3.9	2.42	0.005
Sigara alternata	9	16.4	4.5	3.16	0.011
Psectrocladius	9	13.5	4.6	2.95	0.024
Sigara grosslineata	9	11.8	4.2	2.89	0.029
Trichocorixa	9	9.1	3.9	2.36	0.046

Large Prairie River Assemblage

Cheumatopsyche	11	54.7	9.9	3.18	0.001
Chironomidae	11	23.3	5.9	3.37	0.003
Neochoroterpes oklahoma	11	16.6	4.2	2.7	0.005
Choroterpes	11	23.5	7.3	4.14	0.009
Ambrysus mormom	11	19.9	7.1	3.72	0.011
Hemerodromia	11	18.4	6.1	3.69	0.015
Microcyloepus	11	13.6	5.5	3.08	0.026
Hydropsyche morosa grp	11	12.2	5.8	3.16	0.044
Hydrochus	11	8.8	4.1	2.77	0.048

Prairie Pool Assemblage

Hyalella	12	62.2	9.5	3.24	0.001
Coenagrion/Enallagma	12	32.7	4.8	2.67	0.001
Gammarus sp.	12	27.8	7	3.79	0.004
Callibaetis	12	30.4	7.4	4.02	0.005
Glyptotendipes	12	18.7	6	3.37	0.005
Trichocorixa nais	12	15	3.9	2.58	0.005
Gyraulus	12	22.4	7.2	3.79	0.008
Endochironomus	12	18.5	5.8	3.7	0.008
Haliplus	12	17	5.7	3.03	0.009
Paratanytarsus sp.	12	20.2	5.6	3.54	0.011
Mystacides sp.	12	13.2	4.2	2.76	0.015
Molanna	12	10	4	2.64	0.033

Hygrotus	12	9.8	4.1	2.72	0.044
Caenis sp.	12	9.1	4.1	2.63	0.049
Erpobdella	12	11.1	5.3	3.07	0.05
Corisella	12	9.4	4.2	2.87	0.05
Stagnicola	12	12	5.4	3.6	0.051
Filtering-Collector Assemblage					
Simulium sp.	37	67.6	13.2	3.78	0.001
Isonychia sp.	37	21.4	6.6	3.87	0.01
Stylurus sp.	37	10.7	4	2.6	0.02
Eukiefferella claripennis grp	37	12.1	4.7	3.07	0.029
Pseudocloeon	37	9.4	4.4	2.85	0.049
Hydropsyche confusa	37	10.8	5	3.32	0.05
Large River Slow Current Assemblage					
Tanytarsus sp.	38	49.5	10.8	4.68	0.001
Dicrotendipes	38	24.5	8.1	3.34	0.002
Cladotanytarsus	38	32.5	10.1	5.04	0.005
Hexagenia limbata	38	30	5.3	2.92	0.005
Ablabesmyia sp.	38	17.4	6.1	2.74	0.006
Polycentropus	38	16.4	5.4	3.23	0.011
Chironomus sp.	38	19.3	7.3	3.75	0.016
Paratanytarsus	38	16.1	7.2	3.23	0.02
Sigara sp.	38	17.8	6.8	3.98	0.021
Culicoides sp.	38	12.3	5	3.35	0.037
Pseudocloeon sp.	38	14.9	7.5	3.78	0.049
Gomphidae	38	9.7	4.5	2.94	0.051
Ithytrichia	38	10.6	5	3.15	0.052
Medium Warm River Side-Channel Community					
Corixidae	40	71.1	8.4	3.26	0.001
Cryptotendipes	40	21.7	6.2	3.45	0.004
Placobdella	40	14.3	4.3	2.61	0.004
Tubifex	40	16.4	4.3	2.68	0.007
Procladius	40	20.4	6.9	3.31	0.008
Cryptochironomus	40	15.7	6.7	2.46	0.009
Stempelinella	40	18.8	5.5	3.36	0.013
Tanypus	40	14.5	6.2	3.54	0.041
Centroptilum	40	11	4.8	2.84	0.047
Gompus sp.	40	9.4	4.2	2.85	0.052
Palmarcorixa gilletti	40	11.6	5.4	3.44	0.053
Probezzia	40	11.1	5.5	3.61	0.053
Pristine Mountain Stream Community					
Enchytriidae	58	27.6	5.6	2.72	0.001
Rhithrogena	58	42.8	8.7	3.2	0.001
Drunella doddsi	58	34.8	7.2	2.96	0.001
Cinygmula	58	59.9	7.2	3.32	0.001
Epeorus longimanus	58	47.2	7.1	3.68	0.001

Rhyacophila betteni	58	29.4	5.2	2.74	0.001
Drunella coloradensis	58	26.5	6.2	2.83	0.001
Megarcys	58	75.6	6.1	2.94	0.001
Zapada oregonensis	58	51.3	5.8	3.29	0.001
Baetis bicaudatus	58	38.1	6.4	3.47	0.001
Epeorus grandis	58	76.7	6.5	3.57	0.001
Parapsyche elsis	58	37.9	4.9	2.99	0.001
Zapada columbiana	58	32.9	5.6	3.09	0.001
Rhyaphila siberica grp	58	21.5	4.3	2.76	0.001
Rhyacophila hylineata grp	58	34.8	6.3	3.28	0.002
Epeorus albertae	58	26	5.5	3.4	0.002
Epeorus deceptivus	58	26.6	5.5	3.46	0.003
Zapada cinctipes	58	24.2	7.4	3.47	0.004
Ameletus	58	25.9	7.3	3.5	0.004
Rhyacophila verrula	58	13.3	3.9	2.5	0.011
Rhyacophila iranda grp	58	12.8	4	2.77	0.013
Doroneuria	58	23.5	8.6	4.72	0.019
Rhabdomastix	58	12.5	4.1	2.68	0.026
Apatania	58	12.5	5.5	3.25	0.04
Rhyacophila albertae	58	11.5	5	3.08	0.049

Medium Mountain Stream Community

Tvetenia bavarica grp	90	46.6	6.2	2.99	0.001
Orthocladius sp.	90	37	10.6	3.22	0.001
Heterlimnius	90	46.7	7.3	3.07	0.001
Sweltsa	90	43.7	7.3	3.07	0.001
Psychoglypha	90	22.6	5.3	3.02	0.001
Eukiefferella gracei grp	90	29.6	6.3	3.3	0.001
Rhyacophila brunnea grp	90	25.3	7.2	2.72	0.002
Glutops	90	24.5	4.8	2.97	0.002
Micropsectra sp.	90	25.8	9.3	3.25	0.003
Polycelis cornuta	90	23.8	5.2	3.23	0.003
Pisidium	90	20.8	7.5	3.11	0.004
Serretella tibialis	90	24.9	5.8	3.11	0.004
Rhyacophila narvae	90	22	4.8	3.16	0.004
Micrasema sp.	90	29	8.7	4.54	0.005
Pseudodiamesa	90	15.7	4.1	2.49	0.006
Pagastia sp.	90	23.4	9.7	3.65	0.007
Yoraperla	90	16.9	4.7	2.81	0.007
Ostracoda	90	20.2	6.7	3.37	0.008
Drunella grandis	90	17	6.4	3.1	0.01
Perlodidae	90	13.2	4.6	2.64	0.015
Brillia	90	22.2	8.6	4.58	0.017
Visokia cataractae	90	12.7	4.5	2.65	0.019
Turbellaria	90	17.8	7.7	3.22	0.02

Caudatella hystrix	90	18.9	6.2	3.89	0.023
Leuctridae	90	11.1	3.9	2.6	0.028
Neothremma	90	14.3	5	3.27	0.028
Cleptelmis	90	13.9	5.4	3.21	0.029
Clinocera sp.	90	11.5	4.5	2.53	0.029
Limnophora	90	12.5	5	3.48	0.037
Eukiefferella devonica	90	14.4	6.5	3.49	0.042
Caudatella sp.	90	8.8	3.9	2.46	0.046
Neophylax rickeri	90	9.8	4.6	3.29	0.051

Small Foothills Transitional Assemblage

Narpus concolor	105	92.2	5.6	2.94	0.001
Helicopsyche borealis	105	51.5	8.2	3.93	0.001
Corynoneura sp.	105	41.4	8.2	4.16	0.001
Constempellina sp.	105	60.2	5.2	2.78	0.001
Nanocladius sp.	105	79.9	7.5	4.3	0.001
Prosimulium	105	64.5	5.4	3.15	0.001
Amiocentrus aspilis	105	32.5	8.2	4.58	0.001
Lara	105	32.5	4.4	2.75	0.001
Phaenopsectra	105	32.7	6.4	3.6	0.001
Plauditus punctiventris	105	78.9	5.5	2.85	0.001
Erioptera	105	38.5	4.3	2.61	0.001
Diamesa sp.	105	52	6.7	3.19	0.001
Ptychoptera	105	22.9	4.8	3.2	0.001
Protanydarus	105	36	4.8	3.24	0.001
Diplocladius sp.	105	97.3	4.9	3.13	0.001
Setvena	105	61.5	5.1	3.25	0.001
Paraperla	105	32	3.9	2.55	0.001
Agraylia	105	46.5	4.6	3.2	0.001
Blepharicera	105	21.8	3.7	2.24	0.001
Ephemerella infrequens	105	37.3	4.9	3.21	0.001
Acentrella edmundsi	105	36.5	4	2.68	0.001
Nemotaulius	105	35.5	3.9	2.55	0.001
Tipulidae	105	16.4	4	2.55	0.002
Ordobrevia nubifera	105	27.4	5.2	2.96	0.002
Acricotopus	105	21.2	4.1	2.79	0.002
Leucrocuta	105	24	6.2	3.52	0.004
Helichus	105	18	4	2.61	0.004
Culoptila	105	20.4	5.7	3.39	0.005
Rhyacophila sp.	105	21.4	4.3	2.96	0.005
Parakiefferiella	105	18.7	6.3	3.3	0.007
Pteronocella badia	105	18.2	5.2	3.04	0.009
Epeorus	105	17.2	5.3	3.36	0.01
Hydroptila sp.	105	14.4	4	2.7	0.011
Nilothauma	105	13.8	3.9	2.59	0.012

Paraleptophlebia	105	12.5	4	2.31	0.021
Amnicola	105	11.7	4	2.74	0.023
Cascadoperla	105	12.5	4	2.37	0.025
Nectopsyche	105	12.6	5.1	2.65	0.026
Pseudosmittia	105	9.6	4	2.46	0.034
Chimarra	105	12.5	4.1	2.5	0.035
Glossoma	105	12.5	4.1	2.5	0.035
Procloeon	105	10.1	4.8	2.82	0.051
