Site Description

Study Name	Yukon Territory - DFO
Site	YPS-444
Sampling Date	Jul 25 2016
Know Your Watershed Basin	Alsek
Province / Territory	Yukon Territories
Terrestrial Ecological Classification	Boreal Cordillera EcoZone Ruby Ranges EcoRegion
Coordinates (decimal degrees)	61.07468 N, 137.91806 W
Altitude	2893
Local Basin Name	Jarvis River
	Alsek
Stream Order	5

Figure 1. Location Map

Down Stream

Cabin Assessment Results

Reference Model Summary	
Model	Yukon 2013
Analysis Date	March 20, 2017
Taxonomic Level	Family

Cabin Assessment Results

Predictive Model Variables	Altitude Depth-Avg Longitude Natl-BroadLeafopen Natl-Bryoids Natl-MixedWoodOpen Natl-WetlandHerb Precip02_FEB Precip03_MAR Precip06_JUN Precip07_JUL RainFall06_JUN Temp04_APRmax Velocity-Avg

Reference Groups	**1**	**2**	**3**	**4**	**5**
Number of Reference Sites	23	98	44	108	13
Group Error Rate	34.8%	49.0%	59.1%	53.7%	30.8%
Overall Model Error Rate	50.3%				
Probability of Group Membership	53.5%	26.8%	10.7%	8.9%	0.1%
CABIN Assessment of YPS-444 on Jul 25, 2016	Mildly Divergent				

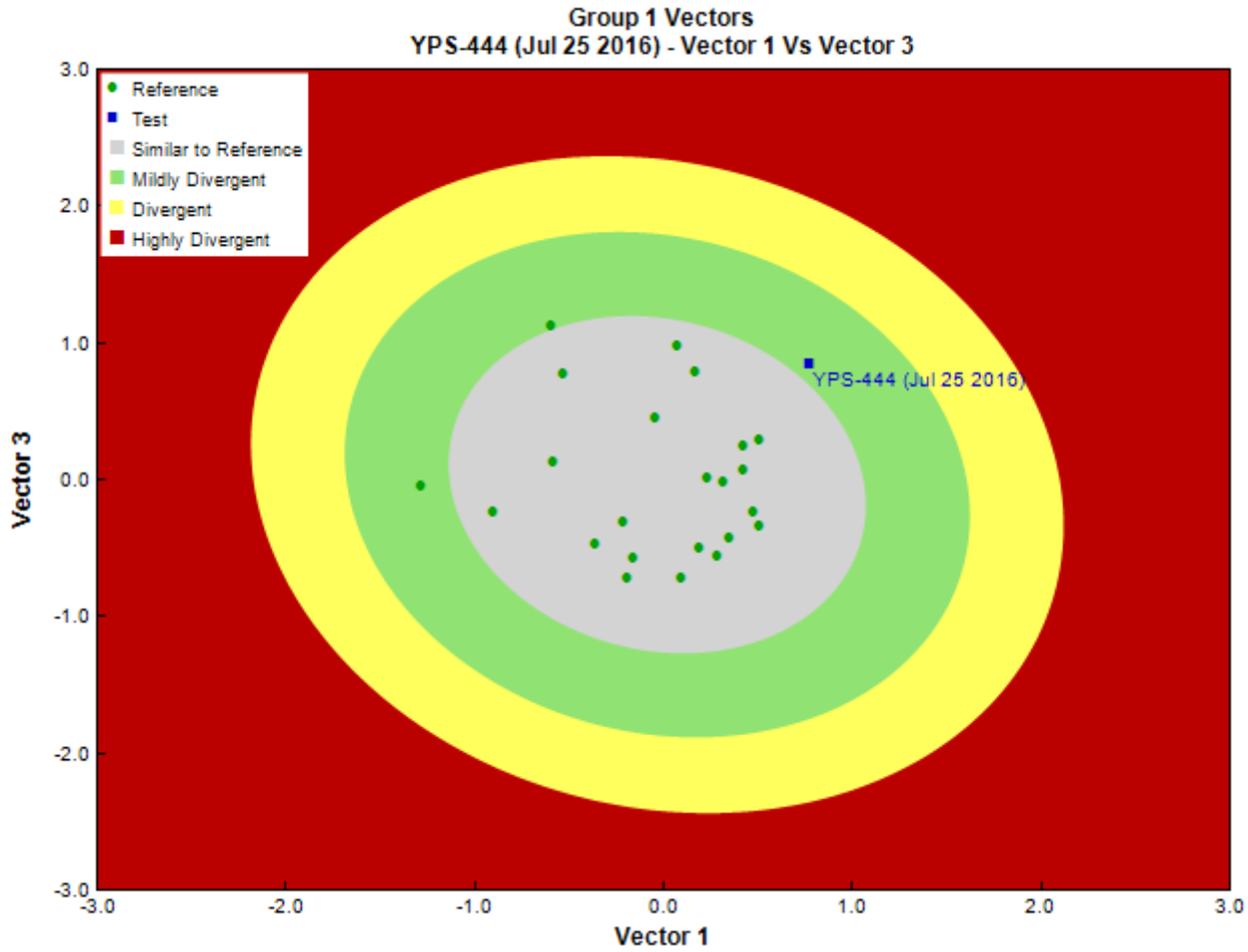

Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

Sample Information

Sampling Device	Kick Net

Sample Information

Mesh Size	500
Sampling Time	3
Taxonomist	-
Date Taxonomy Completed	-
	-
Sub-Sample Proportion	100/100

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
Arthropoda	Insecta	Coleoptera	Staphylinidae	1	1.0
		Diptera	Chironomidae	3	3.0
			Total	4	4.0

Metrics

Name	YPS-444	Predicted Group Reference Mean ±SD
Bray-Curtis Distance	0.6	0.6 ± 0.3
Number Of Individuals		
Total Abundance	4.0	192.2 ± 127.1
Richness		
Total No. of Taxa	2.0	10.1 ± 4.5

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-444
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ameletidae	9%	37%	70%	39%	15%	0.26
Apataniidae	0%	1%	0%	3%	8%	0.01
Arrenuridae	0%	0%	2%	0%	0%	0.00
Athericidae	0%	1%	0%	0%	0%	0.00
Aturidae	0%	0%	5%	2%	8%	0.01
Baetidae	30%	85%	82%	94%	100%	0.56
Blephariceridae	0%	0%	5%	0%	0%	0.00
Brachycentridae	0%	15%	7%	23%	8%	0.07
Caenidae	0%	1%	0%	1%	0%	0.00
Capniidae	9%	23%	43%	50%	77%	0.20
Ceratopogonidae	22%	28%	30%	24%	0%	0.24
Chironomidae	91%	100%	100%	100%	100%	0.95
Chloroperlidae	22%	43%	77%	50%	38%	0.36
Corixidae	13%	8%	0%	0%	0%	0.09
Culicidae	9%	0%	0%	0%	0%	0.05
Curculionidae	0%	1%	0%	1%	0%	0.00
Deuterophlebiidae	0%	3%	14%	1%	0%	0.02
Dixidae	0%	5%	2%	1%	0%	0.02
Dolichopodidae	0%	0%	2%	1%	0%	0.00
Dytiscidae	4%	14%	0%	13%	0%	0.07
Elmidae	4%	3%	0%	2%	0%	0.03
Empididae	9%	49%	77%	59%	54%	0.31
Enchytraeidae	0%	0%	9%	2%	0%	0.01
Ephemerellidae	26%	37%	61%	37%	31%	0.34
Ephydridae	0%	0%	2%	0%	0%	0.00
Feltriidae	0%	0%	2%	6%	8%	0.01
Gammaridae	9%	2%	0%	13%	23%	0.06
Glossiphoniidae	0%	1%	0%	0%	0%	0.00
Glossosomatidae	0%	14%	23%	17%	0%	0.08
Helophoridae	0%	0%	2%	0%	0%	0.00
Heptageniidae	17%	63%	95%	76%	85%	0.43
Hirudinidae	0%	1%	0%	1%	0%	0.00
Hyalellidae	4%	5%	0%	6%	0%	0.04
Hydraenidae	0%	2%	0%	1%	0%	0.01
Hydrobiidae	9%	3%	2%	1%	0%	0.06
Hydropsychidae	4%	13%	36%	8%	0%	0.11

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-444
	Group 1	Group 2	Group 3	Group 4	Group 5	
Hydroptilidae	4%	7%	0%	6%	0%	0.05
Hydrozetidae	4%	3%	20%	28%	31%	0.08
Hydryphantidae	4%	0%	9%	6%	0%	0.04
Hygrobatidae	0%	9%	25%	28%	0%	0.08
Isotomidae	9%	5%	2%	1%	0%	0.06
Lebertiidae	13%	20%	52%	54%	23%	0.23
Lepidostomatidae	0%	1%	5%	4%	8%	0.01
Leptoceridae	0%	1%	0%	2%	0%	0.00
Leptophlebiidae	4%	7%	0%	7%	8%	0.05
Leuctridae	4%	14%	32%	10%	0%	0.10
Limnephilidae	13%	48%	43%	46%	23%	0.29
Limnesiidae	0%	1%	2%	6%	8%	0.01
Limnocharidae	0%	0%	0%	1%	0%	0.00
Lumbriculidae	26%	22%	34%	42%	23%	0.27
Lymnaeidae	13%	9%	0%	3%	0%	0.10
Metretopodidae	0%	1%	0%	1%	0%	0.00
Mideopsidae	0%	0%	2%	0%	0%	0.00
Muscidae	0%	4%	7%	7%	0%	0.02
Naididae	35%	43%	9%	22%	31%	0.33
Nemouridae	39%	74%	100%	81%	100%	0.59
Noctuidae	0%	0%	0%	1%	0%	0.00
Oreoleptidae	0%	0%	0%	1%	0%	0.00
Oxidae	0%	0%	0%	1%	0%	0.00
Peltoperlidae	0%	2%	0%	0%	0%	0.01
Perlidae	0%	2%	2%	1%	0%	0.01
Perlodidae	17%	31%	70%	49%	62%	0.29
Phryganeidae	0%	1%	0%	0%	0%	0.00
Physidae	4%	1%	2%	4%	0%	0.03
Pionidae	0%	0%	2%	2%	0%	0.00
Pisidiidae	17%	9%	2%	7%	8%	0.13
Planariidae	0%	2%	2%	3%	0%	0.01
Planorbidae	13%	4%	2%	2%	8%	0.08
Poduridae	0%	1%	0%	1%	0%	0.00
Psychodidae	22%	15%	11%	25%	8%	0.19
Rhyacophilidae	4%	34%	68%	25%	15%	0.21
Scathophagidae	0%	2%	0%	0%	0%	0.01
Simuliidae	39%	78%	86%	87%	77%	0.59
Sperchontidae	22%	49%	68%	68%	31%	0.38
Staphylinidae	4%	0%	0%	1%	0%	0.02
Stratiomyidae	0%	0%	0%	2%	0%	0.00
Tabanidae	4%	0%	0%	0%	0%	0.02
Taeniopterygidae	0%	1%	5%	2%	15%	0.01
Tipulidae	35%	47%	55%	62%	46%	0.43
Torrenticolidae	0%	0%	0%	5%	8%	0.00
Tubificidae	4%	1%	9%	13%	0%	0.05
Uenoidae	0%	8%	30%	1%	0%	0.05
Valvatidae	4%	9%	5%	11%	8%	0.06

RIVPACS Ratios

RIVPACS : Expected taxa P>0.50	2.69
RIVPACS : Observed taxa P>0.50	1.00
RIVPACS : O:E (p > 0.5)	0.37
RIVPACS : Expected taxa P>0.70	0.95
RIVPACS : Observed taxa P>0.70	1.00
RIVPACS : O:E (p > 0.7)	1.05

Habitat Description

Variable	YPS-444	Predicted Group Reference Mean ±SD
Bedrock Geology		

Habitat Description

Variable	YPS-444	Predicted Group Reference Mean ±SD
Channel		
Depth-Avg (cm)	75.0	36.5 ± 24.3
Velocity-Avg (m/s)	0.50	0.42 ± 0.29
Climate		
Precip02_FEB (mm)	37.28222	27.73943 ± 9.10561
Precip03_MAR (mm)	34.31444	25.54674 ± 9.71520
Precip06_JUN (mm)	67.19389	49.78117 ± 15.10067
Precip07_JUL (mm)	85.67778	63.45366 ± 19.76560
Rainfall06_JUN (mm)	62.65445	45.78194 ± 13.48156
Temp04_APRmax (Degrees Celsius)	1.94167	-0.26448 ± 3.57165
Hydrology		
Landcover		
Natl-BroadleafOpen (%)	0.00000	0.19525 ± 0.41187
Natl-Bryoids (%)	0.00000	0.16846 ± 0.41890
Natl-MixedwoodOpen (%)	0.00000	2.45662 ± 5.01153
Natl-WetlandHerb (%)	0.00000	0.22137 ± 0.64189
Substrate Data		
Water Chemistry		