

**Site Description**

<b>Study Name</b>	CBWQ-Slocan
<b>Site</b>	NJK0C01
<b>Sampling Date</b>	Sep 15 2008
<b>Know Your Watershed Basin</b>	Slocan
<b>Province / Territory</b>	British Columbia
<b>Terrestrial Ecological Classification</b>	Montane Cordillera EcoZone Columbia Mountains and Highlands EcoRegion
<b>Coordinates (decimal degrees)</b>	49.60000 N, 117.76667 W
<b>Altitude</b>	
<b>Local Basin Name</b>	Koch Creek columbia Basin
<b>Stream Order</b>	4



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>	September 05, 2017
<b>Taxonomic Level</b>	Family

**Cabin Assessment Results**

<b>Predictive Model Variables</b>	Depth-Avg Latitude Longitude Reg-Ice Reg-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>	4.9%	4.7%	5.0%	79.5%	5.9%
<b>CABIN Assessment of NJK0C01 on Sep 15, 2008</b>	Similar to Reference				

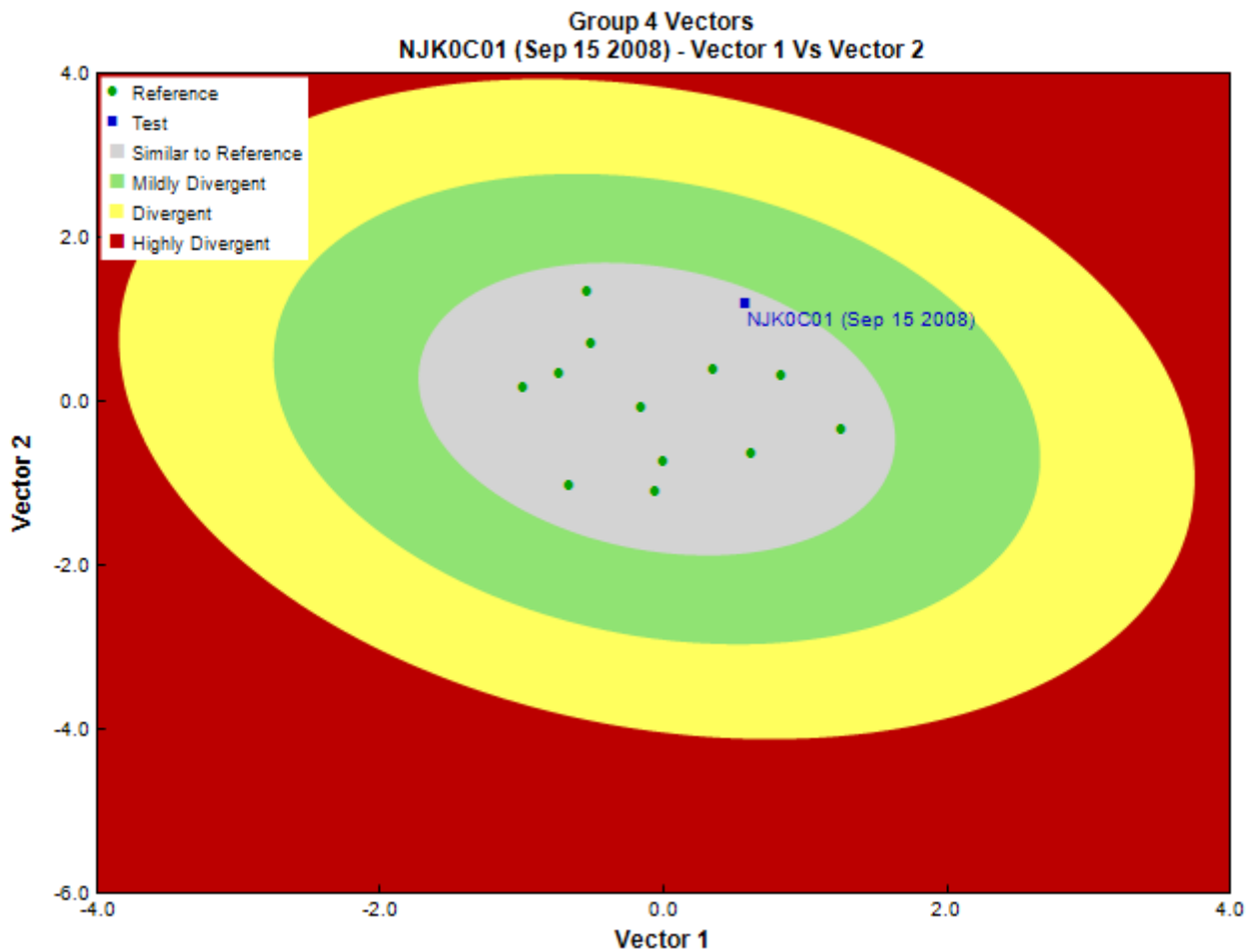


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

**Sample Information**

<b>Sampling Device</b>	Kick Net
<b>Mesh Size</b>	400
<b>Sampling Time</b>	3
<b>Taxonomist</b>	Dave Langill, EcoAnalysts, Inc.
<b>Date Taxonomy Completed</b>	November 11, 2008
	Marchant Box
<b>Sub-Sample Proportion</b>	100/100

## Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
Arthropoda	Arachnida	Trombidiformes	Sperchontidae	1	1.0
	Insecta	Coleoptera	Elmidae	1	1.0
		Diptera	Chironomidae	101	101.0
			Empididae	1	1.0
			Tipulidae	1	1.0
		Ephemeroptera	Baetidae	177	177.0
			Ephemeridae	9	9.0
			Heptageniidae	57	57.0
			Leptophlebiidae	2	2.0
		Plecoptera	Nemouridae	2	2.0
			Perlidae	1	1.0
		Trichoptera	Apataniidae	3	3.0
			Hydropsychidae	2	2.0
			Rhyacophilidae	1	1.0
			Uenoidae	2	2.0
			Total	361	361.0

## Metrics

Name	NJK0C01	Predicted Group Reference Mean $\pm$ SD
<b>Bray-Curtis Distance</b>	0.5	0.4 $\pm$ 0.1
<b>Biotic Indices</b>		
<b>Hilsenhoff Family index (North-West)</b>	4.5	3.2 $\pm$ 0.3
<b>Intolerant taxa</b>	--	
<b>Long-lived taxa</b>	2.0	2.1 $\pm$ 1.0
<b>Tolerant individuals (%)</b>	--	0.8 $\pm$ 0.3
<b>Functional Measures</b>		
<b>% Filterers</b>	0.6	2.2 $\pm$ 1.8
<b>% Gatherers</b>	30.2	38.4 $\pm$ 12.4
<b>% Predatores</b>	32.1	19.0 $\pm$ 8.5
<b>% Scrapers</b>	66.5	63.2 $\pm$ 19.7
<b>% Shredder</b>	1.9	27.6 $\pm$ 15.2
<b>No. Clinger Taxa</b>	9.0	23.2 $\pm$ 6.3
<b>Number Of Individuals</b>		
<b>% Chironomidae</b>	28.0	7.4 $\pm$ 6.4
<b>% Coleoptera</b>	0.3	1.5 $\pm$ 3.9
<b>% Diptera + Non-insects</b>	28.8	10.8 $\pm$ 7.6
<b>% Ephemeroptera</b>	67.9	51.7 $\pm$ 18.8
<b>% Ephemeroptera that are Baetidae</b>	72.2	40.6 $\pm$ 30.0
<b>% EPT Individuals</b>	70.9	87.7 $\pm$ 7.4
<b>% Odonata</b>	0.0	0.0 $\pm$ 0.0
<b>% of 2 dominant taxa</b>	77.0	57.9 $\pm$ 14.2
<b>% of 5 dominant taxa</b>	96.1	81.6 $\pm$ 7.9
<b>% of dominant taxa</b>	49.0	39.8 $\pm$ 14.9
<b>% Plecoptera</b>	0.8	31.4 $\pm$ 15.4
<b>% Tribe Tanyatarisini</b>	--	
<b>% Trichoptera that are Hydropsychida</b>	25.0	27.0 $\pm$ 26.2
<b>% Tricoptera</b>	2.2	4.5 $\pm$ 2.8
<b>No. EPT individuals/Chironomids+EPT Individuals</b>	0.7	0.9 $\pm$ 0.1
<b>Total Abundance</b>	361.0	587.4 $\pm$ 299.1
<b>Richness</b>		
<b>Chironomidae taxa (genus level only)</b>	1.0	1.0 $\pm$ 0.0
<b>Coleoptera taxa</b>	1.0	0.4 $\pm$ 0.5
<b>Diptera taxa</b>	3.0	3.3 $\pm$ 1.0
<b>Ephemeroptera taxa</b>	4.0	3.8 $\pm$ 0.8
<b>EPT Individuals (Sum)</b>	256.0	526.0 $\pm$ 285.8
<b>EPT taxa (no)</b>	10.0	13.3 $\pm$ 2.7
<b>Odonata taxa</b>	0.0	0.0 $\pm$ 0.0
<b>Pielou's Evenness</b>	0.5	0.7 $\pm$ 0.1
<b>Plecoptera taxa</b>	2.0	6.3 $\pm$ 1.1
<b>Shannon-Wiener Diversity</b>	1.3	1.9 $\pm$ 0.4
<b>Simpson's Diversity</b>	0.7	0.8 $\pm$ 0.1

**Metrics**

Name	NJK0C01	Predicted Group Reference Mean $\pm$ SD
Simpson's Evenness	0.2	0.3 $\pm$ 0.1
Total No. of Taxa	15.0	19.3 $\pm$ 3.7
Trichoptera taxa	4.0	3.2 $\pm$ 1.4

**Frequency and Probability of Taxa Occurrence**

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at NJK0C01
	Group 1	Group 2	Group 3	Group 4	Group 5	
Baetidae	100%	100%	100%	100%	97%	1.00
Capniidae	78%	55%	50%	92%	68%	0.86
Chironomidae	100%	100%	100%	100%	95%	1.00
Chloroperlidae	78%	88%	94%	100%	100%	0.98
EphemereIIDae	78%	100%	100%	100%	100%	0.99
Heptageniidae	100%	100%	100%	100%	100%	1.00
Hydropsychidae	11%	92%	78%	92%	86%	0.87
Nemouridae	100%	100%	100%	100%	100%	1.00
Perlidae	11%	84%	33%	100%	3%	0.86
Perlodidae	78%	78%	89%	92%	81%	0.90
Rhyacophilidae	100%	92%	100%	100%	95%	0.99
Taeniopterygidae	89%	49%	100%	92%	97%	0.90

**RIVPACS Ratios**

RIVPACS : Expected taxa P>0.50	14.29
RIVPACS : Observed taxa P>0.50	9.00
RIVPACS : O:E (p > 0.5)	0.63
RIVPACS : Expected taxa P>0.70	11.34
RIVPACS : Observed taxa P>0.70	7.00
RIVPACS : O:E (p > 0.7)	0.62

**Habitat Description**

Variable	NJK0C01	Predicted Group Reference Mean $\pm$ SD
<b>Bedrock Geology</b>		
Alluvium (%)	0.00000	0.00000 $\pm$ 0.00000
Intrusive (%)	99.85139	11.07346 $\pm$ 28.63466
Metamorphic (%)	0.14861	17.96649 $\pm$ 35.53463
Sedimentary (%)	0.00000	70.96005 $\pm$ 44.90394
Ultramafic (%)	0.00000	0.00000 $\pm$ 0.00000
Volcanic (%)	0.00000	0.00000 $\pm$ 0.00000
<b>Channel</b>		
Depth-Avg (cm)	45.3	23.6 $\pm$ 11.1
Depth-Max (cm)	54.1	34.6 $\pm$ 12.3
Macrophyte (PercentRange)	1	0 $\pm$ 0
Reach-%CanopyCoverage (PercentRange)	1.00	1.33 $\pm$ 0.78
Reach-%Logging (PercentRange)	3	0 $\pm$ 0
Reach-Pools (Binary)	0	1 $\pm$ 0
Reach-Rapids (Binary)	0	0 $\pm$ 0
Reach-Riffles (Binary)	1	1 $\pm$ 0
Reach-StraightRun (Binary)	0	1 $\pm$ 1
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)	0.73	0.48 $\pm$ 0.22
Velocity-Max (m/s)	0.90	0.76 $\pm$ 0.36
Width-Bankfull (m)	20.0	13.4 $\pm$ 9.9
<b>Climate</b>		
Precip01_JAN (mm)	132.00000	104.85000 $\pm$ 26.28129
Precip02_FEB (mm)	110.85714	83.66667 $\pm$ 27.10278
Precip03_MAR (mm)	103.14286	77.23611 $\pm$ 27.15950

## Habitat Description

Variable	NJK0C01	Predicted Group Reference Mean $\pm$ SD
Precip04_APR (mm)	132.00000	104.85000 $\pm$ 26.28129
Precip05_MAY (mm)	87.85714	71.65833 $\pm$ 17.81753
Precip06_JUN (mm)	96.14286	78.56667 $\pm$ 15.58521
Precip07_JUL (mm)	73.85714	64.39167 $\pm$ 10.41611
Precip08_AUG (mm)	70.57143	60.53056 $\pm$ 10.43373
Precip09_SEP (mm)	67.14286	56.91944 $\pm$ 10.91783
Precip10_OCT (mm)	79.57143	65.08056 $\pm$ 14.41229
Precip11_NOV (mm)	124.85714	105.93889 $\pm$ 25.04104
Precip12_DEC (mm)	145.57143	116.84444 $\pm$ 29.80954
PrecipTotal_ANNUAL (mm)	1174.28571	952.64722 $\pm$ 226.04690
Temp01_JANMax (Degrees Celsius)	-5.00000	-4.39167 $\pm$ 2.51268
Temp01_JANmin (Degrees Celsius)	-10.85714	-11.40833 $\pm$ 3.53951
Temp02_FEBmax (Degrees Celsius)	-2.57143	-1.70000 $\pm$ 2.12945
Temp02_FEBmin (Degrees Celsius)	-9.00000	-9.17500 $\pm$ 3.33361
Temp03_MARmax (Degrees Celsius)	0.57143	2.50556 $\pm$ 2.87525
Temp03_MARmin (Degrees Celsius)	-6.57143	-6.14167 $\pm$ 2.98556
Temp04_APRmax (Degrees Celsius)	5.14286	7.12222 $\pm$ 3.48771
Temp04_APRmin (Degrees Celsius)	-3.57143	-2.71667 $\pm$ 2.22785
Temp05_MAYmax (Degrees Celsius)	9.85714	12.03889 $\pm$ 3.55434
Temp05_MAYmin (Degrees Celsius)	0.14286	1.04722 $\pm$ 2.08663
Temp06_JUNMax (Degrees Celsius)	13.42857	15.72500 $\pm$ 3.40030
Temp06_JUNMin (Degrees Celsius)	3.42857	4.00278 $\pm$ 2.41085
Temp07_JULmax (Degrees Celsius)	17.42857	19.56111 $\pm$ 3.47275
Temp07_JULmin (Degrees Celsius)	6.00000	6.35833 $\pm$ 2.28332
Temp08_AUGmax (Degrees Celsius)	17.42857	19.52222 $\pm$ 3.51100
Temp08_AUGmin (Degrees Celsius)	6.00000	6.19167 $\pm$ 2.34422
Temp09_SEPmax (Degrees Celsius)	12.42857	14.04444 $\pm$ 3.03456
Temp09_SEPmin (Degrees Celsius)	2.00000	2.04722 $\pm$ 2.37208
Temp10_OCTmax (Degrees Celsius)	5.28571	6.88889 $\pm$ 2.71577
Temp10_OCTmin (Degrees Celsius)	-1.71429	-1.46111 $\pm$ 1.64316
Temp11_NOVmax (Degrees Celsius)	-1.71429	-0.79722 $\pm$ 2.43512
Temp11_NOVmin (Degrees Celsius)	-7.00000	-6.68056 $\pm$ 2.97163
Temp12_DECmax (Degrees Celsius)	-5.00000	-4.66389 $\pm$ 2.69757
Temp12_DECmin (Degrees Celsius)	-10.57143	-10.65833 $\pm$ 3.71739
TempANNUALmax (Degrees Celsius)	5.28571	6.96389 $\pm$ 3.06157
TempANNUALmean (Degrees Celsius)	1.14286	2.25278 $\pm$ 2.66574
TempANNUALmin (Degrees Celsius)	-2.28571	-2.18056 $\pm$ 2.41152
<b>Hydrology</b>		
Drainage-Area (km <sup>2</sup> )	411.41014	124.42081 $\pm$ 200.99192
Perimeter (Km)	141.28288	64.71360 $\pm$ 56.15436
StreamDensity (m/km <sup>2</sup> )	2179.81328	2246.06682 $\pm$ 604.89962
StreamLength (m)	896797.28	302226.63 $\pm$ 500983.26
<b>Landcover</b>		
Natl-AnnCrops (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-Barren (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-BroadleafDense (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-BroadleafOpen (%)	1.82922	1.19263 $\pm$ 2.03874
Natl-BroadleafSparse (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-Coniferous (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-ConiferousDense (%)	0.63963	0.64845 $\pm$ 0.37668
Natl-ConiferousOpen (%)	49.43652	54.62780 $\pm$ 18.30692
Natl-ConiferousSparse (%)	2.48532	0.94121 $\pm$ 1.53621
Natl-Deciduous (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-Developed (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-ExposedLand (%)	24.04120	13.20054 $\pm$ 11.11850
Natl-Grassland (%)	0.00000	1.87556 $\pm$ 1.68508
Natl-Herb (%)	6.99736	5.75738 $\pm$ 2.89836
Natl-MixedForest (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-MixedwoodDense (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-MixedwoodOpen (%)	0.08125	0.04060 $\pm$ 0.10208
Natl-MixedwoodSparse (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-PerennCropsPast (%)	0.00000	0.00000 $\pm$ 0.00000

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Variable	NJK0C01	Predicted Group Reference Mean $\pm$ SD
Natl-Rock/Rubble (%)	0.93325	1.56403 $\pm$ 2.75979
Natl-Shrubland (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-ShrubLow (%)	0.79140	4.98298 $\pm$ 3.22579
Natl-ShrubTall (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-SnowIce (%)	0.00000	0.08491 $\pm$ 0.15475
Natl-Water (%)	0.26352	0.22916 $\pm$ 0.36834
Natl-Wetland (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-WetlandHerb (%)	0.02372	0.12918 $\pm$ 0.35193
Natl-WetlandShrub (%)	0.00000	0.00000 $\pm$ 0.00000
Natl-WetlandTreed (%)	0.00000	0.00000 $\pm$ 0.00000
Reg-Ice (%)	0.00000	0.02487 $\pm$ 0.06034
<b>Substrate Data</b>		
D50 (cm)	28.30	15.12 $\pm$ 14.26
Dominant-1st (Category(0-9))	8	7 $\pm$ 1
Dominant-2nd (Category(0-9))	7	7 $\pm$ 1
Embeddedness (Category(1-5))	4	5 $\pm$ 1
PeriphytonCoverage (Category(1-5))	2	1 $\pm$ 0
SurroundingMaterial (Category(0-9))	2	4 $\pm$ 1
<b>Topography</b>		
ElevationMax (m)	2679.00000	2634.66667 $\pm$ 309.54023
ElevationMin (m)	657.00000	913.41667 $\pm$ 271.25180
ElevationStdev (m)	358.21583	349.02363 $\pm$ 92.12445
Reg-SlopeLT30% (%)	16.68000	18.88386 $\pm$ 9.29866
Slope30-50% (%)	30.46845	29.00215 $\pm$ 6.33837
Slope50-60% (%)	15.56600	13.91808 $\pm$ 1.91315
SlopeAvg (%)	50.75652	52.79851 $\pm$ 8.68755
SlopeGT60% (%)	33.14314	35.47207 $\pm$ 13.39684
SlopeLT30% (%)	20.82240	21.60770 $\pm$ 8.54172
SlopeMax (%)	210.65477	298.94390 $\pm$ 146.30679
SlopeMin (%)	0.00000	0.19777 $\pm$ 0.29213
SlopeStdev (%)	24.29132	26.57529 $\pm$ 4.62351
<b>Water Chemistry</b>		
Ca (mg/L)	5.6000000	21.1083333 $\pm$ 16.8005659
General-Alkalinity (mg/L)	20.5000000	71.7000000 $\pm$ 53.9231440
General-DO (mg/L)	11.0000000	11.4175000 $\pm$ 0.7986708
General-Hardness (mg/L)	17.6000000	84.2750000 $\pm$ 70.6251066
General-pH (pH)	7.4	7.9 $\pm$ 0.4
General-SpCond ( $\mu$ S/cm)	39.5000000	168.9833333 $\pm$ 123.7858182
Mg (mg/L)	0.8600000	7.6666667 $\pm$ 7.9748848
Phosphorus-TP (mg/L)	0.0025000	0.0045833 $\pm$ 0.0049992