

Site Description

Study Name	Yukon Territory - YTG
Site	YPS-166
Sampling Date	Jul 28 2016
Know Your Watershed Basin	Stewart
Province / Territory	Yukon Territories
Terrestrial Ecological Classification	Boreal Cordillera EcoZone Yukon Plateau -North EcoRegion
Coordinates (decimal degrees)	63.68441 N, 137.06349 W
Altitude	1840
Local Basin Name	Right Hook Creek
	McQuesten River
Stream Order	4

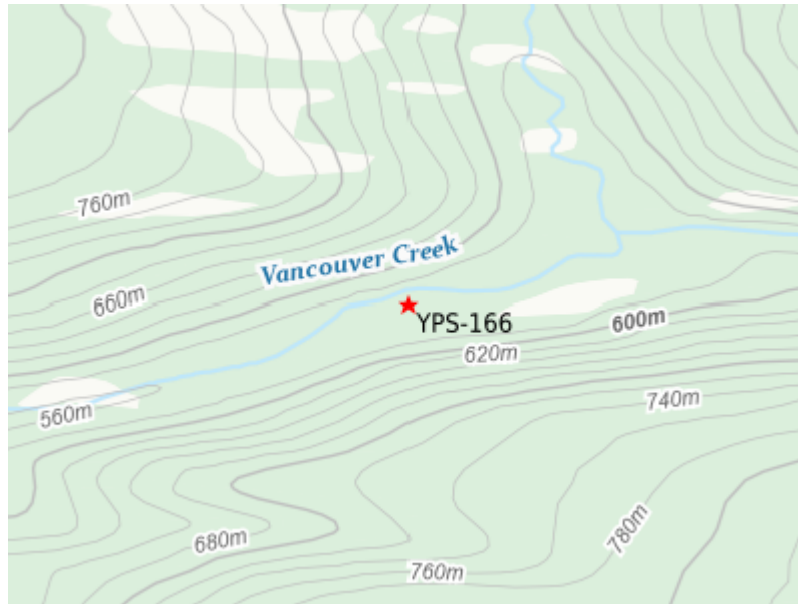


Figure 1. Location Map



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
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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	10.4%	36.5%	17.4%	35.1%	0.5%
CABIN Assessment of YPS-166 on Jul 28, 2016	Mildly Divergent				

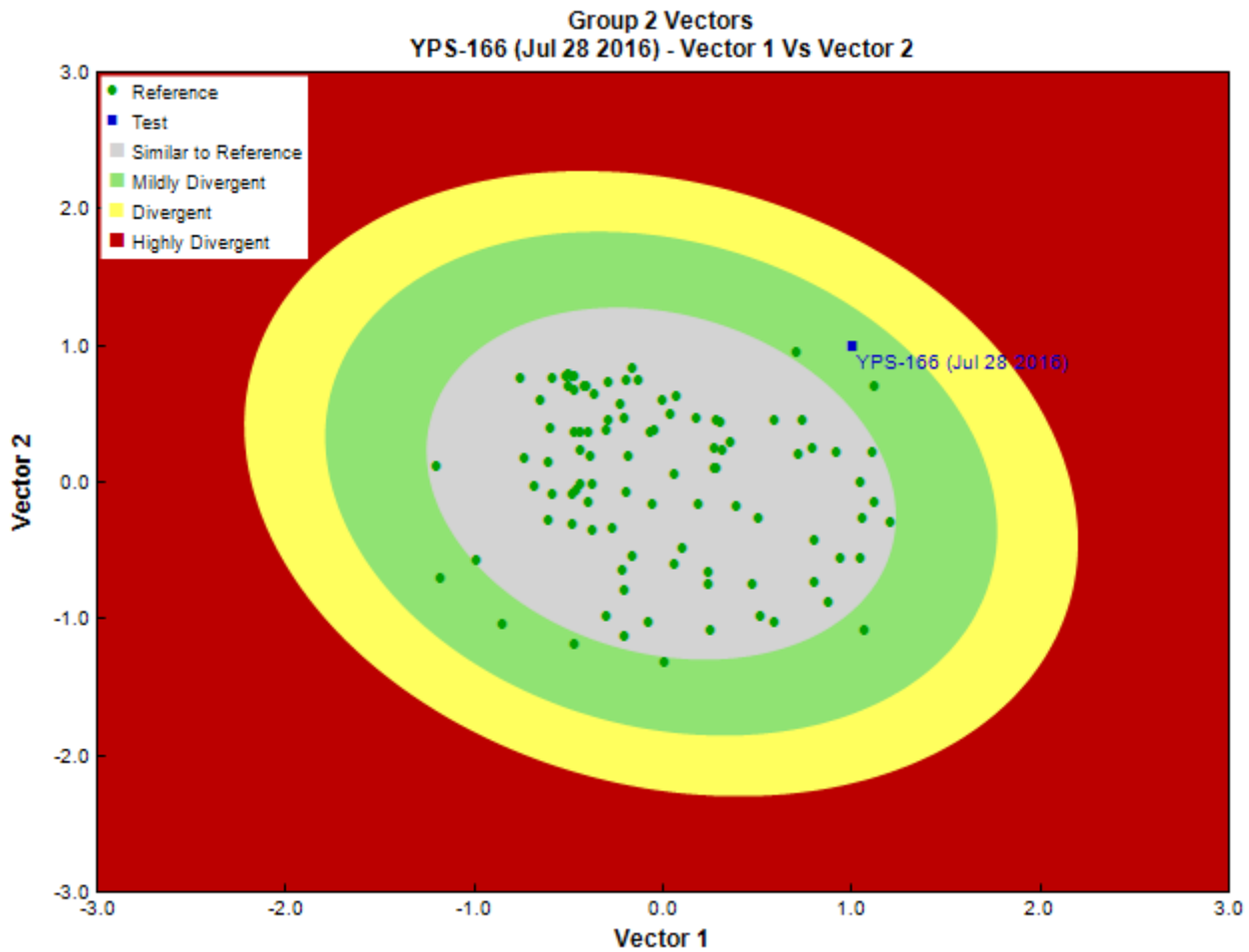


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

Sample Information

Sampling Device	Kick Net
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Sample Information

Mesh Size	500
Sampling Time	3
Taxonomist	-
Date Taxonomy Completed	-
	-
Sub-Sample Proportion	27/100

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	9	33.3
Arthropoda	Arachnida	Trombidiformes	Hygrobatae	1	3.7
			Lebertiidae	13	48.1
			Sperchontidae	12	44.4
	Insecta	Diptera		1	3.7
			Chironomidae	122	451.8
			Empididae	45	166.7
			Simuliidae	2	7.4
		Ephemeroptera	Ameletidae	7	25.9
			Baetidae	5	18.5
			Heptageniidae	38	140.7
		Plecoptera	Chloroperlidae	12	44.4
			Leuctridae	1	3.7
			Nemouridae	33	122.2
			Perlodidae	1	3.7
			Taeniopterygidae	1	3.7
		Trichoptera	Glossosomatidae	2	7.4
			Limnephilidae	7	25.9
			Rhyacophilidae	28	103.7
			Uenoidae	18	66.7
			Total	358	1,325.6

Metrics

Name	YPS-166	Predicted Group Reference Mean \pm SD
Bray-Curtis Distance	--	--
Number Of Individuals		
Total Abundance	1325.9	265.3 \pm 160.6
Richness		
Total No. of Taxa	19.0	11.5 \pm 4.3

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-166
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ameletidae	9%	37%	70%	39%	15%	0.40
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%	0.82
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%	0.35
Ceratopogonidae	22%	28%	30%	24%	0%	0.26
Chironomidae	91%	100%	100%	100%	100%	0.99
Chloroperlidae	22%	43%	77%	50%	38%	0.49
Corixidae	13%	8%	0%	0%	0%	0.04
Culicidae	9%	0%	0%	0%	0%	0.01
Curculionidae	0%	1%	0%	1%	0%	0.01
Deuterophlebiidae	0%	3%	14%	1%	0%	0.04
Dixidae	0%	5%	2%	1%	0%	0.03

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-166
	Group 1	Group 2	Group 3	Group 4	Group 5	
Dolichopodidae	0%	0%	2%	1%	0%	0.01
Dytiscidae	4%	14%	0%	13%	0%	0.10
Elmidae	4%	3%	0%	2%	0%	0.02
Empididae	9%	49%	77%	59%	54%	0.53
Enchytraeidae	0%	0%	9%	2%	0%	0.02
Ephemerellidae	26%	37%	61%	37%	31%	0.40
Ephydriidae	0%	0%	2%	0%	0%	0.00
Feltriidae	0%	0%	2%	6%	8%	0.02
Gammaridae	9%	2%	0%	13%	23%	0.06
Glossiphoniidae	0%	1%	0%	0%	0%	0.00
Glossosomatidae	0%	14%	23%	17%	0%	0.15
Helophoridae	0%	0%	2%	0%	0%	0.00
Heptageniidae	17%	63%	95%	76%	85%	0.69
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%	0.03
Hydropsychidae	4%	13%	36%	8%	0%	0.15
Hydroptilidae	4%	7%	0%	6%	0%	0.05
Hydrozetidae	4%	3%	20%	28%	31%	0.15
Hydryphantidae	4%	0%	9%	6%	0%	0.04
Hygrobatidae	0%	9%	25%	28%	0%	0.17
Isotomidae	9%	5%	2%	1%	0%	0.03
Lebertiidae	13%	20%	52%	54%	23%	0.37
Lepidostomatidae	0%	1%	5%	4%	8%	0.03
Leptoceridae	0%	1%	0%	2%	0%	0.01
Leptophlebiidae	4%	7%	0%	7%	8%	0.06
Leuctridae	4%	14%	32%	10%	0%	0.15
Limnephilidae	13%	48%	43%	46%	23%	0.43
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%	0.78
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%	0.43
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%	0.08
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%	0.33
Scathophagidae	0%	2%	0%	0%	0%	0.01
Simuliidae	39%	78%	86%	87%	77%	0.78
Sperchontidae	22%	49%	68%	68%	31%	0.56
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%	0.02
Tipulidae	35%	47%	55%	62%	46%	0.52
Torrenticolidae	0%	0%	0%	5%	8%	0.02

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-166
	Group 1	Group 2	Group 3	Group 4	Group 5	
Tubificidae	4%	1%	9%	13%	0%	0.07
Uenoidae	0%	8%	30%	1%	0%	0.08
Valvatidae	4%	9%	5%	11%	8%	0.09

RIVPACS Ratios

RIVPACS : Expected taxa P>0.50	5.67
RIVPACS : Observed taxa P>0.50	0.00
RIVPACS : O:E (p > 0.5)	0.00
RIVPACS : Expected taxa P>0.70	3.37
RIVPACS : Observed taxa P>0.70	0.00
RIVPACS : O:E (p > 0.7)	0.00

Habitat Description

Variable	YPS-166	Predicted Group Reference Mean \pm SD
Bedrock Geology		
Channel		
Depth-Avg (cm)	31.4	31.4 \pm 19.7
Velocity-Avg (m/s)	0.38	0.43 \pm 0.26
Climate		
Precip02_FEB (mm)	29.10818	28.51137 \pm 7.47006
Precip03_MAR (mm)	28.04000	26.48398 \pm 7.72519
Precip06_JUN (mm)	60.51455	57.13713 \pm 13.58676
Precip07_JUL (mm)	70.21091	73.01094 \pm 17.73562
Rainfall06_JUN (mm)	55.56364	49.31793 \pm 11.37423
Temp04_APRmax (Degrees Celsius)	-2.82727	0.93101 \pm 4.20058
Hydrology		
Landcover		
Natl-BroadleafOpen (%)	0.04238	0.14237 \pm 0.34395
Natl-Bryoids (%)	0.22587	0.31369 \pm 0.60856
Natl-MixedwoodOpen (%)	0.31831	0.75166 \pm 1.44254
Natl-WetlandHerb (%)	0.00000	0.11375 \pm 0.31492
Substrate Data		
Water Chemistry		