YUKON SNOW SURVEY BULLETIN & WATER SUPPLY FORECAST

March 1, 2006

Prepared and issued by:
Environment Yukon
Environmental Programs Branch
Water Resources Section

PREFACE

The Yukon Snow Survey Bulletin and Water Supply Forecast is prepared and issued by the Water Resources Branch of Yukon Environment, three times annually, after March 1, April 1 and May 1. 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:

Glenn Ford
Hydrology Technologist
(867) 667-3104
glenn.ford@gov.yk.ca

Richard Janowicz
Manager, Hydrology
(867) 667-3223
richard.janowicz@gov.yk.ca

NETWORK CHANGES for 2006

No changes for 2006.

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be made in the following form:

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

Atmospheric Environment Service, Whitehorse
Supervisor, Technical Programs

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. Environment Lands and Parks, Water Management Branch

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

The winter of 2005-06 was warmer and drier than normal over most of the Yukon. Precipitation came early in the form of snow and at lower elevations was then affected by the warm temperatures

October
Temperatures were near normal almost everywhere. The central Yukon was slightly above normal. Precipitation was below normal except for a few stations along the Dempster which were normal.

November
Snow came early in November with much of the territory getting normal monthly amounts in the first two weeks of the month. The second half of November brought rain to the southern Yukon. Overall precipitation was well above normal for the month.
Temperatures were above normal almost everywhere except for the far north.

December
December was quite warm everywhere. Carcross was 7.5 degrees above normal for the month.
Precipitation was very light everywhere south of Mayo. Burwash Landing received only 6% of normal precipitation.

January
Temperatures for January were above normal again almost everywhere. Only north of the Ogilives and the western edge of the Yukon were normal or slightly below.
Watson Lake had normal precipitation for January. The rest of the Yukon was below normal again. Haines Junction and Burwash Landing recorded only 8% of normal.

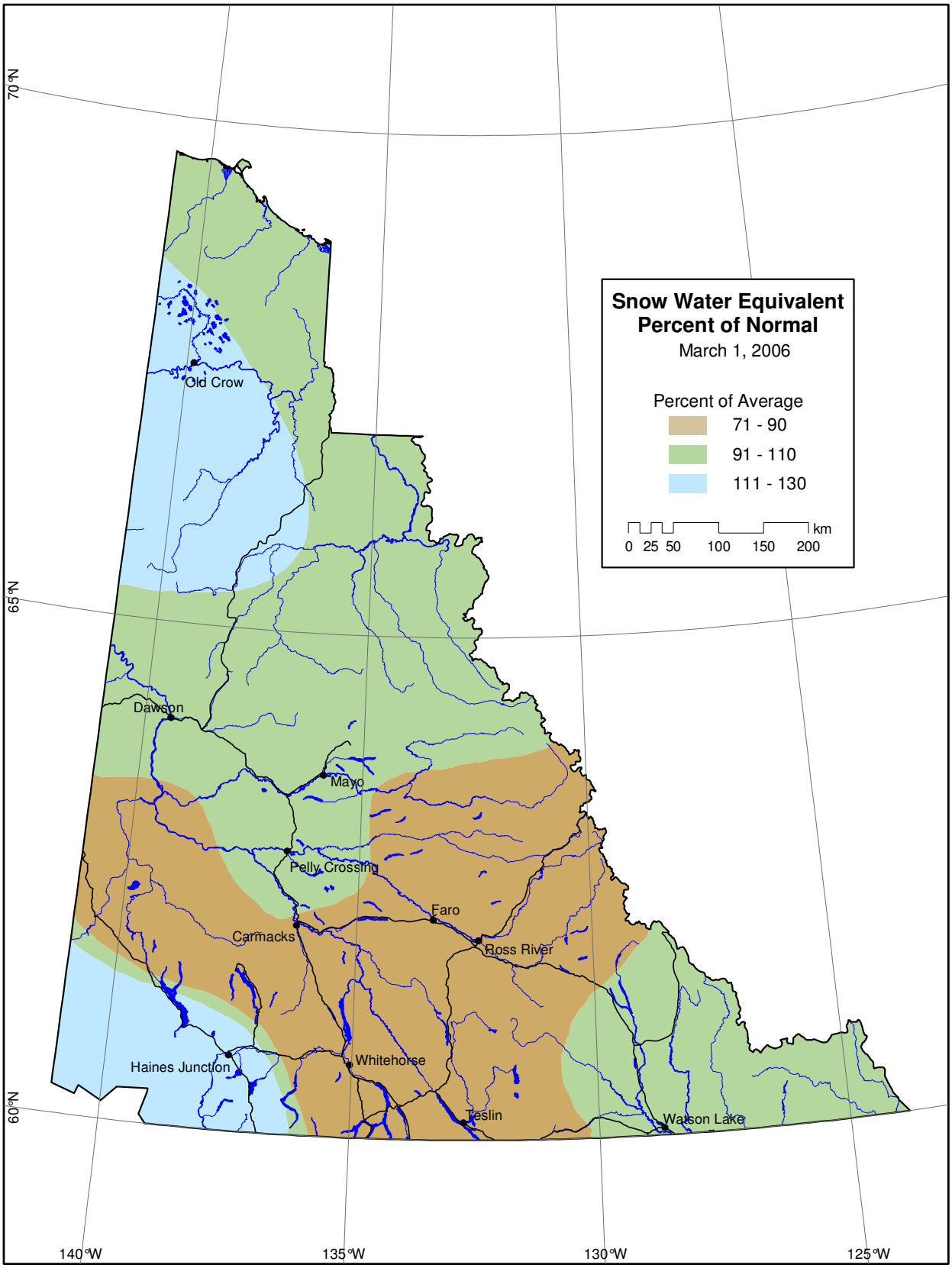
February
February was another warm month. Along the Dempster temperatures were as much as 11 degrees above normal. Burwash Landing was again in the news recording a temperature of 12.0 degrees on the 10th. Only Watson Lake was colder than normal. Precipitation was again below normal almost everywhere.

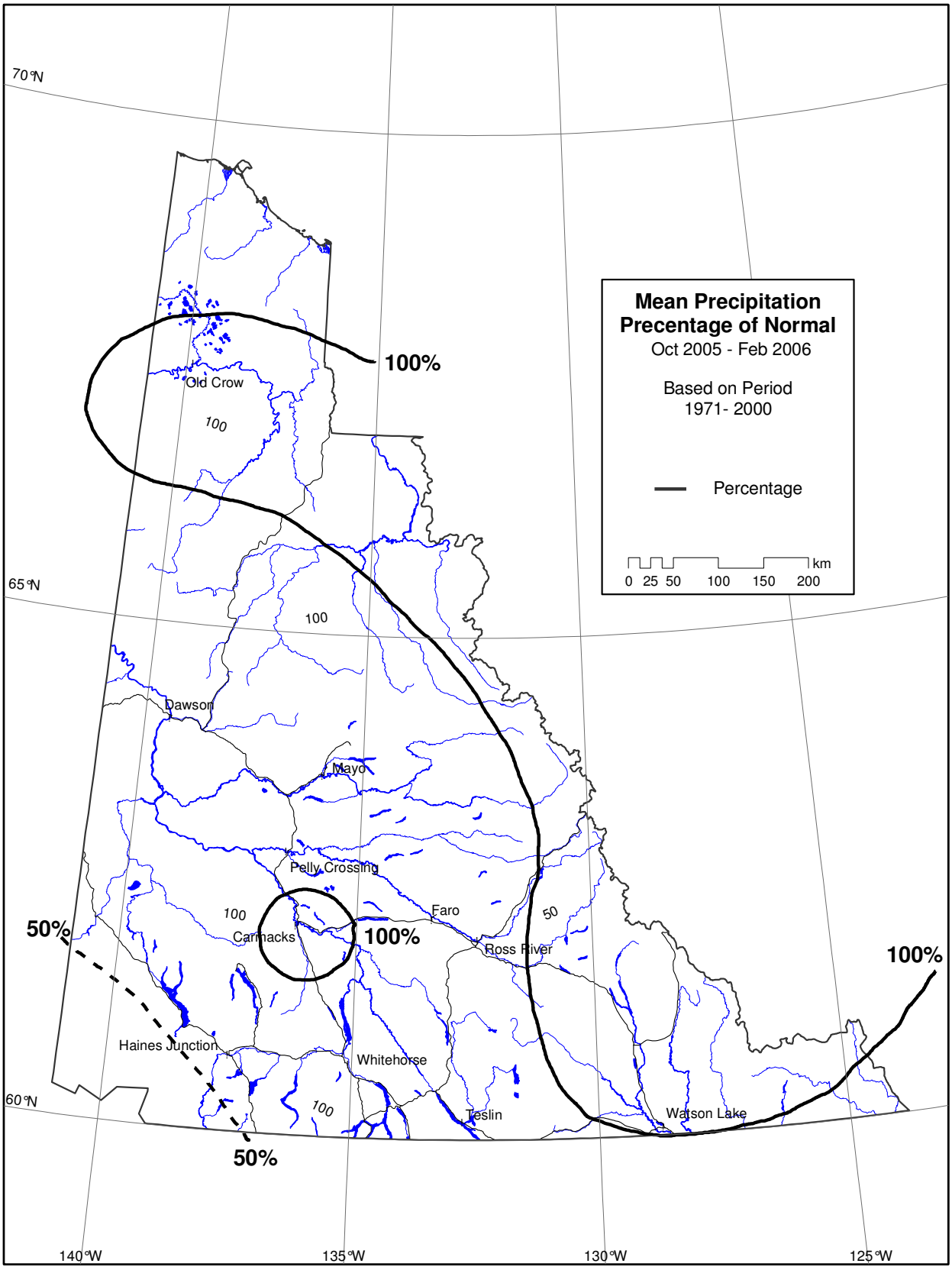
SNOWPACK

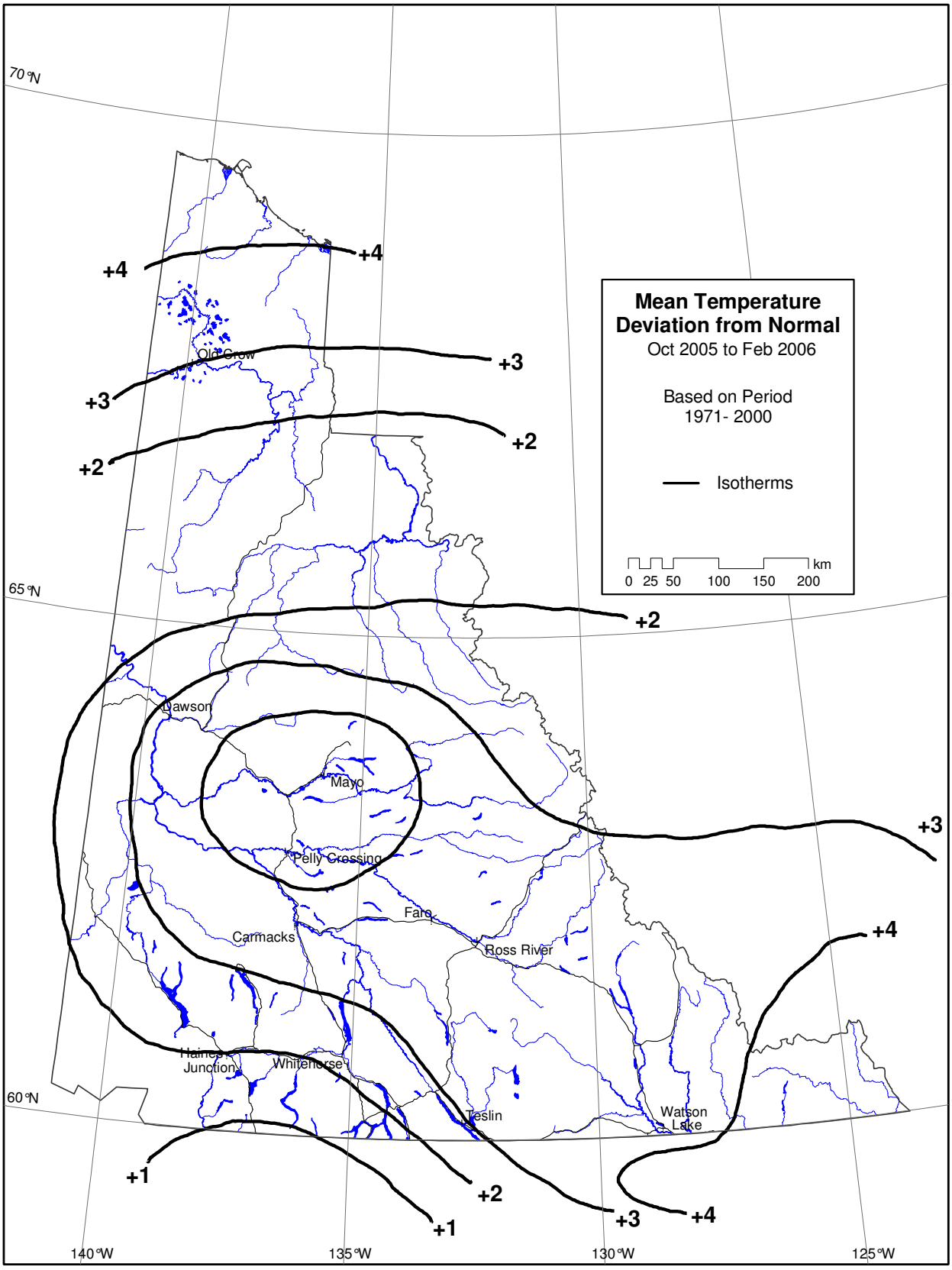
Snowpack is below normal in the south central Yukon. Things are not as low as one would think looking around the valley bottoms though. Higher elevations appear to have been less affected by the warm weather in November and December that melted the snow in the valley bottoms. Generally the south-central Yukon is in the 70% to 90% of normal range. The rest of the Yukon is near normal except for the extreme southwest and the far northwest which are slightly above normal.

STREAMFLOW

Streamflow conditions within Yukon are normal to slightly above normal for March 1st. Streamflow during this period represents winter baseflow, which provides an indication of winter groundwater contributions.


Snow Water Equivalent
Percent of Normal
March 1, 2006
Percent of Average
71 - 90
91 - 110
111 - 130
km
0 25 50 100 150 200
70°N
65°N
60°N
140°W
135°W
130°W
125°W
Old Crow
Dawson
Mayo
Pelly Crossing
Carmacks
Faro
Ross River
Haines Junction
Whitehorse
Teslin
Watson Lake


Mean Precipitation
Precentage of Normal
Oct 2005 - Feb 2006
Based on Period
1971- 2000
Percentage
km
0 25 50 100 150 200
70°N
65°N
60°N
140°W
135°W
130°W
125°W
100%
50%
50%
100%
100%
100
100
100
100
50
Old Crow
Dawson
Mayo
Pelly Crossing
Carmacks
Faro
Ross River
Haines Junction
Whitehorse
Teslin
Watson Lake

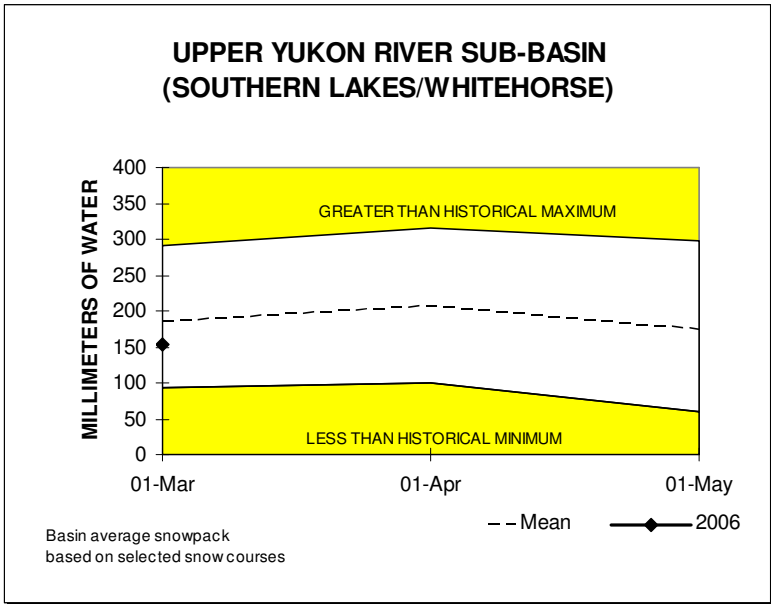

Mean Temperature
Deviation from Normal
Oct 2005 to Feb 2006
Based on Period
1971- 2000
Isotherms
km
0 25 50 100 150 200
70°N
65°N
60°N
140°W
135°W
130°W
125°W
Old Crow
Dawson
Mayo
Pelly Crossing
Carmacks
Faro
Ross River
Haines Junction
Whitehorse
Teslin
Watson Lake
+4
+3
+2
+1

YUKON RIVER BASIN

Snowpack conditions in the Yukon River Basin are normal to below normal. The central Yukon River basin including the Pelly, Teslin , White and upper Yukon areas are in the 70 to 90% of normal range.

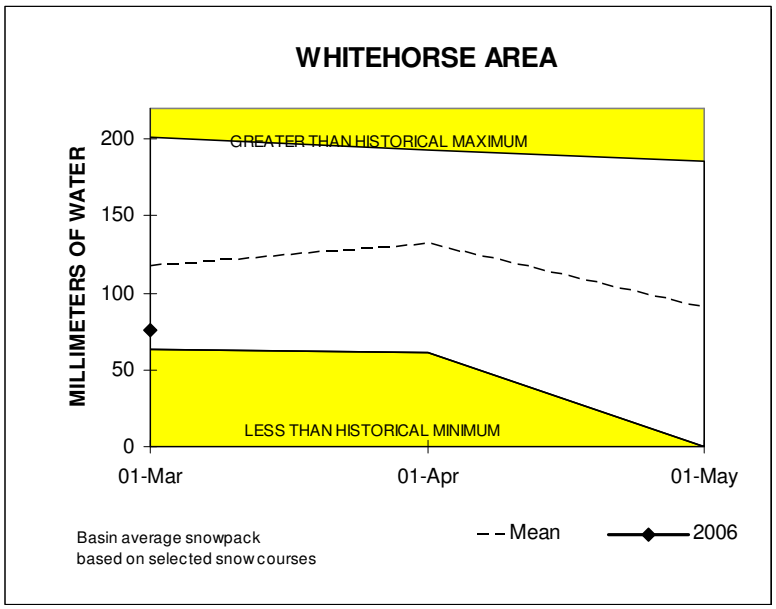
UPPER YUKON RIVER SUB-BASIN (SOUTHERN LAKES/WHITEHORSE)

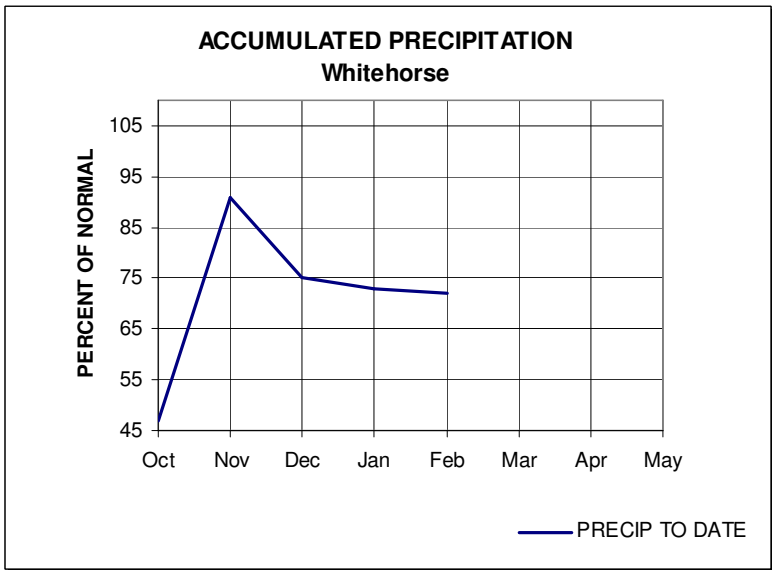
Snowpack conditions in the Upper Yukon River watershed are below normal. Values range from 89 percent of normal at Log Cabin to 66 percent of normal at Atlin. A basin wide average has been estimated to be 76 percent of normal.



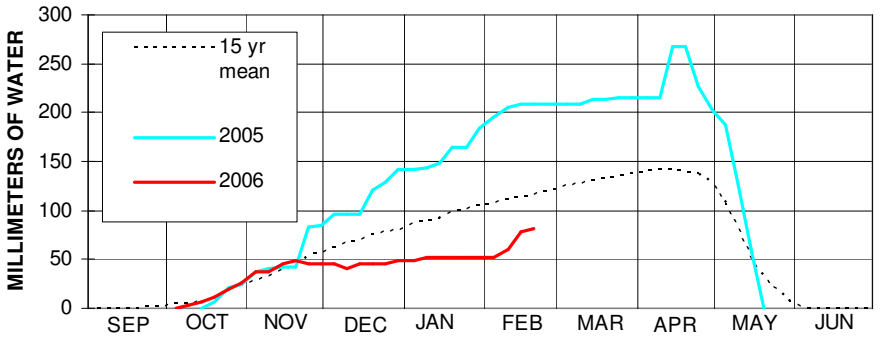
WHITEHORSE AREA

Snowpack conditions in the Whitehorse area are well below normal for March 1st. Values range from 72 percent of normal at Tagish to 48 percent of normal at Whitehorse Airport. A basin wide average is estimated to be 65 percent of average.

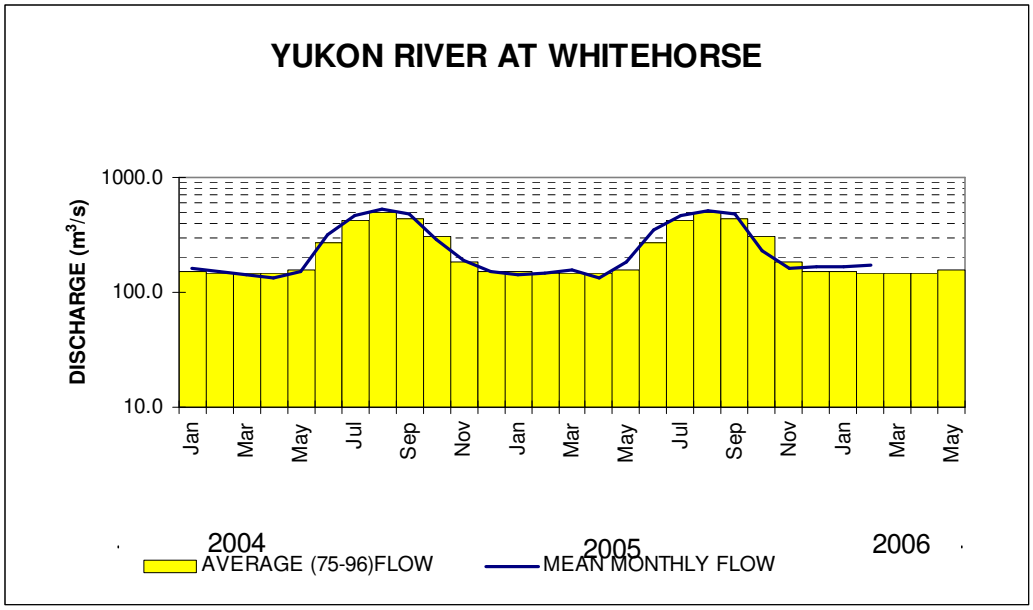




SNOW PILLOW STATION DATA
TAGISH, No: 09AA-SC1

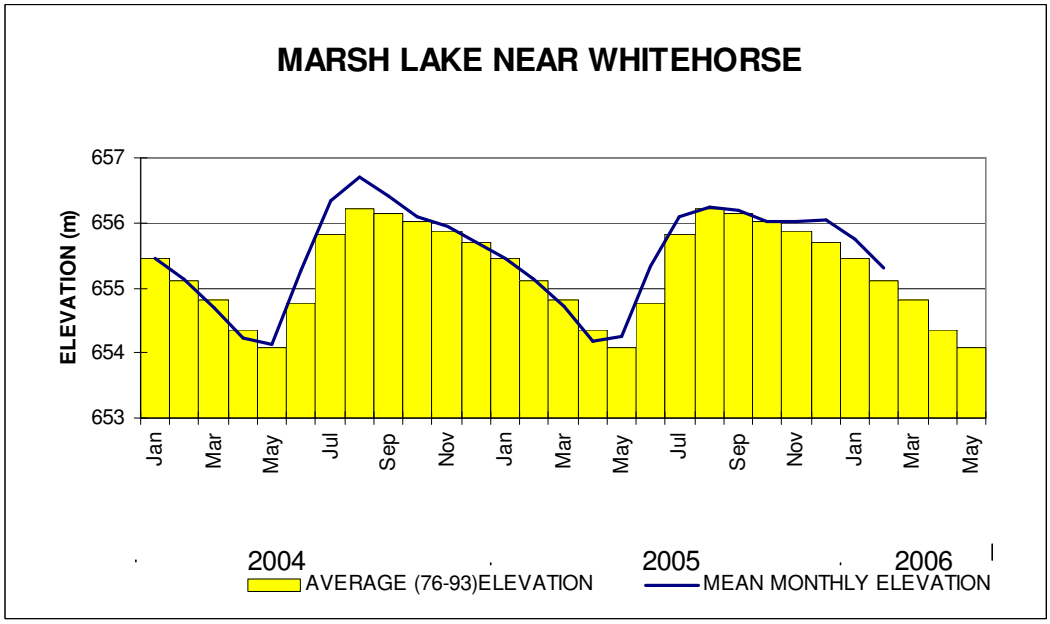


LAT 60° 17' LONG 134° 11'
ELEVATION 1080 metres
DRAINAGE YUKON BASIN



MARSH LAKE

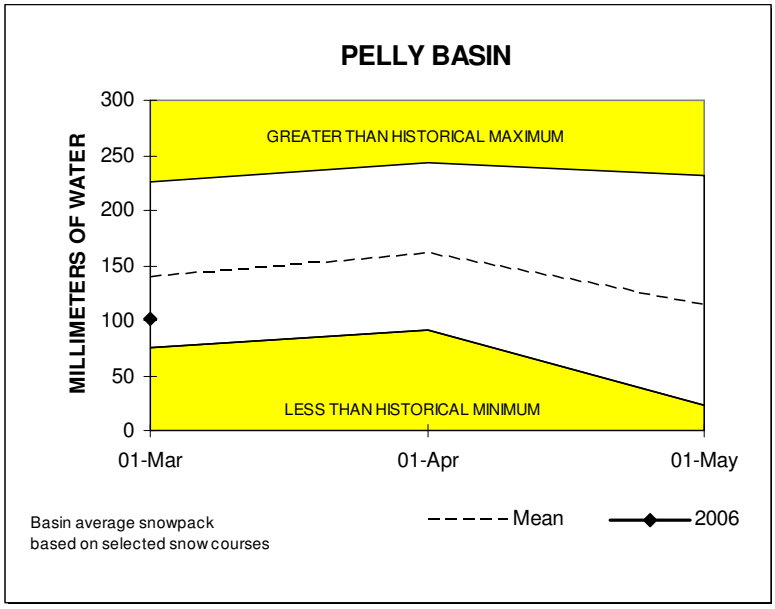
The elevation of Marsh Lake during February was 655.317 or 0.212M above normal. Yukon River at Whitehorse mean discharge during April was 117 percent of normal. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 101 percent and 106 percent of normal respectively.

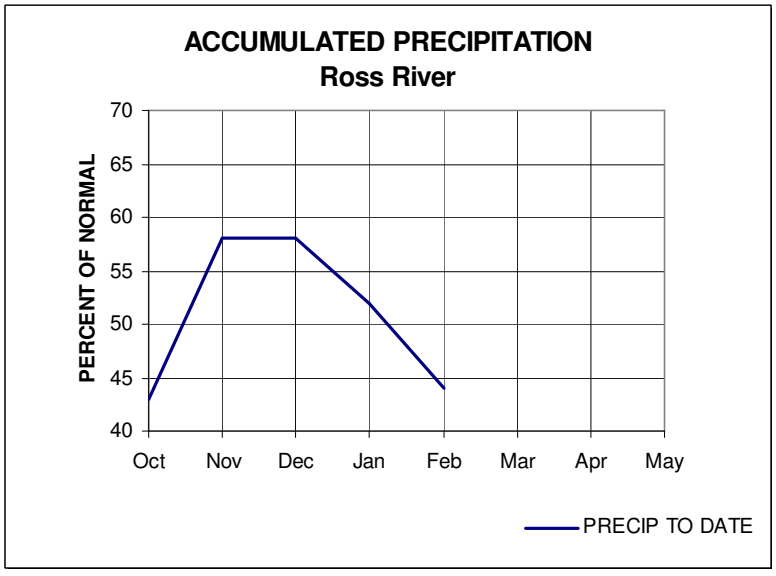


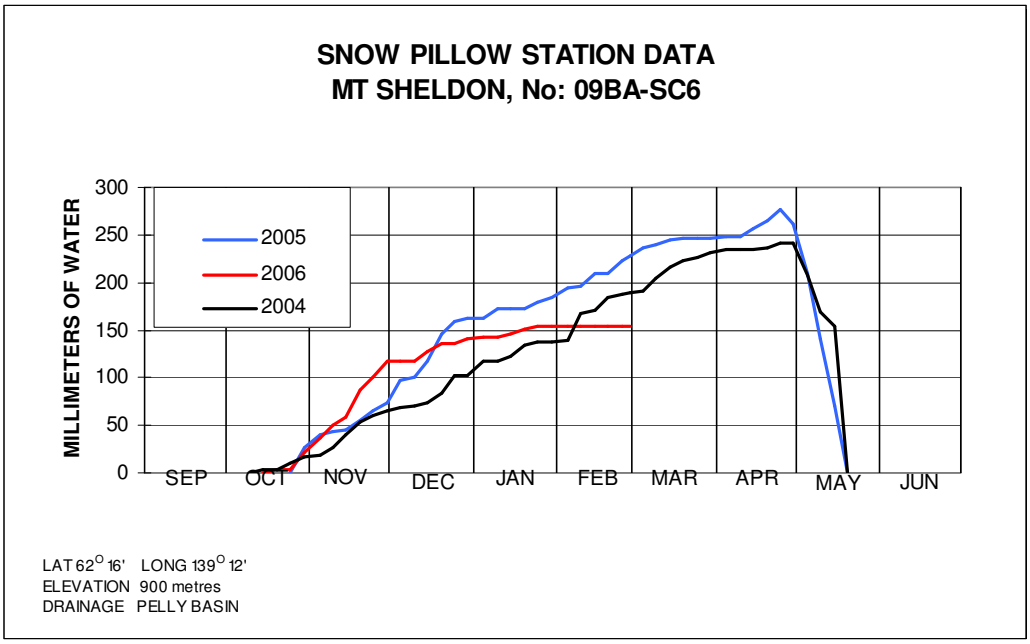
PELLY RIVER SUB-BASIN

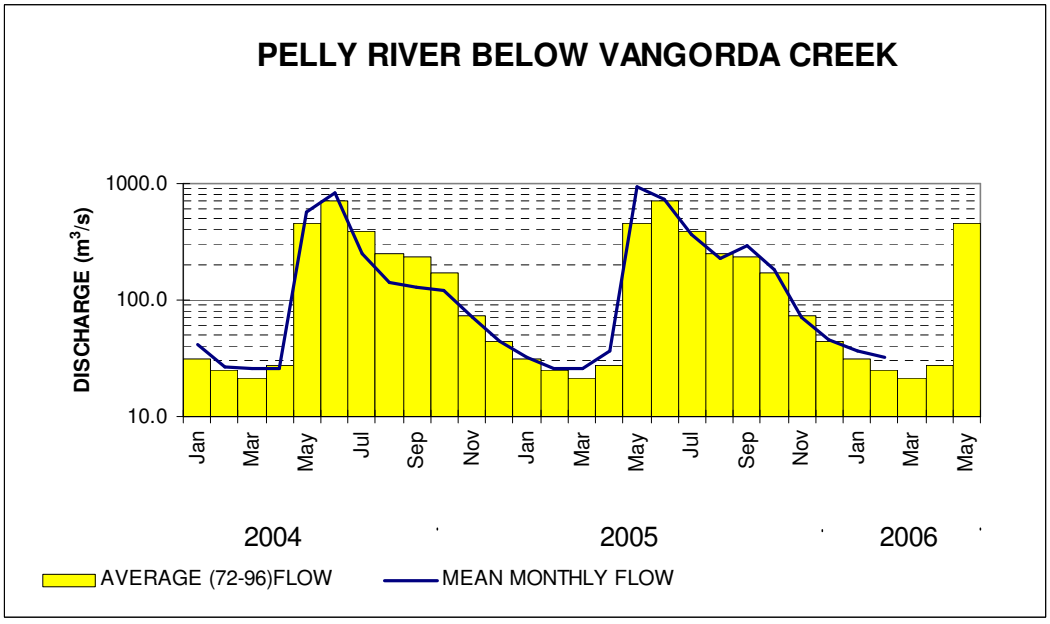
Snowpack conditions in the Pelly River watershed are well below normal. Values of snow water equivalent range from 80 percent of normal at Twin Creeks to 62 percent of normal at Hoole River. A basin wide average has been estimated to be 73 percent of normal.

Mean April streamflow for the watershed was 130 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 80 percent and 80 percent of normal respectively.





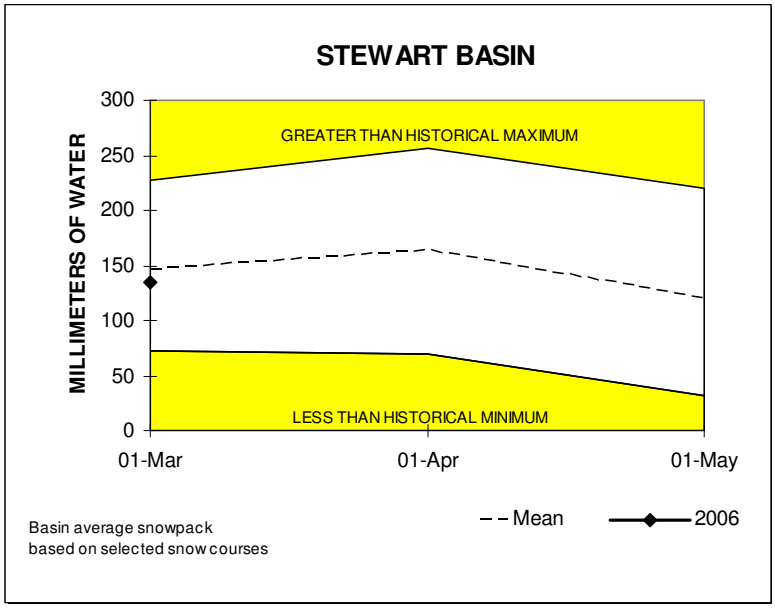

SNOW PILLOW STATION DATA
MT SHELDON, No: 09BA-SC6
MILLIMETERS OF WATER
300
250
200
150
100
50
0
2005
2006
2004
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
LAT 62° 16' LONG 139° 12'
ELEVATION 900 metres
DRAINAGE PELLY BASIN

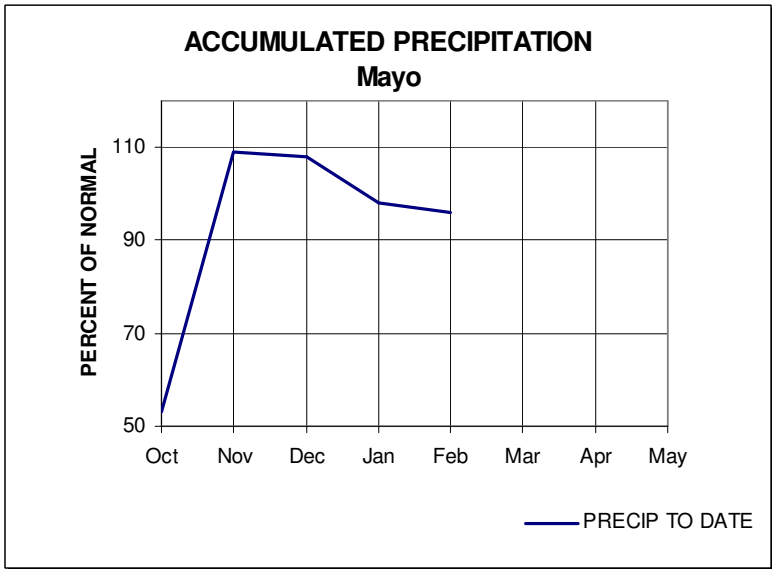

PELLY RIVER BELOW VANGORDA CREEK
DISCHARGE (m3/s)
1000.0
100.0
10.0
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
2004
2005
2006
AVERAGE (72-96)FLOW
MEAN MONTHLY FLOW

STEWART RIVER SUB-BASIN

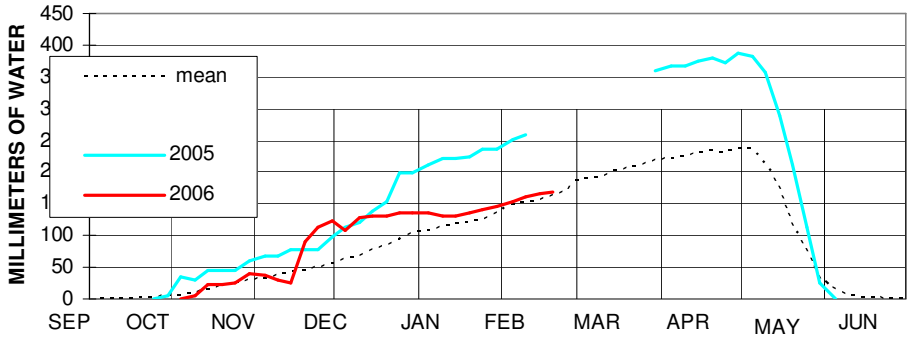
Snowpack conditions throughout the Stewart River watershed are near normal for March 1st. Values of snow water equivalent range from 109 percent of normal at Calumet to 69 percent of normal at Plata Airstrip. A basin wide average has been estimated to be 92 percent of normal.

The Stewart River near the Mouth indicates February streamflow at 140 percent of average. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 98 percent and 105 percent of normal respectively.



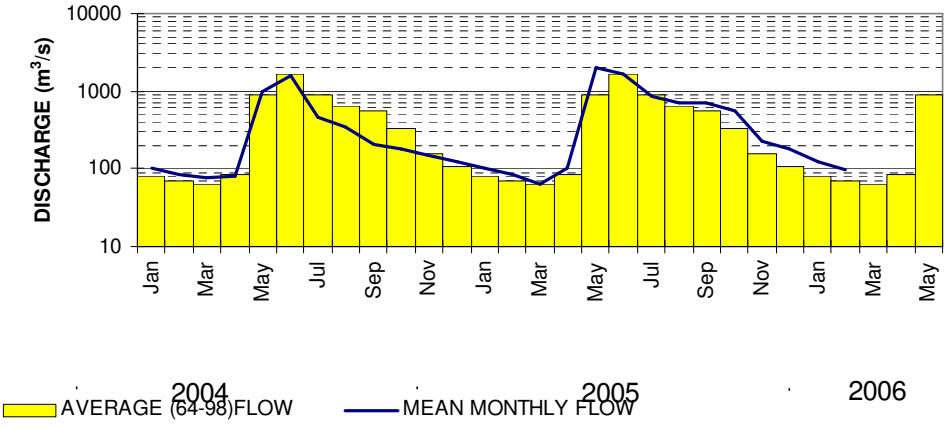


SNOW PILLOW STATION DATA
WITHERS LAKE, No: 09DB-SC1



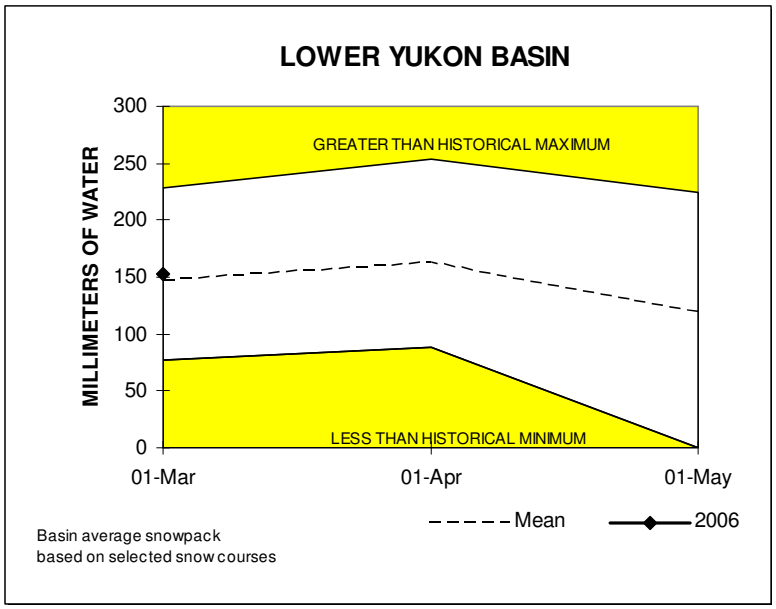
LAT 63° 59' LONG 132° 18'
ELEVATION 975 metres
DRAINAGE STEWART BASIN

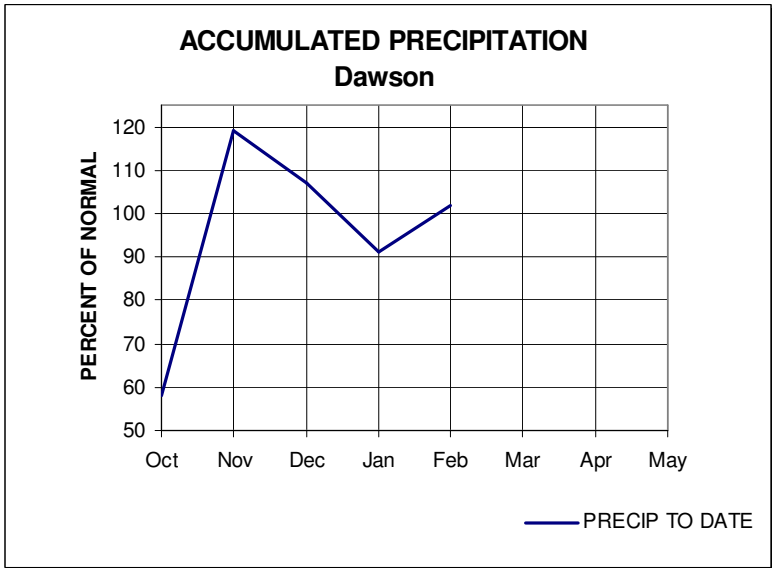
STEWART RIVER AT THE MOUTH



LOWER YUKON RIVER BASIN
(DAWSON AREA)

Snowpack conditions in the Dawson area are normal for March 1st. Values of snow water equivalent range from 111 percent of normal at King Solomon Dome to 90 percent of normal at Midnight Dome. An area wide average has been estimated to be 104 percent of normal.

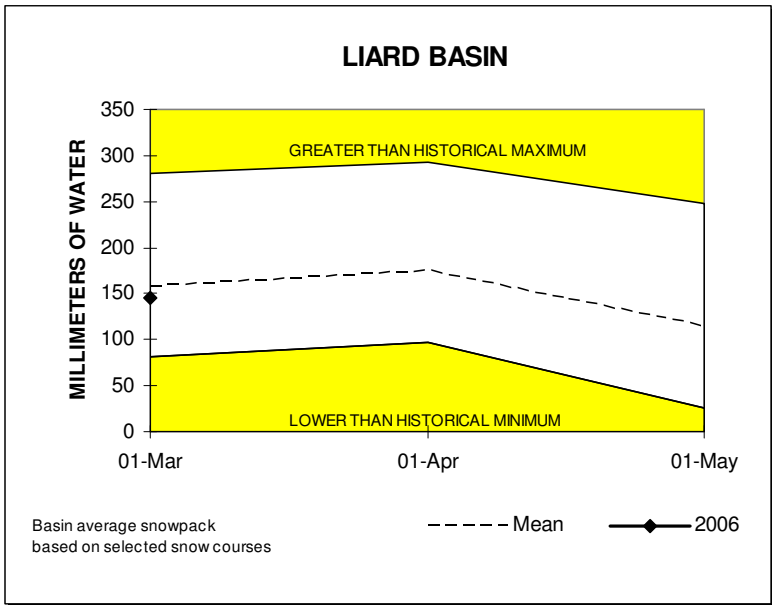


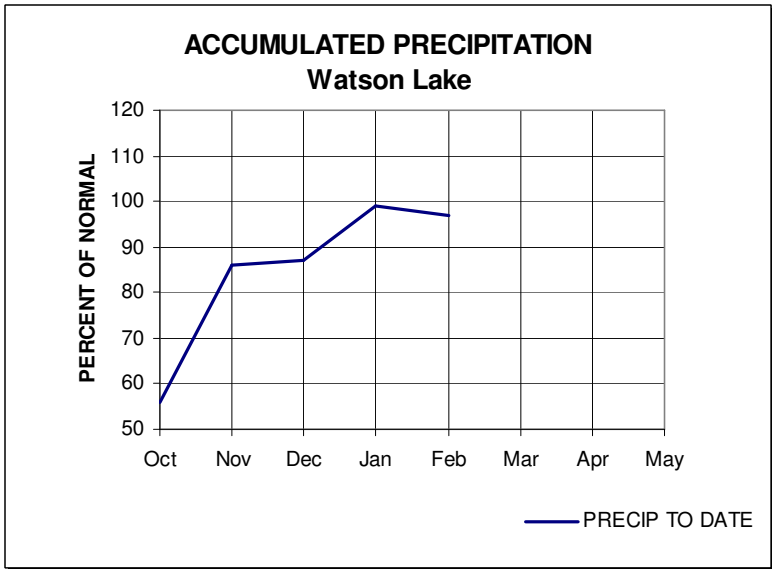


LIARD RIVER BASIN

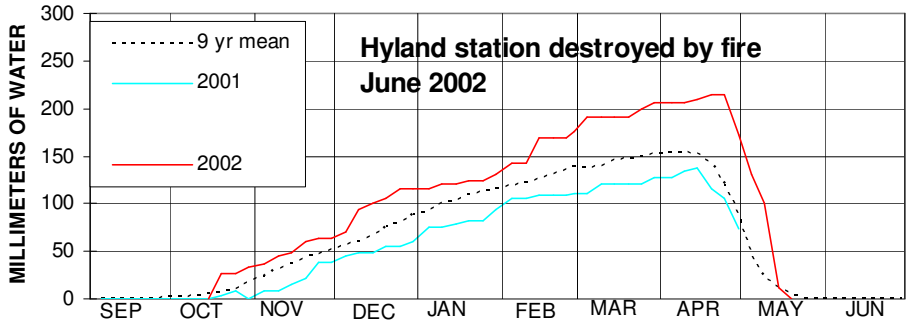
Snowpack conditions within the Liard River watershed are near normal. Values of snow water equivalent range from 97 percent of normal at Tintina Airstrip to 88 percent of normal at Pine Lake Airstrip. A basin wide average has been estimated to be 93 percent of normal.

Mean March streamflow for the Liard River upstream of Upper Liard was 126 percent of normal. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 95 percent and 90 percent of normal.



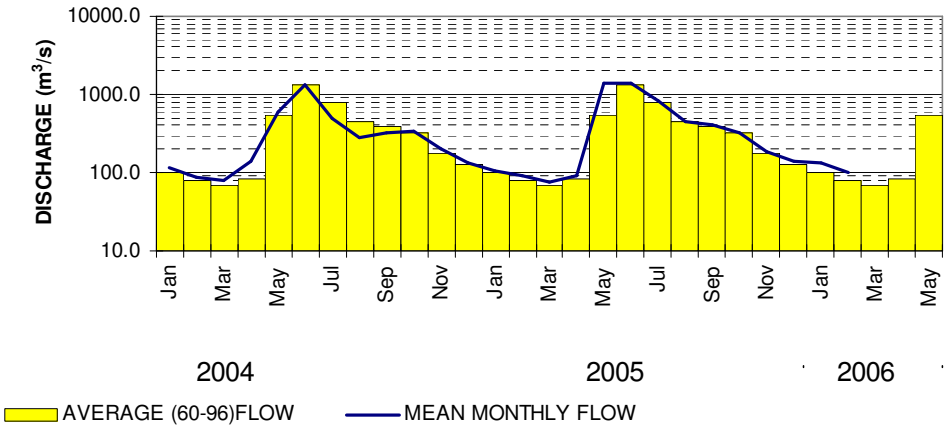


SNOW PILLOW STATION DATA
HYLAND RIVER, No: 10AD-SC1



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

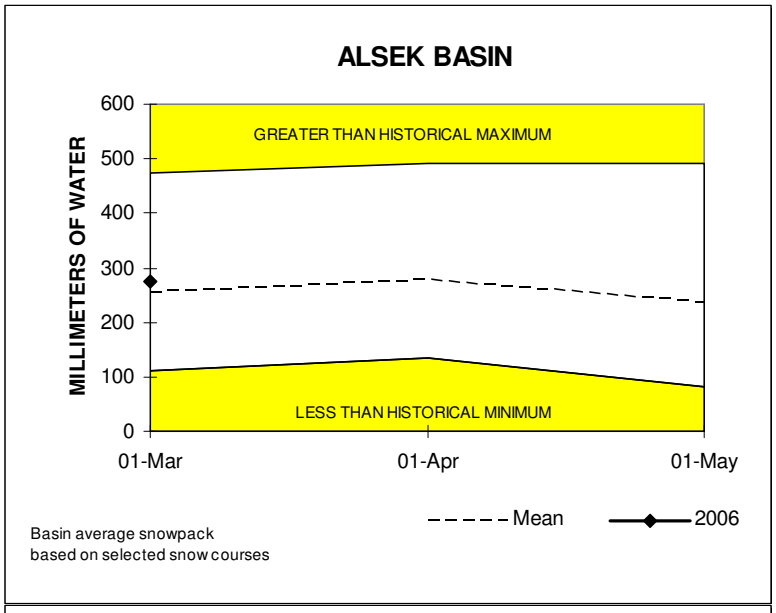
LIARD RIVER AT UPPER CROSSING

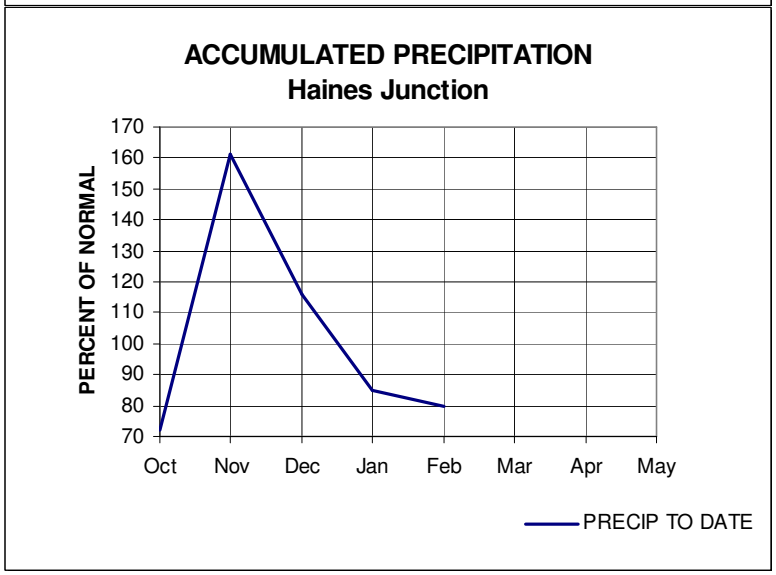


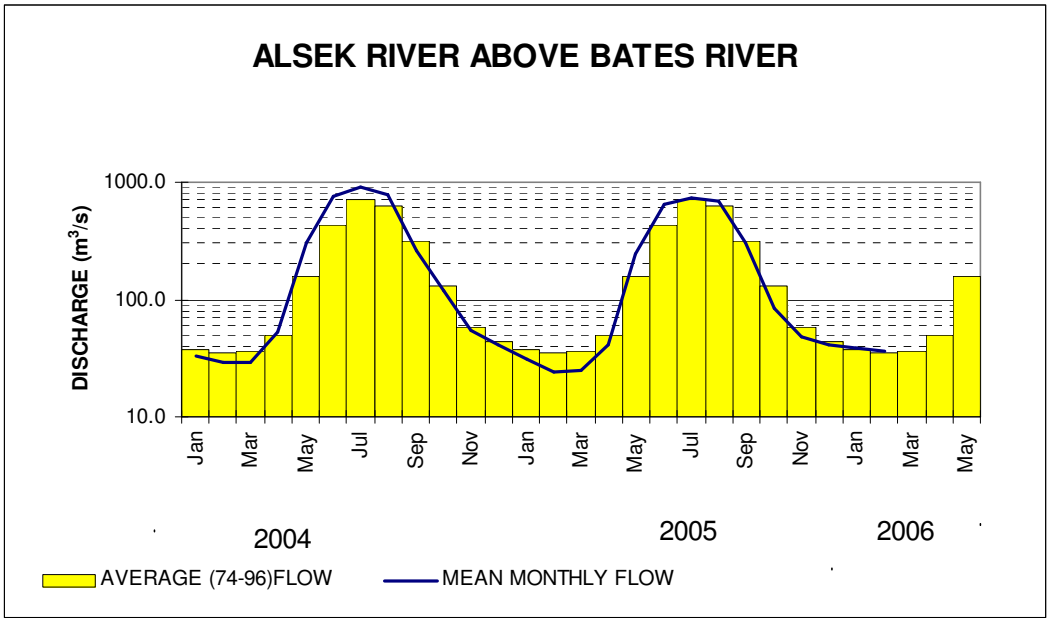
ALSEK RIVER BASIN

Snowpack conditions within the Alsek River watershed are above normal for March 1st. Values of snow water equivalent range from 169 percent of normal at Alder Creek to 106 percent of normal at Summit. A basin wide average has been estimated to be 118 percent of normal.

Mean monthly streamflow for April as indicated by the Alsek River above Bates River was 55 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 105 and 105 percent of normal respectively.



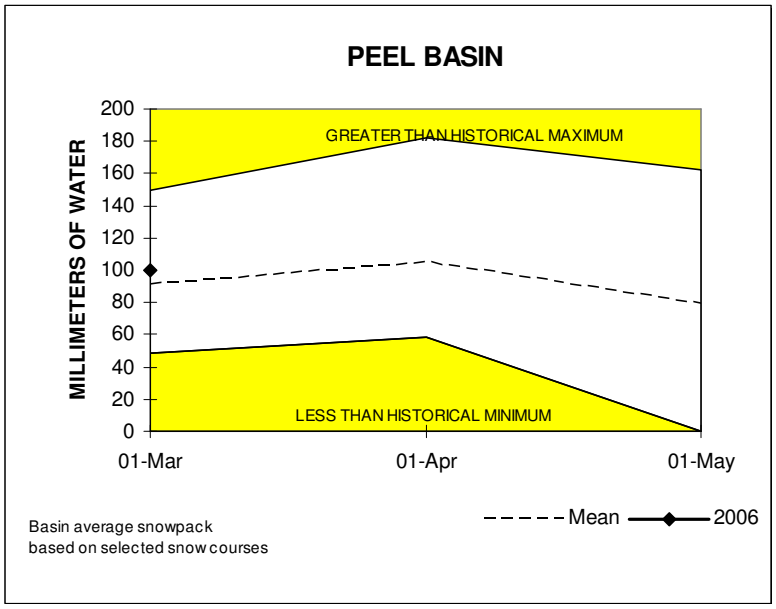


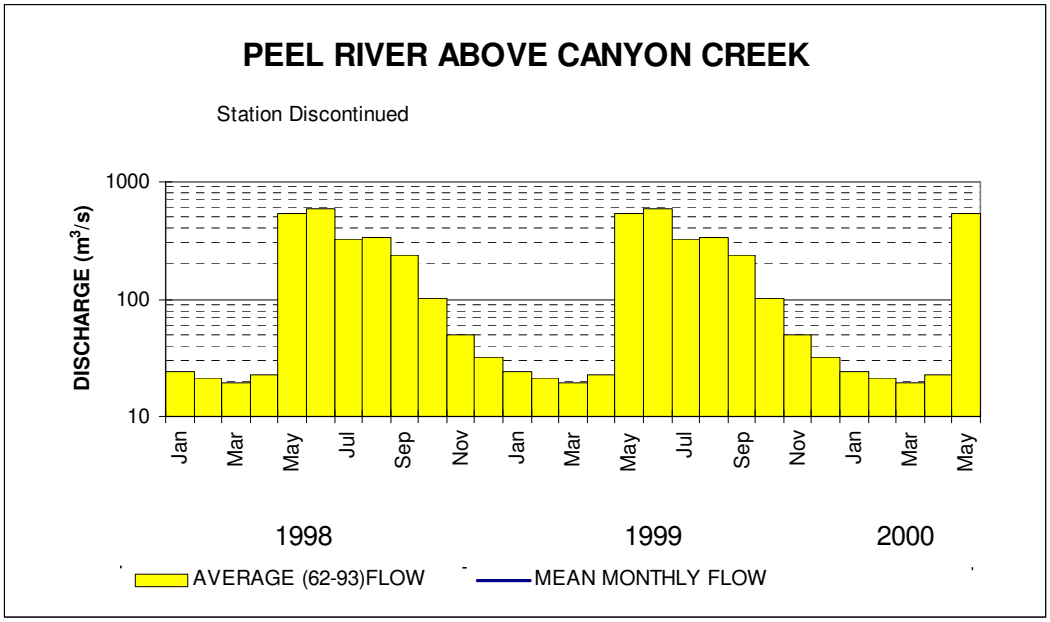

ALSEK RIVER ABOVE BATES RIVER
DISCHARGE (m3/s)
1000.0
100.0
10.0
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
2004
2005
2006
AVERAGE (74-96)FLOW
MEAN MONTHLY FLOW

PEEL RIVER BASIN

Snowpack conditions in the Peel River watershed are slightly above normal with values of snow water equivalent ranging from 121 percent of normal at Ogilive to 100 percent of normal at Blackstone. A basin wide average has been estimated to be 110 percent of normal.

Streamflow data is no longer collected at the Peel River above Canyon Creek station. Peel River volume and peak flow forecasts are not available at this time.

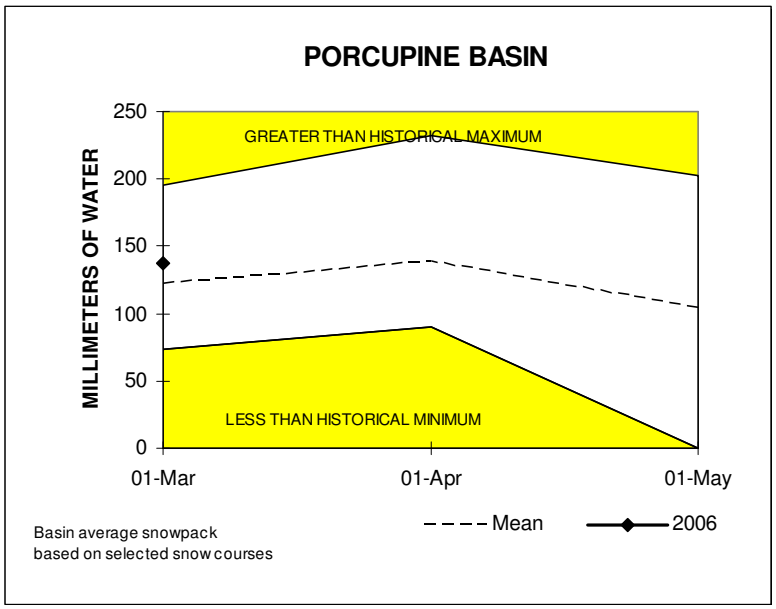


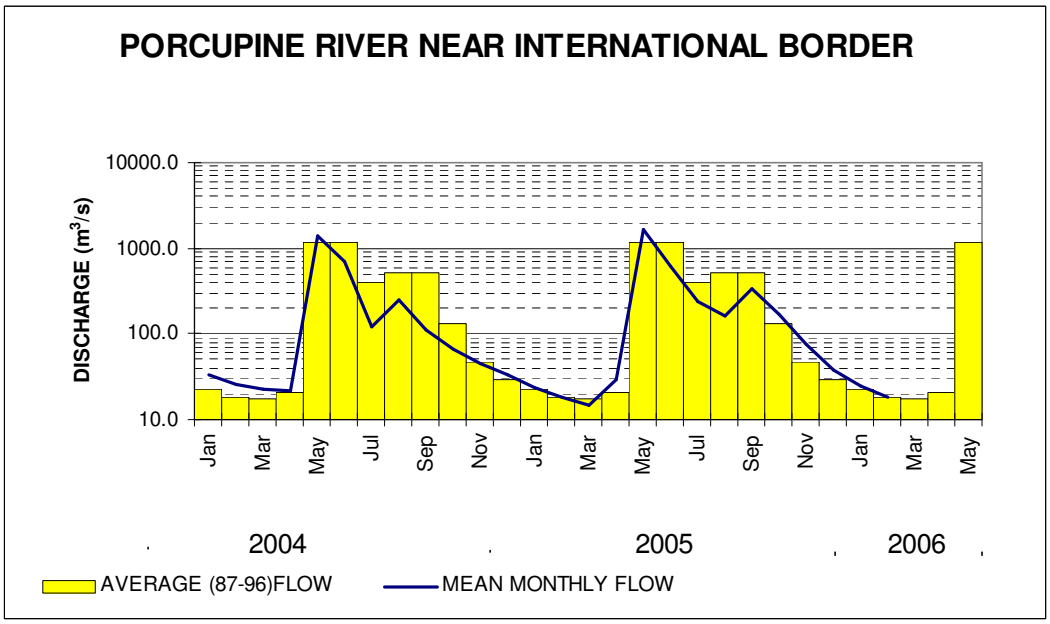


PORCUPINE RIVER BASIN

Snowpack conditions in the Porcupine River watershed are above normal with values of snow water equivalent ranging from 126 percent of normal at Old Crow to 105 percent of normal at Eagle Plains. A basin wide average has been estimated to be 113 percent of normal.

Mean February streamflow for the basin as indicated by the Porcupine River near the International Boundary is 98 percent of normal. Porcupine River volume and peak flow forecasts are not available at this time.





Drainage Basin and Snow Course

For Sample Date: 2006-03-01

Name	Number	Elev (m)	This Year: Date of Survey	This Year: Snow Depth (cm)	This Year: Water Content	Water Content: Last Year (mm)	Water Content: Average	Water Content: Yrs of Rec
Alsek River Basin								
Canyon Lake	08AA-SC01	1160	2006/03/01	34	69	89	76	28
Alder Creek	08AA-SC02	768	2006/02/28	67	153	236	144	25
Aishihik Lake	08AA-SC03	945	2006/02/27	25	43	97	67	12
Haines Junction Farm	08AA-SC4	610	2006/02/28	27	66	69	99	6
Clay Creek	08AB-SC02	670	2006/03/01	178	544	700 E	559	24
Summit	08AB-SC03	1000	2006/02/28	116	330	257	242	26
Profile Mountain	08AB-SC04	900	2006/03/01	119	334	250	282	19
Yukon River Basin								
Tagish	09AA-SC01	1080	2006/02/23	40	89	227	123	31
Montana Mountain	09AA-SC02	1020	2006/03/01	44	90	178	127	30
Log Cabin (B.C.)	09AA-SC03	884	2006/02/28	107	286	381	322	45
Atlin (B.C)	09AA-SC04	730	2006/03/01	32	74	137	112	41
Mt McIntyre B	09AB-SC01B	1097	2006/02/23	50	83	219	129	30
Whitehorse Airport	09AB-SC02	700	2006/03/02	29	43	154	90	41
Meadow Creek	09AD-SC01	1235	2006/02/27	80	161	324	234	29
Jordan Lake	09AD-SC02	930	2006/02/27	46	78	167	122	18
Morley Lake	09AE-SC01	824	2006/03/01	46	100 E	213	140	18
Mount Berdoe	09AH-SC01	1035	2006/03/01	47	81	99	92	31
Satasha Lake	09AH-SC03	1106	2006/03/01	40	70	83	79	19
Williams Creek	09AH-SC04	914	2006/03/01	42	71	79	78	11
Twin Creeks	09BA-SC02	900	2006/02/28	72	131	211	164	28
Hoole River	09BA-SC03	1036	2006/02/27	42	71	163	114	29
Burns Lake	09BA-SC04	1112	2006/02/27	80	157	232	191	20
Finlayson Airstrip	09BA-SC05	988	2006/02/27	37	53	128	89	19
Fuller Lake	09BB-SC03	1126	2006/02/28	59	111	228	171	19
Russell Lake	09BB-SC04	1060	2006/02/28	83	174	260	201	19
Rose Creek	09BC-SC01	1080	2006/02/26	45	75	128	96	12
Mount Nansen	09CA-SC01	1021	2006/03/01	38	56	77	66	30
MacIntosh	09CA-SC02	1160	2006/03/01	42	60	96	78	30
Burwash Airstrip	09CA-SC03	810	2006/02/27	9	16	49	41	29
Duke River	09CA-SC05	1310	2006/03/01	43	76	108	91	19
Beaver Creek	09CB-SC01	655	2006/02/27	39	50	83	73	31
Chair Mountain	09CB-SC02	1067	2006/02/27	37	51	114	85	16
White River	09CB-SC03	823	No Surv			N.S.	59	4
Casino Creek	09CD-SC01	1065	2006/03/01	62	89	161	105	28
Pelly Farm	09CD-SC03	472	2006/02/26	32	70	71	75	19

Printed on 07 Mar 2006 from the Environment Yukon Snow Survey System

Code "E" - Estimate, Code "B" - Survey date is outside of valid sampling range

Drainage Basin and Snow Course

For Sample Date: 2006-03-01

Name	Number	Elev (m)	This Year Date of Survey	This Year Snow Depth (cm)	This Year Water Content	Water Content Last Year (mm)	Water Content Average	Water Content Yrs of Rec
Yukon River Basin								
Plata Airstrip	09DA-SC01	830	2006/02/28	67	118	255	170	27
Arrowhead Lake	09DA-SC02	1120	No Surv			N.S.	162	14
Withers Lake	09DB-SC01	975	2006/02/28	93	219	303	205	20
Rackla Lake	09DB-SC02	1040	2006/02/28	80	161	194	174	17
Mayo Airport A	09DC-SC01A	540	2006/02/28	50	92	144 E	90	36
Mayo Airport B	09DC-SC01B	540	2006/02/28	50	86	136	97	18
Edwards Lake	09DC-SC02	830	2006/02/28	58	99	194	152	19
Calumet	09DD-SC01	1310	2006/02/28	87	196	274	180	29
King Solomon Dome	09EA-SC01	1080	2006/02/23	77	165	197	149	31
Grizzly Creek	09EA-SC02	975	2006/02/23	80	173	252	158	30
Midnight Dome	09EB-SC01	855	2006/02/23	63	120	196	134	30
Boundary (Alaska)	09EC-SC02	1005	No Surv			N.S.	116	32
Porcupine River Basin								
Riff's Ridge	09FA-SC01	650	2006/02/27	83	168	130	124	19
Eagle Plains	09FB-SC01	710	2006/02/27	79	159	160	151	23
Eagle River	09FB-SC02	340	2006/02/27	69	127	131	113	23
Old Crow	09FD-SC01	299	2006/02/28	74	127	150	101	21
Liard River Basin								
Watson Lake Airport	10AA-SC01	685	2006/02/23	63	116	216	127	41
Tintina Airstrip	10AA-SC02	1067	2006/02/27	76	170	244	175	27
Pine Lake Airstrip	10AA-SC03	995	2006/03/01	76	175	314	199	29
Ford Lake	10AA-SC04	1110	2006/02/27	69	104	226	167	18
Frances River	10AB-SC01	730	2006/02/23	62	130	226	138	30
Hyland River	10AD-SC01	855	2006/02/27	63	138	218	146	30
Peel River Basin								
Blackstone River	10MA-SC01	920	2006/02/27	56	90	123	90	30
Ogilvie River	10MA-SC02	595	2006/02/27	61	110	90	91	30
Bonnet Plume Lake	10MB-SC01	1120	2006/02/28	78	154	229	159	18
Alaska Snow Courses								
Eaglecrest	08AK-SC01	305	2006/02/27	84	221	333	423	24
Moore Creek Bridge	08AK-SC02	700	2006/02/28	79	218	427	470	14

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INDEX OF YUKON SNOW COURSES 2005

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
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 Lands and Parks
4. USDA Natural Resources Conservation Service
5. Yukon Transportation and Highways
6. Parks Canada
7. Yukon Energy Corp.