

**Site Description**

<b>Study Name</b>	CBWQ-Central Kootenay
<b>Site</b>	NGJOS02
<b>Sampling Date</b>	Sep 26 2012
<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



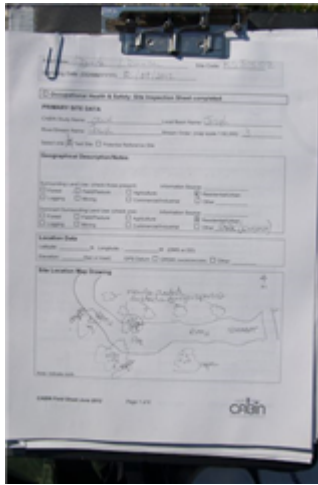
Figure 1. Location Map



Across Reach  
Aerial (No image found)



Down Stream



Field Sheet

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%				
<b>Reference Groups</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Number of Reference Sites</b>	9	43	17	12	33
<b>Group Error Rate</b>	22.2%	24.5%	22.2%	25.0%	32.4%
<b>Overall Model Error Rate</b>	26.4%				
<b>Probability of Group Membership</b>	0.0%	34.0%	62.5%	3.4%	0.2%
<b>CABIN Assessment of NGJOS02 on Sep 26, 2012</b>	Divergent				

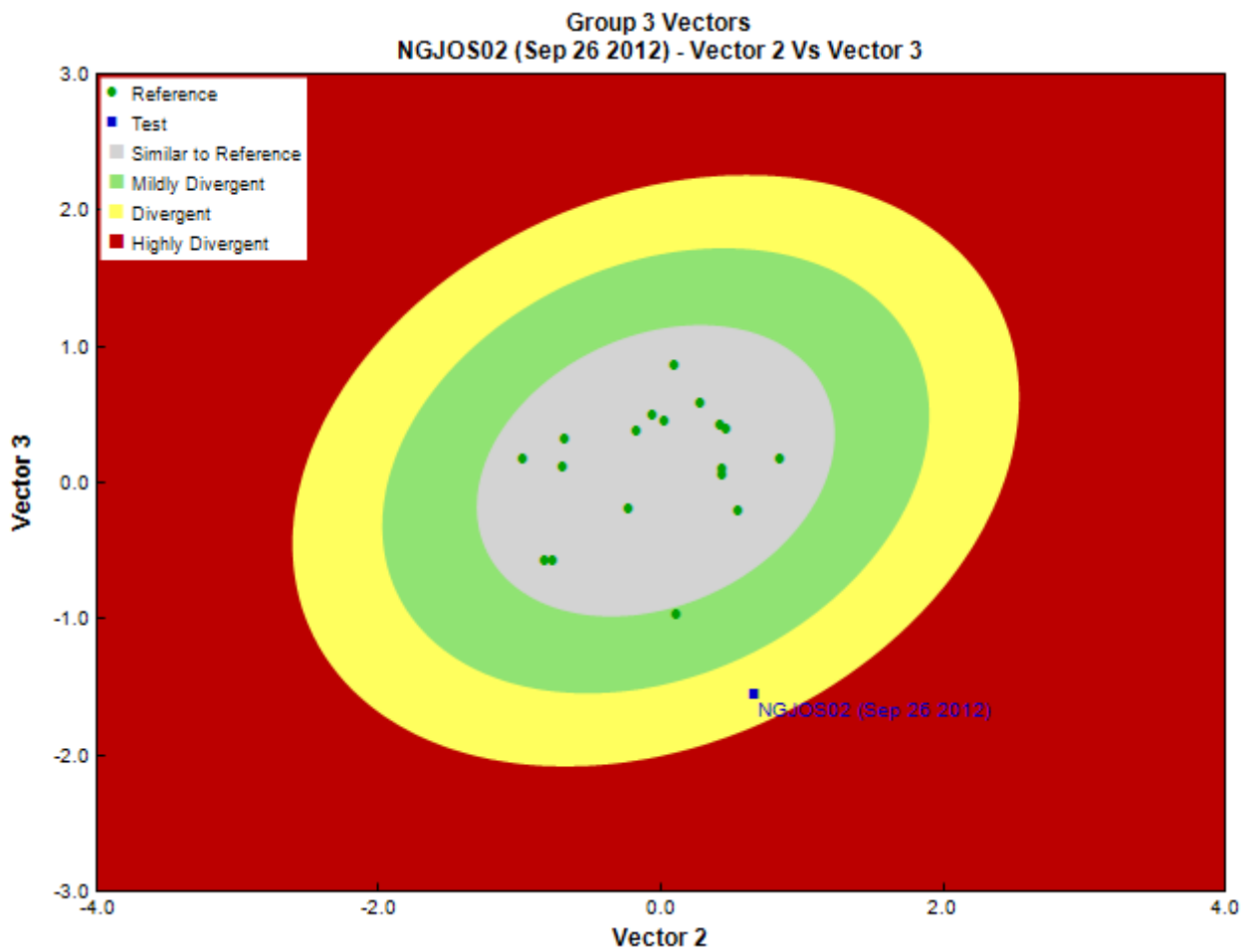


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

**Sample Information**

<b>Sampling Device</b>	Kick Net
<b>Mesh Size</b>	400
<b>Sampling Time</b>	3
<b>Taxonomist</b>	Eco Analysts, EcoAnalysts
<b>Date Taxonomy Completed</b>	February 12, 2013
	Marchant Box
<b>Sub-Sample Proportion</b>	0.62/100

**Community Structure**

Phylum	Class	Order	Family	Raw Count	Total Count
Annelida	Oligochaeta	Tubificida		1	161.3
Arthropoda	Arachnida	Trombidiformes	Sperchontidae	1	161.3
			Torrenticolidae	1	161.3
		Insecta	Coleoptera	Elmidae	50
		Diptera	Chironomidae	1	161.3
			Psychodidae	1	161.3
		Ephemeroptera	Baetidae	32	5,161.3
			Ephemerellidae	19	3,064.5
			Heptageniidae	82	13,225.8
			Leptophlebiidae	9	1,451.6
		Plecoptera	Capniidae	2	322.6
			Chloroperlidae	6	967.7
			Nemouridae	8	1,290.3
			Perlodidae	4	645.2
		Trichoptera	Brachycentridae	2	322.6

## Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
			Glossosomatidae	46	7,419.4
			Lepidostomatidae	32	5,161.3
			Rhyacophilidae	1	161.3
Mollusca	Bivalvia	Veneroida	Pisidiidae	3	483.9
			Total	301	48,548.5

## Metrics

Name	NGJOS02	Predicted Group Reference Mean $\pm$ SD
<b>Bray-Curtis Distance</b>	0.9	0.4 $\pm$ 0.2
<b>Number Of Individuals</b>		
% Chironomidae	0.3	8.2 $\pm$ 13.6
% Ephemeroptera	47.3	43.5 $\pm$ 15.9
% Ephemeroptera that are Baetidae	22.5	33.9 $\pm$ 27.7
% of 2 dominant taxa	44.0	59.2 $\pm$ 10.0
% of dominant taxa	27.3	39.7 $\pm$ 10.9
% Plecoptera	6.7	34.8 $\pm$ 17.8
% Trichoptera	27.0	6.9 $\pm$ 8.6
No. EPT individuals/Chironomids+EPT Individuals	1.0	0.9 $\pm$ 0.1
<b>Total Abundance</b>	48387.1	5757.3 $\pm$ 4889.9
<b>Richness</b>		
Ephemeroptera taxa	4.0	3.4 $\pm$ 0.5
EPT taxa (no)	12.0	11.5 $\pm$ 1.2
Plecoptera taxa	4.0	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
Perlodidae	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>	12.00
<b>RIVPACS : O:E (p &gt; 0.5)</b>	0.89
<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>		
<b>Depth-Avg (cm)</b>	17.2	22.5 $\pm$ 10.5
<b>Depth-BankfullMinusWetted (cm)</b>	8.00	26.00 $\pm$ 4.24
<b>Depth-Max (cm)</b>	19.5	32.9 $\pm$ 17.9

## Habitat Description

Variable	NGJOS02	Predicted Group Reference Mean $\pm$ SD
Macrophyte (PercentRange)	0	0 $\pm$ 0
Reach-%CanopyCoverage (PercentRange)	0.00	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)	0.0062000	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)	0.47	0.51 $\pm$ 0.25
Velocity-Max (m/s)	0.63	0.75 $\pm$ 0.28
Width-Bankfull (m)	4.3	15.6 $\pm$ 12.8
Width-Wetted (m)	4.3	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 (%)	1	6 $\pm$ 7
%Cobble (%)	42	61 $\pm$ 27
%Gravel (%)	4	1 $\pm$ 2
%Pebble (%)	53	31 $\pm$ 28
%Sand (%)	0	0 $\pm$ 0
%Silt+Clay (%)	0	1 $\pm$ 3
D50 (cm)	5.90	79.45 $\pm$ 47.98
Dg (cm)	5.8	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))	1	2 $\pm$ 1
<b>Topography</b>		
SlopeLT30% (%)	75.73000	27.92073 $\pm$ 14.83033
<b>Water Chemistry</b>		
General-Alkalinity (mg/L)	123.0000000	121.5944444 $\pm$ 36.7225924
General-DO (mg/L)	8.0000000	10.4922222 $\pm$ 0.8833463
General-pH (pH)	8.7	8.0 $\pm$ 0.6
General-SpCond ( $\mu$ S/cm)	222.6000000	214.2437500 $\pm$ 77.1891440
General-TempAir (Degrees Celsius)	19.5	10.5 $\pm$ 4.2
General-TempWater (Degrees Celsius)	13.0000000	6.8794444 $\pm$ 1.7335020
General-Turbidity (NTU)	4.6300000	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