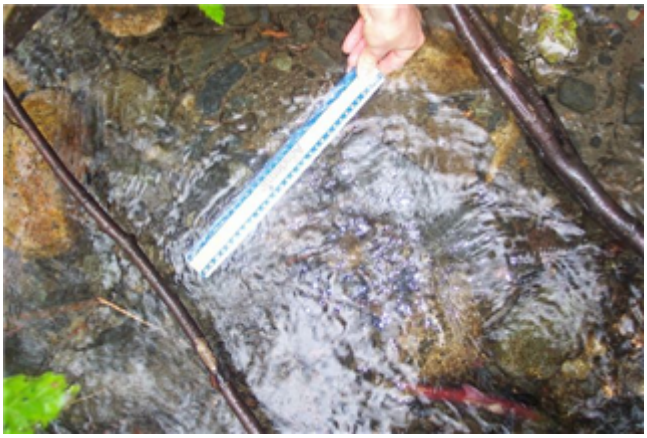
Site Description

Study Name	CBWQ-Slocan
Site	NJBON01
Sampling Date	Oct 03 2007
Know Your Watershed Basin	Slocan
Province / Territory	British Columbia
Terrestrial Ecological Classification	Montane Cordillera EcoZone Columbia Mountains and Highlands EcoRegion
Coordinates (decimal degrees)	50.10000 N, 117.48333 W
Altitude	
Local Basin Name	Slocan River
	Slocan
Stream Order	4

Figure 1. Location Map

Across Reach (No image found)
Aerial (No image found)

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



Substrate

Up Stream

Cabin Assessment Results

Reference Model Summary	
Model	Columbia-Okanagan Preliminary March 2010
Analysis Date	September 05, 2017
Taxonomic Level	Family
Predictive Model Variables	Depth-Avg Latitude Longitude Reg-Ice Reg-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	27.4%	4.7%	11.8%	45.3%	10.8%
CABIN Assessment of NJBON01 on Oct 03, 2007	Similar to Reference				

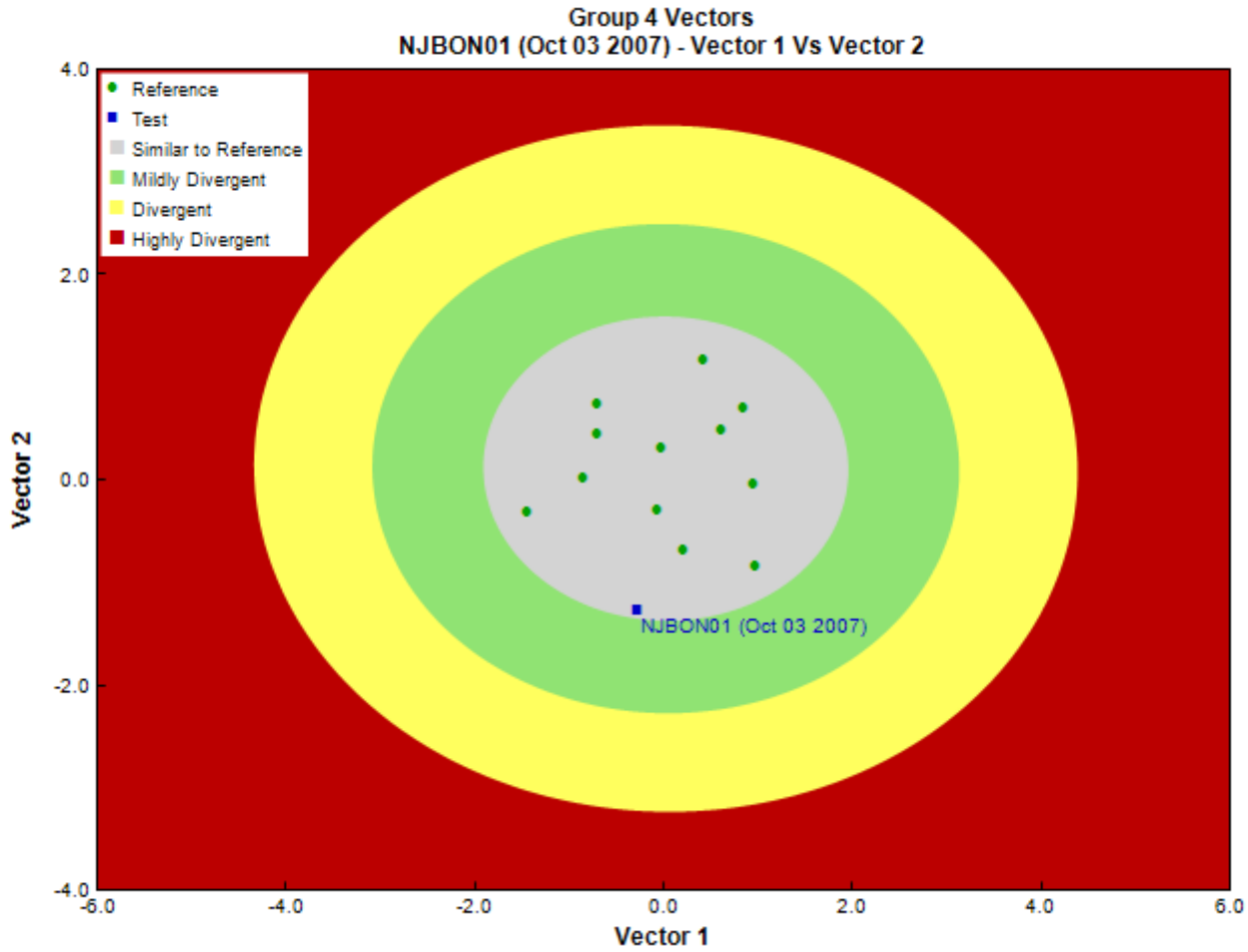


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

Sample Information

Sampling Device	Kick Net
Mesh Size	400
Sampling Time	3
Taxonomist	Gary Lester, Ecoanalysts Inc.
Date Taxonomy Completed	March 01, 2008
	Marchant Box
Sub-Sample Proportion	45/100

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	1	2.2
Arthropoda	Arachnida			3	6.7
		Trombidiformes	Hygrobatidae	1	2.2
			Lebertiidae	3	6.7
			Sperchontidae	1	2.2
			Torrenticolidae	1	2.2
	Insecta	Coleoptera	Elmidae	26	57.8
		Diptera	Ceratopogonidae	1	2.2
			Chironomidae	42	93.3
			Empididae	3	6.7
			Psychodidae	2	4.4
			Simuliidae	2	4.4
			Tipulidae	2	4.4
		Ephemeroptera	Ameletidae	1	2.2
			Baetidae	50	111.1

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
			Ephemerellidae	19	42.2
			Heptageniidae	24	53.3
		Plecoptera	Chloroperlidae	1	2.2
			Nemouridae	8	17.8
			Perlidae	4	8.9
			Taeniopterygidae	1	2.2
		Trichoptera	Brachycentridae	10	22.2
			Glossosomatidae	65	144.4
			Hydropsychidae	11	24.4
			Lepidostomatidae	17	37.8
			Rhyacophilidae	1	2.2
			Uenoidae	1	2.2
			Total	301	668.5

Metrics

Name	NJBON01	Predicted Group Reference Mean ±SD
Bray-Curtis Distance	0.56	0.4 ± 0.1
Biotic Indices		
Hilsenhoff Family index (North-West)	3.1	3.2 ± 0.3
Intolerant taxa	--	
Long-lived taxa	2.0	2.1 ± 1.0
Tolerant individuals (%)	--	0.8 ± 0.3
Functional Measures		
% Filterers	7.6	2.2 ± 1.8
% Gatherers	38.2	38.4 ± 12.4
% Predatores	23.6	19.0 ± 8.5
% Scrapers	56.8	63.2 ± 19.7
% Shredder	21.3	27.6 ± 15.2
No. Clinger Taxa	15.0	23.2 ± 6.3
Number Of Individuals		
% Chironomidae	14.1	7.4 ± 6.4
% Coleoptera	8.7	1.5 ± 3.9
% Diptera + Non-insects	19.8	10.8 ± 7.6
% Ephemeroptera	31.5	51.7 ± 18.8
% Ephemeroptera that are Baetidae	53.2	40.6 ± 30.0
% EPT Individuals	71.5	87.7 ± 7.4
% Odonata	0.0	0.0 ± 0.0
% of 2 dominant taxa	38.6	57.9 ± 14.2
% of 5 dominant taxa	69.5	81.6 ± 7.9
% of dominant taxa	21.8	39.8 ± 14.9
% Plecoptera	4.7	31.4 ± 15.4
% Tribe Tanyatarisini	--	
% Trichoptera that are Hydropsychida	10.5	27.0 ± 26.2
% Tricoptera	35.2	4.5 ± 2.8
No. EPT individuals/Chironomids+EPT Individuals	0.8	0.9 ± 0.1
Total Abundance	668.8	587.4 ± 299.1
Richness		
Chironomidae taxa (genus level only)	1.0	1.0 ± 0.0
Coleoptera taxa	1.0	0.4 ± 0.5
Diptera taxa	6.0	3.3 ± 1.0
Ephemeroptera taxa	4.0	3.8 ± 0.8
EPT Individuals (Sum)	473.3	526.0 ± 285.8
EPT taxa (no)	14.0	13.3 ± 2.7
Odonata taxa	0.0	0.0 ± 0.0
Pielou's Evenness	0.7	0.7 ± 0.1
Plecoptera taxa	4.0	6.3 ± 1.1
Shannon-Wiener Diversity	2.4	1.9 ± 0.4
Simpson's Diversity	0.9	0.8 ± 0.1
Simpson's Evenness	0.3	0.3 ± 0.1
Total No. of Taxa	26.0	19.3 ± 3.7
Trichoptera taxa	6.0	3.2 ± 1.4

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at NJBON01
	Group 1	Group 2	Group 3	Group 4	Group 5	
Baetidae	100%	100%	100%	100%	97%	1.00
Capniidae	78%	55%	50%	92%	68%	0.79
Chironomidae	100%	100%	100%	100%	95%	0.99
Chloroperlidae	78%	88%	94%	100%	100%	0.93
Ephemerellidae	78%	100%	100%	100%	100%	0.94
Heptageniidae	100%	100%	100%	100%	100%	1.00
Nemouridae	100%	100%	100%	100%	100%	1.00
Perlodidae	78%	78%	89%	92%	81%	0.86
Rhyacophilidae	100%	92%	100%	100%	95%	0.99
Taeniopterygidae	89%	49%	100%	92%	97%	0.90

RIVPACS Ratios

RIVPACS : Expected taxa P>0.50	13.96
RIVPACS : Observed taxa P>0.50	15.00
RIVPACS : O:E (p > 0.5)	1.07
RIVPACS : Expected taxa P>0.70	9.40
RIVPACS : Observed taxa P>0.70	8.00
RIVPACS : O:E (p > 0.7)	0.85

Habitat Description

Variable	NJBON01	Predicted Group Reference Mean ±SD
Channel		
Depth-Avg (cm)	50.0	23.6 ± 11.1
Reach-%CanopyCoverage (PercentRange)	3.00	1.33 ± 0.78
Reach-%Logging (PercentRange)	1	0 ± 0
Reach-Pools (Binary)	0	1 ± 0
Reach-Rapids (Binary)	0	0 ± 0
Reach-Riffles (Binary)	1	1 ± 0
Reach-StraightRun (Binary)	0	1 ± 1
Veg-Coniferous (Binary)	1	1 ± 0
Veg-Deciduous (Binary)	1	1 ± 0
Veg-GrassesFerns (Binary)	0	1 ± 0
Veg-Shrubs (Binary)	1	1 ± 0
Velocity-Avg (m/s)	1.13	0.48 ± 0.22
Velocity-Max (m/s)	1.20	0.76 ± 0.36
Width-Bankfull (m)	9.9	13.4 ± 9.9
Width-Wetted (m)	8.7	8.5 ± 5.8
XSEC-VelMethod (Category (1-3))	3	1 ± 0
Landcover		
Reg-Ice (%)	0.00000	0.02487 ± 0.06034
Substrate Data		
Dominant-1st (Category(0-9))	7	7 ± 1
Dominant-2nd (Category(0-9))	8	7 ± 1
Embeddedness (Category(1-5))	4	5 ± 1
SurroundingMaterial (Category(0-9))	3	4 ± 1
Topography		
Reg-SlopeLT30% (%)	28.34000	18.88386 ± 9.29866
Water Chemistry		
General-Alkalinity (mg/L)	61.6000000	71.7000000 ± 53.9231440
General-Hardness (mg/L)	153.9000000	84.2750000 ± 70.6251066
General-pH (pH)	7.6	7.9 ± 0.4
General-SolidsTSS (mg/L)	11.4000000	0.8849836 ± 1.2378575
General-SpCond (µS/cm)	144.0000000	168.9833333 ± 123.7858182
General-TempWater (Degrees Celsius)	7.5000000	7.3183333 ± 2.7240839
General-Turbidity (NTU)	1.4000000	0.2020000
Nitrogen-TN (mg/L)	0.1300000	0.0883333 ± 0.0521943
Phosphorus-TP (mg/L)	0.0170000	0.0045833 ± 0.0049992

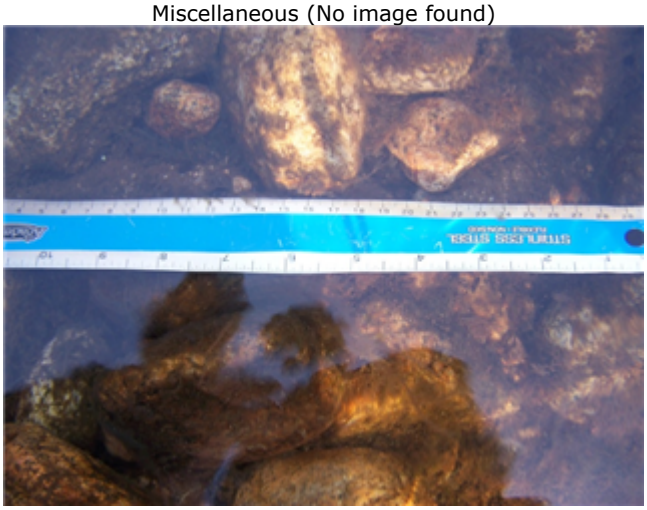
Site Description

Study Name	CBWQ-Slocan
Site	NJBON01
Sampling Date	Oct 01 2012
Know Your Watershed Basin	Slocan
Province / Territory	British Columbia
Terrestrial Ecological Classification	Montane Cordillera EcoZone Columbia Mountains and Highlands EcoRegion
Coordinates (decimal degrees)	50.10000 N, 117.48333 W
Altitude	
Local Basin Name	Slocan River
	Slocan
Stream Order	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	
Model	Columbia-Okanagan Preliminary March 2010
Analysis Date	September 05, 2017
Taxonomic Level	Family

Cabin Assessment Results

Predictive Model Variables	Depth-Avg Latitude Longitude Reg-Ice Reg-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	100.0%	0.0%	0.0%	0.0%	0.0%
CABIN Assessment of NJBON01 on Oct 01, 2012	Similar to Reference				

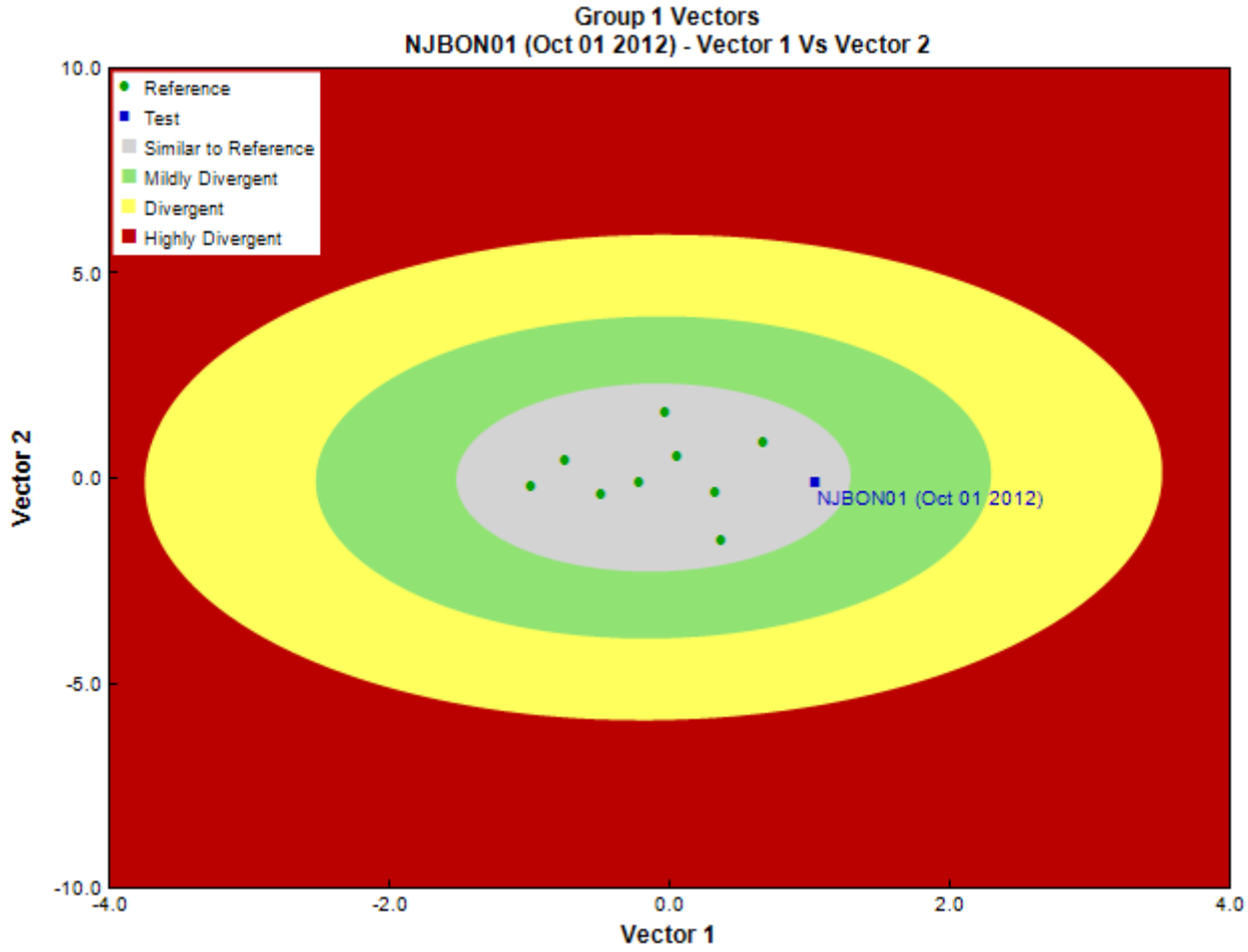


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

Sample Information

Sampling Device	Kick Net
Mesh Size	400
Sampling Time	3
Taxonomist	Eco Analsyts, EcoAnalysts
Date Taxonomy Completed	February 09, 2013
	Marchant Box
Sub-Sample Proportion	100/100

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
Arthropoda	Arachnida	Trombidiformes	Hygrobatidae	1	1.0
			Lebertiidae	1	1.0
			Sperchontidae	1	1.0
			Stygothrombidiidae	1	1.0
			Torrenticolidae	1	1.0
	Insecta	Coleoptera	Elmidae	35	35.0
		Diptera	Ceratopogonidae	12	12.0
			Chironomidae	104	104.0
			Empididae	4	4.0
			Pelecorhynchidae	1	1.0
			Psychodidae	30	30.0
			Tipulidae	3	3.0
		Ephemeroptera	Baetidae	32	32.0
			Ephemerellidae	29	29.0
			Heptageniidae	30	30.0
		Plecoptera	Capniidae	3	3.0
			Chloroperlidae	40	40.0
			Nemouridae	4	4.0
			Perlidae	9	9.0
			Perlodidae	8	8.0
			Taeniopterygidae	2	2.0
		Trichoptera	Brachycentridae	2	2.0
			Glossosomatidae	16	16.0
			Hydropsychidae	6	6.0
			Philopotamidae	9	9.0
			Rhyacophilidae	27	27.0
			Total	411	411.0

Metrics

Name	NJBON01	Predicted Group Reference Mean ±SD
Bray-Curtis Distance	0.59	0.4 ± 0.2
Biotic Indices		
Hilsenhoff Family index (North-West)	3.9	3.3 ± 0.5
Intolerant taxa	--	1.0
Long-lived taxa	2.0	2.3 ± 1.5
Tolerant individuals (%)	--	
Functional Measures		
% Filterers	4.1	1.1 ± 1.5
% Gatherers	63.5	35.2 ± 11.4
% Predatores	52.6	16.9 ± 7.6
% Scrapers	40.6	60.6 ± 17.9
% Shredder	11.9	19.4 ± 13.9
No. Clinger Taxa	15.0	18.6 ± 4.2
Number Of Individuals		
% Chironomidae	25.3	8.1 ± 6.9
% Coleoptera	8.5	0.5 ± 1.7
% Diptera + Non-insects	38.7	11.2 ± 7.6
% Ephemeroptera	22.1	61.6 ± 17.6
% Ephemeroptera that are Baetidae	35.2	50.3 ± 24.0
% EPT Individuals	52.8	88.3 ± 7.4
% Odonata	0.0	0.0 ± 0.0
% of 2 dominant taxa	35.0	59.1 ± 14.3
% of 5 dominant taxa	58.6	84.1 ± 7.1
% of dominant taxa	25.3	41.5 ± 15.1
% Plecoptera	16.1	23.9 ± 14.1
% Tribe Tanyatarisini	--	
% Trichoptera that are Hydropsychida	10.0	12.9 ± 23.9
% Tricoptera	14.6	2.8 ± 2.9
No. EPT individuals/Chironomids+EPT Individuals	0.7	0.9 ± 0.1
Total Abundance	411.0	1453.9 ± 1355.4
Richness		

Metrics

Name	NJBON01	Predicted Group Reference Mean ±SD
Chironomidae taxa (genus level only)	1.0	1.0 ± 0.0
Coleoptera taxa	1.0	0.2 ± 0.4
Diptera taxa	6.0	2.9 ± 1.0
Ephemeroptera taxa	3.0	3.6 ± 0.6
EPT Individuals (Sum)	217.0	1288.9 ± 1149.7
EPT taxa (no)	14.0	11.1 ± 2.1
Odonata taxa	0.0	0.0 ± 0.0
Pielou's Evenness	0.8	0.7 ± 0.1
Plecoptera taxa	6.0	5.1 ± 1.2
Shannon-Wiener Diversity	2.6	1.8 ± 0.4
Simpson's Diversity	0.9	0.7 ± 0.1
Simpson's Evenness	0.3	0.3 ± 0.1
Total No. of Taxa	26.0	16.3 ± 3.2
Trichoptera taxa	5.0	2.3 ± 1.3

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at NJBON01
	Group 1	Group 2	Group 3	Group 4	Group 5	
Baetidae	100%	100%	100%	100%	97%	1.00
Capniidae	78%	55%	50%	92%	68%	0.78
Chironomidae	100%	100%	100%	100%	95%	1.00
Chloroperlidae	78%	88%	94%	100%	100%	0.78
Ephemerellidae	78%	100%	100%	100%	100%	0.78
Heptageniidae	100%	100%	100%	100%	100%	1.00
Lebertiidae	78%	65%	39%	58%	5%	0.78
Nemouridae	100%	100%	100%	100%	100%	1.00
Perlodidae	78%	78%	89%	92%	81%	0.78
Rhyacophilidae	100%	92%	100%	100%	95%	1.00
Sperchontidae	78%	63%	50%	42%	65%	0.78
Taeniopterygidae	89%	49%	100%	92%	97%	0.89

RIVPACS Ratios

RIVPACS : Expected taxa P>0.50	12.33
RIVPACS : Observed taxa P>0.50	14.00
RIVPACS : O:E (p > 0.5)	1.14
RIVPACS : Expected taxa P>0.70	10.56
RIVPACS : Observed taxa P>0.70	12.00
RIVPACS : O:E (p > 0.7)	1.14

Habitat Description

Variable	NJBON01	Predicted Group Reference Mean ±SD
Channel		
Depth-Avg (cm)	192.0	39.4 ± 23.6
Depth-Max (cm)	255.0	55.6 ± 30.6
Macrophyte (PercentRange)	0	0 ± 0
Reach-%CanopyCoverage (PercentRange)	2.00	0.67 ± 1.00
Reach-Pools (Binary)	1	0 ± 1
Reach-Rapids (Binary)	0	0 ± 0
Reach-Riffles (Binary)	1	1 ± 1
Reach-StraightRun (Binary)	1	1 ± 1
Slope (m/m)	0.0960000	0.0440367 ± 0.0734738
Veg-Coniferous (Binary)	1	1 ± 0
Veg-Deciduous (Binary)	1	1 ± 0
Veg-GrassesFerns (Binary)	0	1 ± 0
Veg-Shrubs (Binary)	1	1 ± 0
Velocity-Avg (m/s)	2.28	0.64 ± 0.29
Velocity-Max (m/s)	4.08	0.81 ± 0.28
Width-Bankfull (m)	20.1	27.7 ± 17.6

Habitat Description

Variable	NJBON01	Predicted Group Reference Mean ±SD
Width-Wetted (m)	9.8	17.6 ± 11.6
Landcover		
Reg-Ice (%)	0.00000	11.04418 ± 12.39512
Substrate Data		
%Bedrock (%)	0	1 ± 2
%Boulder (%)	7	1 ± 2
%Cobble (%)	77	55 ± 30
%Gravel (%)	0	2 ± 2
%Pebble (%)	16	40 ± 28
%Sand (%)	0	0 ± 0
%Silt+Clay (%)	0	0 ± 1
D50 (cm)	10.75	8.05 ± 3.69
Dg (cm)	11.0	7.5 ± 3.2
Dominant-1st (Category(0-9))	6	6 ± 2
Dominant-2nd (Category(0-9))	7	6 ± 1
Embeddedness (Category(1-5))	3	4 ± 1
PeriphytonCoverage (Category(1-5))	3	3 ± 1
Topography		
Reg-SlopeLT30% (%)	28.34000	27.80144 ± 15.50843
Water Chemistry		
General-Conductivity (µS/cm)	130.4000000	75.3777778 ± 42.7748109
General-DO (mg/L)	11.0000000	11.4277778 ± 1.0113454
General-pH (pH)	6.9	7.6 ± 0.6
General-TempAir (Degrees Celsius)	12.5	4.2
General-TempWater (Degrees Celsius)	7.5000000	5.7844444 ± 2.4754197
General-Turbidity (NTU)	0.2500000	67.5295000 ± 95.4176962

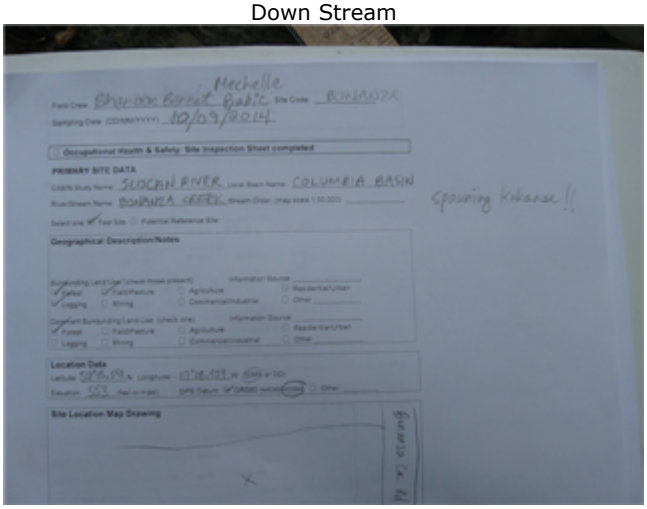
Site Description

Study Name	CBWQ-Slocan
Site	NJBON01
Sampling Date	Sep 10 2014
Know Your Watershed Basin	Slocan
Province / Territory	British Columbia
Terrestrial Ecological Classification	Montane Cordillera EcoZone Columbia Mountains and Highlands EcoRegion
Coordinates (decimal degrees)	50.10000 N, 117.48333 W
Altitude	1814
Local Basin Name	Slocan River
	Slocan
Stream Order	4

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	September 05, 2017
Taxonomic Level	Family
Predictive Model Variables	Depth-Avg Latitude Longitude Reg-Ice Reg-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	0.2%	11.4%	17.5%	53.1%	17.8%
CABIN Assessment of NJBON01 on Sep 10, 2014	Similar to Reference				

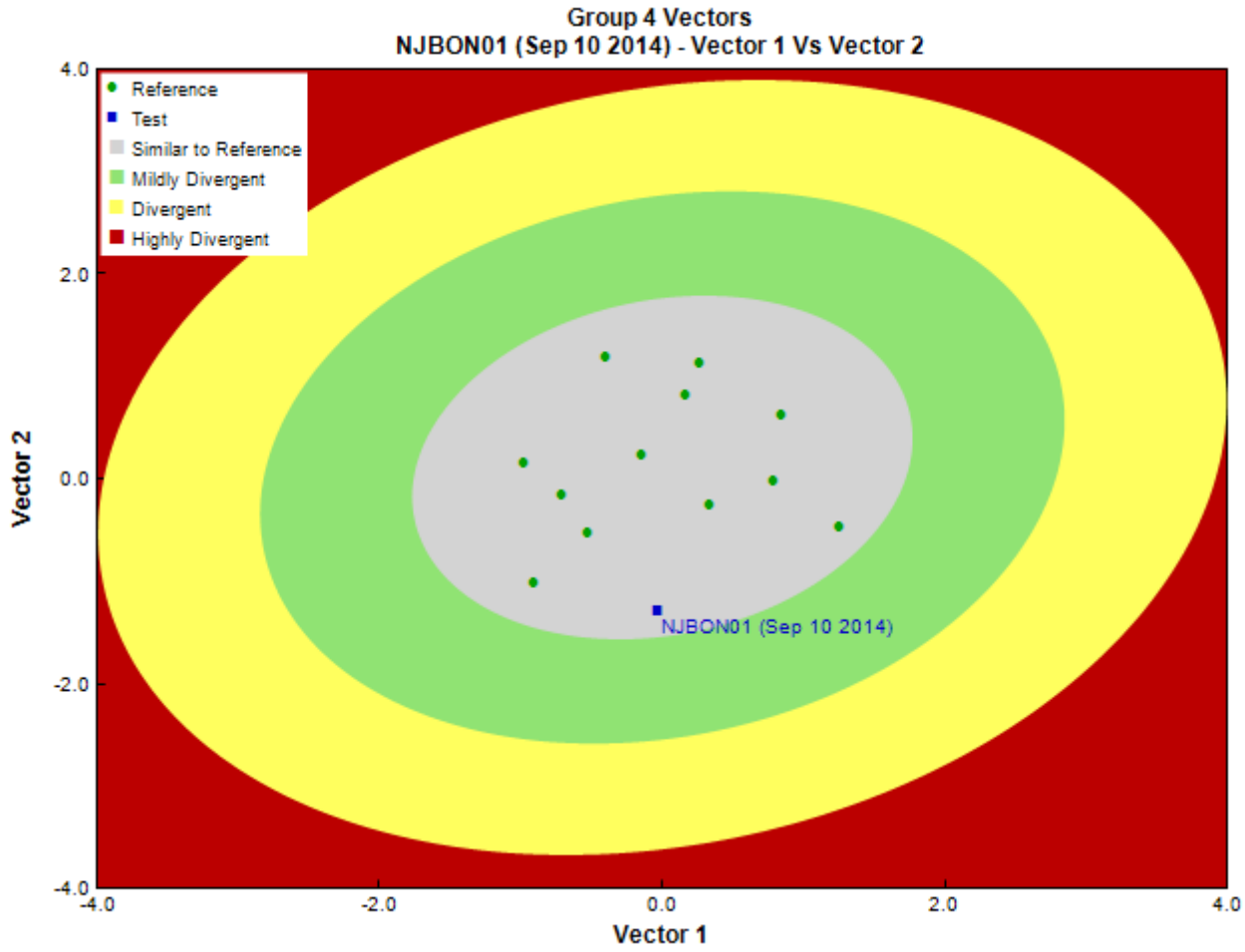


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

Sample Information

Sampling Device	Kick Net
Mesh Size	400
Sampling Time	3
Taxonomist	Pina Viola, Consultant
Date Taxonomy Completed	January 21, 2015
	Marchant Box
Sub-Sample Proportion	24/100

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	2	8.3
Arthropoda	Arachnida	Sarcoptiformes		1	4.2
		Trombidiformes	Sperchontidae	3	12.5
	Insecta	Coleoptera	Elmidae	10	41.6
		Diptera	Ceratopogonidae	1	4.2
			Chironomidae	22	91.7
			Empididae	1	4.2
			Psychodidae	1	4.2
			Simuliidae	1	4.2
			Tipulidae	11	45.8
		Ephemeroptera	Ameletidae	1	4.2
			Baetidae	86	358.3
			Ephemerellidae	6	25.0
			Heptageniidae	25	104.2
		Plecoptera	Capniidae	1	4.2

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
			Chloroperlidae	3	12.5
			Nemouridae	8	33.4
			Perlidae	2	8.3
			Taeniopterygidae	1	4.2
		Trichoptera		1	4.2
			Brachycentridae	2	8.3
			Glossosomatidae	124	516.7
			Hydropsychidae	4	16.6
			Philopotamidae	4	16.7
			Rhyacophilidae	7	29.2
			Total	328	1,366.9

Metrics

Name	NJBON01	Predicted Group Reference Mean ±SD
Bray-Curtis Distance	0.61	0.4 ± 0.1
Biotic Indices		
Hilsenhoff Family index (North-West)	2.4	3.2 ± 0.3
Intolerant taxa	--	
Long-lived taxa	4.0	2.1 ± 1.0
Tolerant individuals (%)	--	0.8 ± 0.3
Functional Measures		
% Filterers	3.4	2.2 ± 1.8
% Gatherers	20.7	38.4 ± 12.4
% Predatores	13.4	19.0 ± 8.5
% Scrapers	76.5	63.2 ± 19.7
% Shredder	10.1	27.6 ± 15.2
No. Clinger Taxa	24.0	23.2 ± 6.3
Number Of Individuals		
% Chironomidae	6.7	7.4 ± 6.4
% Coleoptera	3.1	1.5 ± 3.9
% Diptera + Non-insects	12.9	10.8 ± 7.6
% Ephemeroptera	36.2	51.7 ± 18.8
% Ephemeroptera that are Baetidae	72.9	40.6 ± 30.0
% EPT Individuals	84.1	87.7 ± 7.4
% Odonata	0.0	0.0 ± 0.0
% of 2 dominant taxa	64.4	57.9 ± 14.2
% of 5 dominant taxa	82.2	81.6 ± 7.9
% of dominant taxa	38.0	39.8 ± 14.9
% Plecoptera	4.6	31.4 ± 15.4
% Tribe Tanyatarisini	--	
% Trichoptera that are Hydropsychida	2.8	27.0 ± 26.2
% Tricoptera	43.3	4.5 ± 2.8
No. EPT individuals/Chironomids+EPT Individuals	0.9	0.9 ± 0.1
Total Abundance	1366.5	587.4 ± 299.1
Richness		
Chironomidae taxa (genus level only)	1.0	1.0 ± 0.0
Coleoptera taxa	1.0	0.4 ± 0.5
Diptera taxa	6.0	3.3 ± 1.0
Ephemeroptera taxa	4.0	3.8 ± 0.8
EPT Individuals (Sum)	1141.6	526.0 ± 285.8
EPT taxa (no)	14.0	13.3 ± 2.7
Odonata taxa	0.0	0.0 ± 0.0
Pielou's Evenness	0.6	0.7 ± 0.1
Plecoptera taxa	5.0	6.3 ± 1.1
Shannon-Wiener Diversity	2.0	1.9 ± 0.4
Simpson's Diversity	0.8	0.8 ± 0.1
Simpson's Evenness	0.2	0.3 ± 0.1
Total No. of Taxa	23.0	19.3 ± 3.7
Trichoptera taxa	5.0	3.2 ± 1.4

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at NJBON01
	Group 1	Group 2	Group 3	Group 4	Group 5	
Baetidae	100%	100%	100%	100%	97%	1.00
Capniidae	78%	55%	50%	92%	68%	0.76
Chironomidae	100%	100%	100%	100%	95%	0.99
Chloroperlidae	78%	88%	94%	100%	100%	0.98
Ephemerellidae	78%	100%	100%	100%	100%	1.00
Heptageniidae	100%	100%	100%	100%	100%	1.00
Hydropsychidae	11%	92%	78%	92%	86%	0.88
Nemouridae	100%	100%	100%	100%	100%	1.00
Perlodidae	78%	78%	89%	92%	81%	0.88
Rhyacophilidae	100%	92%	100%	100%	95%	0.98
Taeniopterygidae	89%	49%	100%	92%	97%	0.89

RIVPACS Ratios

RIVPACS : Expected taxa P>0.50	12.79
RIVPACS : Observed taxa P>0.50	13.00
RIVPACS : O:E (p > 0.5)	1.02
RIVPACS : Expected taxa P>0.70	10.35
RIVPACS : Observed taxa P>0.70	10.00
RIVPACS : O:E (p > 0.7)	0.97

Habitat Description

Variable	NJBON01	Predicted Group Reference Mean ±SD
Channel		
Depth-Avg (cm)	18.5	23.6 ± 11.1
Depth-BankfullMinusWetted (cm)	68.00	51.38 ± 29.42
Depth-Max (cm)	38.0	34.6 ± 12.3
Macrophyte (PercentRange)	1	0 ± 0
Reach-%CanopyCoverage (PercentRange)	3.00	1.33 ± 0.78
Reach-DomStreamsideVeg (Category (1-4))	2	4 ± 1
Reach-Pools (Binary)	1	1 ± 0
Reach-Rapids (Binary)	0	0 ± 0
Reach-Riffles (Binary)	1	1 ± 0
Reach-StraightRun (Binary)	1	1 ± 1
Slope (m/m)	0.0960000	0.0546683 ± 0.0376269
Veg-Coniferous (Binary)	1	1 ± 0
Veg-Deciduous (Binary)	1	1 ± 0
Veg-GrassesFerns (Binary)	1	1 ± 0
Veg-Shrubs (Binary)	1	1 ± 0
Velocity-Avg (m/s)	0.43	0.48 ± 0.22
Velocity-Max (m/s)	0.77	0.76 ± 0.36
Width-Bankfull (m)	12.0	13.4 ± 9.9
Width-Wetted (m)	10.0	8.5 ± 5.8
XSEC-VelMethod (Category (1-3))	1	1 ± 0
Landcover		
Reg-Ice (%)	0.00000	0.02487 ± 0.06034
Substrate Data		
%Bedrock (%)	0	0 ± 0
%Boulder (%)	2	9 ± 9
%Cobble (%)	96	51 ± 15
%Gravel (%)	0	3 ± 3
%Pebble (%)	2	37 ± 20
%Sand (%)	0	0 ± 0
%Silt+Clay (%)	0	0 ± 0
D50 (cm)	13.00	15.12 ± 14.26
Dg (cm)	13.2	8.2 ± 2.8
Dominant-1st (Category(0-9))	7	7 ± 1
Dominant-2nd (Category(0-9))	6	7 ± 1
Embeddedness (Category(1-5))	5	5 ± 1
PeriphytonCoverage (Category(1-5))	2	1 ± 0

Habitat Description

Variable	NJBON01	Predicted Group Reference Mean ±SD
SurroundingMaterial (Category(0-9))	2	4 ± 1
Topography		
Reg-SlopeLT30% (%)	28.34000	18.88386 ± 9.29866
Water Chemistry		
CO3 (mg/L)	0.2500000	0.0000000 ± 0.0000000
General-Alkalinity (mg/L)	65.4000000	71.7000000 ± 53.9231440
General-Conductivity (µS/cm)	15.0000000	121.8083333 ± 87.6800844
General-DO (mg/L)	12.0000000	11.4175000 ± 0.7986708
General-TempAir (Degrees Celsius)	12.0	26.0
General-TempWater (Degrees Celsius)	7.0000000	7.3183333 ± 2.7240839
HCO3 (mg/L)	79.7000000	0.0000000 ± 0.0000000
Nitrogen-NO2 (mg/L)	0.0025000	0.0027500 ± 0.0062831
Nitrogen-NO2+NO3 (mg/L)	0.0250000	0.0690000
Nitrogen-NO3 (mg/L)	0.0250000	0.0546667 ± 0.0498148
Phosphorus-OrthoP (mg/L)	0.0025000	0.0002727 ± 0.0004671
Phosphorus-TP (mg/L)	0.0025000	0.0045833 ± 0.0049992