

**Site Description**

<b>Study Name</b>	Yukon Territory - YTG
<b>Site</b>	YPS-534
<b>Sampling Date</b>	Jul 28 2016
<b>Know Your Watershed Basin</b>	Upper Yukon
<b>Province / Territory</b>	Yukon Territories
<b>Terrestrial Ecological Classification</b>	Boreal Cordillera EcoZone Klondike Plateau EcoRegion
<b>Coordinates (decimal degrees)</b>	63.01108 N, 139.36092 W
<b>Altitude</b>	1483
<b>Local Basin Name</b>	Kirkman Creek
	Yukon River South
<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>	24.4%	23.0%	9.3%	41.5%	1.8%
<b>CABIN Assessment of YPS-534 on Jul 28, 2016</b>	Mildly Divergent				

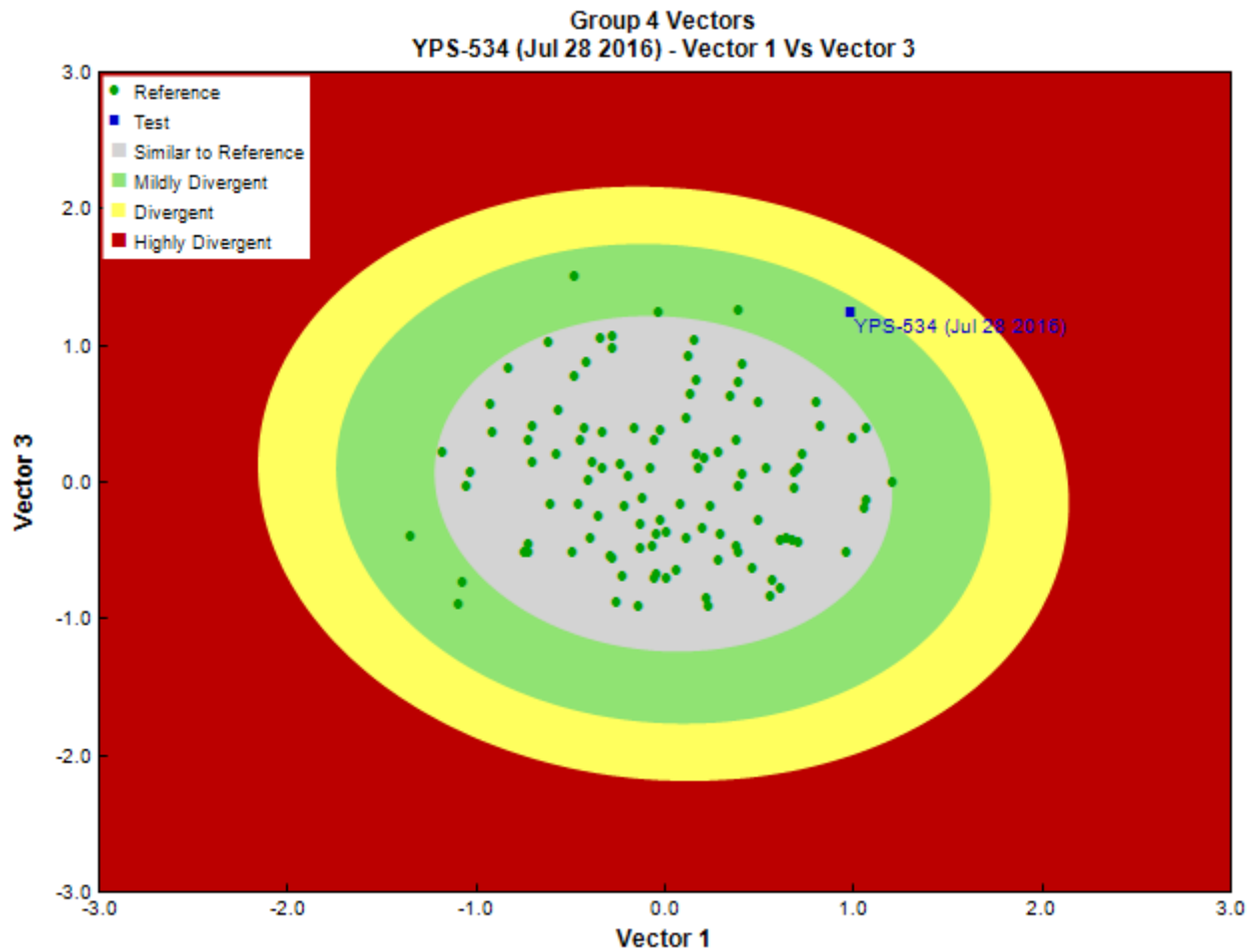


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

**Sample Information**

<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	Sperchontidae	1	1.0
	Collembola	Collembola	Isotomidae	3	3.0
	Insecta	Diptera		1	1.0
			Chironomidae	82	82.0
			Simuliidae	1	1.0
			Tipulidae	2	2.0
		Ephemeroptera	Baetidae	356	356.0
			Heptageniidae	1	1.0
		Plecoptera	Capniidae	1	1.0
			Nemouridae	7	7.0
			Perlodidae	17	17.0
			Taeniopterygidae	3	3.0
		Trichoptera	Glossosomatidae	21	21.0
			Limnephilidae	8	8.0
	Malacostraca	Amphipoda	Crangonyctidae	1	1.0
			Total	505	505.0

**Metrics**

Name	YPS-534	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>	505.0	2059.4 $\pm$ 1572.9
<b>Richness</b>		
<b>Total No. of Taxa</b>	14.0	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-534
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ameletidae	9%	37%	70%	39%	15%	0.34
Apataniidae	0%	1%	0%	3%	8%	0.02
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%	0.75
Blephariceridae	0%	0%	5%	0%	0%	0.00
Brachycentridae	0%	15%	7%	23%	8%	0.14
Caenidae	0%	1%	0%	1%	0%	0.01
Capniidae	9%	23%	43%	50%	77%	0.34
Ceratopogonidae	22%	28%	30%	24%	0%	0.24
Chironomidae	91%	100%	100%	100%	100%	0.98
Chloroperlidae	22%	43%	77%	50%	38%	0.44
Corixidae	13%	8%	0%	0%	0%	0.05
Culicidae	9%	0%	0%	0%	0%	0.02
Curculionidae	0%	1%	0%	1%	0%	0.01
Deuterophlebiidae	0%	3%	14%	1%	0%	0.02
Dixidae	0%	5%	2%	1%	0%	0.02
Dolichopodidae	0%	0%	2%	1%	0%	0.01
Dytiscidae	4%	14%	0%	13%	0%	0.10
Elmidae	4%	3%	0%	2%	0%	0.03
Empididae	9%	49%	77%	59%	54%	0.46
Enchytraeidae	0%	0%	9%	2%	0%	0.02

### Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-534
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ephemerellidae	26%	37%	61%	37%	31%	0.36
Ephydriidae	0%	0%	2%	0%	0%	0.00
Feltriidae	0%	0%	2%	6%	8%	0.03
Gammaridae	9%	2%	0%	13%	23%	0.08
Glossiphoniidae	0%	1%	0%	0%	0%	0.00
Glossosomatidae	0%	14%	23%	17%	0%	0.12
Helophoridae	0%	0%	2%	0%	0%	0.00
Heptageniidae	17%	63%	95%	76%	85%	0.61
Hirudinidae	0%	1%	0%	1%	0%	0.01
Hyalellidae	4%	5%	0%	6%	0%	0.05
Hydraenidae	0%	2%	0%	1%	0%	0.01
Hydrobiidae	9%	3%	2%	1%	0%	0.03
Hydropsychidae	4%	13%	36%	8%	0%	0.11
Hydroptilidae	4%	7%	0%	6%	0%	0.05
Hydrozetidae	4%	3%	20%	28%	31%	0.16
Hydryphantidae	4%	0%	9%	6%	0%	0.04
Hygrobatidae	0%	9%	25%	28%	0%	0.16
Isotomidae	9%	5%	2%	1%	0%	0.04
Lebertiidae	13%	20%	52%	54%	23%	0.35
Lepidostomatidae	0%	1%	5%	4%	8%	0.02
Leptoceridae	0%	1%	0%	2%	0%	0.01
Leptophlebiidae	4%	7%	0%	7%	8%	0.06
Leuctridae	4%	14%	32%	10%	0%	0.12
Limnephilidae	13%	48%	43%	46%	23%	0.38
Limnesiidae	0%	1%	2%	6%	8%	0.03
Limnocharidae	0%	0%	0%	1%	0%	0.00
Lumbriculidae	26%	22%	34%	42%	23%	0.32
Lymnaeidae	13%	9%	0%	3%	0%	0.06
Metretopodidae	0%	1%	0%	1%	0%	0.01
Mideopsidae	0%	0%	2%	0%	0%	0.00
Muscidae	0%	4%	7%	7%	0%	0.05
Naididae	35%	43%	9%	22%	31%	0.29
Nemouridae	39%	74%	100%	81%	100%	0.72
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%	0.39
Phryganeidae	0%	1%	0%	0%	0%	0.00
Physidae	4%	1%	2%	4%	0%	0.03
Pionidae	0%	0%	2%	2%	0%	0.01
Pisidiidae	17%	9%	2%	7%	8%	0.10
Planariidae	0%	2%	2%	3%	0%	0.02
Planorbidae	13%	4%	2%	2%	8%	0.05
Poduridae	0%	1%	0%	1%	0%	0.01
Psychodidae	22%	15%	11%	25%	8%	0.20
Rhyacophilidae	4%	34%	68%	25%	15%	0.26
Scathophagidae	0%	2%	0%	0%	0%	0.00
Simuliidae	39%	78%	86%	87%	77%	0.73
Sperchontidae	22%	49%	68%	68%	31%	0.52
Staphylinidae	4%	0%	0%	1%	0%	0.01
Stratiomyidae	0%	0%	0%	2%	0%	0.01
Tabanidae	4%	0%	0%	0%	0%	0.01
Taeniopterygidae	0%	1%	5%	2%	15%	0.02
Tipulidae	35%	47%	55%	62%	46%	0.51
Torrenticolidae	0%	0%	0%	5%	8%	0.02
Tubificidae	4%	1%	9%	13%	0%	0.08
Uenoidae	0%	8%	30%	1%	0%	0.05
Valvatidae	4%	9%	5%	11%	8%	0.08

**RIVPACS Ratios**

<b>RIVPACS : Expected taxa P&gt;0.50</b>	4.81
<b>RIVPACS : Observed taxa P&gt;0.50</b>	7.00
<b>RIVPACS : O:E (p &gt; 0.5)</b>	1.46
<b>RIVPACS : Expected taxa P&gt;0.70</b>	3.18
<b>RIVPACS : Observed taxa P&gt;0.70</b>	4.00
<b>RIVPACS : O:E (p &gt; 0.7)</b>	1.26

**Habitat Description**

<b>Variable</b>	<b>YPS-534</b>	<b>Predicted Group Reference Mean ±SD</b>
<b>Bedrock Geology</b>		
<b>Channel</b>		
<b>Depth-Avg (cm)</b>	25.0	29.8 ± 14.6
<b>Velocity-Avg (m/s)</b>	0.47	0.52 ± 0.32
<b>Climate</b>		
<b>Precip02_FEB (mm)</b>	34.30125	29.33781 ± 11.78911
<b>Precip03_MAR (mm)</b>	33.31250	27.45595 ± 11.91497
<b>Precip06_JUN (mm)</b>	53.98625	53.48783 ± 18.48854
<b>Precip07_JUL (mm)</b>	70.30375	65.85484 ± 22.37167
<b>Rainfall06_JUN (mm)</b>	50.92625	48.43760 ± 16.05524
<b>Temp04_APRmax (Degrees Celsius)</b>	-1.29750	-0.98364 ± 3.37510
<b>Hydrology</b>		
<b>Landcover</b>		
<b>Natl-BroadleafOpen (%)</b>	0.53403	0.37555 ± 1.31381
<b>Natl-Bryoids (%)</b>	0.48838	0.53753 ± 1.04480
<b>Natl-MixedwoodOpen (%)</b>	1.45042	0.77433 ± 2.87383
<b>Natl-WetlandHerb (%)</b>	0.00000	0.14452 ± 0.46324
<b>Substrate Data</b>		
<b>Water Chemistry</b>		