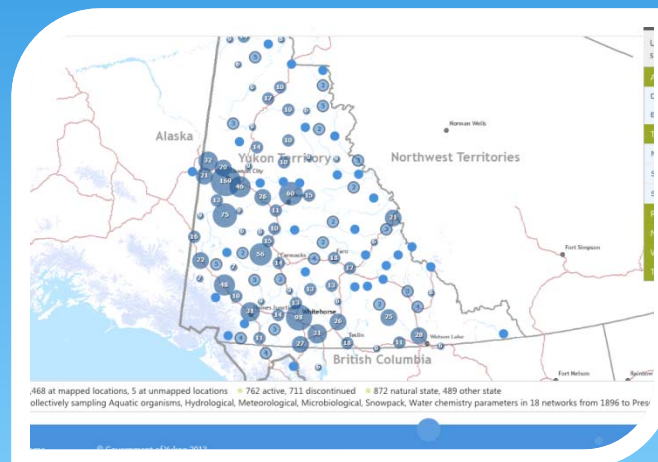


Existing and Planned Water Databases in Yukon



468 at mapped locations, 5 at unmapped locations = 762 active, 711 discontinued = 872 natural state, 489 other state
collectively sampling Aquatic organisms, Hydrological, Meteorological, Microbiological, Snowpack, Water chemistry parameters in 18 networks from 1896 to Present

Erin Light

Water Information Specialist, Environment Yukon

June 18, 2014

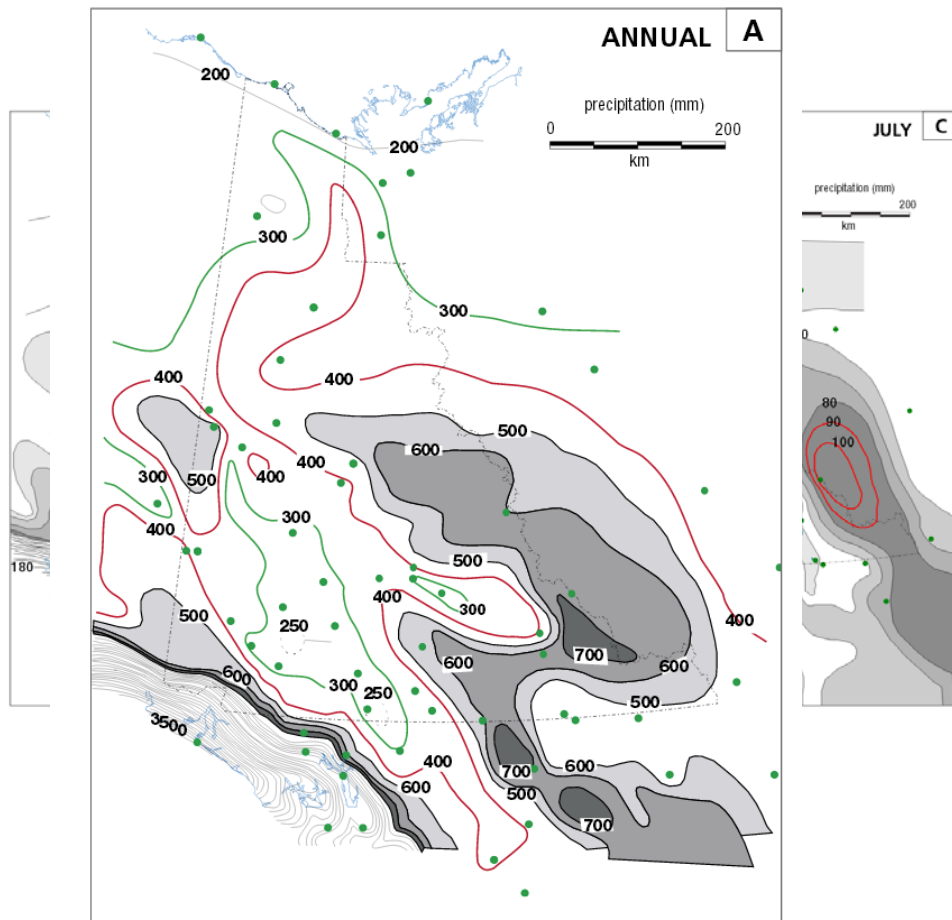
Yukon

Presentation Outline

1. Hydrological Setting
2. YukonWater Data Availability
3. Environment
Yukon Databases
4. Future Database
Maintenance and
Development



Hydrological Setting- Climate



- * Sub-arctic continental
- * Long, cold winters (minimum, -62°C) and hot, dry summers (maximum, 36.1°C)
- * Arid, low precipitation

Hydrological Setting- Watersheds

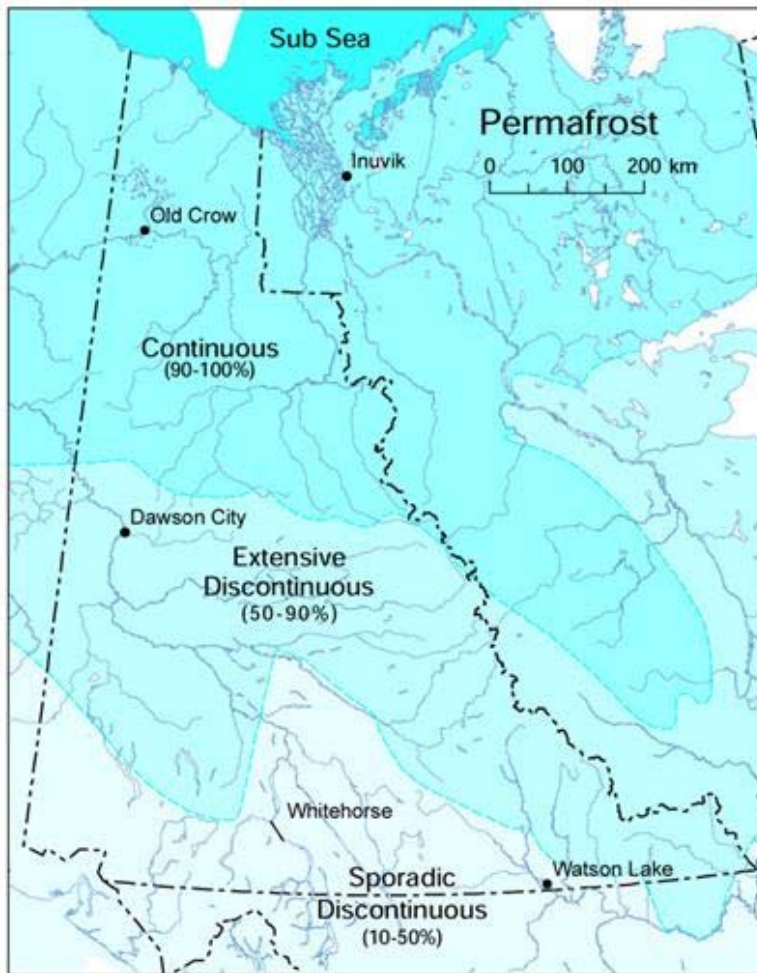


Department of Environment Map ID: ENV261.001

© 2011 Environment Yukon



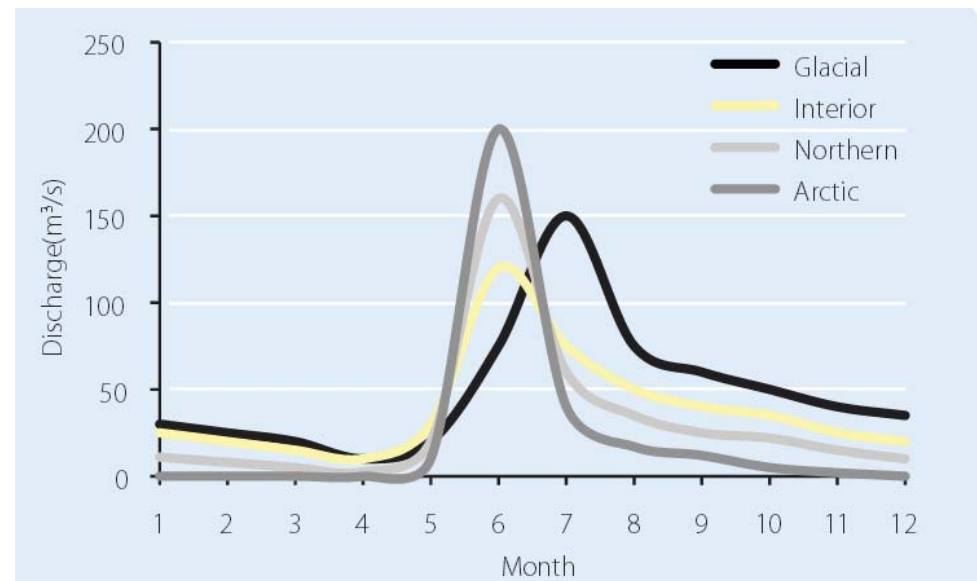
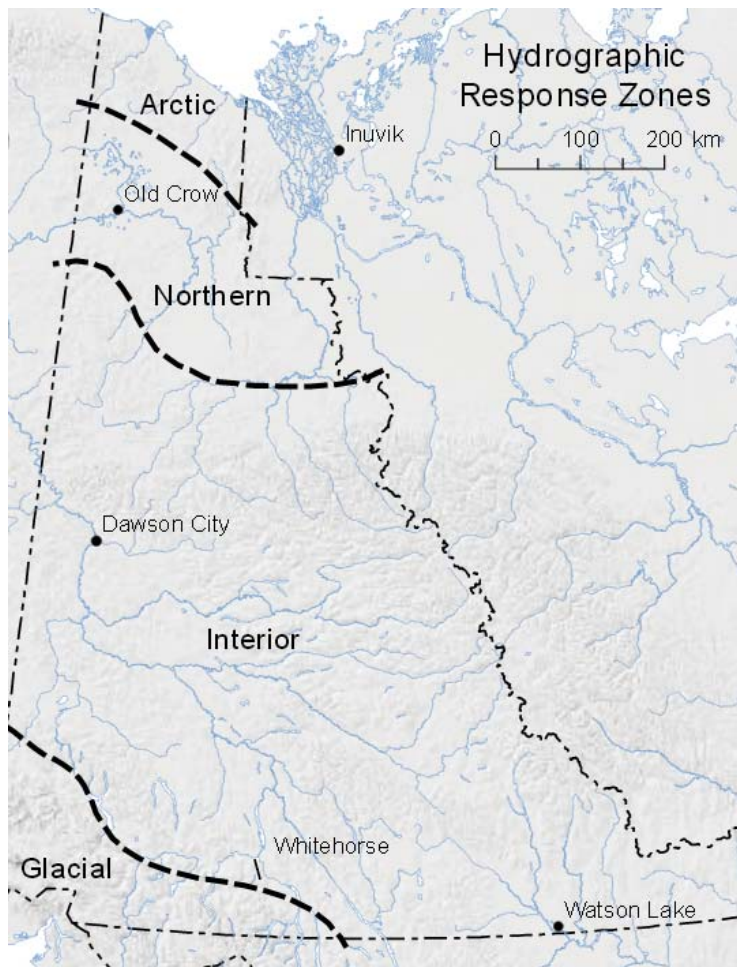
Hydrological Setting- Permafrost



Department of Environment Map ID: GIS2003-028-05



Hydrological Setting- Streamflow



Data Availability -

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Understanding
Yukon Water

Managing
Yukon Water

Monitoring
Yukon Water

Water
and You

Yukon
Government



Yukon River at Dawson ice break-up, May 2, 2014

Latest News and Updates

[New study on water quality and Arctic grayling in Yukon](#)

May 27, 2014

Scientist at University of Victoria collaborated with staff at Yukon Government and the Department of Fisheries and Oceans to conduct research on the impacts of elevated concentrations

[North Yukon Water Quality Monitoring Network Added to Data Catalogue](#)

May 27, 2014

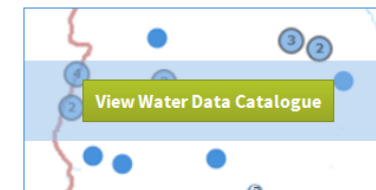
As part of the YukonWater Data Catalogue Annual Update, we have added a new network! The North Yukon Water Quality Monitoring Network is comprised of 35

Welcome to Yukon Water

Here, you'll find information about Yukon's water resources and how our water is used, managed and monitored. We encourage you to get involved and play a key role in the future of Yukon's water.

Water and You

[Water Projects and Current Initiatives](#) ▶



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Understanding
Yukon Water

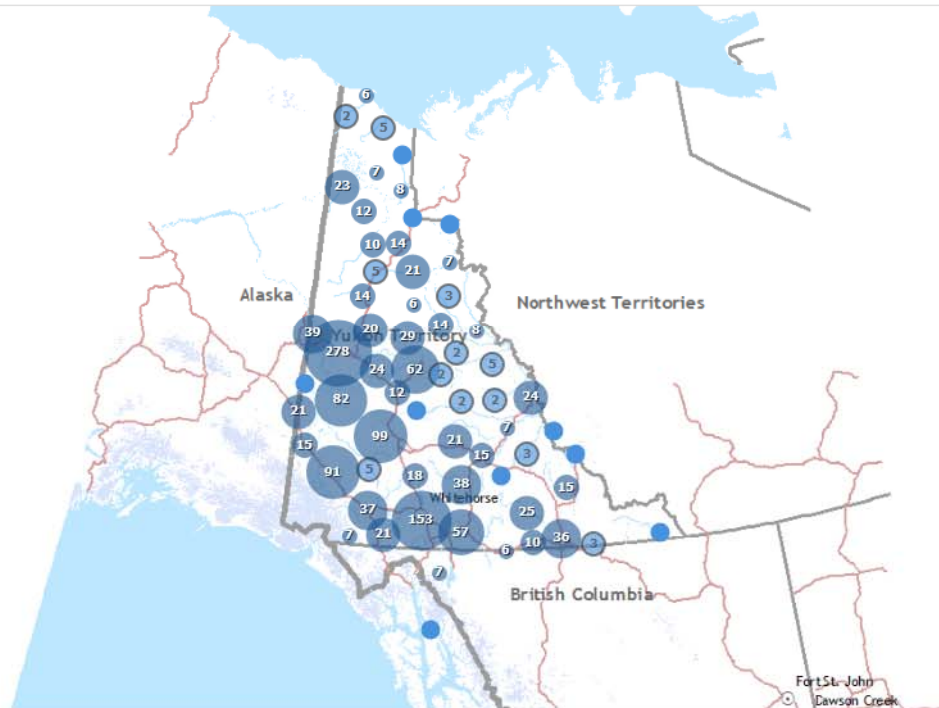
Managing
Yukon Water

Monitoring
Yukon Water

Water
and You



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Filter sites by...

[Clear all filters](#)

Use these controls to define what water sample sites are displayed on the map.

Area [Clear area](#)

DRAW ON MAP

ENTER COORDINATES

Types [Clear types](#)

NETWORK TYPE

SAMPLE TYPE

SITE STATE

Reporting sources [Clear sources](#)

Networks [Clear networks](#)

Watersheds [Clear watersheds](#)

Time period [Clear time](#)

1,468 at mapped locations, 5 at unmapped locations 762 active, 711 discontinued 872 natural state, 489 other state

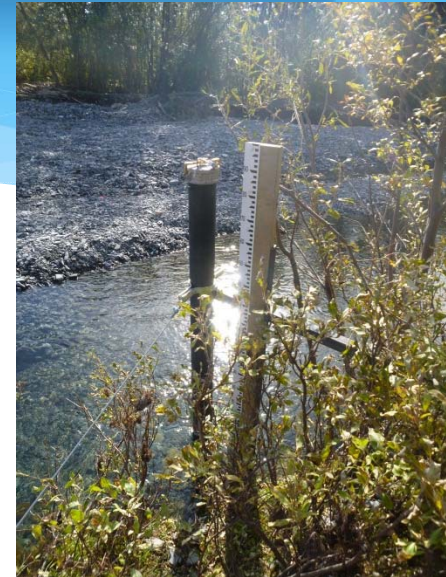
Collectively sampling Aquatic organisms, Hydrological, Meteorological, Microbiological, Snowpack, Water chemistry parameters in 18 networks from 1896 to Present

[view and export detailed report](#)

Data Availability -

yukonwater

- * Aquatic health
 - * Biological composition of fish
 - * Benthics
- * Hydrometeorological
 - * Streamflow
 - * Groundwater
- * Water Quality
 - * Physical parameters
 - * Nutrients
 - * Organics
 - * Metals



Data Availability -

yukonwater

Agencies with metadata in Catalogue:

- * Government of Yukon
- * Federal Government
- * Yukon First Nation Governments
- * Cross-border organizations

Yukon
Government

Canada 



Data Availability -

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yukonwater

[resources](#) [tips](#) [site map](#) [contact us](#)



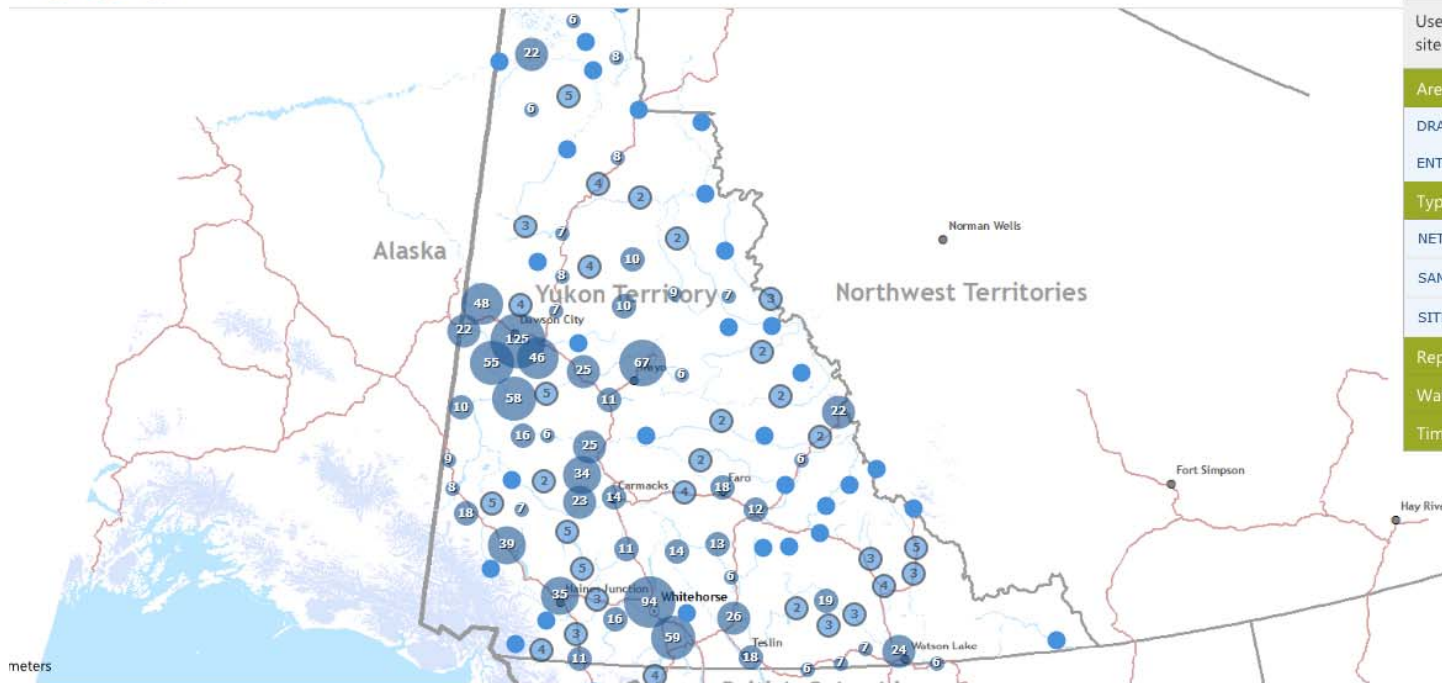
[understanding yukon water](#) [managing yukon water](#) [monitoring yukon water](#)

[AGENCIES](#) [NETWORK TYPES](#) [NETWORKS](#) [SAMPLE TYPES](#) [GLOSSARY](#) [WATER DATA CATALOGUE](#)

WATER DATA CATALOGUE



yukonwater



1 371 at manned locations 2 at unmanned locations 738 active 635 discontinued 833 natural state 494 other state

Filter sites by... [Clear all filters](#)

Use these controls to define what water sample sites are displayed on the map.

Area [Clear area](#)

DRAW ON MAP

ENTER COORDINATES

Types [Clear types](#)

NETWORK TYPE

SAMPLE TYPE

SITE STATE

Reporting sources [Clear sources](#)

Watersheds [Clear watersheds](#)

Time period [Clear time](#)

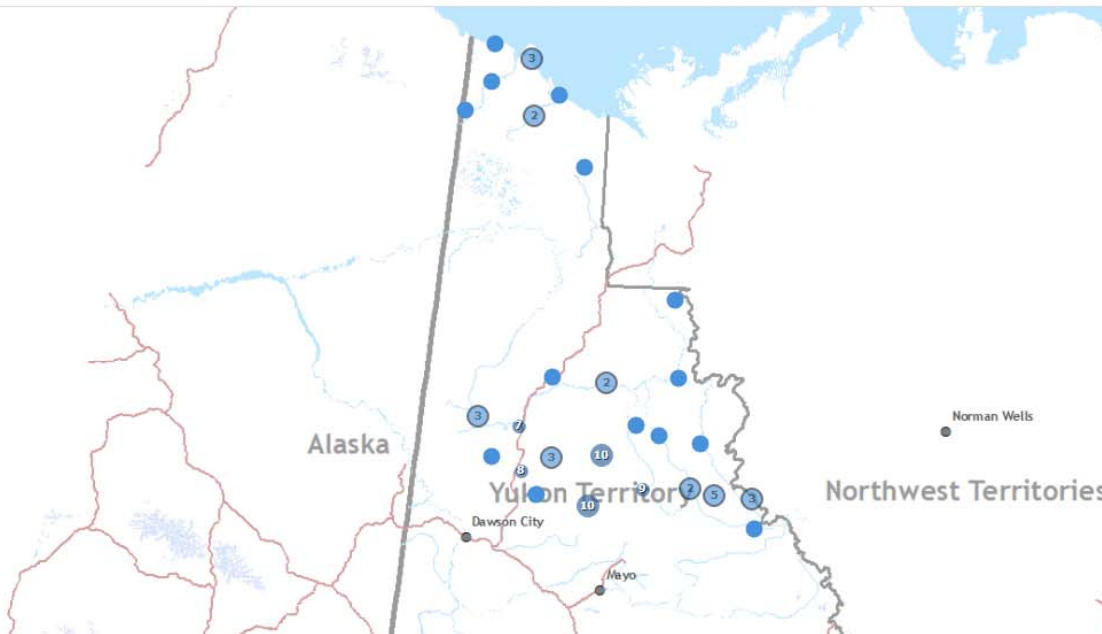
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WATER DATA CATALOGUE



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Filter sites by... [Clear all filters](#)

Use these controls to define what water sample sites are displayed on the map.

Area [Clear area](#)

DRAW ON MAP

ENTER COORDINATES

Types [Clear types](#)

NETWORK TYPE

SAMPLE TYPE

SITE STATE

Reporting sources [Clear sources](#)

Watersheds [Clear watersheds](#)

- Arctic Drainage Area
 - Central Liard
 - Central Mackenzie - Blackwater Lake
 - Lower Liard
 - Peel and Southwestern Beaufort Sea
 - Upper Liard
- Pacific Drainage Area

Found 81 matching sample sites of 1,373 total sample sites

81 at mapped locations, 0 at unmapped location 9 active, 72 discontinued 74 natural state, 1 other state
Collectively sampling Aquatic organisms, Hydrological, Meteorological, Snowpack, Water chemistry parameters in 7 networks from 1896 to Present

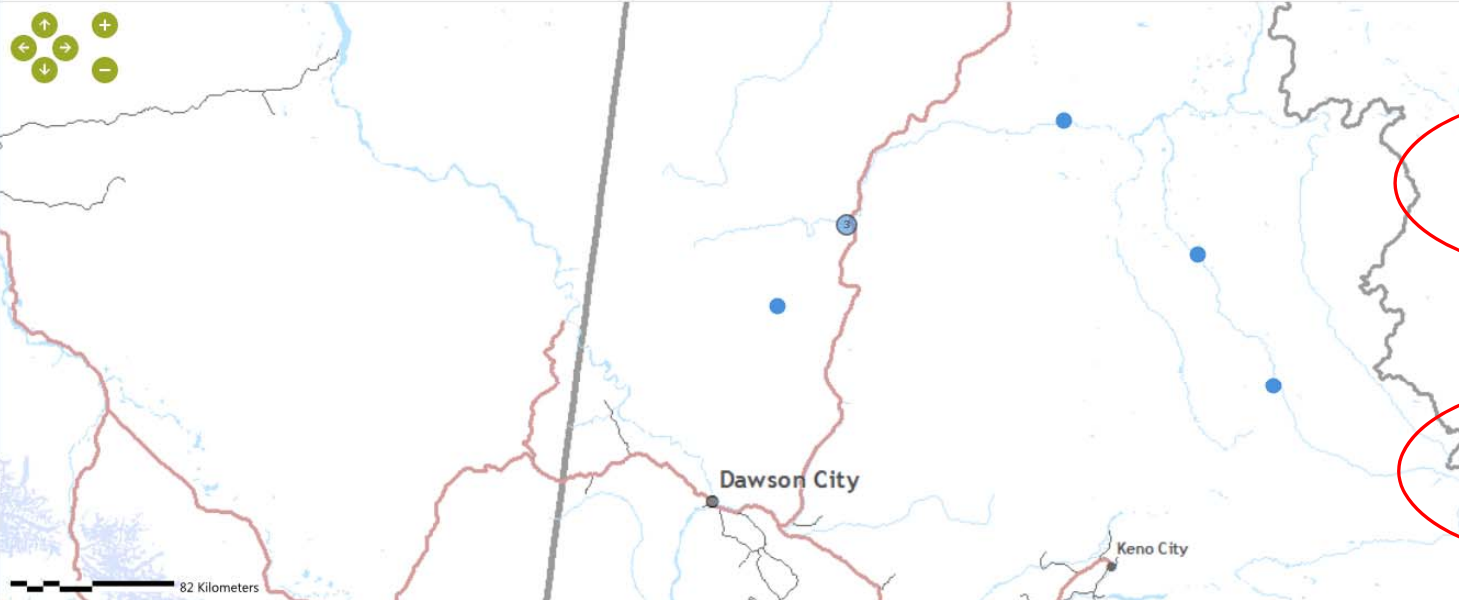
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Data Availability -

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WATER DATA CATALOGUE

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Filter sites by... [Clear all filters](#)

Use these controls to define what water sample sites are displayed on the map.

ENTER COORDINATES

Types [Clear types](#)

NETWORK TYPE

Aquatic Health Hydrometeorologic

Water Quality

SAMPLE TYPE

SITE STATE

Reporting sources [Clear sources](#)

Watersheds [Clear watersheds](#)

- Arctic Drainage Area
 - Central Liard
 - Central Mackenzie - Blackwater Lake
 - Lower Liard
 - Peel and Southwestern Beaufort Sea
 - Upper Liard

Found 7 matching sample sites of 1,373 total sample sites

- 7 at mapped locations, 0 at unmapped location
- 1 active, 6 discontinued
- 0 natural state, 1 other state
- Collectively sampling Hydrological, Water chemistry parameters in 2 networks from 1992 to Present

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AGENCIES NETWORK TYPES NETWORKS SAMPLE TYPES GLOSSARY WATER DATA CATALOGUE

WATER DATA CATALOGUE

Filter sites by... [Clear all filters](#)

Use these controls to define what water sample sites are displayed on the map.

ENTER COORDINATES

Types [Clear types](#)

NETWORK TYPE

Aquatic Health Hydrometeorologic

Water Quality

SAMPLE TYPE

SITE STATE

Reporting sources [Clear sources](#)

Watersheds [Clear watersheds](#)

- Arctic Drainage Area
 - Central Liard
 - Central Mackenzie - Blackwater Lake
 - Lower Liard
 - Peel and Southwestern Beaufort Sea
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Found 7 matching sample sites of 1,373 total sample sites

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- Collectively sampling Hydrological, Water chemistry parameters in 2 networks from 1992 to Present

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Data Availability -

yukonwater

Processor v. 1.9

Prepare data for upload

2013 Enter most current year of record

Step 1. Update ID numbers in network files

Step 2. Compile networks Identify networks

Step 3. Run spatial processor

Step 4. Update lat/long text

Upload data to Oracle

DEV Select destination database

Step 5. Upload to DEV

frmMain WTR_SITE

Site code 2100100

Network ID 2

Site name AISHIHIK A

Relocation No

Relocation note

Site state Natural

Site state note

UTM zone

UTM northing (m)

UTM easting (m)

Latitude degrees 61

Latitude minutes 39

Latitude seconds

Longitude degrees 137

Longitude minutes 29

Longitude seconds

Datum UNK

Coordinate source UNK

Coordinate precision UNK

Elevation (m) 966

Elevation source UNK

Drainage area (km2)

Placer watershed name

Sub-sub drainage name

NTS 50K mapsheet

Notes

Sampling status **Discontinued**

If sampling is still occurring at this site, leave End year blank in the most recent sample period.

SAMPLE PERIODS

Start year	End year
1943	1966

SAMPLE FREQUENCIES

Sample frequency	Operation Sch	Current?
Daily	Continuous	No
Hourly	Continuous	No

SAMPLE TYPES and PARAMETER CLASSES

Sample type	Parameter class
Meteorological	Humidity
Meteorological	Precipitation
Meteorological	Temperature
Meteorological	Wind

Create Date 2011 Mar 30 19:59:01

Environment Yukon Databases

- * Aquarius- streamflow, discharge, hydrometeorological, continuous water quality.

The screenshot displays the Aquarius Springboard web interface. The top navigation bar includes 'Location Folders' with 'All Locations' and 'Recent Locations'. The main content area is titled 'Data Sets' and contains a table with columns for 'Data Set ID', 'Description', 'First Measurement', and 'Last Measurement'. Below this, there is a 'Visits' section with a table for 'Christmas Creek' showing dates, parties, and comments.

Data Set ID	Description	First Measurement	Last Measurement
Discharge.Corrected@29CA005	WardSW	6/16/1995 12:00 AM	12/13/2013 12:00 AM
Stage.Corrected@29CA005	WardSW	1/1/1995 12:00 AM	6/20/2013 3:30 PM
Stage.Hobo15min@29CA005		5/13/2009 2:00 PM	6/20/2013 3:30 PM
Stage.0815min@29CA005		5/13/2009 2:00 PM	6/21/2013 12:00 AM
Atmos Pres.Hobo15min@29CA005	Baro	5/6/2013 11:00 AM	6/20/2013 3:30 PM
Water Temp.Hobo15min@29CA005	sampled at 15 minute interval, not averaged	5/6/2013 11:00 AM	6/20/2013 3:30 PM
River X Area.Field Visits@29CA005		5/13/2009 12:21 PM	6/20/2013 11:50 AM
Discharge.Field Visits@29CA005		5/13/2009 12:21 PM	6/20/2013 11:50 AM
River X Width.Field Visits@29CA005		5/13/2009 12:21 PM	6/20/2013 12:05 PM
Stage.Field Visits@29CA005		5/13/2009 12:21 PM	6/20/2013 11:50 AM
Water Velocity.Field Visits@29CA005		5/13/2009 12:37 PM	6/20/2013 12:01 PM
Level Survey Result.Field Visits@29CA005	surveyed water level	5/13/2009 12:21 PM	6/20/2013 12:23 PM
Stage.Combined@29CA005		5/13/2009 2:00 PM	6/21/2013 12:00 AM

Date	Party	Comments
6/20/2013 11:50 AM	G. Carpenter	BV - 1.3 Pulled out loggers and shut down station. Light snow falling
6/26/2013 1:32 PM	G. Carpenter	BV - 1.2. Reprogrammed Ott to SG - 0.420 @ 12:58
7/18/2013 11:33 AM	G. Carpenter, J. Gonet	BV - 1.3. Jared metered creek. Downloaded loggers, ran levels.
6/12/2013 12:02 PM	G. Carpenter, J. Gonet	BV - 1.4. Jared metered creek. Ott - 0.533, SG1 - 0.592, SG2 - 0.531
5/22/2013 1:59 PM	G. Carpenter	Ott logger reads 0.312 on arrival, reset manually to SG - 0.512
6/6/2013 12:55 PM	G. Carpenter	Installed Ott & Hobo loggers that were preprogrammed before

Environment Yukon Databases

- * Yukon Water Well Registry- depth to water table, stratigraphy

frmBoreholeData

WATER WELL RECORD

Add New Borehole SELECT BOREHOLE 101120002 Report Well Location Sketch

Add New Monitor (Borehole Required) SELECT MONITOR 1011200021 Red indicates Mandatory Fields

PART A. WELL LOCATION AND OWNER'S INFORMATION

A1 Borehole/Well Name: Well #3 A6 Elevation of Top of Casing: 1.00 m ft ASL

A2 Drilled for: Village of Haines Junction A7 Horizontal Accuracy: 30-100 (topo)

A3 Street Address of Well: Lot 1038 Haines Hwy A7 Vertical Accuracy: unknown or unreliable

A3 Neighbourhood: Overall Data Record Quality: Fair

A4 Community: Haines Junction A8 Purpose of Well(s): Municipal - residences and other gr

A5 UTM Coordinates: 8 363254 6737341 NAD 83 B1 Completion Date: Total Borehole Depth: 85.3 m ft BGS

Zone Easting Northing C1 Drilling Method: Entered Last Edited

NTS Mapsheet (50k): 115A/12

General Site Comments:

PART H and I. WELL CONTRACTOR

I3 Report Reference: Stanley, 1980 Add Driller I1 Name of Consultant:

Add Report I2 Address of Consultant:

PART B. LOG OF OVERBURDEN AND BEDROCK MATERIALS

BoreholeID: 101120002

Permafrost Encountered? From m ft To m ft

Layer	B2 From m	B3 To ft	B4 General Colour	B5 Most Common Material	B6 Secondary Materials	B7 General Description
1	0	0.3		GRAVEL		
2	0.3	2.5		CLAY		
3	2.4	6		GRAVEL		
4	6	7.3		CLAY		
5	7.2	15		thin gravelly grey, some cobbles		

A Layer Number must be entered for each geological material entered

PART C. WELL CONSTRUCTION/MONITOR DETAILS

Environment Yukon Databases

* Yukon Snow Survey Network- depth, SWE

The screenshot shows the Microsoft Access interface with a data table open. The table is titled 'Select Snow Course: Aishihik Lake - 08AA-SC03'. The table contains 20 rows of data, each representing a snow survey record. The columns are: Snow Course Number, Depth, SWE, Density, Estimate, Sample Date, Survey Date, Exclude Special, and Agency. All records in this table are from the 'Yukon Electric Company Limited'.

Snow Course Number	Depth	SWE	Density	Estimate	Sample Date	Survey Date	Exclude Special	Agency
08AA-SC03	15.30	56.00	0.37		01 May 2014	25 Apr 2014		Yukon Electric Company Limited
08AA-SC03	32.00	64.00	0.20		01 Apr 2014	26 Mar 2014		Yukon Electric Company Limited
08AA-SC03	33.00	77.00	0.23		01 Mar 2014	25 Feb 2014		Yukon Electric Company Limited
08AA-SC03	42.00	106.00	0.25		01 May 2013	30 Apr 2013		Yukon Electric Company Limited
08AA-SC03	47.20	92.00	0.19		01 Apr 2013	27 Mar 2013		Yukon Electric Company Limited
08AA-SC03	45.00	120.00	0.27		01 Mar 2013	02 Mar 2013		Yukon Electric Company Limited
08AA-SC03	16.00	32.00	0.20		01 May 2012	30 Apr 2012		Yukon Electric Company Limited
08AA-SC03	55.00	118.00	0.21		01 Apr 2012	28 Mar 2012		Yukon Electric Company Limited
08AA-SC03	48.00	87.00	0.18		01 Mar 2012	27 Feb 2012		Yukon Electric Company Limited
08AA-SC03	47.00	135.00	0.29		01 May 2011	28 Apr 2011		Yukon Electric Company Limited
08AA-SC03	70.00	155.00	0.22		01 Apr 2011	29 Mar 2011		Yukon Electric Company Limited
08AA-SC03	62.00	136.00	0.22		01 Mar 2011	24 Feb 2011		Yukon Electric Company Limited
08AA-SC03	3.00	9.00	0.30		01 May 2010	26 Apr 2010		Yukon Electric Company Limited
08AA-SC03	34.00	72.00	0.21		01 Apr 2010	29 Mar 2010		Yukon Electric Company Limited
08AA-SC03	31.00	53.00	0.17		01 Mar 2010	25 Feb 2010		Yukon Electric Company Limited
08AA-SC03	46.00	119.00	0.26		01 May 2009	28 Apr 2009		Yukon Electric Company Limited
08AA-SC03	60.00	140.00	0.23		01 Apr 2009	30 Mar 2009		Yukon Electric Company Limited
08AA-SC03	56.00	113.00	0.20		01 Mar 2009	23 Feb 2009		Yukon Electric Company Limited
08AA-SC03	17.00	36.00	0.21		01 May 2008	29 Apr 2008		Yukon Electric Company Limited
08AA-SC03	38.00	73.00	0.19		01 Apr 2008	31 Mar 2008		Yukon Electric Company Limited
08AA-SC03	37.00	89.00	0.24		01 Mar 2008	25 Feb 2008		Yukon Electric Company Limited
08AA-SC03	34.40	171.00	0.50		01 May 2007	26 Apr 2007		Yukon Electric Company Limited
08AA-SC03	52.00	120.00	0.23		01 Apr 2007	28 Mar 2007		Yukon Electric Company Limited
08AA-SC03	50.00	102.00	0.20		01 Mar 2007	06 Mar 2007		Yukon Electric Company Limited
08AA-SC03	19.00	52.00	0.27		01 May 2006	25 Apr 2006		Yukon Electric Company Limited

Environment Yukon Databases

* EQWin- water quality compliance samples

Stn.Code	eq Smpl #	Sampling Session	Smpl Date	Sample Class	Start Date/Time	Depth - Tc
T-1	T-1_29-May-13_LP	2013-05	5/29/2013 3:56:59 PM	LP	5/29/2013	
WRSS	WRSS_29-May-13_LP	2013-05	5/29/2013 3:13:00 PM	LP	5/29/2013	
MW06-10S	MW06-10S_29-05-13_LP	2013-05	5/29/2013 2:24:59 PM	LP	5/29/2013	
MW06-10S	MW06-10S_29-05-13LQS	2013-05	5/29/2013 2:24:59 PM	LQS	5/29/2013	
MW06-10M	MW06-10M_29-05-13_LP	2013-05	5/29/2013 12:00:00 PM	LP	5/29/2013	
W-81	W-81_28-May-13_LP	2013-05	5/28/2013 5:24:59 PM	LP	5/28/2013	
W-15	W-15_28-May-13_LP	2013-05	5/28/2013 4:36:59 PM	LP	5/28/2013	
W-82	W-82_28-May-13_LP	2013-05	5/28/2013 2:19:00 PM	LP	5/28/2013	
W-85	W-85_27-May-13_LM	2013-05	5/27/2013 1:11:00 PM	LM	5/27/2013	
W-16	W-16_26-May-13_LP	2013-05	5/26/2013 4:39:59 PM	LP	5/26/2013	
W-31	W-31_24-May-13_LQS	2013-05	5/24/2013 1:18:59 PM	LQS	5/24/2013	
W-31	W-31_24-May-13_LP	2013-05	5/24/2013 1:18:59 PM	LP	5/24/2013	
WRSS	WRSS_21-May-13_LM	2013-05	5/21/2013 1:25:00 PM	LM	5/21/2013	
MW05-5B	MW05-5B_19-May-13_LP	2013-05	5/19/2013 2:44:59 PM	LP	5/19/2013	
MW05-5A	MW05-5A_19-May-13_LP	2013-05	5/19/2013 2:15:59 PM	LP	5/19/2013	
T-1	T-1_15-May-13_LP	2013-05	5/15/2013	LP	5/15/2013	
MW06-12S	MW06-12S_14-05-13_LP	2013-05	5/14/2013	LP	5/14/2013	
MW08-13	MW08-13_12-May-13_LP	2013-05	5/12/2013	LP	5/12/2013	
W-73	W-73_11-May-13_LP	2013-05	5/11/2013 4:57:59 PM	LP	5/11/2013	
W-72	W-72_11-May-13_LP	2013-05	5/11/2013 4:39:59 PM	LP	5/11/2013	
W-71	W-71_11-May-13_LP	2013-05	5/11/2013 4:25:59 PM	LP	5/11/2013	
W-21	W-21_11-May-13_LP	2013-05	5/11/2013 2:26:59 PM	LP	5/11/2013	
W-22	W-22_11-May-13_LP	2013-05	5/11/2013 12:58:59 PM	LP	5/11/2013	
W-40	W-40_11-May-13_LP	2013-05	5/11/2013 12:36:00 PM	LP	5/11/2013	
MW05-6B	MW05-6B_08-May-13_LM	2013-05	5/8/2013 12:09:59 PM	LM	5/8/2013	
MW05-6A	MW05-6A_08-May-13_LM	2013-05	5/8/2013 11:24:59 AM	LM	5/8/2013	
MW06-8S	MW06-8S_07-May-13_LP	2013-05	5/7/2013 4:20:00 PM	LP	5/7/2013	
MW06-8D	MW06-8D_07-May-13_LP	2013-05	5/7/2013 12:45:00 PM	LP	5/7/2013	
MW06-8M	MW06-8M_05-May-13_LP	2013-05	5/5/2013 7:05:00 PM	LP	5/5/2013	

Sample number: T-1_29-May-13_LP Station: T-1 Sample class: LP

Date/time collected: 5/29/2013 Date/time started: 5/29/2013 Sampling method: [dropdown]

3:56:59 PM 12:00:00 AM Sampled by: [text box]

Sample Comments: N-NO23 and N-NO2 RDL raised due to sample matrix interference. Br RDL raised due to sample matrix interference.

Sample Results

Parameter Name	Param.Code	Units	Alt Result No	Result	R
Acidity	Acidity	mgCaCO3/L	0	<0.50	
Ag-D	Ag-D	mg/L	0	0.000132	
Ag-T	Ag-T	mg/L	0	0.000478	
Al-D	Al-D	mg/L	0	0.625	
Alk-T	Alk-T	mgCaCO3/L	0	38.7	
Al-T	Al-T	mg/L	0	0.657	
As-D	As-D	mg/L	0	0.00765	
As-T	As-T	mg/L	0	0.00883	
Ba-D	Ba-D	mg/L	0	0.201	
Ba-T	Ba-T	mg/L	0	0.194	
B-D	B-D	mg/L	0	<0.50	

Future of Databases

- * Aquarius- add data from other branches within Environment Yukon (Parks, Standards and Approvals)
- * Yukon Water Well Registry Enhancements
- * Other...
 - * Waterline improvements

Thanks!



Erin.Light@gov.yk.ca