

**YUKON SNOW SURVEY
BULLETIN & WATER
SUPPLY FORECAST**
May 1, 2011

Prepared and issued by:
Water Resources Branch
Environment Yukon



PREFACE

The Yukon Snow Survey Bulletin and Water Supply Forecast is prepared and issued three times annually - after March 1, April 1 and May 1 - by Environment Yukon's Water Resources Branch. The bulletin provides a summary of winter meteorological and streamflow conditions for Yukon, as well as current snow depth and snow water equivalent observations for 56 locations. This information is used to make projections of total volume runoff for the summer period, and an estimate of peak flow for the main river basins and sub-basins including the: upper and lower Yukon, Pelly, Stewart, Liard, Alsek, Porcupine and Peel Rivers. Information about the bulletin, snowpack conditions or streamflow projections can be obtained by contacting:

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NETWORK CHANGES for 2011

There have been no network changes in 2011. This bulletin can now be accessed on the web at http://environmentyukon.gov.yk.ca/monitoringenvironment/snow_survey.php

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It is recommended that reference to this report be made in the following form:

Yukon Snow Survey Bulletin and Water Supply Forecast
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Other agencies that contribute significantly to the Snow Survey Program by providing data, assistance and information for the bulletin are:

Meteorologist, Wildland Fire Management, Yukon Department of Community Services, Whitehorse

Officer in Charge, Water Survey of Canada, Whitehorse.

Agencies cooperating with Environment Yukon in the Snow Survey Program are:

Client Service and Inspections Branch, Yukon Department of Energy Mines and Resources

Information Management and Technology, Yukon Department of Environment

B.C. Ministry of Environment, Water Stewardship Division

USDA Natural Resources Conservation Service

Yukon Department of Highways and Public Works

Parks Canada

The Yukon Energy Corporation

YUKON TERRITORY SNOWPACK CONDITIONS AND RUNOFF PROJECTION

WEATHER

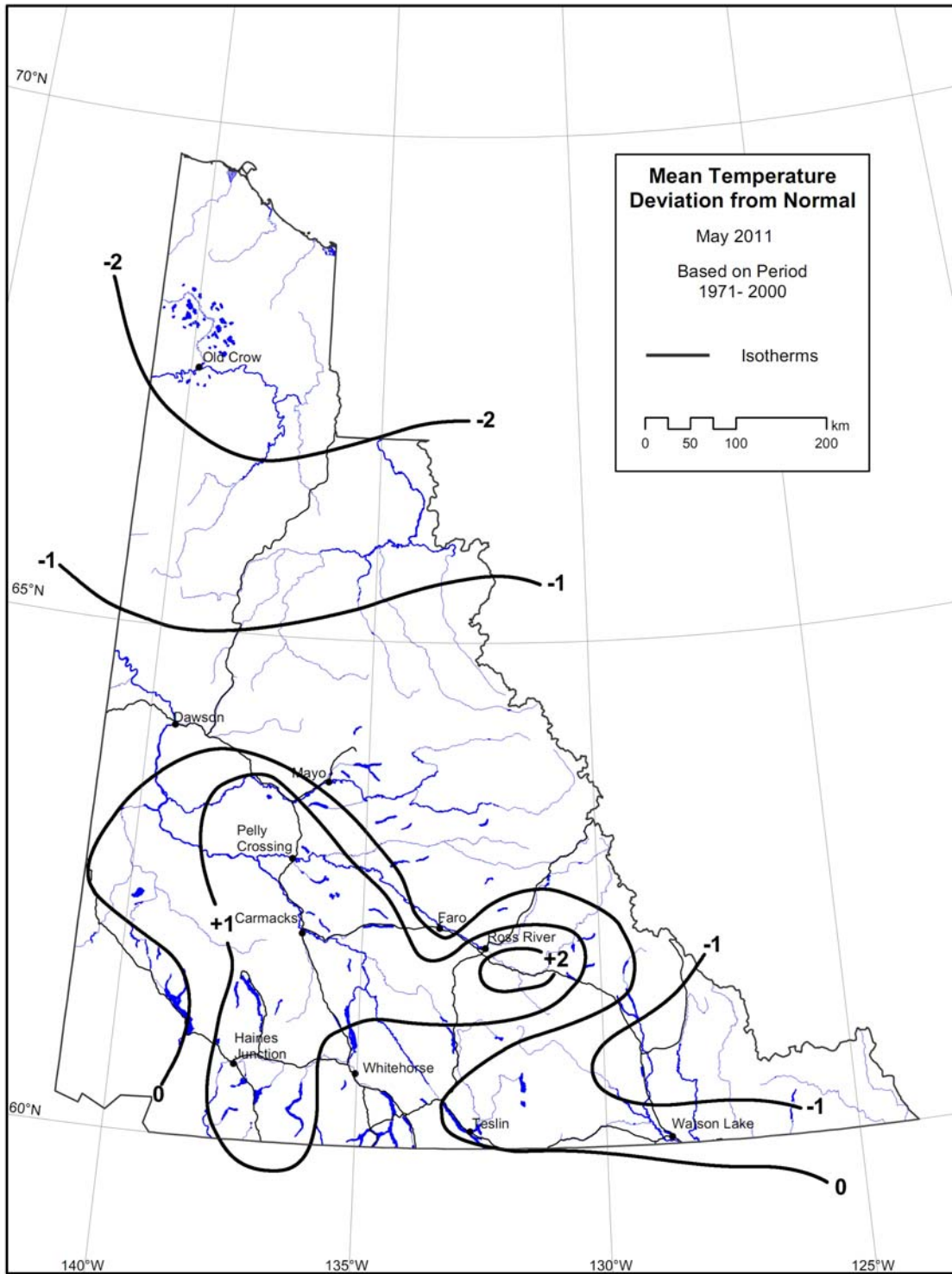
April temperatures throughout Yukon were generally near normal. Temperature deviations ranged from one degree above normal in south central Yukon to one degree below normal in south eastern regions. Northern Yukon experienced temperatures that were one to two degrees below normal. April precipitation was well below normal throughout the Territory with the exception of north central and northwestern regions which were normal.

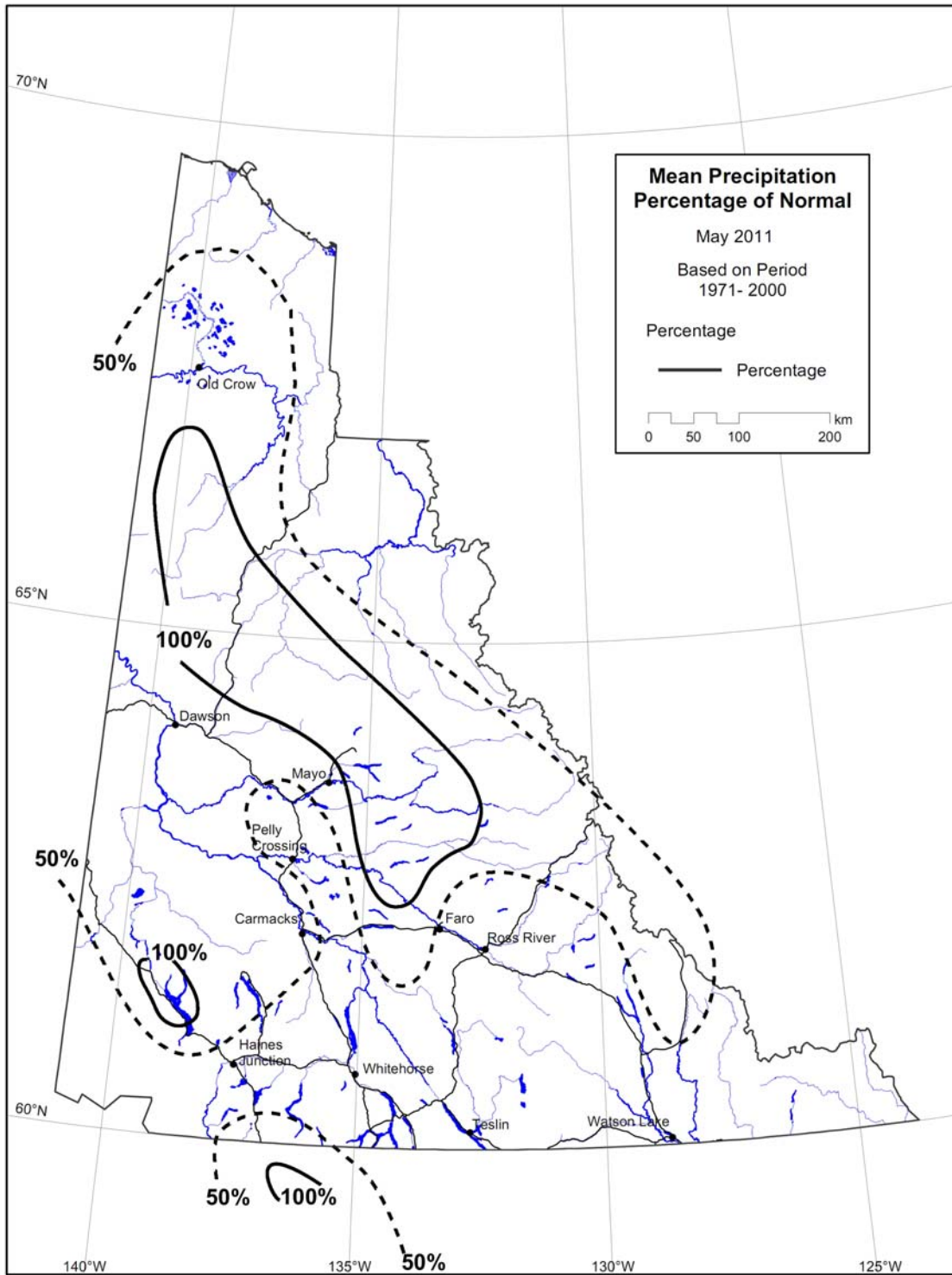
SNOWPACK

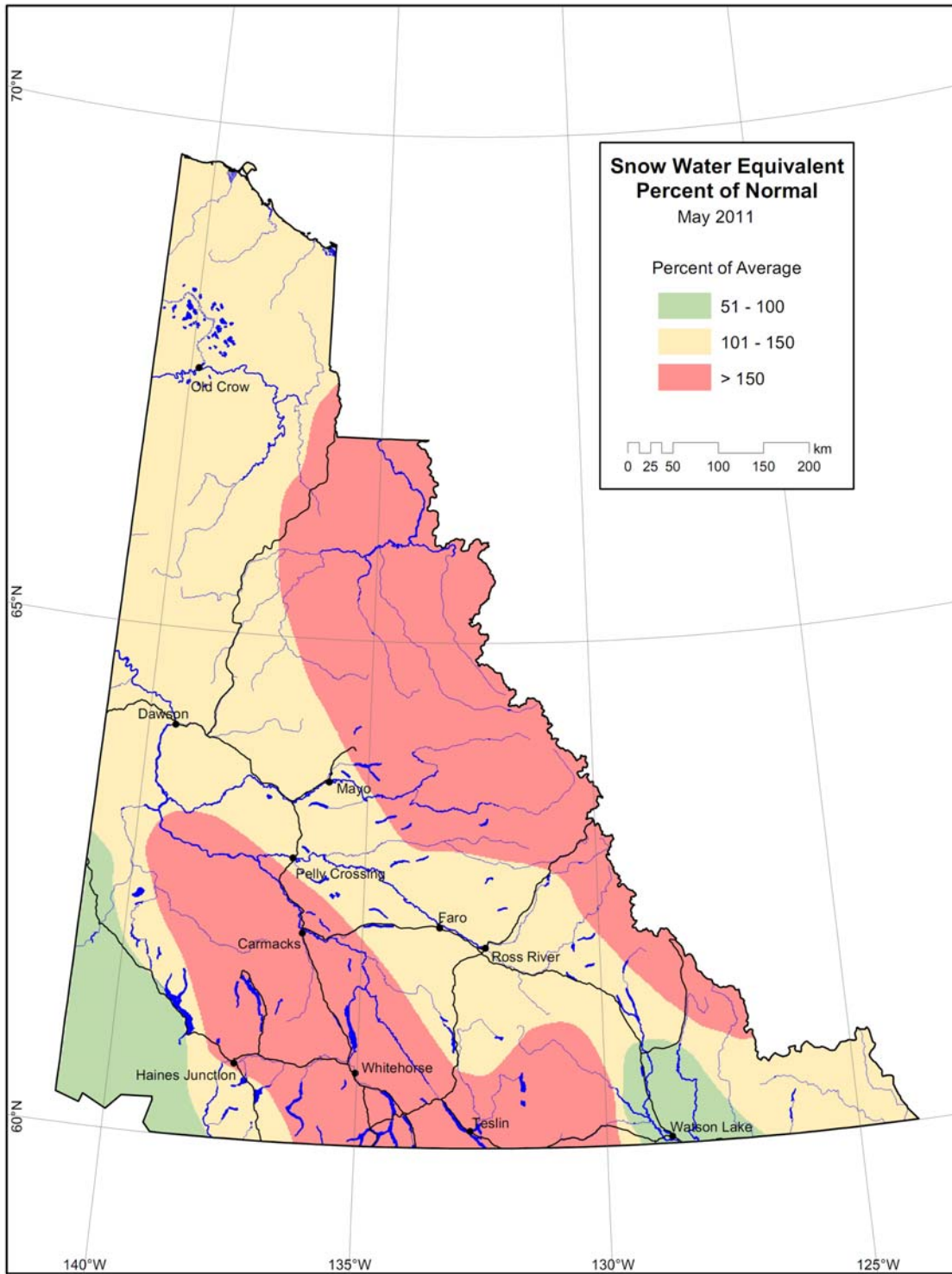
The May 1 Yukon snowpack is well above normal throughout much of the Territory with the exception of the Liard basin and southwestern Yukon which are below normal.

STREAMFLOW

Streamflow conditions within Yukon are generally below normal throughout most of Yukon with the exception of northern Yukon which is above normal for May 1st. Streamflow during this period represents winter baseflow, which provides an indication of winter groundwater contributions.





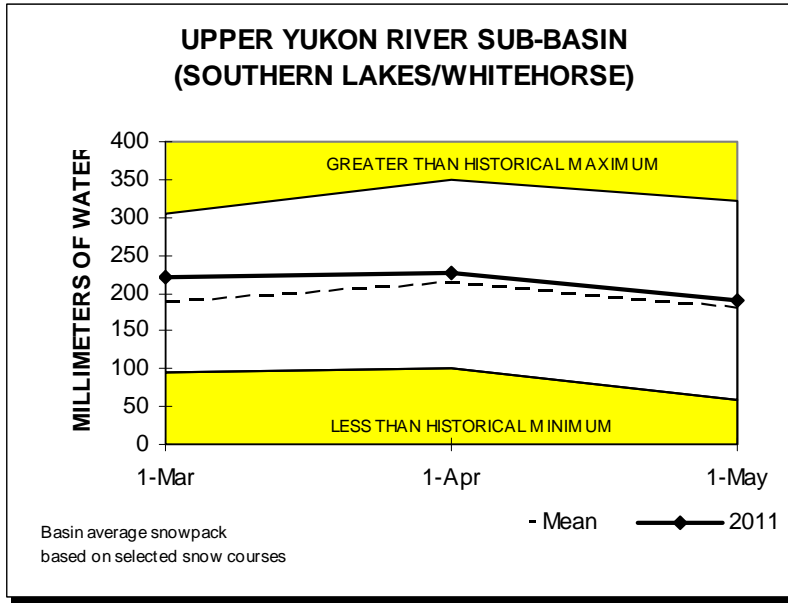


YUKON RIVER BASIN

Snowpack conditions in the Yukon River Basin are generally well above normal with the exception of southeastern portions of the basin which are near normal.

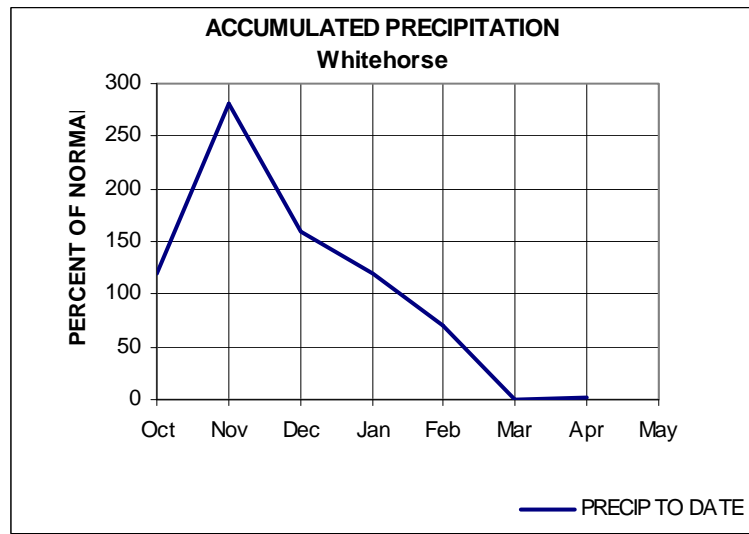
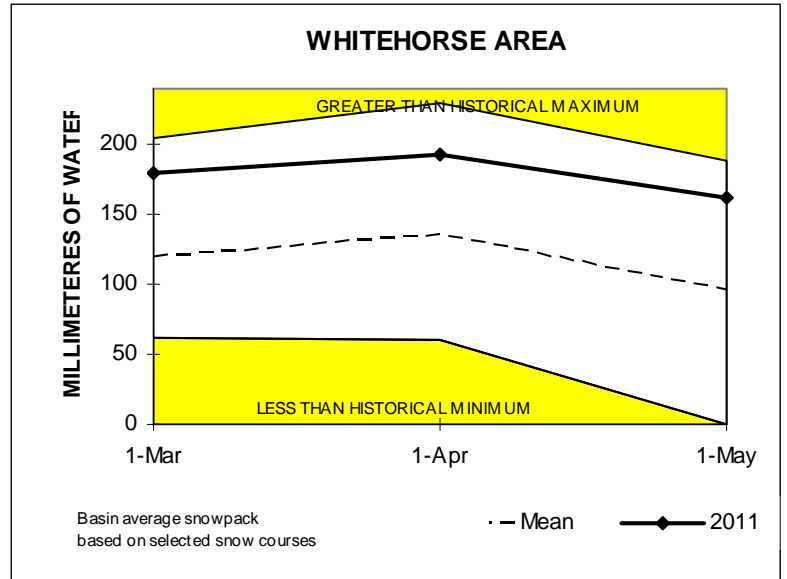
UPPER YUKON RIVER SUB-BASIN (SOUTHERN LAKES)

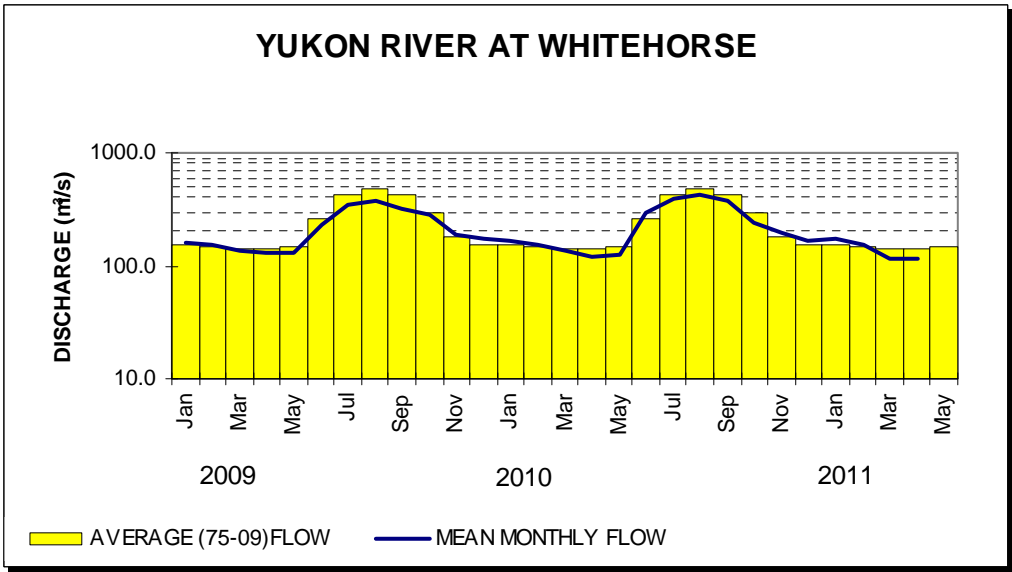
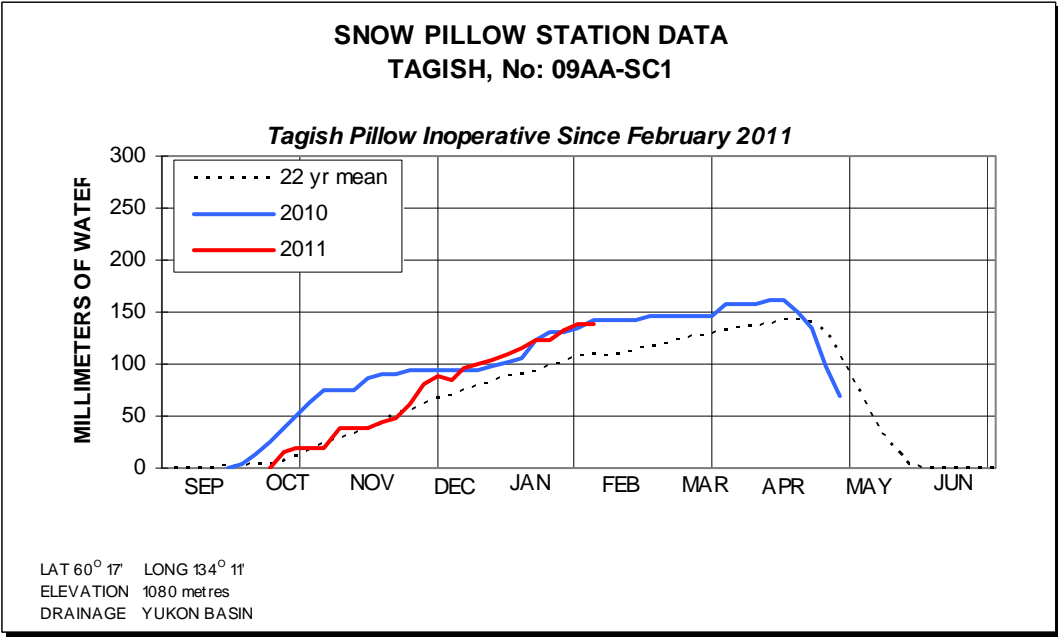
Snowpack conditions in the Upper Yukon River watershed are near normal. Values range from no snow at Atlin to greater than 174 percent of normal at Tagish. A basin wide average has been estimated to be 106 percent of normal.



WHITEHORSE AREA

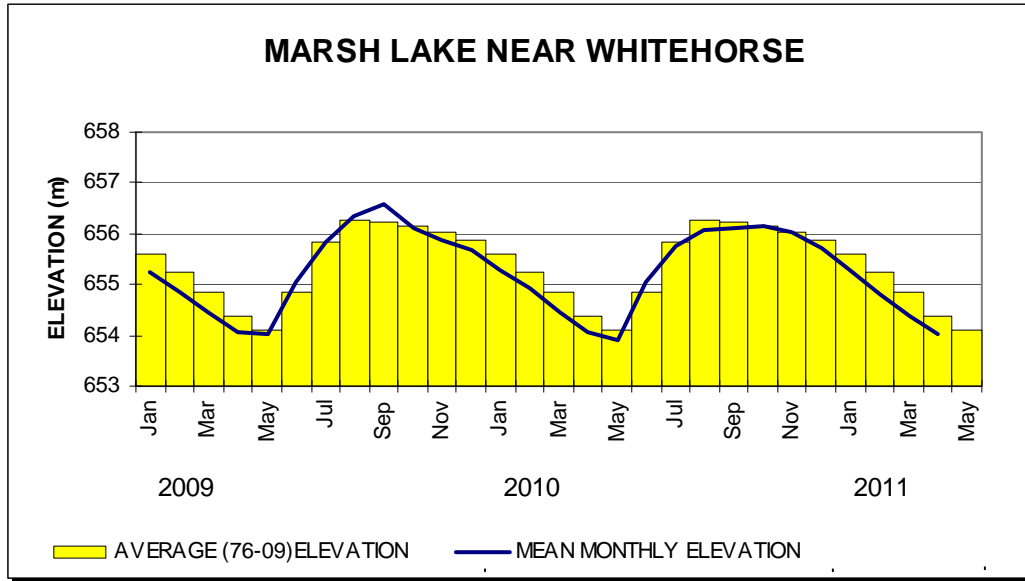
Snowpack conditions in the Whitehorse area are well above normal for May 1st. Values range from 167 percent of normal at the Whitehorse Airport to 172 percent of normal at Mt McIntyre. An area wide average is estimated to be 170 percent of normal.





YUKON RIVER and MARSH LAKE

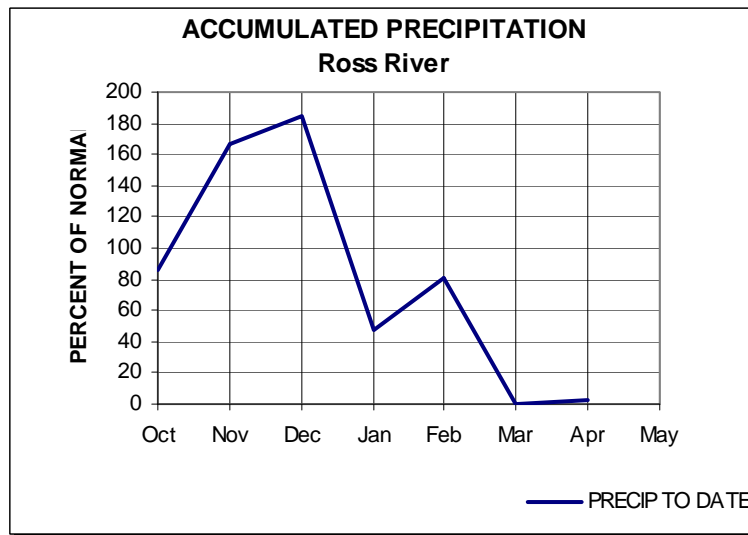
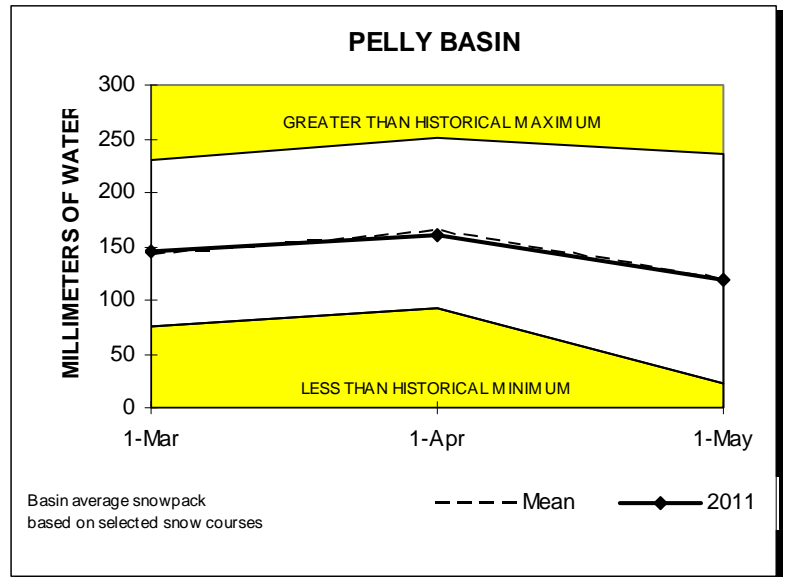
The elevation of Marsh Lake during April was 654.049 m or 0.207 m below normal. Yukon River at Whitehorse mean discharge during March was 70 percent of normal. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 110 percent and 110 percent of normal respectively.

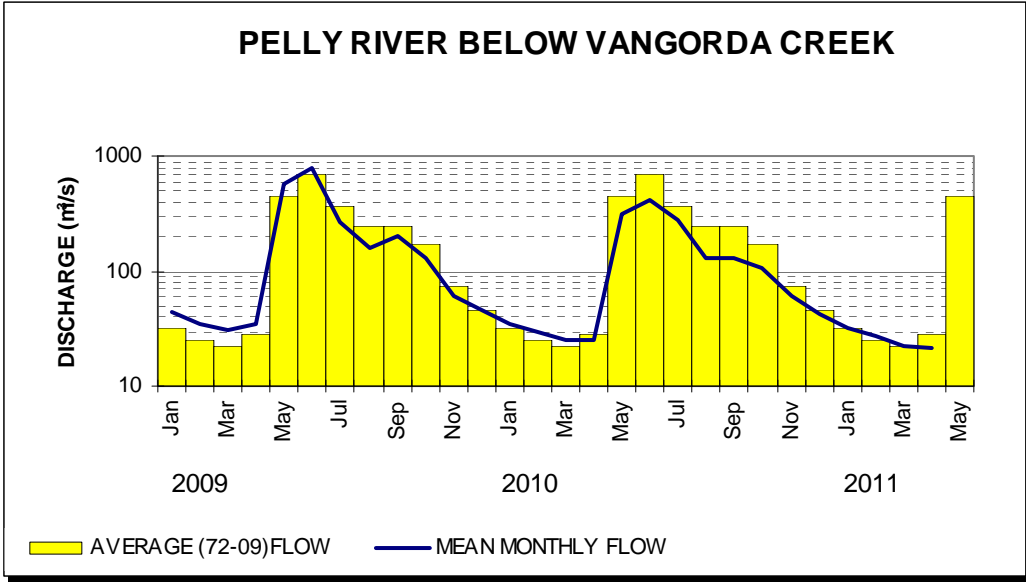
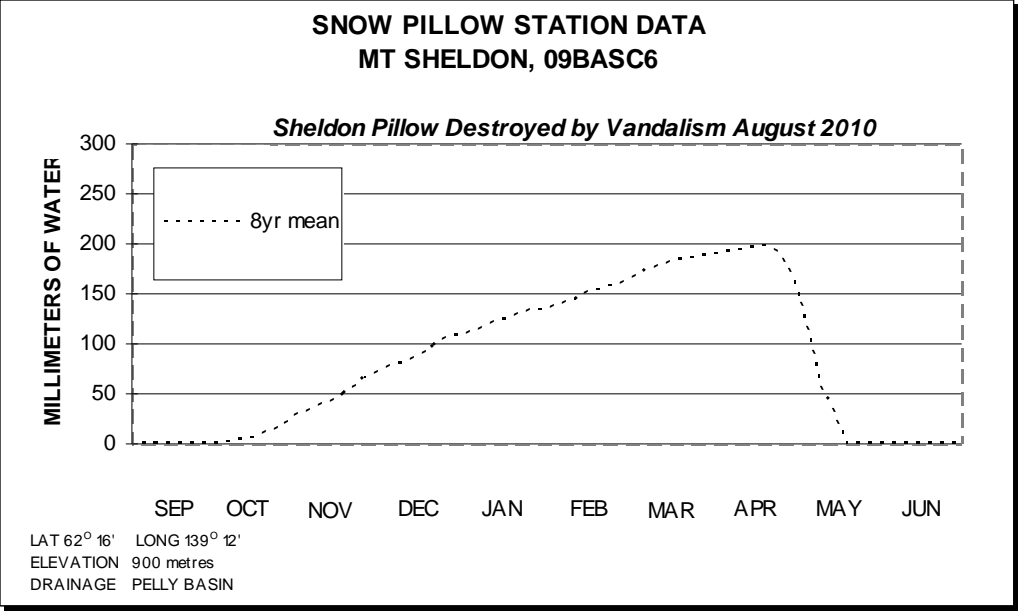


PELLY RIVER SUB-BASIN

Snowpack conditions in the Pelly River watershed are slightly below normal. Values of snow water equivalent range from 55 percent of normal at Twin Creeks to 159 percent of normal at Hoole River. A basin wide average has been estimated to be 93 percent of normal.

Mean April streamflow for the watershed was 74 percent of normal as indicated by the Pelly River below Vangorda Creek. Given normal summer meteorological conditions, volume runoff and peak flows are expected to be 105 percent and 100 percent of normal respectively.

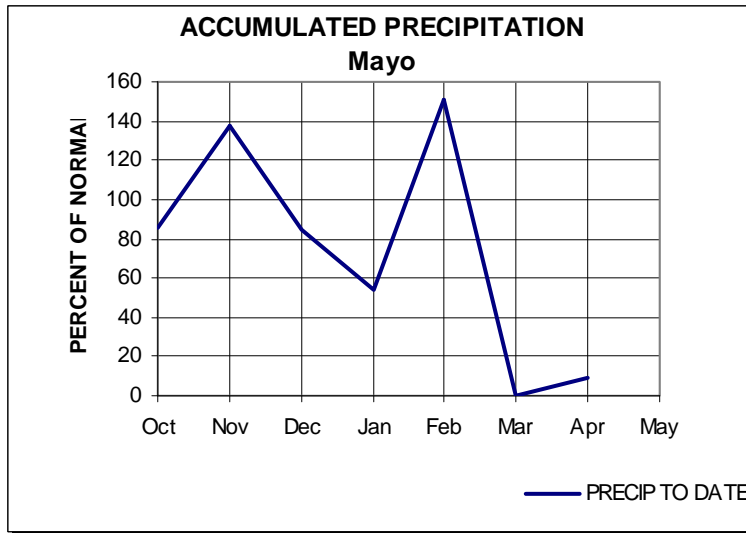
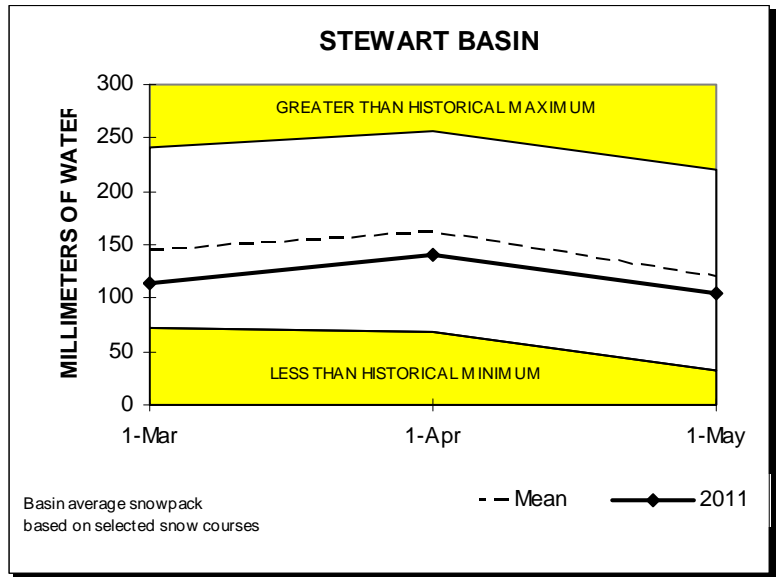


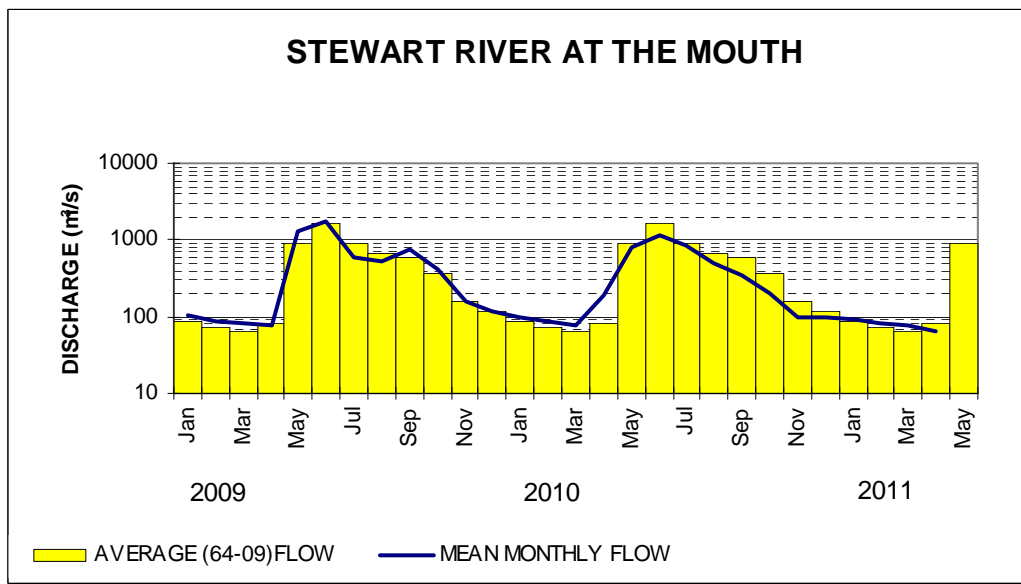
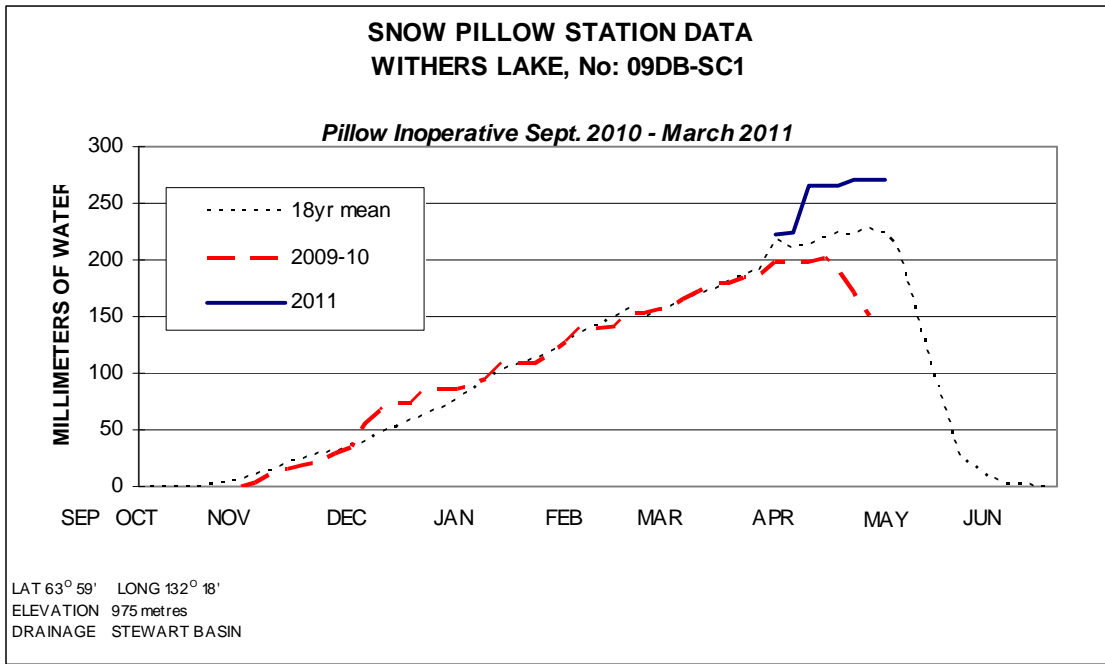


STEWART RIVER SUB-BASIN

Snowpack conditions in the Stewart River watershed are below normal for April 1st. Values of snow water equivalent range from no snow at the Mayo Airport to 111 percent of normal at Plata Airstrip. A basin wide average has been estimated to be 88 percent of normal.

Mean April streamflow for the watershed was 78 percent of normal as indicated by the Stewart River at the Mouth. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 100 percent and 95 percent of normal respectively.

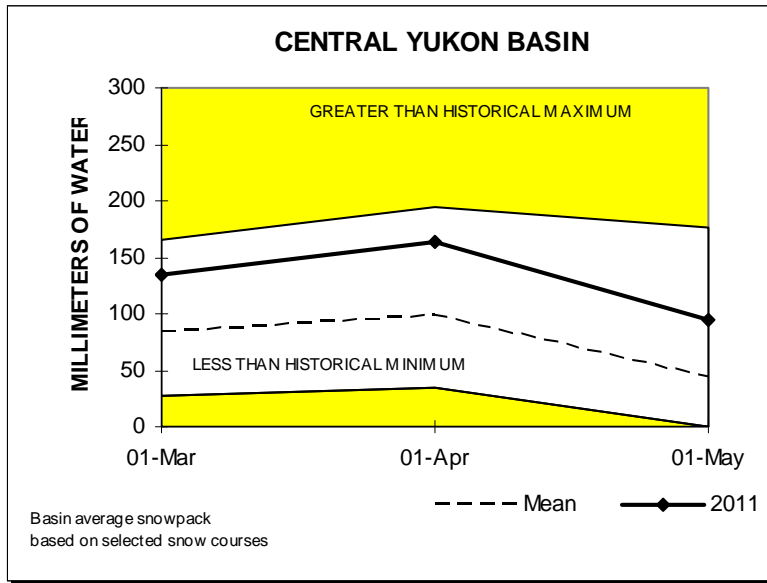




CENTRAL YUKON RIVER BASIN (CARMACKS AREA)

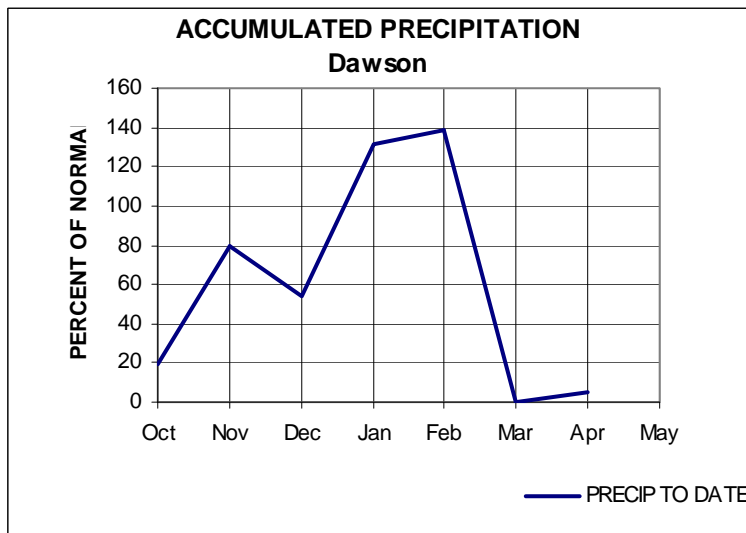
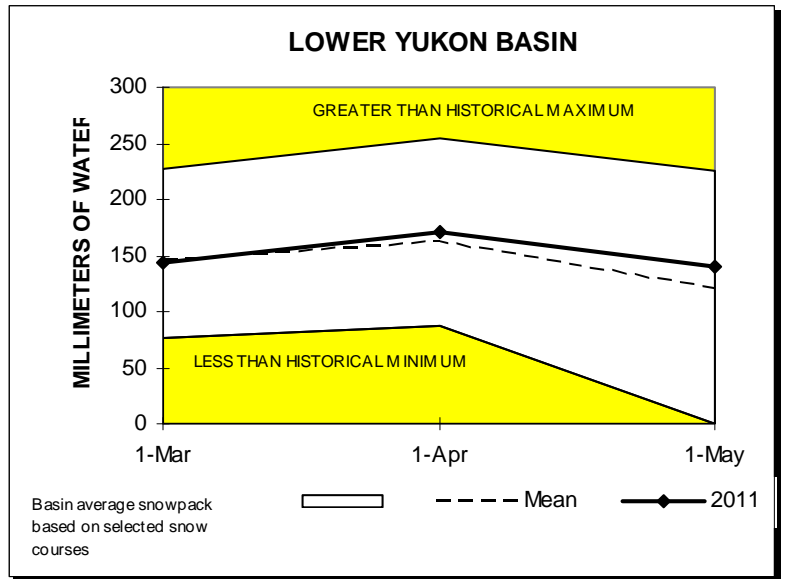
Snowpack conditions in the Carmacks area are well above normal for April 1st. Values of snow water equivalent range from

no snow at Williams Creek and MacIntosh to over 300 percent of normal at Mount Nansen. An area wide average has been estimated to be 223 percent of normal. Record high snowpacks were observed at Mount Berdoe and Mount Nansen.



LOWER YUKON RIVER BASIN (DAWSON AREA)

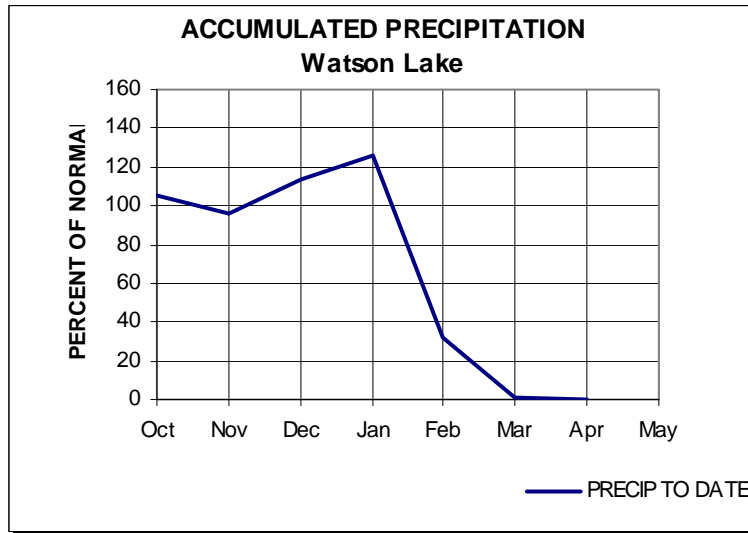
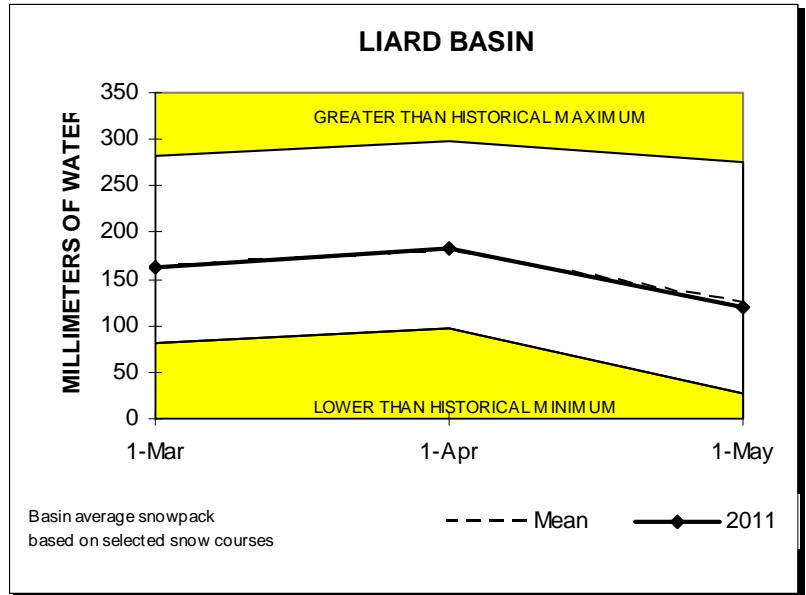
Snowpack conditions in the Dawson area are above normal for May 1st. Values of snow water equivalent range from 81 percent of normal at Grizzly to 139 percent of normal at Midnight Dome. An area wide average has been estimated to be 116 percent of normal.



LIARD RIVER BASIN

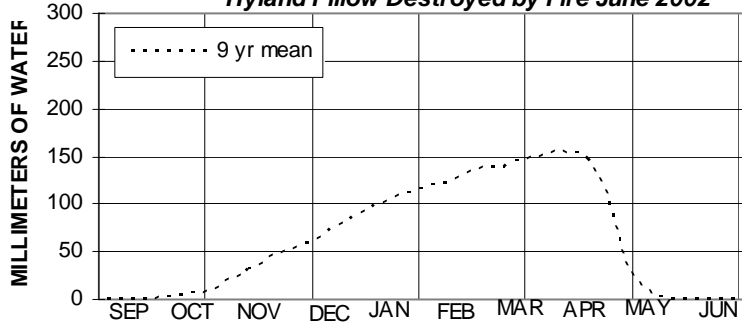
Snowpack conditions within the Liard River watershed are above normal. Values of snow water equivalent range from 71 percent of normal at Frances Lake to 151 percent of normal at Hyland River. A basin wide average has been estimated to be 111 percent of normal.

Mean April streamflow for the Liard River upstream of Upper Liard was 81 percent of normal. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 98 percent and 104 percent of normal.



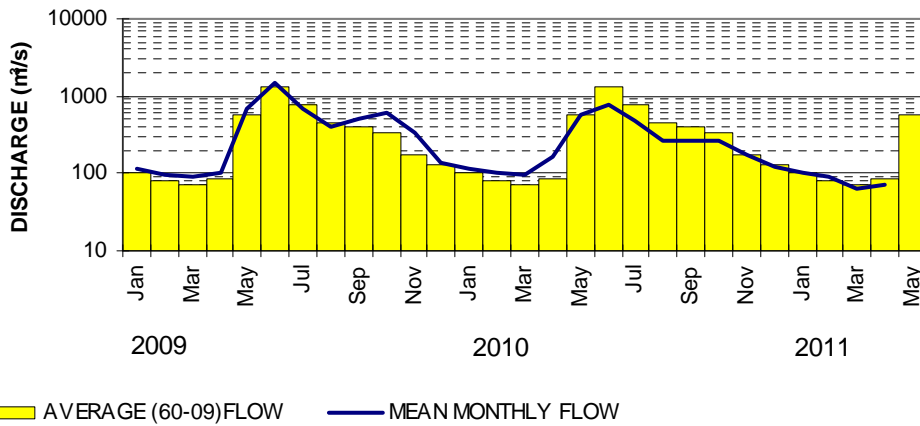
**SNOW PILLOW STATION DATA
HYLAND RIVER, No: 10AD-SC1**

Hyland Pillow Destroyed by Fire June 2002



LAT 61° 31' LONG 128° 16'
ELEVATION 855 metres
DRAINAGE LIARD BASIN

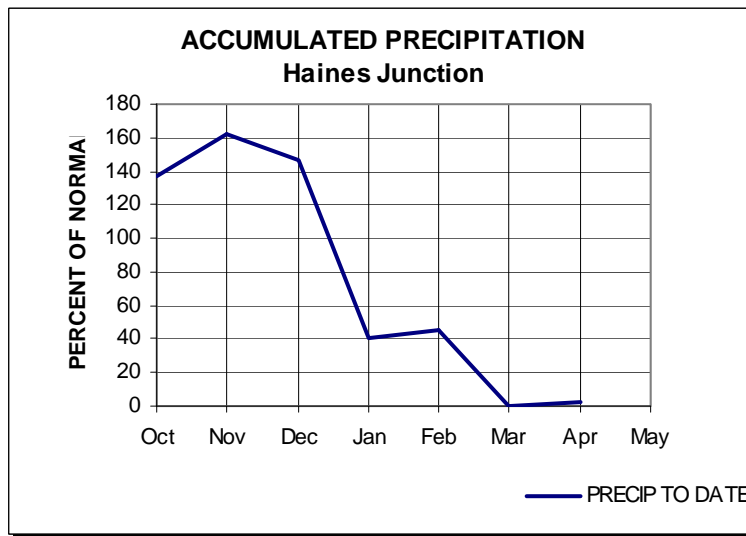
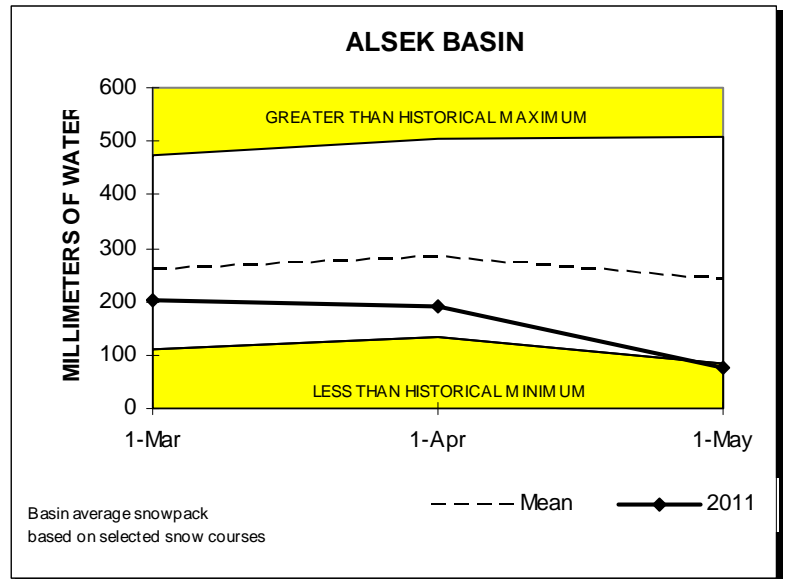
LIARD RIVER AT UPPER CROSSING

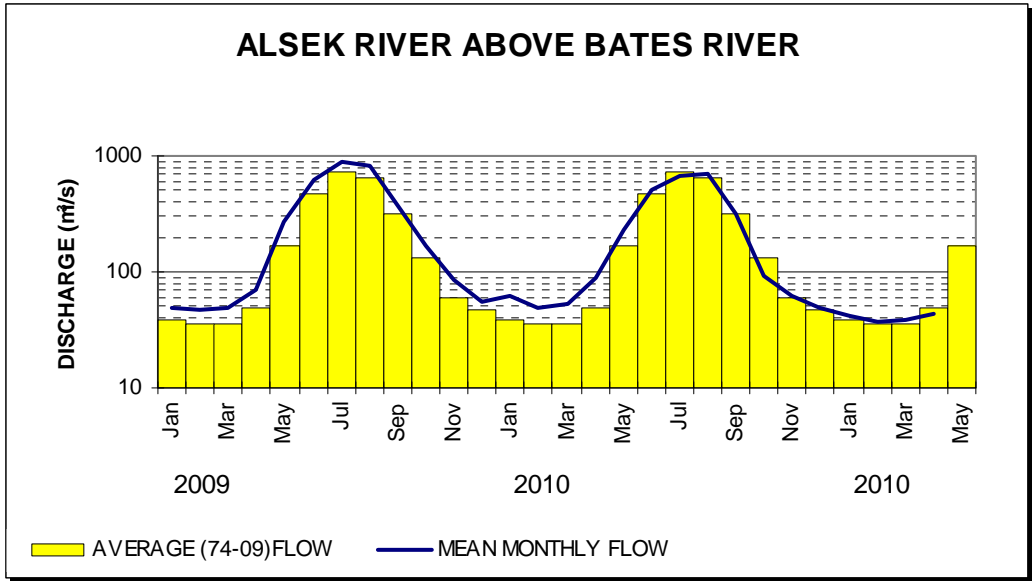


ALSEK RIVER BASIN

Snowpack conditions within the Alsek River watershed are well above normal for May 1st. Values of snow water equivalent range from 106 percent of normal at Alder Creek to over 300 percent of normal at Canyon Creek. A basin wide average has been estimated to be 157 percent of normal.

Mean monthly streamflow for March as indicated by the Alsek River above Bates River was 92 percent of normal. The Alsek River is primarily a glacial regime type, which is largely dependent on summer temperatures. Given normal summer meteorological conditions however, volume runoff and peak flows for the season are expected to be 115 and 115 percent of normal respectively.

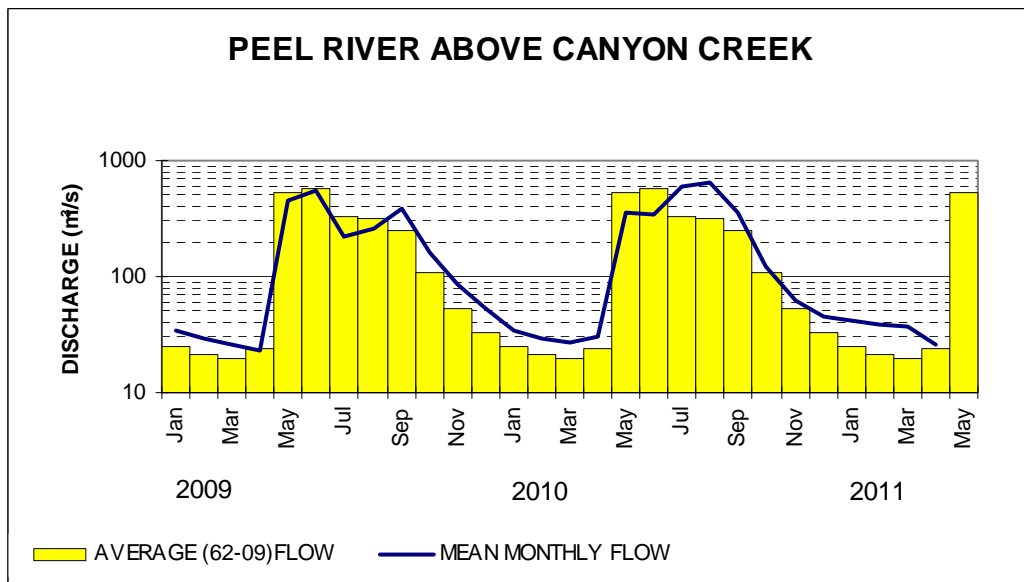
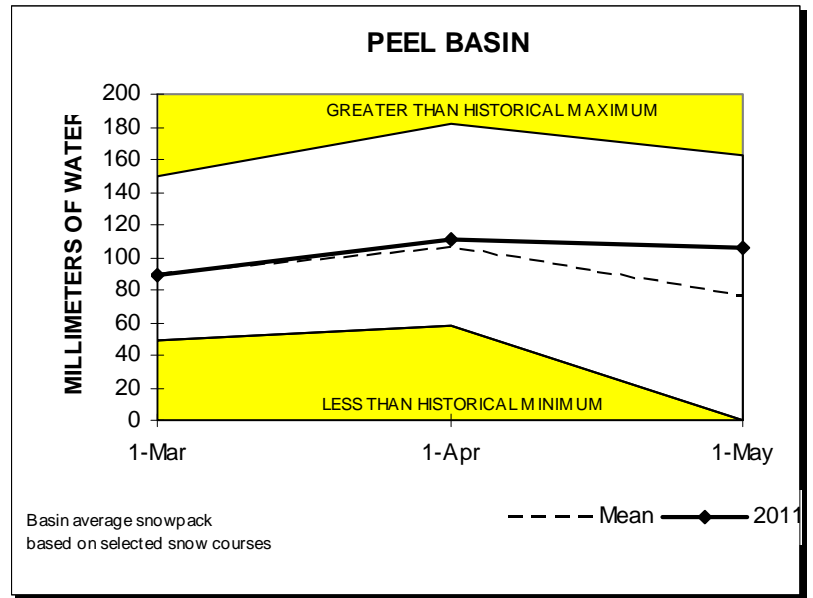




PEEL RIVER BASIN

Snowpack conditions in the Peel River watershed are above normal with values of snow water equivalent ranging from 130 percent of normal at Ogilvie to 150 percent of normal at Blackstone. A basin wide average has been estimated to be 140 percent of normal.

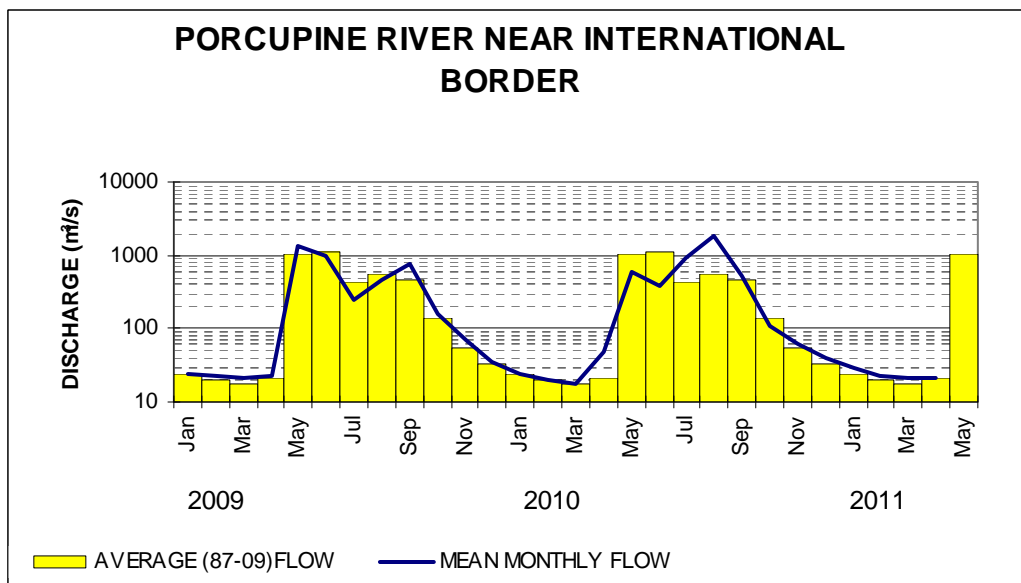
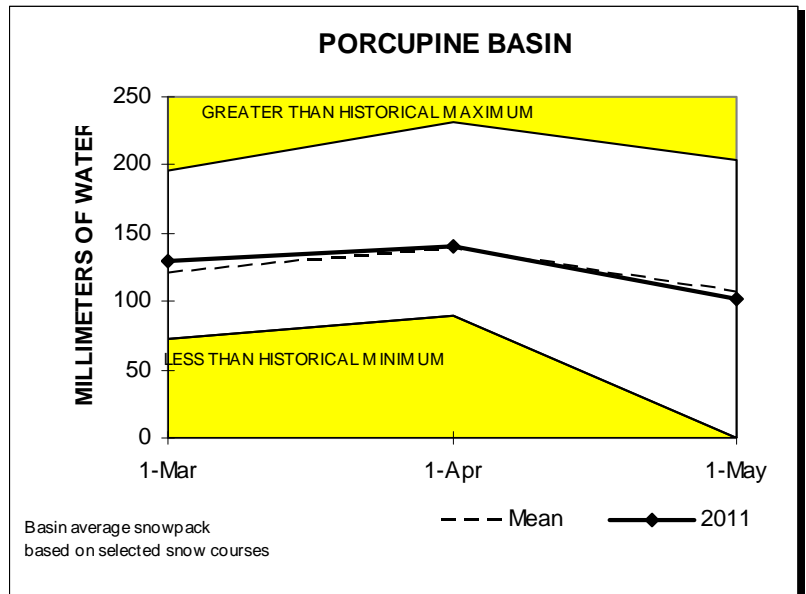
Mean monthly streamflow for April as indicated by the Peel River above Canyon Creek station was 107 percent of normal. Peel River volume and peak flow forecasts are not available at this time.



PORCUPINE RIVER BASIN

Snowpack conditions in the Porcupine River watershed are above normal with values of snow water equivalent ranging from 128 percent of normal at Eagle River to 143 percent of normal at Eagle Plains. A basin wide average has been estimated to be 135 percent of normal.

Mean March streamflow for the basin as indicated by the Porcupine River near the International Boundary is 97 percent of normal. Porcupine River volume and peak flow forecasts are not available at this time.



Drainage Basin and Snow Course

For Sample Date: 2011-05-01

Name	Number	Elev (m)	Date of Survey	This Year		Water Content		
				Snow Depth (cm)	Water Content (mm)	Last Year (mm)	Average (mm)	Yrs of Rec
Alsek River Basin								
Canyon Lake	08AA-SC01	1160	2011/04/28	53	160	63	35	34
Alder Creek	08AA-SC02	768	2011/04/27	34	84	0	82	30
Aishihik Lake	08AA-SC03	945	2011/04/28	47	135	9	44	17
Haines Junction Farm	08AA-SC04	610	2011/04/28	31	87	28	49	11
Clay Creek	08AB-SC02	670	No Surv			580	630	30
Summit	08AB-SC03	1000	2011/04/28	92	222	249	210	31
Profile Mountain	08AB-SC04	900	No Surv			244	261	23
Yukon River Basin								
Tagish	09AA-SC01	1080	2011/04/28	74	198	123	114	35
Montana Mountain	09AA-SC02	1020	2011/04/27	72	190	85	114	35
Log Cabin (B.C.)	09AA-SC03	884	2011/04/27	112	386	345	342	53
Atlin (B.C.)	09AA-SC04	730	2011/05/01	0	0	0	48	44
Mt McIntyre B	09AB-SC01B	1097	2011/04/29	78	220	156	128	35
Whitehorse Airport	09AB-SC02	700	2011/04/29	14	40	0	23	44
Meadow Creek	09AD-SC01	1235	2011/04/28	101	179	294	280	35
Jordan Lake	09AD-SC02	930	2011/04/28	32	65	23	88	24
Morley Lake	09AE-SC01	824	2011/04/27	39	84	44	85	24
Mount Berdoe	09AH-SC01	1035	2011/04/27	73	168	0	59	35
Satasha Lake	09AH-SC03	1106	2011/04/26	0	0	0	30	23
Williams Creek	09AH-SC04	914	2011/04/26	0	0	0	46	15
Twin Creeks	09BA-SC02	900	2011/04/27	52	82	0	146	34
Hoole River	09BA-SC03	1036	2011/04/28	61	140	0	86	34
Burns Lake	09BA-SC04	1112	2011/04/28	84	225	92	212	25
Finlayson Airstrip	09BA-SC05	988	2011/04/28	34	99	0	49	24
Fuller Lake	09BB-SC03	1126	2011/04/27	85	211	128	206	25
Russell Lake	09BB-SC04	1060	2011/04/27	107	282	93	215	24
Rose Creek	09BC-SC01	1080	2011/04/28	35	90	0	29	17
Mount Nansen	09CA-SC01	1021	2011/04/26	56	118	0	17	34
MacIntosh	09CA-SC02	1160	2011/04/26	0	0	0	49	34
Burwash Airstrip	09CA-SC03	810	2011/04/28	29	52	0	7	34
Duke River	09CA-SC05	1310	No Surv			69	72	21
Beaver Creek	09CB-SC01	655	2011/04/28	33	59	0	29	36
Chair Mountain	09CB-SC02	1067	2011/04/29	47	108	0	34	8
White River	09CB-SC03	823	No Surv			N.S.	0	2
Casino Creek	09CD-SC01	1065	2011/04/26	82	182	106	119	33
Pelly Farm	09CD-SC03	472	No Surv			0	17	25

Printed on 10 May 2011 from the Environment Yukon Snow Survey System
Code "E" - Estimate, Code "B" - Survey date is outside of valid sampling range

Page 1 of 2

Drainage Basin and Snow Course

For Sample Date: 2011-05-01

Name	Number	Elev (m)	Date of Survey	This Year		Water Content		Yrs of Rec
				Snow Depth (cm)	Water Content (mm)	Last Year (mm)	Average (mm)	
Yukon River Basin								
Plata Airstrip	09DA-SC01	830	2011/04/27	77	167	0	146	32
Arrowhead Lake	09DA-SC02	1120	No Surv			68	198	20
Withers Lake	09DB-SC01	975	2011/04/27	108	274	146	234	25
Rackla Lake	09DB-SC02	1040	2011/04/27	87	222	124	205	24
Mayo Airport A	09DC-SC01A	540	2011/04/27	0	0	0	13	40
Mayo Airport B	09DC-SC01B	540	2011/04/27	0	0	0	12	23
Edwards Lake	09DC-SC02	830	2011/04/27	73	163	81	156	24
Calumet	09DD-SC01	1310	2011/04/27	61	148	133	194	30
King Solomon Dome	09EA-SC01	1080	2011/04/26	53	140	0	104	36
Grizzly Creek	09EA-SC02	975	2011/04/28	43	105	158	126	36
Midnight Dome	09EB-SC01	855	2011/04/27	66	174	98	126	36
Porcupine River Basin								
Riff's Ridge	09FA-SC01	650	2011/04/27	69	165	90	115	24
Eagle Plains	09FB-SC01	710	2011/04/27	71	168	0	126	26
Eagle River	09FB-SC02	340	2011/04/27	60	139	0	93	26
Old Crow	09FD-SC01	299	No Surv			0	87	28
Liard River Basin								
Watson Lake Airport	10AA-SC01	685	2011/04/26	32	64	0	46	46
Tintina Airstrip	10AA-SC02	1067	2011/04/28	69	151	75	180	34
Pine Lake Airstrip	10AA-SC03	995	2011/04/27	65	160	154	193	35
Ford Lake	10AA-SC04	1110	2011/04/28	61	147	95	170	23
Frances River	10AB-SC01	730	2011/04/26	37	64	16	88	36
Hyland River	10AD-SC01	855	2011/04/27	48	160	22	104	35
Peel River Basin								
Blackstone River	10MA-SC01	920	2011/04/28	48	111	0	72	35
Ogilvie River	10MA-SC02	595	2011/04/28	52	100	0	75	34
Bonnet Plume Lake	10MB-SC01	1120	2011/04/27	81	190	126	197	25
Alaska Snow Courses								
Eaglecrest	08AK-SC01	305	2011/04/28	127	559	348	421	27
Moore Creek Bridge	08AK-SC02	700	2011/04/29	127	452	546	508	19

INDEX OF YUKON SNOW COURSES

NAME	NUMBER	ELEVATION (m)	LATITUDE	LONGITUDE	AGENCY
YUKON RIVER BASIN					
Tagish	09AA-SC1	1080	60°17'	134°11'	2
Montana Mountain	09AA-SC2	1020	60°08'	134°44'	2
Log Cabin (B.C.)	09AA-SC3	884	59°46'	134°58'	2
Atlin (B.C.)	09AA-SC4	730	59°34'	133°42'	3
Mt. McIntyre (B)	09AB-SC1B	1097	60°39'	135°08'	1
Whitehorse Airport	09AB-SC2	700	60°42'	135°04'	1
Meadow Creek	09AD-SC1	1235	60°35'	133°05'	2
Jordan Lake	09AD-SC2	930	60°52'	132°50'	1
Morley Lake	09AE-SC1	824	60°00'	132°07'	2
Mount Berdoe	09AH-SC1	1035	62°02'	136°14'	2
Satasha Lake	09AH-SC3	1106	61°29'	136°16'	2
Williams Creek	09AH-SC4	914	60°21'	136°43'	2
Twin Creeks	09BA-SC2	900	62°37'	131°16'	1
Hoole River	09BA-SC3	1036	61°32'	131°36'	1
Burns Lake	09BA-SC4	1112	62°17'	129°57'	1
Finlayson Airstrip	09BA-SC5	988	61°42'	130°46'	1
Fuller Lake	09BB-SC3	1126	62°58'	130°46'	1
Rose Creek	09BC-SC01	1080	62°20'	133°23'	1
Russell Lake	09BB-SC4	1060	63°12'	133°29'	1
Mount Nansen	09CA-SC1	1021	62°02'	137°03'	2
MacIntosh	09CA-SC2	1160	61°43'	137°20'	2
Burwash Airstrip	09CA-SC3	810	61°23'	139°03'	2
Duke River	09CA-SC5	1310	61°15'	138°59'	6
Beaver Creek	09CB-SC1	655	62°25'	140°51'	2
Chair Mountain	09CB-SC2	1067	62°04'	140°48'	2
White River	09CB-SC3	823	61°55'	140°32'	2
Casino Creek	09CD-SC1	1065	62°44'	138°48'	2
Pelly Farm	09CD-SC3	472	62°50'	137°20'	8
Plata Airstrip	09DA-SC1	830	63°31'	132°03'	1
Arrowhead Lake	09DA-SC2	1120	63°42'	131°10'	1
Withers Lake	09DB-SC1	975	63°59'	132°18'	1
Rackla Lake	09DB-SC2	1040	64°17'	133°15'	1
Mayo Airport (A)	09DC-SC1A	540	63°38'	135°53'	2
Mayo Airport (B)	09DC-SC1B	540	63°38'	135°53'	2
Edwards Lake	09DC-SC2	830	63°42'	134°18'	1
Calumet	09DD-SC1	1310	63°55'	135°24'	2
King Solomon Dome	09EA-SC1	1080	63°52'	138°56'	2
Grizzly Creek	09EA-SC2	975	64°26'	138°16'	2
Boundary (Alaska)	09EC-SC2	1005	64°05'	141°27'	4
Midnight Dome	09EB-SC1	855	64°04'	139°24'	2

NAME	NUMBER	ELEVATION (m)	LATITUDE	LONGITUDE	AGENCY
LIARD RIVER BASIN					
Watson Lake Airport	10AA-SC1	685	60°07'	128°50'	2
Tintina Airstrip	10AA-SC2	1067	61°05'	131°15'	1
Pine Lake Airstrip	10AA-SC3	995	60°06'	130°56'	2
Ford Lake	10AA-SC4	1110	60°47'	131°28'	1
Frances River	10AB-SC1	730	60°35'	129°11'	2
Hyland River	10AD-SC1	855	61°31'	128°16'	2
ALSEK RIVER BASIN					
Canyon Lake	08AA-SC1	1160	61°07'	136°59'	7
Alder Creek	08AA-SC2	768	60°22'	137°06'	6
Aishihik Lake	08AA-SC3	945	61°12'	137°00'	7
Haines Junction Farm	08AA-SC4	610	60°45'	137°34'	2
Clay Creek	08AB-SC2	670	60°09'	137°56'	6
Summitt	08AB-SC3	1000	60°51'	137°47'	2
Profile Mountain	08AB-SC4	900	60°38'	137°56'	6
PEEL RIVER BASIN					
Blackstone River	10MA-SC1	920	64°57'	138°15'	2
Ogilvie River	10MA-SC2	595	65°21'	138°18'	2
Bonnet Plume Lake	10MB-SC1	1120	64°18'	132°00'	1
PORCUPINE RIVER BASIN					
Riff's Ridge	09FA-SC1	650	65°57'	137°22'	2
Eagle Plains	09FB-SC1	710	66°22'	136°44'	2
Eagle River	09FB-SC2	340	66°27'	136°43'	2
Old Crow	09FD-SC1	299	67°34'	139°51'	5
ALASKA SNOW COURSES					
Eaglecrest	34J03	305	58°17'	134°32'	4
Moore Creek Bridge	34K02	701	59°31'	135°15'	4

Numbers refer to Agencies cooperating in the Yukon Snow Surveys:

1. Department of Environment, Government of Yukon
2. Dept of Energy Mines and Resources Yukon
3. British Columbia Ministry of Environment
4. USDA Natural Resources Conservation Service
5. Yukon Transportation and Highways
6. Parks Canada
7. Yukon Energy Corp.
8. Private Contract