

**Site Description**

<b>Study Name</b>	Yukon Territory - DFO
<b>Site</b>	YPS-590
<b>Sampling Date</b>	Jul 25 2016
<b>Know Your Watershed Basin</b>	Alsek
<b>Province / Territory</b>	Yukon Territories
<b>Terrestrial Ecological Classification</b>	Boreal Cordillera EcoZone Ruby Ranges EcoRegion
<b>Coordinates (decimal degrees)</b>	60.85958 N, 138.06937 W
<b>Altitude</b>	2554
<b>Local Basin Name</b>	Kimberley Creek
	Alsek
<b>Stream Order</b>	3



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>	26.5%	4.7%	56.8%	11.7%	0.4%
<b>CABIN Assessment of YPS-590 on Jul 25, 2016</b>	Highly Divergent				

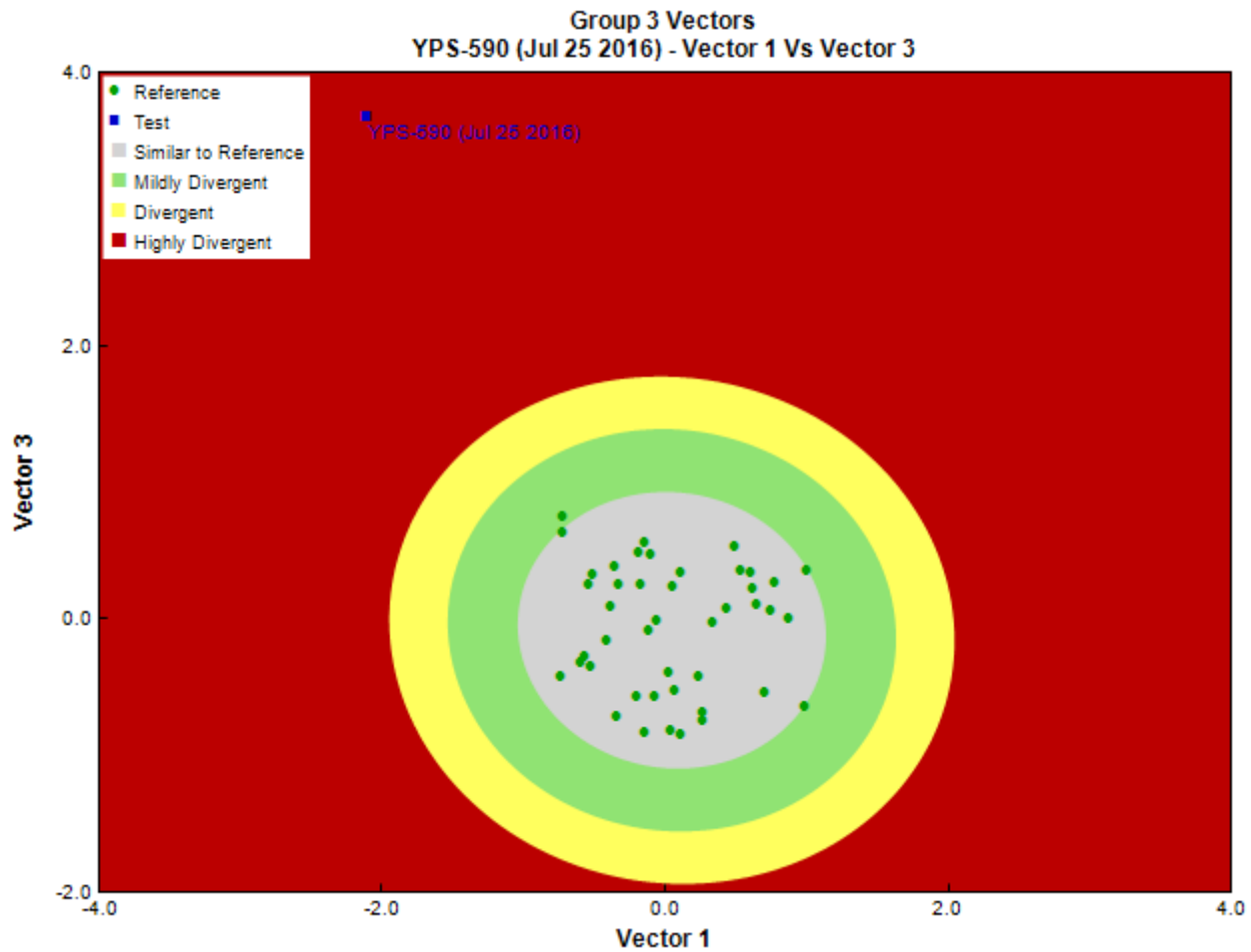


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

**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	Insecta	Diptera	Chironomidae	1	1.0
		Ephemeroptera	Baetidae	2	2.0
			Heptageniidae	10	10.0
		Plecoptera	Chloroperlidae	1	1.0
			Nemouridae	1	1.0
			Perlodidae	1	1.0
			Total	16	16.0

**Metrics**

Name	YPS-590	Predicted Group Reference Mean $\pm$ SD
<b>Bray-Curtis Distance</b>	0.95	0.4 $\pm$ 0.1
<b>Number Of Individuals</b>		
<b>Total Abundance</b>	16.0	567.0 $\pm$ 737.1
<b>Richness</b>		
<b>Total No. of Taxa</b>	6.0	10.6 $\pm$ 6.1

**Frequency and Probability of Taxa Occurrence**

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-590
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ameletidae	9%	37%	70%	39%	15%	0.49
Apataniidae	0%	1%	0%	3%	8%	0.00
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%	0.70
Blephariceridae	0%	0%	5%	0%	0%	0.03
Brachycentridae	0%	15%	7%	23%	8%	0.07
Caenidae	0%	1%	0%	1%	0%	0.00
Capniidae	9%	23%	43%	50%	77%	0.34
Ceratopogonidae	22%	28%	30%	24%	0%	0.27
Chironomidae	91%	100%	100%	100%	100%	0.98
Chloroperlidae	22%	43%	77%	50%	38%	0.58
Corixidae	13%	8%	0%	0%	0%	0.04
Culicidae	9%	0%	0%	0%	0%	0.02
Curculionidae	0%	1%	0%	1%	0%	0.00
Deuterophlebiidae	0%	3%	14%	1%	0%	0.08
Dixidae	0%	5%	2%	1%	0%	0.02
Dolichopodidae	0%	0%	2%	1%	0%	0.01
Dytiscidae	4%	14%	0%	13%	0%	0.03
Elmidae	4%	3%	0%	2%	0%	0.02
Empididae	9%	49%	77%	59%	54%	0.56
Enchytraeidae	0%	0%	9%	2%	0%	0.05
Ephemerellidae	26%	37%	61%	37%	31%	0.48
Ephydriidae	0%	0%	2%	0%	0%	0.01
Feltriidae	0%	0%	2%	6%	8%	0.02
Gammaridae	9%	2%	0%	13%	23%	0.04
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%	0.71
Hirudinidae	0%	1%	0%	1%	0%	0.00

**Frequency and Probability of Taxa Occurrence**

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-590
	Group 1	Group 2	Group 3	Group 4	Group 5	
Hyalellidae	4%	5%	0%	6%	0%	0.02
Hydraenidae	0%	2%	0%	1%	0%	0.00
Hydrobiidae	9%	3%	2%	1%	0%	0.04
Hydropsychidae	4%	13%	36%	8%	0%	0.23
Hydroptilidae	4%	7%	0%	6%	0%	0.02
Hydrozetidae	4%	3%	20%	28%	31%	0.16
Hydryphantidae	4%	0%	9%	6%	0%	0.07
Hygrobatidae	0%	9%	25%	28%	0%	0.18
Isotomidae	9%	5%	2%	1%	0%	0.04
Lebertiidae	13%	20%	52%	54%	23%	0.40
Lepidostomatidae	0%	1%	5%	4%	8%	0.03
Leptoceridae	0%	1%	0%	2%	0%	0.00
Leptophlebiidae	4%	7%	0%	7%	8%	0.02
Leuctridae	4%	14%	32%	10%	0%	0.21
Limnephilidae	13%	48%	43%	46%	23%	0.36
Limnesiidae	0%	1%	2%	6%	8%	0.02
Limnocharidae	0%	0%	0%	1%	0%	0.00
Lumbriculidae	26%	22%	34%	42%	23%	0.32
Lymnaeidae	13%	9%	0%	3%	0%	0.04
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%	0.19
Nemouridae	39%	74%	100%	81%	100%	0.81
Noctuidae	0%	0%	0%	1%	0%	0.00
Oreoleptidae	0%	0%	0%	1%	0%	0.00
Oxidae	0%	0%	0%	1%	0%	0.00
Peltopteridae	0%	2%	0%	0%	0%	0.00
Perlidae	0%	2%	2%	1%	0%	0.01
Perlodidae	17%	31%	70%	49%	62%	0.52
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%	0.05
Poduridae	0%	1%	0%	1%	0%	0.00
Psychodidae	22%	15%	11%	25%	8%	0.16
Rhyacophilidae	4%	34%	68%	25%	15%	0.44
Scathophagidae	0%	2%	0%	0%	0%	0.00
Simuliidae	39%	78%	86%	87%	77%	0.74
Sperchontidae	22%	49%	68%	68%	31%	0.55
Staphylinidae	4%	0%	0%	1%	0%	0.01
Stratiomyidae	0%	0%	0%	2%	0%	0.00
Tabanidae	4%	0%	0%	0%	0%	0.01
Taeniopterygidae	0%	1%	5%	2%	15%	0.03
Tipulidae	35%	47%	55%	62%	46%	0.50
Torrenticolidae	0%	0%	0%	5%	8%	0.01
Tubificidae	4%	1%	9%	13%	0%	0.08
Uenoidae	0%	8%	30%	1%	0%	0.17
Valvatidae	4%	9%	5%	11%	8%	0.05

**RIVPACS Ratios**

<b>RIVPACS : Expected taxa P&gt;0.50</b>	6.13
<b>RIVPACS : Observed taxa P&gt;0.50</b>	6.00
<b>RIVPACS : O:E (p &gt; 0.5)</b>	0.98
<b>RIVPACS : Expected taxa P&gt;0.70</b>	3.23
<b>RIVPACS : Observed taxa P&gt;0.70</b>	3.00
<b>RIVPACS : O:E (p &gt; 0.7)</b>	0.93

## Habitat Description

Variable	YPS-590	Predicted Group Reference Mean $\pm$ SD
<b>Bedrock Geology</b>		
<b>Channel</b>		
Depth-Avg (cm)	47.6	32.1 $\pm$ 15.8
Velocity-Avg (m/s)	2.38	0.58 $\pm$ 0.29
<b>Climate</b>		
Precip02_FEB (mm)	30.72000	36.13728 $\pm$ 23.92832
Precip03_MAR (mm)	26.68000	33.12839 $\pm$ 21.04203
Precip06_JUN (mm)	59.56400	64.67097 $\pm$ 18.68912
Precip07_JUL (mm)	75.48200	78.30006 $\pm$ 20.80864
Rainfall06_JUN (mm)	55.99000	52.72477 $\pm$ 13.45837
Temp04_APRmax (Degrees Celsius)	4.59600	1.37555 $\pm$ 3.73745
<b>Hydrology</b>		
<b>Landcover</b>		
Natl-BroadleafOpen (%)	0.00000	0.67948 $\pm$ 1.61907
Natl-Bryoids (%)	0.00000	0.36641 $\pm$ 0.83769
Natl-MixedwoodOpen (%)	0.00000	0.96002 $\pm$ 1.72070
Natl-WetlandHerb (%)	0.00000	0.03164 $\pm$ 0.10034
<b>Substrate Data</b>		
<b>Water Chemistry</b>		