

**Site Description**

<b>Study Name</b>	CBWQ-Central Kootenay
<b>Site</b>	NGJOS02
<b>Sampling Date</b>	Sep 20 2010
<b>Know Your Watershed Basin</b>	Central Kootenay
<b>Province / Territory</b>	British Columbia
<b>Terrestrial Ecological Classification</b>	Montane Cordillera EcoZone Southern Rocky Mountain Trench EcoRegion
<b>Coordinates (decimal degrees)</b>	49.50194 N, 115.75472 W
<b>Altitude</b>	3084
<b>Local Basin Name</b>	Joseph Creek
	St Mary River
<b>Stream Order</b>	3



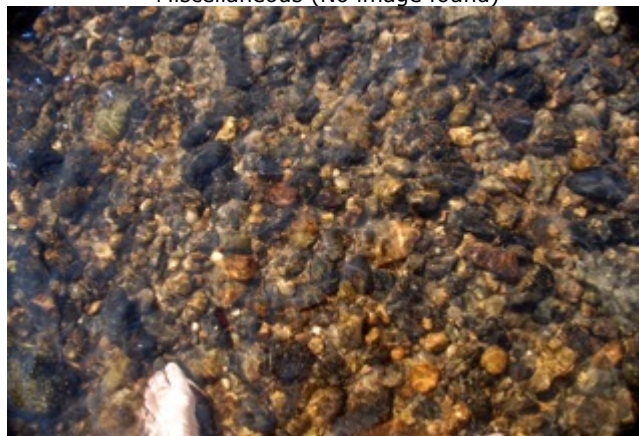
Figure 1. Location Map



Across Reach  
Aerial (No image found)



Down Stream  
Field Sheet (No image found)  
Miscellaneous (No image found)



Substrate



Up Stream

**Cabin Assessment Results**

<b>Reference Model Summary</b>	
<b>Model</b>	Columbia-Okanagan Preliminary March 2010
<b>Analysis Date</b>	July 29, 2013
<b>Taxonomic Level</b>	Family
<b>Predictive Model Variables</b>	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%	33.9%	62.5%	3.4%	0.2%
CABIN Assessment of NGJOS02 on Sep 20, 2010	Mildly Divergent				

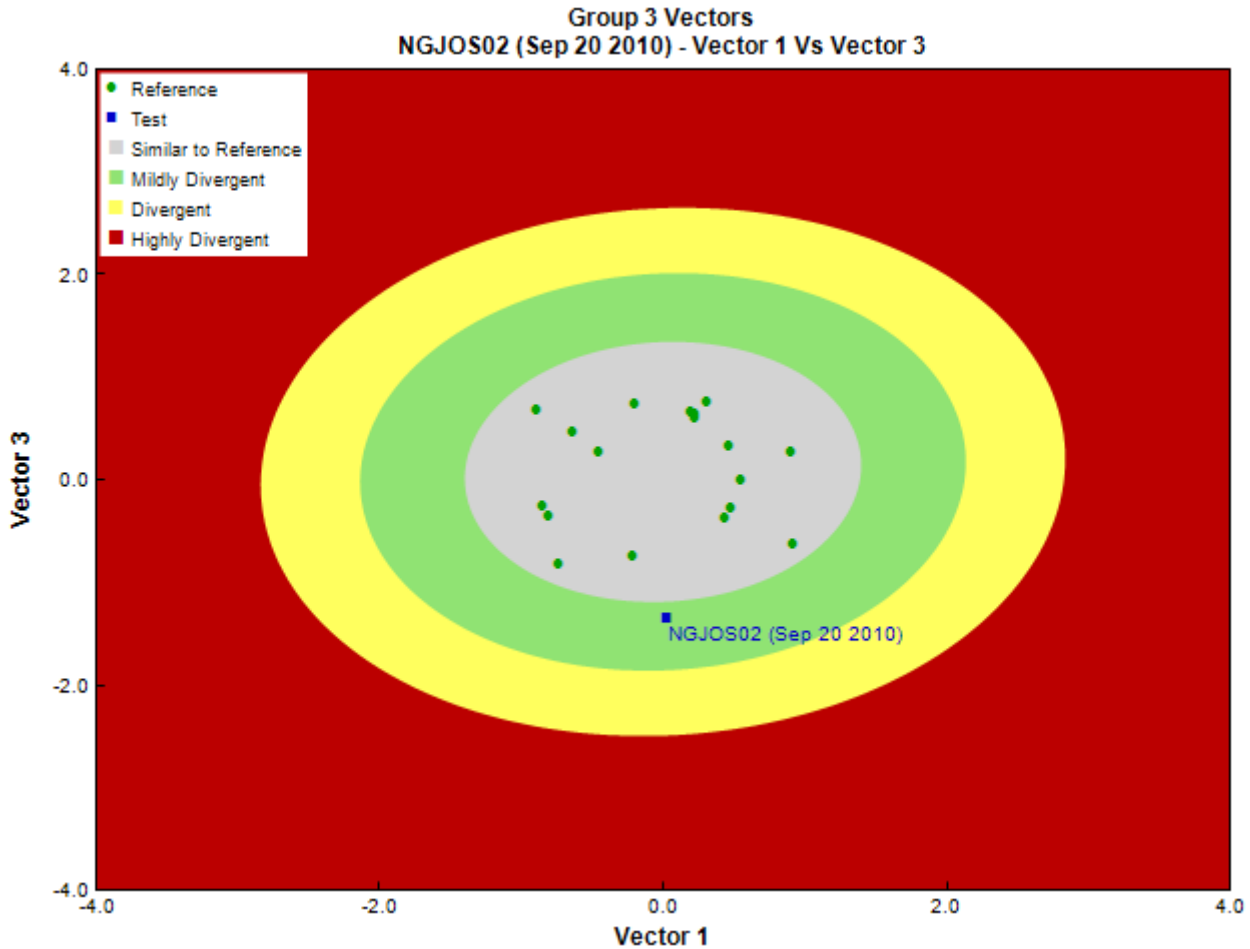


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

**Sample Information**

Sampling Device	Kick Net
Mesh Size	400
Sampling Time	3
Taxonomist	Gary Lester, Ecoanalysts Inc.
Date Taxonomy Completed	March 07, 2011
	Marchant Box
Sub-Sample Proportion	4/100

**Community Structure**

Phylum	Class	Order	Family	Raw Count	Total Count
Arthropoda	Arachnida	Trombidiformes	Hygrobatidae	1	25.0
			Tormenticolidae	2	50.0
	Insecta	Coleoptera	Elmidae	100	2,500.0
		Diptera	Chironomidae	14	350.0
			Psychodidae	1	25.0
			Simuliidae	1	25.0
		Ephemeroptera	Baetidae	84	2,100.0

## Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
			Ephemerellidae	16	400.0
			Heptageniidae	25	625.0
			Leptophlebiidae	17	425.0
		Plecoptera	Chloroperlidae	1	25.0
			Nemouridae	11	275.0
			Perlidae	1	25.0
		Trichoptera	Glossosomatidae	25	625.0
			Hydropsychidae	2	50.0
			Lepidostomatidae	36	900.0
			Rhyacophilidae	1	25.0
Mollusca	Bivalvia	Veneroida	Pisidiidae	9	225.0
			Total	347	8,675.0

## Metrics

Name	NGJOS02	Predicted Group Reference Mean $\pm$ SD
<b>Bray-Curtis Distance</b>	0.7	0.4 $\pm$ 0.2
<b>Number Of Individuals</b>		
% Chironomidae	4.0	8.2 $\pm$ 13.6
% Ephemeroptera	40.9	43.5 $\pm$ 15.9
% Ephemeroptera that are Baetidae	59.2	33.9 $\pm$ 27.7
% of 2 dominant taxa	53.0	59.2 $\pm$ 10.0
% of dominant taxa	28.8	39.7 $\pm$ 10.9
% Plecoptera	3.7	34.8 $\pm$ 17.8
% Trichoptera	18.4	6.9 $\pm$ 8.6
No. EPT individuals/Chironomids+EPT Individuals	0.9	0.9 $\pm$ 0.1
<b>Total Abundance</b>	8675.0	5757.3 $\pm$ 4889.9
<b>Richness</b>		
Ephemeroptera taxa	4.0	3.4 $\pm$ 0.5
EPT taxa (no)	11.0	11.5 $\pm$ 1.2
Plecoptera taxa	3.0	5.3 $\pm$ 0.9
Shannon-Wiener Diversity	2.1	1.9 $\pm$ 0.3
Simpson's Diversity	0.8	0.8 $\pm$ 0.1
<b>Total No. of Taxa</b>	18.0	17.1 $\pm$ 2.4
Trichoptera taxa	4.0	2.8 $\pm$ 1.0

## Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at NGJOS02
	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%	0.92
Ephemerellidae	78%	100%	100%	100%	100%	1.00
Heptageniidae	100%	100%	100%	100%	100%	1.00
Hydropsychidae	11%	92%	78%	92%	86%	0.83
Nemouridae	100%	100%	100%	100%	100%	1.00
Perlidae	78%	78%	89%	92%	81%	0.85
Psychodidae	22%	65%	94%	8%	11%	0.81
Rhyacophilidae	100%	92%	100%	100%	95%	0.97
Taeniopterygidae	89%	49%	100%	92%	97%	0.82

## RIVPACS Ratios

<b>RIVPACS : Expected taxa P&gt;0.50</b>	13.48
<b>RIVPACS : Observed taxa P&gt;0.50</b>	11.00
<b>RIVPACS : O:E (p &gt; 0.5)</b>	0.82
<b>RIVPACS : Expected taxa P&gt;0.70</b>	10.22
<b>RIVPACS : Observed taxa P&gt;0.70</b>	9.00
<b>RIVPACS : O:E (p &gt; 0.7)</b>	0.88

## Habitat Description

Variable	NGJOS02	Predicted Group Reference Mean $\pm$ SD
<b>Channel</b>		
Depth-Avg (cm)	17.3	22.5 $\pm$ 10.5
Depth-BankfullMinusWetted (cm)	12.00	26.00 $\pm$ 4.24
Depth-Max (cm)	19.0	32.9 $\pm$ 17.9
Macrophyte (PercentRange)	0	0 $\pm$ 0
Reach-%CanopyCoverage (PercentRange)	1.00	0.94 $\pm$ 0.80
Reach-DomStreamsideVeg (Category (1-4))	1	3 $\pm$ 1
Reach-Pools (Binary)	0	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)	0.3500000	0.0235102 $\pm$ 0.0284557
Veg-Coniferous (Binary)	0	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)	0.74	0.51 $\pm$ 0.25
Velocity-Max (m/s)	0.94	0.75 $\pm$ 0.28
Width-Bankfull (m)	6.5	15.6 $\pm$ 12.8
Width-Wetted (m)	4.7	10.2 $\pm$ 7.0
XSEC-VelMethod (Category (1-3))	1	2 $\pm$ 1
<b>Landcover</b>		
Reg-Ice (%)	0.00000	0.46949 $\pm$ 1.15785
<b>Substrate Data</b>		
%Bedrock (%)	0	0 $\pm$ 0
%Boulder (%)	0	6 $\pm$ 7
%Cobble (%)	42	61 $\pm$ 27
%Gravel (%)	3	1 $\pm$ 2
%Pebble (%)	55	31 $\pm$ 28
%Sand (%)	0	0 $\pm$ 0
%Silt+Clay (%)	0	1 $\pm$ 3
D50 (cm)	5.80	79.45 $\pm$ 47.98
Dg (cm)	5.7	73.9 $\pm$ 48.0
Dominant-1st (Category(0-9))	5	6 $\pm$ 2
Dominant-2nd (Category(0-9))	6	6 $\pm$ 2
Embeddedness (Category(1-5))	4	4 $\pm$ 1
PeriphytonCoverage (Category(1-5))	2	2 $\pm$ 1
SurroundingMaterial (Category(0-9))	3	4 $\pm$ 2
<b>Topography</b>		
SlopeLT30% (%)	75.73061	27.92073 $\pm$ 14.83033
<b>Water Chemistry</b>		
General-Alkalinity (mg/L)	120.0000000	121.5944444 $\pm$ 36.7225924
General-DO (mg/L)	16.0000000	10.4922222 $\pm$ 0.8833463
General-pH (pH)	8.8	8.0 $\pm$ 0.6
General-SpCond ( $\mu$ S/cm)	169.6000000	214.2437500 $\pm$ 77.1891440
General-TempAir (Degrees Celsius)	13.0	10.5 $\pm$ 4.2
General-TempWater (Degrees Celsius)	11.0000000	6.8794444 $\pm$ 1.7335020
General-Turbidity (NTU)	5.5700000	0.0000000 $\pm$ 0.0000000
Nitrogen-NO2 (mg/L)	0.0025000	0.0023889 $\pm$ 0.0063351
Nitrogen-NO2+NO3 (mg/L)	0.0100000	0.0130000 $\pm$ 0.0088111
Nitrogen-NO3 (mg/L)	0.0100000	0.0245003 $\pm$ 0.0229452
Phosphorus-OrthoP (mg/L)	0.0025000	0.0035000 $\pm$ 0.0018292