

**Site Description**

<b>Study Name</b>	Yukon Territory - DFO
<b>Site</b>	YPS-577
<b>Sampling Date</b>	Jul 27 2016
<b>Know Your Watershed Basin</b>	Headwaters Yukon
<b>Province / Territory</b>	Yukon Territories
<b>Terrestrial Ecological Classification</b>	Boreal Cordillera EcoZone Yukon Plateau -Central EcoRegion
<b>Coordinates (decimal degrees)</b>	62.40106 N, 137.44690 W
<b>Altitude</b>	2464
<b>Local Basin Name</b>	Big Creek
	Big Creek
<b>Stream Order</b>	4



Figure 1. Location Map



Down Stream

**Cabin Assessment Results**

<b>Reference Model Summary</b>	
<b>Model</b>	Yukon 2013
<b>Analysis Date</b>	March 20, 2017
<b>Taxonomic Level</b>	Family

**Cabin Assessment Results**

<b>Predictive Model Variables</b>	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
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Reference Groups	1	2	3	4	5
<b>Number of Reference Sites</b>	23	98	44	108	13
<b>Group Error Rate</b>	34.8%	49.0%	59.1%	53.7%	30.8%
<b>Overall Model Error Rate</b>	50.3%				
<b>Probability of Group Membership</b>	9.6%	9.9%	28.2%	46.5%	5.6%
<b>CABIN Assessment of YPS-577 on Jul 27, 2016</b>	Divergent				

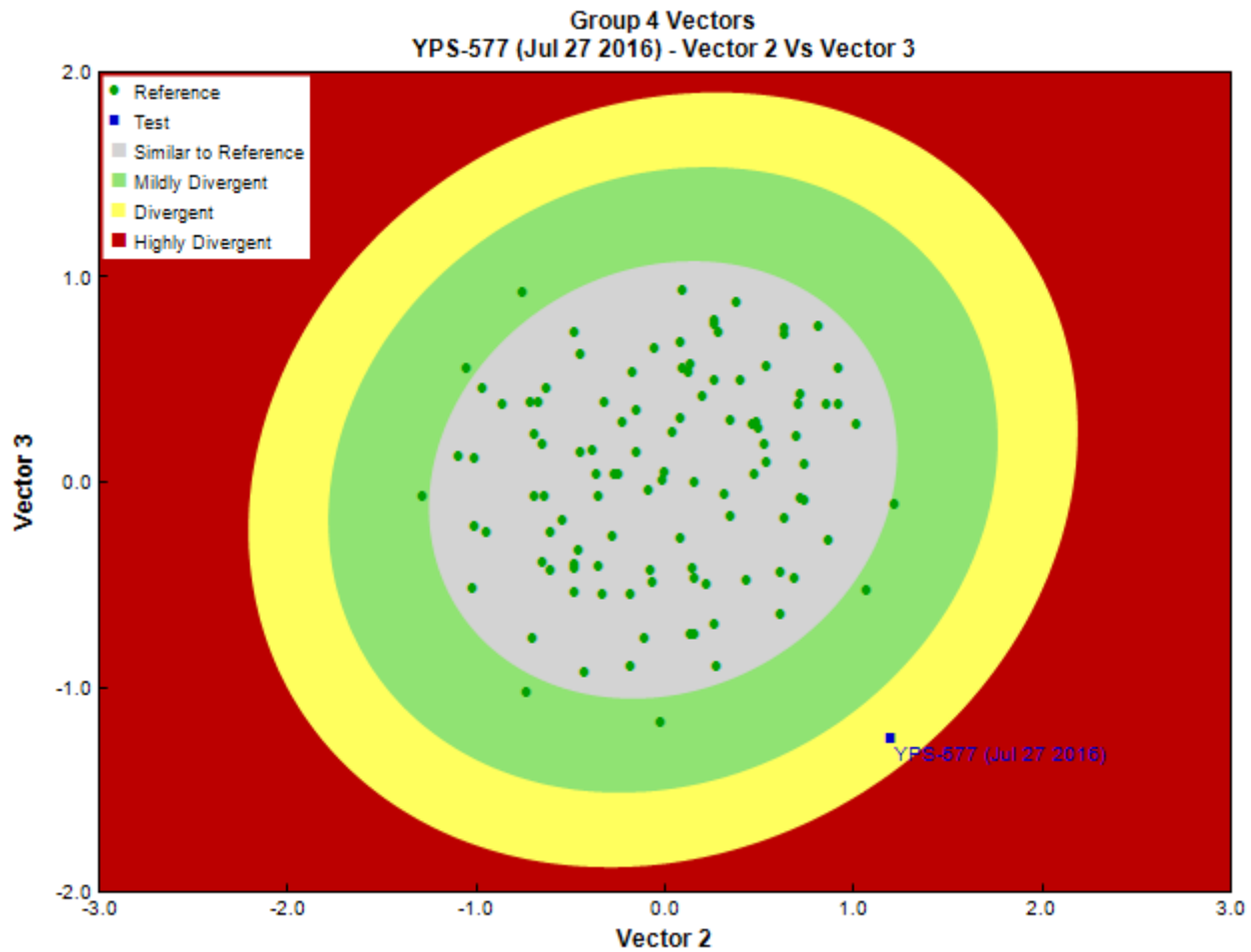


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

**Sample Information**

<b>Sampling Device</b>	Kick Net
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**Sample Information**

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

**Community Structure**

Phylum	Class	Order	Family	Raw Count	Total Count
Arthropoda	Arachnida	Trombidiformes		1	1.0
			Hygrobatidae	3	3.0
			Lebertiidae	6	6.0
			Sperchontidae	3	3.0
	Insecta	Diptera	Ceratopogonidae	8	8.0
			Chironomidae	16	16.0
			Empididae	5	5.0
			Simuliidae	1	1.0
		Ephemeroptera	Ameletidae	1	1.0
			Baetidae	85	85.0
			Ephemerellidae	32	32.0
			Heptageniidae	59	59.0
		Plecoptera	Chloroperlidae	5	5.0
			Nemouridae	2	2.0
		Trichoptera	Apataniidae	16	16.0
			Glossosomatidae	19	19.0
			Limnephilidae	19	19.0
			Total	281	281.0

**Metrics**

Name	YPS-577	Predicted Group Reference Mean $\pm$ SD
<b>Bray-Curtis Distance</b>	0.71	0.5 $\pm$ 0.2
<b>Number Of Individuals</b>		
<b>Total Abundance</b>	281.0	2059.4 $\pm$ 1572.9
<b>Richness</b>		
<b>Total No. of Taxa</b>	16.0	13.0 $\pm$ 4.4

**Frequency and Probability of Taxa Occurrence**

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-577
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ameletidae	9%	37%	70%	39%	15%	0.43
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%	0.03
Baetidae	30%	85%	82%	94%	100%	0.84
Blephariceridae	0%	0%	5%	0%	0%	0.01
Brachycentridae	0%	15%	7%	23%	8%	0.15
Caenidae	0%	1%	0%	1%	0%	0.01
Capniidae	9%	23%	43%	50%	77%	0.43
Ceratopogonidae	22%	28%	30%	24%	0%	0.24
Chironomidae	91%	100%	100%	100%	100%	0.99
Chloroperlidae	22%	43%	77%	50%	38%	0.54
Corixidae	13%	8%	0%	0%	0%	0.02
Culicidae	9%	0%	0%	0%	0%	0.01
Curculionidae	0%	1%	0%	1%	0%	0.01
Deuterophlebiidae	0%	3%	14%	1%	0%	0.05
Dixidae	0%	5%	2%	1%	0%	0.02
Dolichopodidae	0%	0%	2%	1%	0%	0.01
Dytiscidae	4%	14%	0%	13%	0%	0.08
Elmidae	4%	3%	0%	2%	0%	0.02

### Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-577
	Group 1	Group 2	Group 3	Group 4	Group 5	
Empididae	9%	49%	77%	59%	54%	0.58
Enchytraeidae	0%	0%	9%	2%	0%	0.03
Ephemerellidae	26%	37%	61%	37%	31%	0.42
Ephydriidae	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%	0.16
Helophoridae	0%	0%	2%	0%	0%	0.01
Heptageniidae	17%	63%	95%	76%	85%	0.75
Hirudinidae	0%	1%	0%	1%	0%	0.01
Hyalellidae	4%	5%	0%	6%	0%	0.04
Hydraenidae	0%	2%	0%	1%	0%	0.01
Hydrobiidae	9%	3%	2%	1%	0%	0.02
Hydropsychidae	4%	13%	36%	8%	0%	0.16
Hydroptilidae	4%	7%	0%	6%	0%	0.04
Hydrozetidae	4%	3%	20%	28%	31%	0.21
Hydryphantidae	4%	0%	9%	6%	0%	0.06
Hygrobatidae	0%	9%	25%	28%	0%	0.21
Isotomidae	9%	5%	2%	1%	0%	0.02
Lebertiidae	13%	20%	52%	54%	23%	0.44
Lepidostomatidae	0%	1%	5%	4%	8%	0.04
Leptoceridae	0%	1%	0%	2%	0%	0.01
Leptophlebiidae	4%	7%	0%	7%	8%	0.05
Leuctridae	4%	14%	32%	10%	0%	0.16
Limnephilidae	13%	48%	43%	46%	23%	0.41
Limnesiidae	0%	1%	2%	6%	8%	0.04
Limnocharidae	0%	0%	0%	1%	0%	0.00
Lumbriculidae	26%	22%	34%	42%	23%	0.35
Lymnaeidae	13%	9%	0%	3%	0%	0.03
Metretopodidae	0%	1%	0%	1%	0%	0.01
Mideopsidae	0%	0%	2%	0%	0%	0.01
Muscidae	0%	4%	7%	7%	0%	0.06
Naididae	35%	43%	9%	22%	31%	0.22
Nemouridae	39%	74%	100%	81%	100%	0.83
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%	0.51
Phryganeidae	0%	1%	0%	0%	0%	0.00
Physidae	4%	1%	2%	4%	0%	0.03
Pionidae	0%	0%	2%	2%	0%	0.02
Pisidiidae	17%	9%	2%	7%	8%	0.07
Planariidae	0%	2%	2%	3%	0%	0.02
Planorbidae	13%	4%	2%	2%	8%	0.04
Poduridae	0%	1%	0%	1%	0%	0.01
Psychodidae	22%	15%	11%	25%	8%	0.19
Rhyacophilidae	4%	34%	68%	25%	15%	0.36
Scathophagidae	0%	2%	0%	0%	0%	0.00
Simuliidae	39%	78%	86%	87%	77%	0.81
Sperchontidae	22%	49%	68%	68%	31%	0.59
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%	0.03
Tipulidae	35%	47%	55%	62%	46%	0.55
Torrenticolidae	0%	0%	0%	5%	8%	0.03
Tubificidae	4%	1%	9%	13%	0%	0.09
Uenoidae	0%	8%	30%	1%	0%	0.10
Valvatidae	4%	9%	5%	11%	8%	0.08

**RIVPACS Ratios**

<b>RIVPACS : Expected taxa P&gt;0.50</b>	6.99
<b>RIVPACS : Observed taxa P&gt;0.50</b>	8.00
<b>RIVPACS : O:E (p &gt; 0.5)</b>	1.15
<b>RIVPACS : Expected taxa P&gt;0.70</b>	4.22
<b>RIVPACS : Observed taxa P&gt;0.70</b>	5.00
<b>RIVPACS : O:E (p &gt; 0.7)</b>	1.19

**Habitat Description**

<b>Variable</b>	<b>YPS-577</b>	<b>Predicted Group Reference Mean <math>\pm</math>SD</b>
<b>Bedrock Geology</b>		
<b>Channel</b>		
<b>Depth-Avg (cm)</b>	69.1	29.8 $\pm$ 14.6
<b>Velocity-Avg (m/s)</b>	1.15	0.52 $\pm$ 0.32
<b>Climate</b>		
<b>Precip02_FEB (mm)</b>	35.63261	29.33781 $\pm$ 11.78911
<b>Precip03_MAR (mm)</b>	35.22826	27.45595 $\pm$ 11.91497
<b>Precip06_JUN (mm)</b>	64.07435	53.48783 $\pm$ 18.48854
<b>Precip07_JUL (mm)</b>	81.58522	65.85484 $\pm$ 22.37167
<b>Rainfall06_JUN (mm)</b>	58.13304	48.43760 $\pm$ 16.05524
<b>Temp04_APRmax (Degrees Celsius)</b>	-0.19261	-0.98364 $\pm$ 3.37510
<b>Hydrology</b>		
<b>Landcover</b>		
<b>Natl-BroadleafOpen (%)</b>	0.55051	0.37555 $\pm$ 1.31381
<b>Natl-Bryoids (%)</b>	0.00000	0.53753 $\pm$ 1.04480
<b>Natl-MixedwoodOpen (%)</b>	0.00000	0.77433 $\pm$ 2.87383
<b>Natl-WetlandHerb (%)</b>	0.06511	0.14452 $\pm$ 0.46324
<b>Substrate Data</b>		
<b>Water Chemistry</b>		