

**Site Description**

<b>Study Name</b>	CBWQ-Central Kootenay
<b>Site</b>	NGJOS02
<b>Sampling Date</b>	Sep 15 2009
<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>	3067
<b>Local Basin Name</b>	Joseph Creek
	St Mary River
<b>Stream Order</b>	3



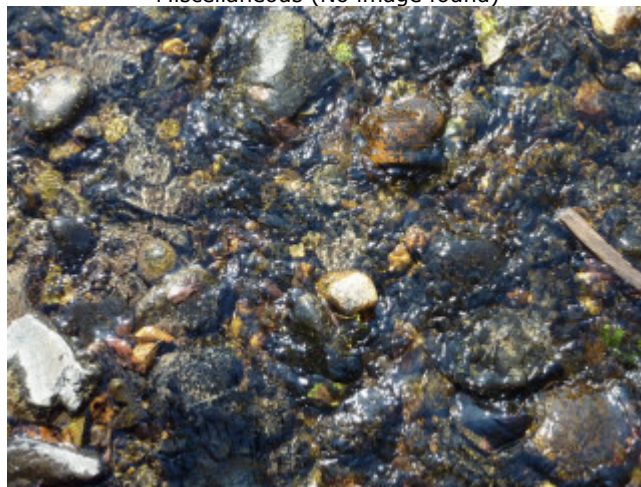
Figure 1. Location Map



Across Reach  
Aerial (No image found)



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



Substrate



Up Stream

### Cabin Assessment Results

Reference Model Summary	
<b>Model</b>	Columbia-Okanagan Preliminary March 2010
<b>Analysis Date</b>	July 29, 2013
<b>Taxonomic Level</b>	Family

**Cabin Assessment Results**

<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%	35.5%	61.1%	3.2%	0.2%
<b>CABIN Assessment of NGJOS02 on Sep 15, 2009</b>	Mildly Divergent				

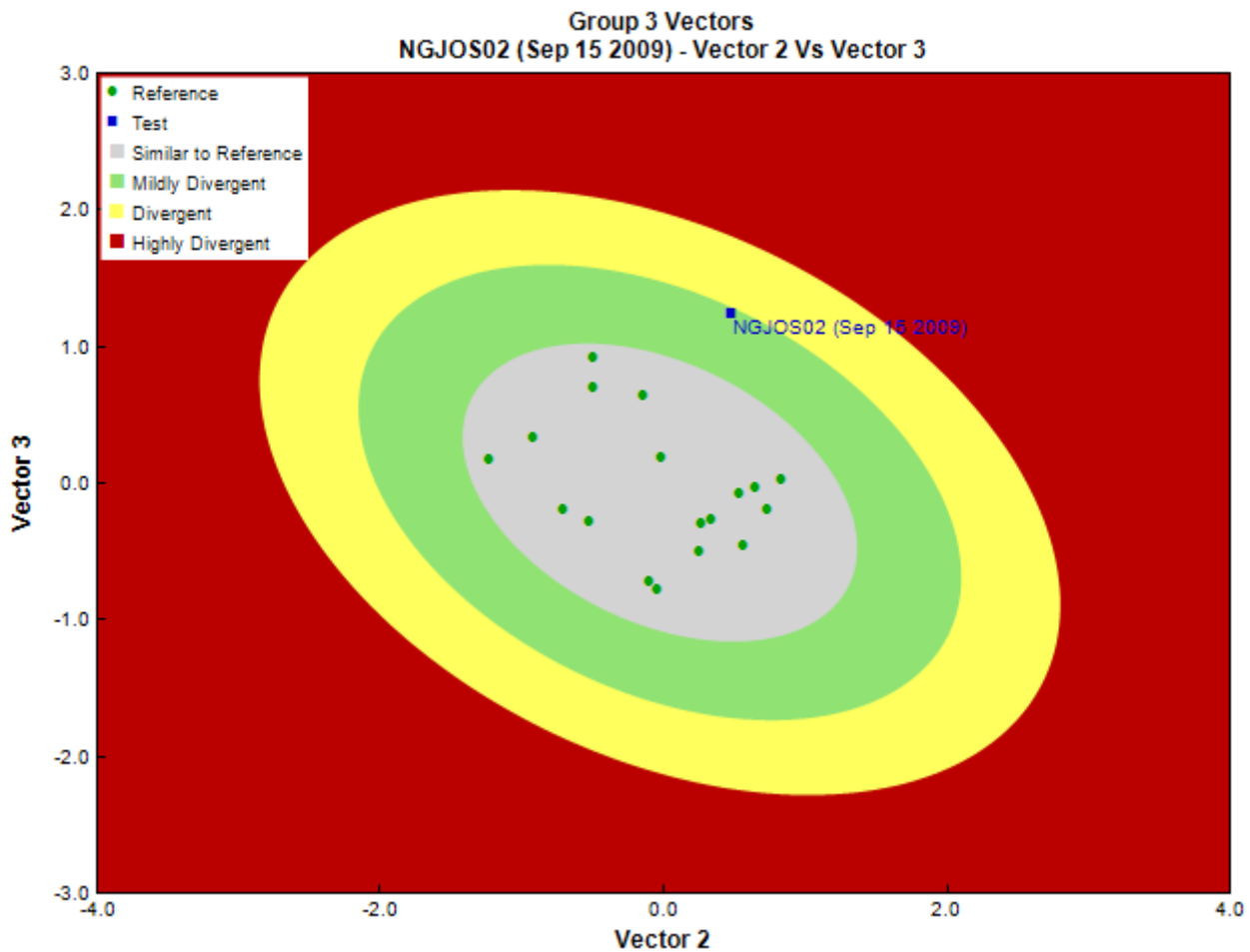


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

**Sample Information**

<b>Sampling Device</b>	Kick Net
<b>Mesh Size</b>	400
<b>Sampling Time</b>	-
<b>Taxonomist</b>	Eco Analyts, EcoAnalysts
<b>Date Taxonomy Completed</b>	February 26, 2010
	Marchant Box
<b>Sub-Sample Proportion</b>	5/100

**Community Structure**

Phylum	Class	Order	Family	Raw Count	Total Count
Arthropoda	Arachnida	Trombidiformes	Sperchontidae	1	20.0
	Insecta	Coleoptera	Elmidae	114	2,280.0
		Diptera	Chironomidae	19	380.0
			Psychodidae	4	80.0
			Simuliidae	2	40.0
			Tipulidae	1	20.0
		Ephemeroptera	Baetidae	37	740.0
			Ephemerellidae	10	200.0
			Heptageniidae	55	1,100.0
			Leptophlebiidae	26	520.0
		Plecoptera	Chloroperlidae	1	20.0
			Nemouridae	4	80.0
			Perlidae	1	20.0
		Trichoptera	Brachycentridae	9	180.0
			Glossosomatidae	5	100.0
			Hydropsychidae	12	240.0
			Lepidostomatidae	59	1,180.0
Mollusca	Bivalvia	Veneroida	Pisidiidae	1	20.0
			Total	361	7,220.0

**Metrics**

Name	NGJOS02	Predicted Group Reference Mean $\pm$ SD
<b>Bray-Curtis Distance</b>	0.61	0.4 $\pm$ 0.2
<b>Number Of Individuals</b>		
% Chironomidae	5.3	8.2 $\pm$ 13.6
% Ephemeroptera	35.5	43.5 $\pm$ 15.9
% Ephemeroptera that are Baetidae	28.9	33.9 $\pm$ 27.7
% of 2 dominant taxa	47.9	59.2 $\pm$ 10.0
% of dominant taxa	31.6	39.7 $\pm$ 10.9
% Plecoptera	1.7	34.8 $\pm$ 17.8
% Trichoptera	23.5	6.9 $\pm$ 8.6
No. EPT individuals/Chironomids+EPT Individuals	0.9	0.9 $\pm$ 0.1
<b>Total Abundance</b>	7220.0	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
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## RIVPACS Ratios

RIVPACS : Observed taxa P>0.50	11.00
RIVPACS : O:E (p > 0.5)	0.82
RIVPACS : Expected taxa P>0.70	10.20
RIVPACS : Observed taxa P>0.70	8.00
RIVPACS : O:E (p > 0.7)	0.78

## Habitat Description

Variable	NGJOS02	Predicted Group Reference Mean $\pm$ SD
<b>Channel</b>		
Depth-Avg (cm)	13.1	22.5 $\pm$ 10.5
Depth-BankfullMinusWetted (cm)	45.00	26.00 $\pm$ 4.24
Depth-Max (cm)	16.0	32.9 $\pm$ 17.9
Macrophyte (PercentRange)	0	0 $\pm$ 0
Reach-%CanopyCoverage (PercentRange)	1.00	0.94 $\pm$ 0.80
Reach-%Logging (PercentRange)	0	0 $\pm$ 0
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)	0.0060000	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)	0.38	0.51 $\pm$ 0.25
Velocity-Max (m/s)	0.49	0.75 $\pm$ 0.28
Width-Bankfull (m)	5.0	15.6 $\pm$ 12.8
Width-Wetted (m)	4.5	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 (%)	27	61 $\pm$ 27
%Gravel (%)	2	1 $\pm$ 2
%Pebble (%)	71	31 $\pm$ 28
%Sand (%)	0	0 $\pm$ 0
%Silt+Clay (%)	0	1 $\pm$ 3
D50 (cm)	5.00	79.45 $\pm$ 47.98
Dg (cm)	5.2	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))	1	4 $\pm$ 2
<b>Topography</b>		
SlopeLT30% (%)	75.73061	27.92073 $\pm$ 14.83033
<b>Water Chemistry</b>		
Ca (mg/L)	30.0000000	38.6142857 $\pm$ 14.8464843
General-Alkalinity (mg/L)	120.0000000	121.5944444 $\pm$ 36.7225924
General-DO (mg/L)	11.0000000	10.4922222 $\pm$ 0.8833463
General-Hardness (mg/L)	119.0000000	146.8222222 $\pm$ 41.6699011
General-pH (pH)	8.3	8.0 $\pm$ 0.6
General-SolidsTSS (mg/L)	2.0000000	0.5604289 $\pm$ 1.4627232
General-SpCond ( $\mu$ S/cm)	225.0000000	214.2437500 $\pm$ 77.1891440
General-TempAir (Degrees Celsius)	19.0	10.5 $\pm$ 4.2
General-TempWater (Degrees Celsius)	19.0000000	6.8794444 $\pm$ 1.7335020
Mg (mg/L)	10.7000000	9.8814286 $\pm$ 6.1601202
Nitrogen-TN (mg/L)	0.1300000	0.0688889 $\pm$ 0.0759171
Phosphorus-TP (mg/L)	0.0025000	0.0032778 $\pm$ 0.0061816