Site Description

Study Name	Yukon Territory - DFO
Site	YPS-585
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)	61.17294 N, 138.00465 W
Altitude	3732
Local Basin Name	Larose Creek
	Alsek
Stream Order	0

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	6.4%	9.1%	40.6%	29.2%	14.7%
CABIN Assessment of YPS-585 on Jul 25, 2016	Similar to Reference				

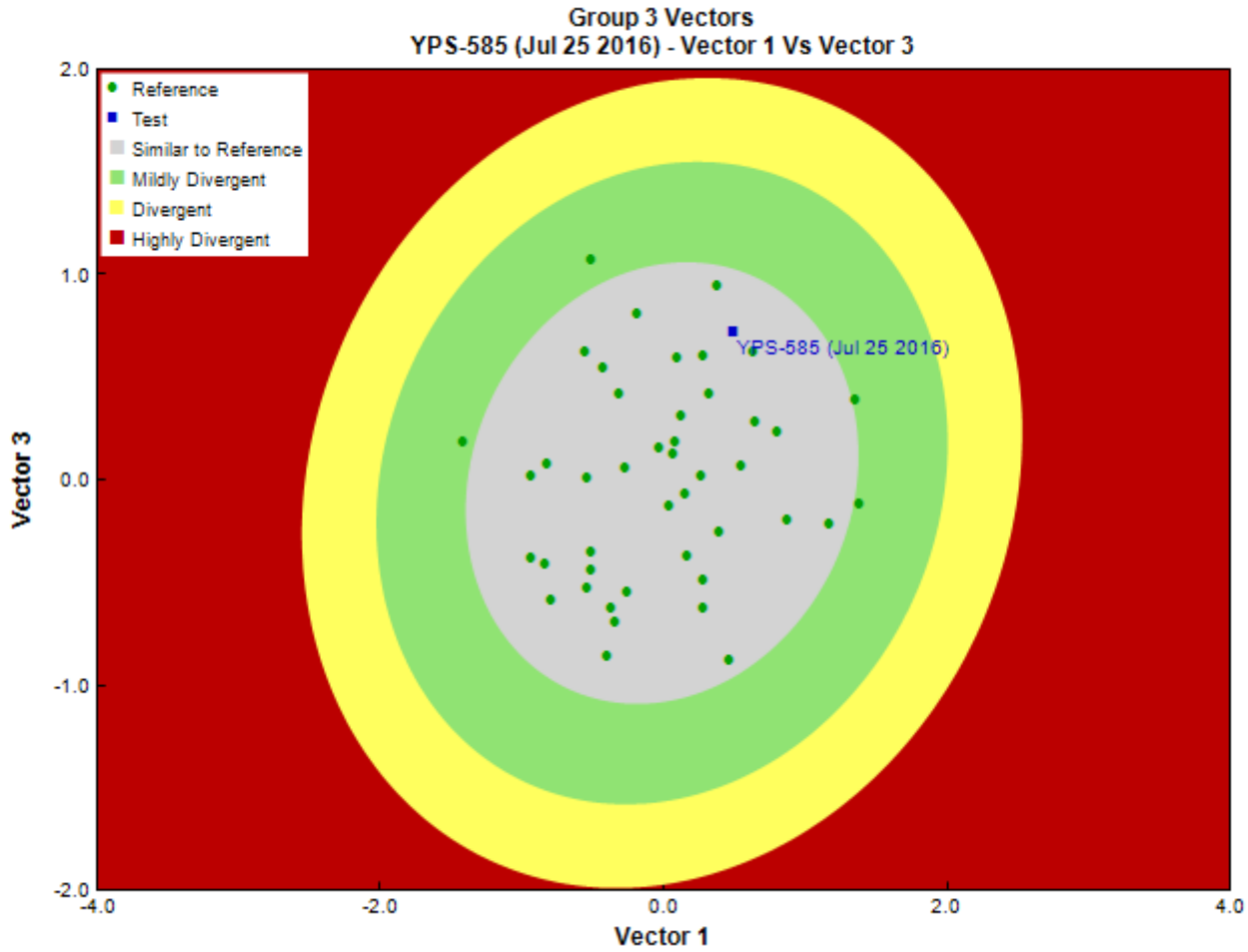

Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

Sample Information

Sampling Device	Kick Net

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
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	84	84.0
Arthropoda	Collembola	Collembola		1	1.0
	Insecta	Diptera	Chironomidae	72	72.0
			Empididae	8	8.0
			Muscidae	2	2.0
			Simuliidae	62	62.0
			Tipulidae	1	1.0
		Ephemeroptera	Ameletidae	25	25.0
			Baetidae	52	52.0
			Ephemerellidae	1	1.0
			Heptageniidae	116	116.0
		Plecoptera	Capniidae	1	1.0
			Chloroperlidae	11	11.0
			Nemouridae	68	68.0
			Perlodidae	14	14.0
		Trichoptera	Limnephilidae	3	3.0
			Total	521	521.0

Metrics

Name	YPS-585	Predicted Group Reference Mean ±SD
Bray-Curtis Distance	0.38	0.4 ± 0.1
Number Of Individuals		
Total Abundance	521.0	567.0 ± 737.1
Richness		
Total No. of Taxa	15.0	10.6 ± 6.1

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-585
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ameletidae	9%	37%	70%	39%	15%	0.46
Apataniidae	0%	1%	0%	3%	8%	0.02
Arrenuridae	0%	0%	2%	0%	0%	0.01
Athericidae	0%	1%	0%	0%	0%	0.00
Aturidae	0%	0%	5%	2%	8%	0.04
Baetidae	30%	85%	82%	94%	100%	0.85
Blephariceridae	0%	0%	5%	0%	0%	0.02
Brachycentridae	0%	15%	7%	23%	8%	0.12
Caenidae	0%	1%	0%	1%	0%	0.00
Capniidae	9%	23%	43%	50%	77%	0.46
Ceratopogonidae	22%	28%	30%	24%	0%	0.23
Chironomidae	91%	100%	100%	100%	100%	0.99
Chloroperlidae	22%	43%	77%	50%	38%	0.57
Corixidae	13%	8%	0%	0%	0%	0.02
Culicidae	9%	0%	0%	0%	0%	0.01
Curculionidae	0%	1%	0%	1%	0%	0.00
Deuterophlebiidae	0%	3%	14%	1%	0%	0.06
Dixidae	0%	5%	2%	1%	0%	0.02
Dolichopodidae	0%	0%	2%	1%	0%	0.01
Dytiscidae	4%	14%	0%	13%	0%	0.05
Elmidae	4%	3%	0%	2%	0%	0.01
Empididae	9%	49%	77%	59%	54%	0.62

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-585
	Group 1	Group 2	Group 3	Group 4	Group 5	
Enchytraeidae	0%	0%	9%	2%	0%	0.04
Ephemerellidae	26%	37%	61%	37%	31%	0.45
Ephydridae	0%	0%	2%	0%	0%	0.01
Feltriidae	0%	0%	2%	6%	8%	0.04
Gammaridae	9%	2%	0%	13%	23%	0.08
Glossiphoniidae	0%	1%	0%	0%	0%	0.00
Glossosomatidae	0%	14%	23%	17%	0%	0.15
Helophoridae	0%	0%	2%	0%	0%	0.01
Heptageniidae	17%	63%	95%	76%	85%	0.80
Hirudinidae	0%	1%	0%	1%	0%	0.00
Hyalellidae	4%	5%	0%	6%	0%	0.02
Hydraenidae	0%	2%	0%	1%	0%	0.00
Hydrobiidae	9%	3%	2%	1%	0%	0.02
Hydropsychidae	4%	13%	36%	8%	0%	0.19
Hydroptilidae	4%	7%	0%	6%	0%	0.03
Hydrozetidae	4%	3%	20%	28%	31%	0.21
Hydryphantidae	4%	0%	9%	6%	0%	0.06
Hygrobatidae	0%	9%	25%	28%	0%	0.19
Isotomidae	9%	5%	2%	1%	0%	0.02
Lebertiidae	13%	20%	52%	54%	23%	0.43
Lepidostomatidae	0%	1%	5%	4%	8%	0.04
Leptoceridae	0%	1%	0%	2%	0%	0.01
Leptophlebiidae	4%	7%	0%	7%	8%	0.04
Leuctridae	4%	14%	32%	10%	0%	0.17
Limnephilidae	13%	48%	43%	46%	23%	0.40
Limnesiidae	0%	1%	2%	6%	8%	0.04
Limnocharidae	0%	0%	0%	1%	0%	0.00
Lumbriculidae	26%	22%	34%	42%	23%	0.33
Lymnaeidae	13%	9%	0%	3%	0%	0.02
Metretopodidae	0%	1%	0%	1%	0%	0.00
Mideopsidae	0%	0%	2%	0%	0%	0.01
Muscidae	0%	4%	7%	7%	0%	0.05
Naididae	35%	43%	9%	22%	31%	0.21
Nemouridae	39%	74%	100%	81%	100%	0.88
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%	0.00
Perlidae	0%	2%	2%	1%	0%	0.01
Perlodidae	17%	31%	70%	49%	62%	0.56
Phryganeidae	0%	1%	0%	0%	0%	0.00
Physidae	4%	1%	2%	4%	0%	0.02
Pionidae	0%	0%	2%	2%	0%	0.01
Pisidiidae	17%	9%	2%	7%	8%	0.06
Planariidae	0%	2%	2%	3%	0%	0.02
Planorbidae	13%	4%	2%	2%	8%	0.04
Poduridae	0%	1%	0%	1%	0%	0.00
Psychodidae	22%	15%	11%	25%	8%	0.16
Rhyacophilidae	4%	34%	68%	25%	15%	0.41
Scathophagidae	0%	2%	0%	0%	0%	0.00
Simuliidae	39%	78%	86%	87%	77%	0.81
Sperchontidae	22%	49%	68%	68%	31%	0.58
Staphylinidae	4%	0%	0%	1%	0%	0.01
Stratiomyidae	0%	0%	0%	2%	0%	0.01
Tabanidae	4%	0%	0%	0%	0%	0.00
Taeniopterygidae	0%	1%	5%	2%	15%	0.05
Tipulidae	35%	47%	55%	62%	46%	0.54
Torrenticolidae	0%	0%	0%	5%	8%	0.02
Tubificidae	4%	1%	9%	13%	0%	0.08
Uenoidae	0%	8%	30%	1%	0%	0.13
Valvatidae	4%	9%	5%	11%	8%	0.07

RIVPACS Ratios

RIVPACS : Expected taxa P>0.50	7.20
RIVPACS : Observed taxa P>0.50	9.00
RIVPACS : O:E (p > 0.5)	1.25
RIVPACS : Expected taxa P>0.70	4.34
RIVPACS : Observed taxa P>0.70	5.00
RIVPACS : O:E (p > 0.7)	1.15

Habitat Description

Variable	YPS-585	Predicted Group Reference Mean ±SD
Bedrock Geology		
Channel		
Depth-Avg (cm)	19.0	32.1 ± 15.8
Velocity-Avg (m/s)	1.14	0.58 ± 0.29
Climate		
Precip02_FEB (mm)	39.25333	36.13728 ± 23.92832
Precip03_MAR (mm)	36.46667	33.12839 ± 21.04203
Precip06_JUN (mm)	69.82333	64.67097 ± 18.68912
Precip07_JUL (mm)	88.93333	78.30006 ± 20.80864
Rainfall06_JUN (mm)	65.09333	52.72477 ± 13.45837
Temp04_APRmax (Degrees Celsius)	1.10000	1.37555 ± 3.73745
Hydrology		
Landcover		
Natl-BroadleafOpen (%)	0.00000	0.67948 ± 1.61907
Natl-Bryoids (%)	0.00000	0.36641 ± 0.83769
Natl-MixedwoodOpen (%)	0.00000	0.96002 ± 1.72070
Natl-WetlandHerb (%)	0.00000	0.03164 ± 0.10034
Substrate Data		
Water Chemistry		