

Site Description

Study Name	CBWQ-Central Kootenay
Site	NGJOS01
Sampling Date	Sep 25 2007
Know Your Watershed Basin	Central Kootenay
Province / Territory	British Columbia
Terrestrial Ecological Classification	Montane Cordillera EcoZone Columbia Mountains and Highlands EcoRegion
Coordinates (decimal degrees)	49.45167 N, 115.68667 W
Altitude	3658
Local Basin Name	Joseph Creek
	St. Mary River
Stream Order	3



Figure 1. Location Map

Across Reach
Aerial (No image found)



Down Stream



Field Sheet

Miscellaneous (No image found)



Substrate



Up Stream

Cabin Assessment Results

Reference Model Summary					
Model	Columbia-Okanagan Preliminary March 2010				
Analysis Date	July 29, 2013				
Taxonomic Level	Family				
Predictive Model Variables	Depth-Avg Latitude Longitude Reg-Ice SlopeLT30%				
Reference Groups	1	2	3	4	5
Number of Reference Sites	9	43	17	12	33
Group Error Rate	22.2%	24.5%	22.2%	25.0%	32.4%
Overall Model Error Rate	26.4%				
Probability of Group Membership	0.0%	10.3%	76.1%	12.8%	0.8%
CABIN Assessment of NGJOS01 on Sep 25, 2007	Similar to Reference				

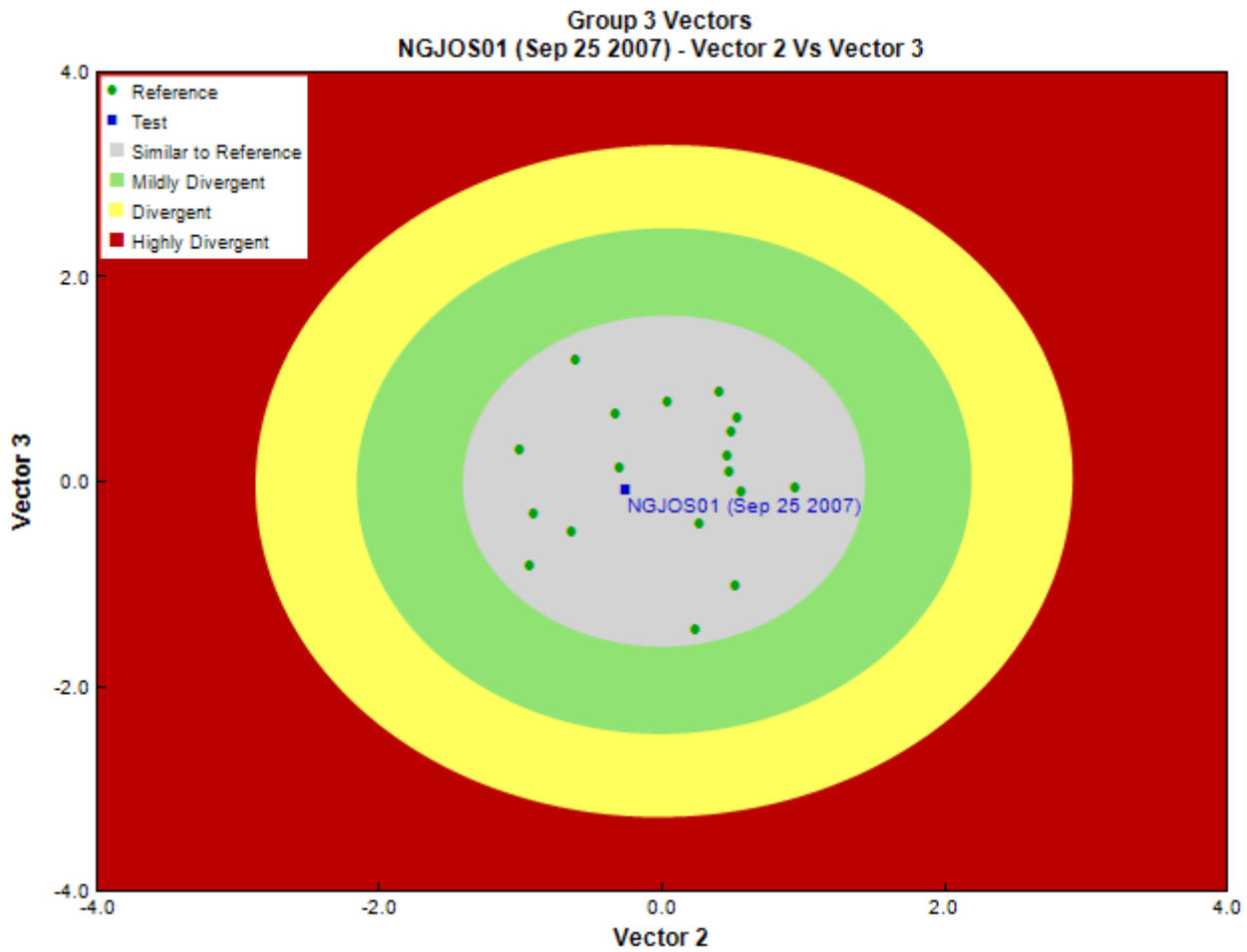


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

Sample Information

Sampling Device	Kick Net
Mesh Size	400
Sampling Time	3
Taxonomist	Dave Langill, EcoAnalysts, Inc.
Date Taxonomy Completed	September 25, 2007
	Marchant Box
Sub-Sample Proportion	9/100

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	1	11.1
		Lumbriculida	Lumbriculidae	1	11.1
Arthropoda	Arachnida	Trombidiformes	Lebertiidae	2	22.2
		Insecta	Coleoptera	Elmidae	37
	Diptera		Chironomidae	51	566.7
			Empididae	1	11.1
			Pelecorynchidae	7	77.8
			Psychodidae	5	55.5
		Ephemeroptera	Ameletidae	6	66.7
			Baetidae	101	1,122.2
			Ephemerellidae	68	755.5
			Heptageniidae	111	1,233.3
		Plecoptera	Chloroperlidae	24	266.7
			Leuctridae	2	22.2
			Nemouridae	15	166.7

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
			Perlidae	9	100.0
			Perlodidae	7	77.8
			Taeniopterygidae	42	466.7
		Trichoptera	Glossosomatidae	5	55.5
			Hydropsychidae	2	22.2
			Lepidostomatidae	7	77.8
			Rhyacophilidae	10	111.1
			Uenoidae	4	44.4
			Total	518	5,755.4

Metrics

Name	NGJOS01	Predicted Group Reference Mean \pm SD
Bray-Curtis Distance	0.33	0.4 \pm 0.2
Number Of Individuals		
% Chironomidae	9.8	8.2 \pm 13.6
% Ephemeroptera	55.2	43.5 \pm 15.9
% Ephemeroptera that are Baetidae	35.3	33.9 \pm 27.7
% of 2 dominant taxa	40.9	59.2 \pm 10.0
% of dominant taxa	21.4	39.7 \pm 10.9
% Plecoptera	19.1	34.8 \pm 17.8
% Trichoptera	5.4	6.9 \pm 8.6
No. EPT individuals/Chironomids+EPT Individuals	0.9	0.9 \pm 0.1
Total Abundance	5755.5	5757.3 \pm 4889.9
Richness		
Ephemeroptera taxa	4.0	3.4 \pm 0.5
EPT taxa (no)	15.0	11.5 \pm 1.2
Plecoptera taxa	6.0	5.3 \pm 0.9
Shannon-Wiener Diversity	2.4	1.9 \pm 0.3
Simpson's Diversity	0.9	0.8 \pm 0.1
Total No. of Taxa	23.0	17.1 \pm 2.4
Trichoptera taxa	5.0	2.8 \pm 1.0

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at NGJOS01
	Group 1	Group 2	Group 3	Group 4	Group 5	
Baetidae	100%	100%	100%	100%	97%	1.00
Chironomidae	100%	100%	100%	100%	95%	1.00
Chloroperlidae	78%	88%	94%	100%	100%	0.95
Ephemerellidae	78%	100%	100%	100%	100%	1.00
Heptageniidae	100%	100%	100%	100%	100%	1.00
Hydropsychidae	11%	92%	78%	92%	86%	0.81
Nemouridae	100%	100%	100%	100%	100%	1.00
Perlodidae	78%	78%	89%	92%	81%	0.88
Psychodidae	22%	65%	94%	8%	11%	0.80
Rhyacophilidae	100%	92%	100%	100%	95%	0.99
Taeniopterygidae	89%	49%	100%	92%	97%	0.94

RIVPACS Ratios

RIVPACS : Expected taxa P>0.50	13.58
RIVPACS : Observed taxa P>0.50	14.00
RIVPACS : O:E (p > 0.5)	1.03
RIVPACS : Expected taxa P>0.70	10.36
RIVPACS : Observed taxa P>0.70	11.00
RIVPACS : O:E (p > 0.7)	1.06

Habitat Description

Variable	NGJOS01	Predicted Group Reference Mean \pm SD
Channel		
Depth-Avg (cm)	15.2	22.5 \pm 10.5
Depth-Max (cm)	16.5	32.9 \pm 17.9
Discharge (m ³ /s)	0.260	0.000 \pm 0.000
Macrophyte (PercentRange)	1	0 \pm 0
Reach-%CanopyCoverage (PercentRange)	2.00	0.94 \pm 0.80
Reach-Pools (Binary)	1	0 \pm 1
Reach-Rapids (Binary)	0	0 \pm 1
Reach-Riffles (Binary)	1	1 \pm 0
Reach-StraightRun (Binary)	1	1 \pm 0
Slope (m/m)	0.0220000	0.0235102 \pm 0.0284557
Veg-Coniferous (Binary)	1	1 \pm 0
Veg-Deciduous (Binary)	1	1 \pm 0
Veg-GrassesFerns (Binary)	1	1 \pm 0
Veg-Shrubs (Binary)	1	1 \pm 0
Velocity-Avg (m/s)	0.39	0.51 \pm 0.25
Velocity-Max (m/s)	0.44	0.75 \pm 0.28
Width-Bankfull (m)	12.7	15.6 \pm 12.8
Width-Wetted (m)	4.5	10.2 \pm 7.0
XSEC-VelInstrumentDirect (Category (1-3))	3	2
XSEC-VelMethod (Category (1-3))	3	2 \pm 1
Landcover		
Reg-Ice (%)	0.00000	0.46949 \pm 1.15785
Substrate Data		
Dominant-1st (Category(0-9))	7	6 \pm 2
Dominant-2nd (Category(0-9))	6	6 \pm 2
Embeddedness (Category(1-5))	4	4 \pm 1
PeriphytonCoverage (Category(1-5))	1	2 \pm 1
SurroundingMaterial (Category(0-9))	4	4 \pm 2
Topography		
SlopeLT30% (%)	54.84410	27.92073 \pm 14.83033
Water Chemistry		
General-Alkalinity (mg/L)	120.0000000	121.5944444 \pm 36.7225924
General-DO (mg/L)	15.0000000	10.4922222 \pm 0.8833463
General-pH (pH)	8.3	8.0 \pm 0.6
General-SolidsTSS (mg/L)	2.0000000	0.5604289 \pm 1.4627232
General-SpCond (μ S/cm)	240.0000000	214.2437500 \pm 77.1891440
General-TempWater (Degrees Celsius)	6.5000000	6.8794444 \pm 1.7335020
Nitrogen-TN (mg/L)	0.0700000	0.0688889 \pm 0.0759171
Phosphorus-TP (mg/L)	0.0025000	0.0032778 \pm 0.0061816