YUKON SNOW SURVEY BULLETIN & WATER SUPPLY FORECAST

April 1, 2008

Prepared and issued by:
Water Resources Section
Environmental Programs 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 Section . 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 2008

There have been no network changes in 2008.
This bulletin can now be accessed on the web at http://www.environmentyukon.gov.yk.ca/epa/waterresources.html

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

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Government Of Yukon
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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. 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

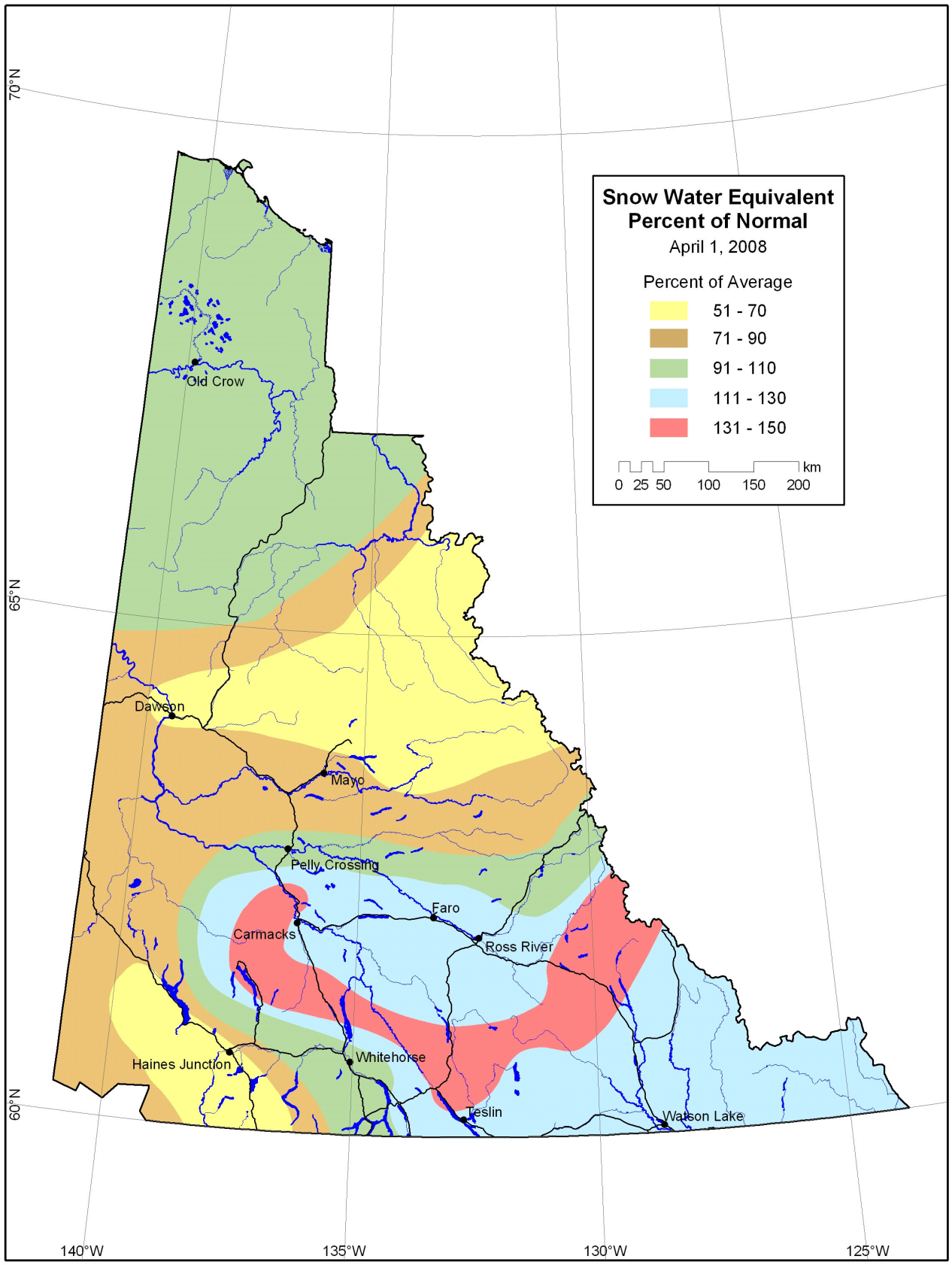
The Territory saw above normal temperatures for most areas with only the area north of the Ogilvie Mountains recording below normal temperatures for the month. The western side of the territory had temperatures above normal with Burwash, Stewart Crossing and Blanchard all nearly three degrees above normal for the month. Snowfall was generally light with many places through central Yukon recording near or below half of the normal snowfall for March. A narrow band from Whitehorse to Teslin recorded near normal snowfall amounts while Old Crow in the far north recorded close to double the normal amount.

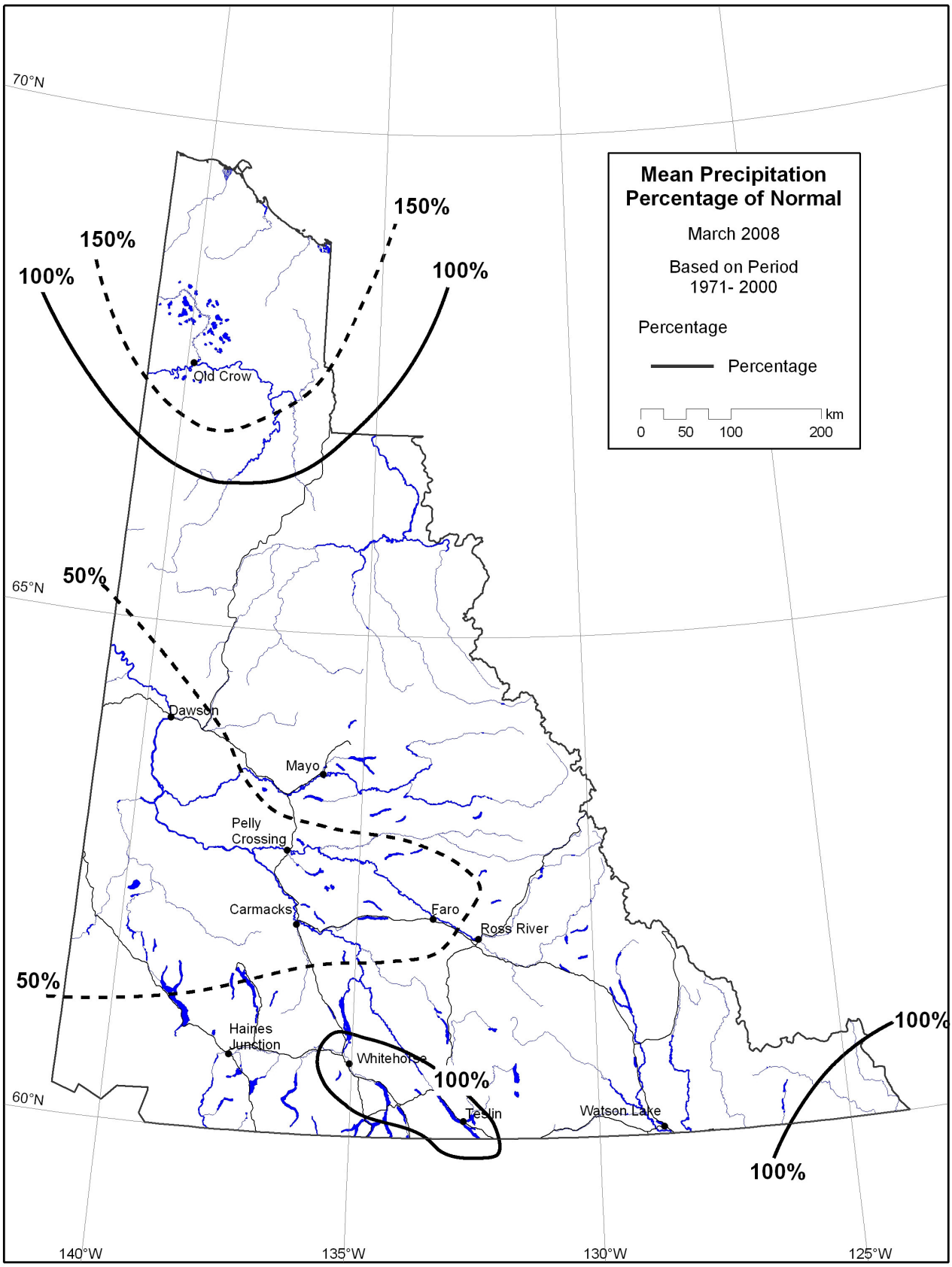
SNOWPACK

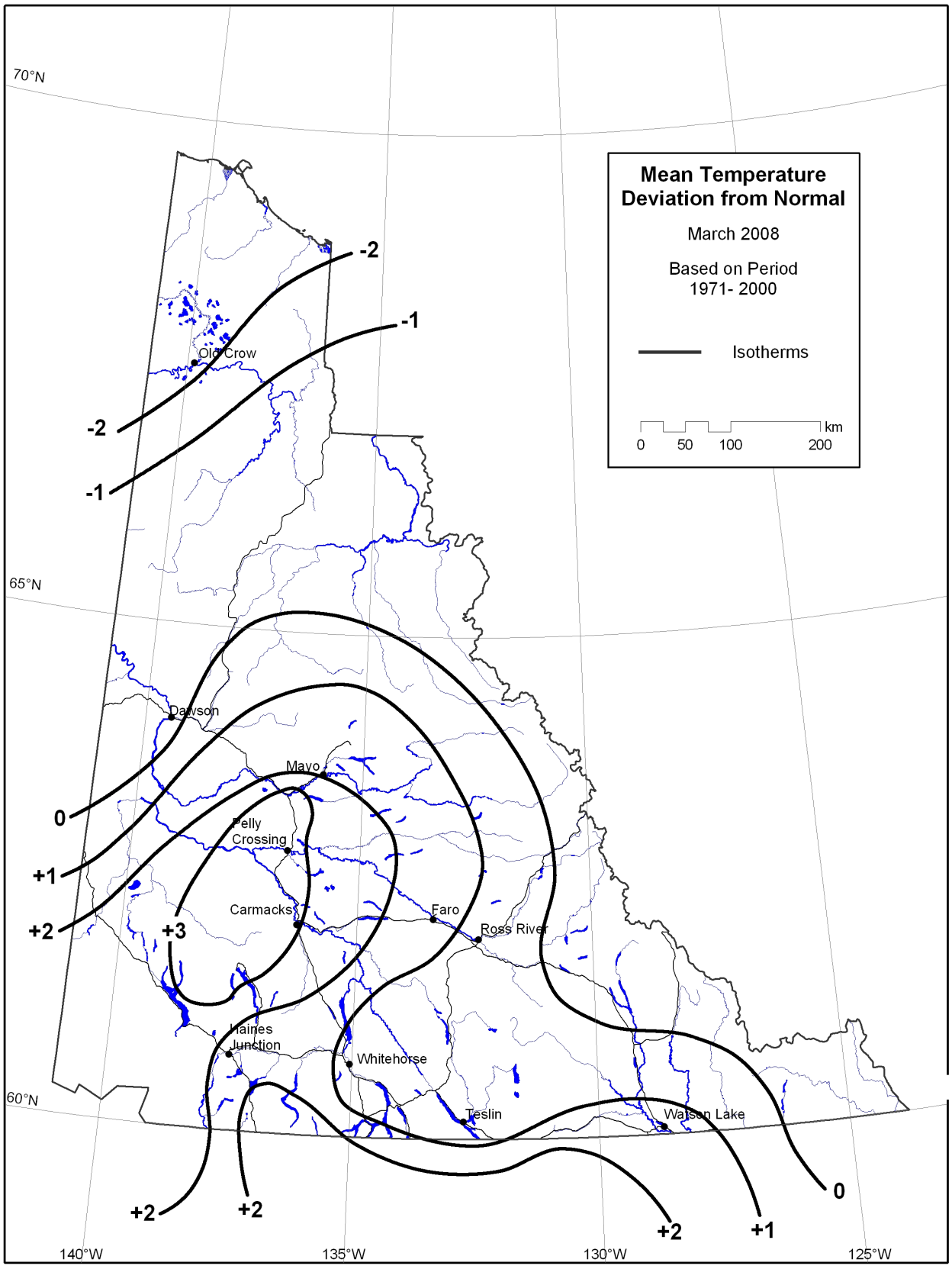
Snowpack is well above normal in a crescent from Carmacks to Teslin and up to the east of Ross River. The Whitehorse and Southern Lakes area are normal to slightly above normal as is the north Yukon. Haines Junction and area north of Mayo and east of Dawson are well below normal.

STREAMFLOW

Streamflow conditions within Yukon are normal for April 1st with the exception of the Porcupine and Alsek, which are below normal. Streamflow during this period represents winter baseflow, which provides an indication of winter groundwater contributions.


Snow Water Equivalent
Percent of Normal
April 1, 2008
Percent of Average
51 - 70
71 - 90
91 - 110
111 - 130
131 - 150
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
Faro
Carmacks
Ross River
Haines Junction
Whitehorse
Teslin
Watson Lake


Mean Precipitation
Percentage of Normal
March 2008
Based on Period
1971- 2000
Percentage
Percentage
km
0 50 100 200
70°N
65°N
60°N
140°W
135°W
130°W
125°W
150%
150%
100%
100%
50%
50%
100%
100%
100%
Old Crow
Dawson
Mayo
Pelly
Crossing
Carmacks
Faro
Ross River
Haines
Junction
Whitehorse
Teslin
Watson Lake

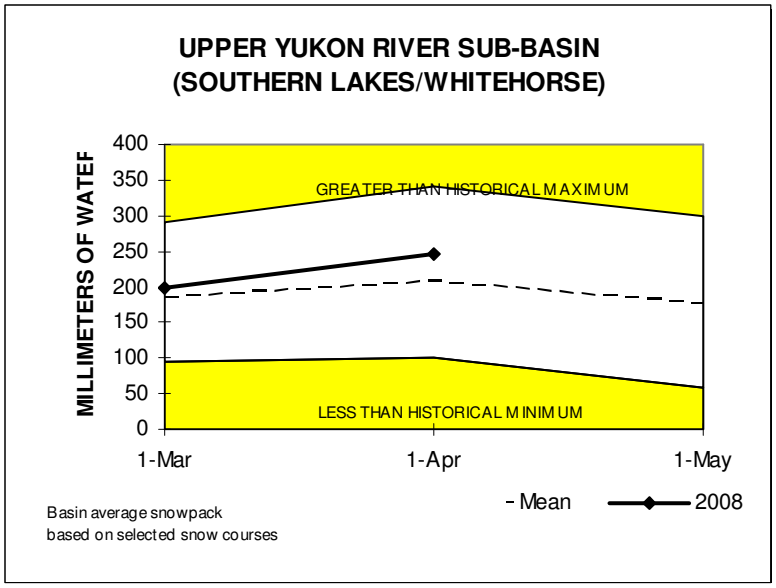

Mean Temperature
Deviation from Normal
March 2008
Based on Period
1971- 2000
Isotherms
km
0 50 100 200
70°N
65°N
60°N
140°W
135°W
130°W
125°W
Old Crow
Dawson
Mayo
Pelly
Crossing
Carmacks
Faro
Ross River
Haines
Junction
Whitehorse
Teslin
Watson Lake
-2
-1
-2
-1
0
+1
+2
+3
+2
+2
+2
+1
0

YUKON RIVER BASIN

Snowpack conditions in the Yukon River Basin are slightly above normal in the south, normal in the central regions and below normal in the northern portion of the basin

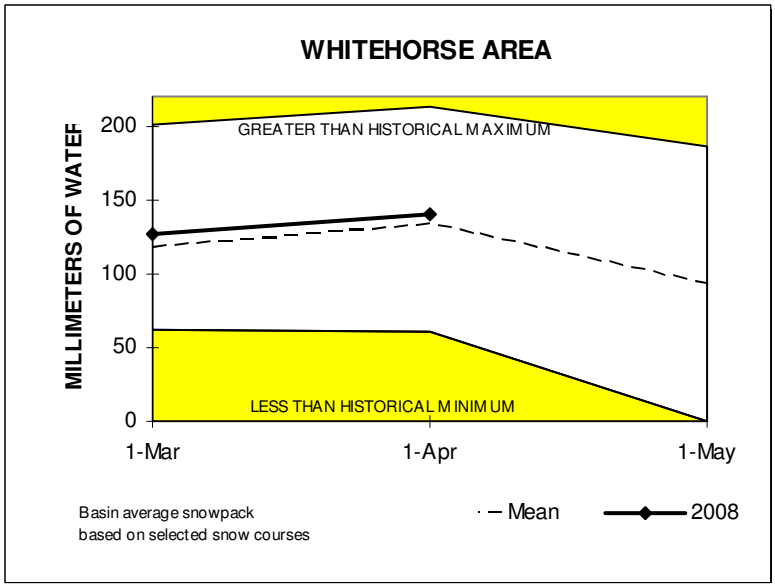
UPPER YUKON RIVER SUB-BASIN (SOUTHERN LAKES/WHITEHORSE)

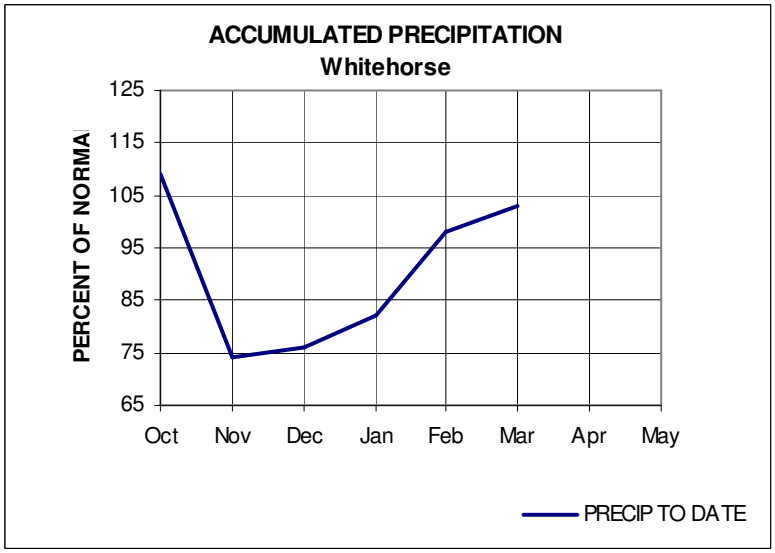
Snowpack conditions in the Upper Yukon River watershed slightly above normal. Values range from 85 percent of normal at Atlin to 154 percent of normal at Meadow Creek a new record for April 1st. A basin wide average has been estimated to be 118 percent of normal.

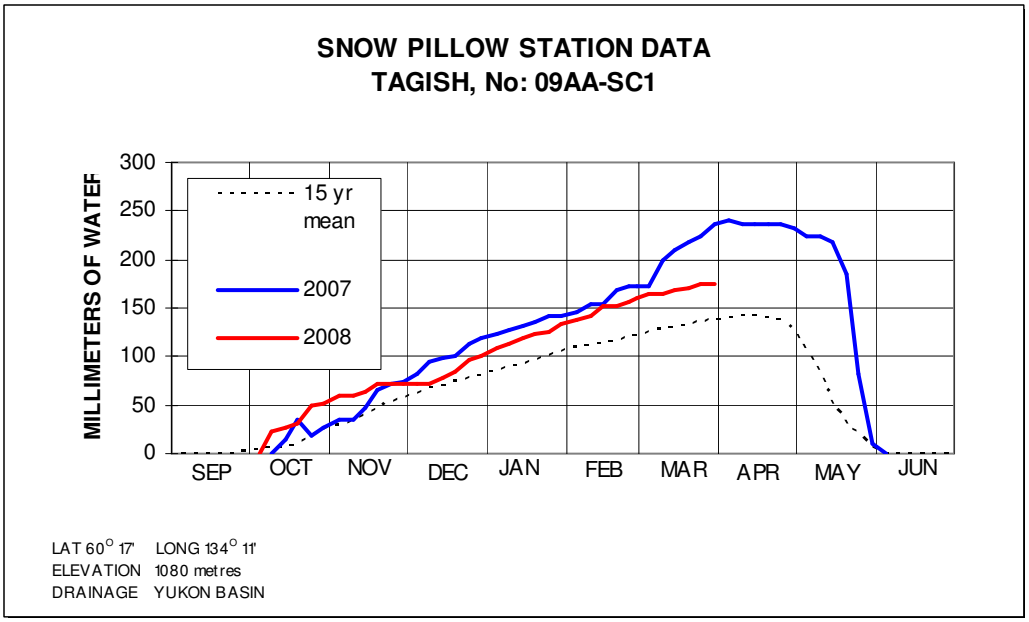


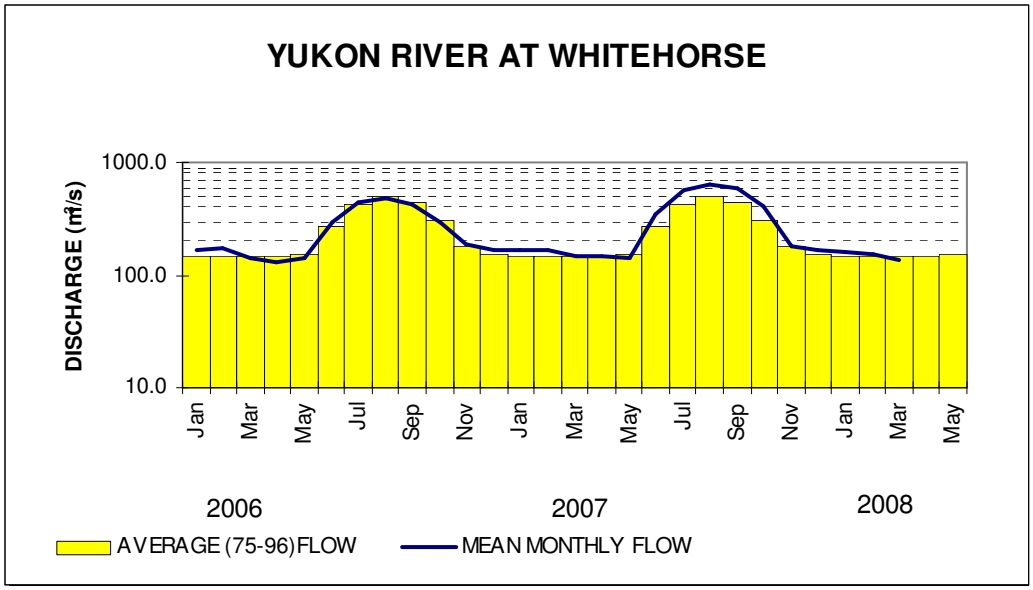
WHITEHORSE AREA

Snowpack conditions in the Whitehorse area are near normal. Values range from 94 percent of normal at Whitehorse to 124 percent of normal at Tagish. A basin wide average is estimated to be 106 percent of average.



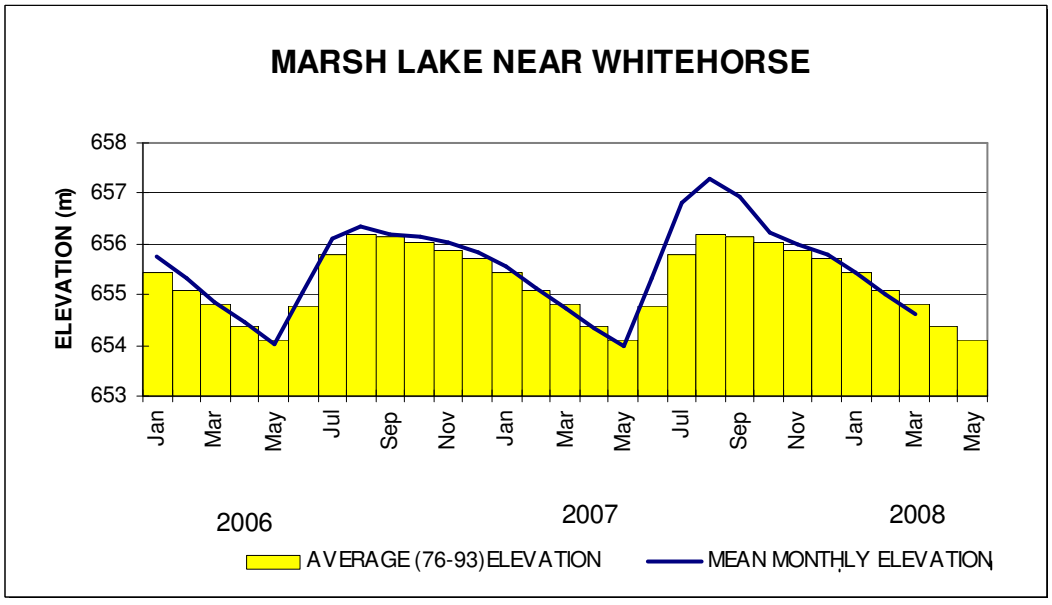



SNOW PILLOW STATION DATA
TAGISH, No: 09AA-SC1
MILLIMETERS OF WATEF
300
250
200
150
100
50
0
15 yr mean
2007
2008
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
LAT 60° 17' LONG 134° 11'
ELEVATION 1080 metres
DRAINAGE YUKON BASIN



MARSH LAKE

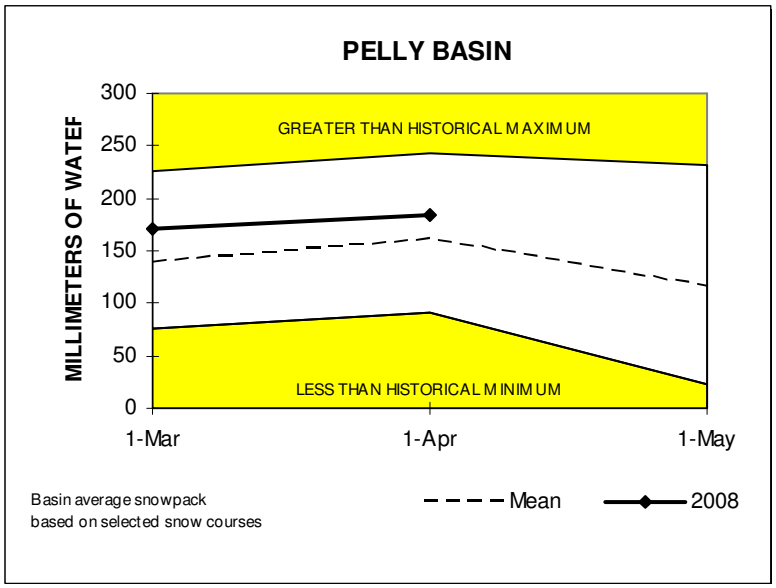
The elevation of Marsh Lake during March was 654.626 or 0.182M below normal. Yukon River at Whitehorse mean discharge during March was 95 percent of normal. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 105 percent and 105 percent of normal respectively.

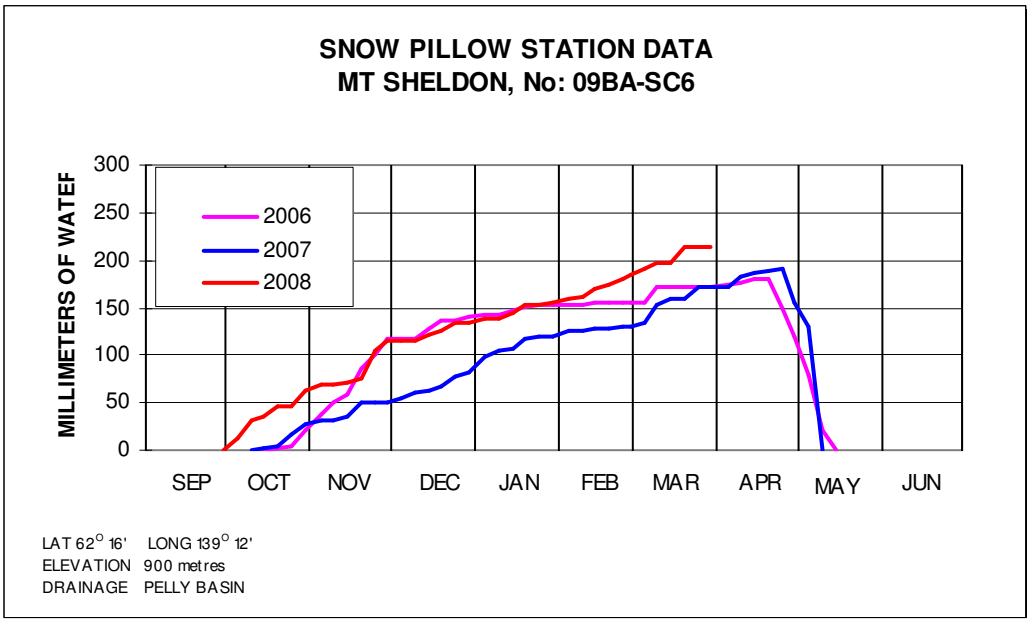


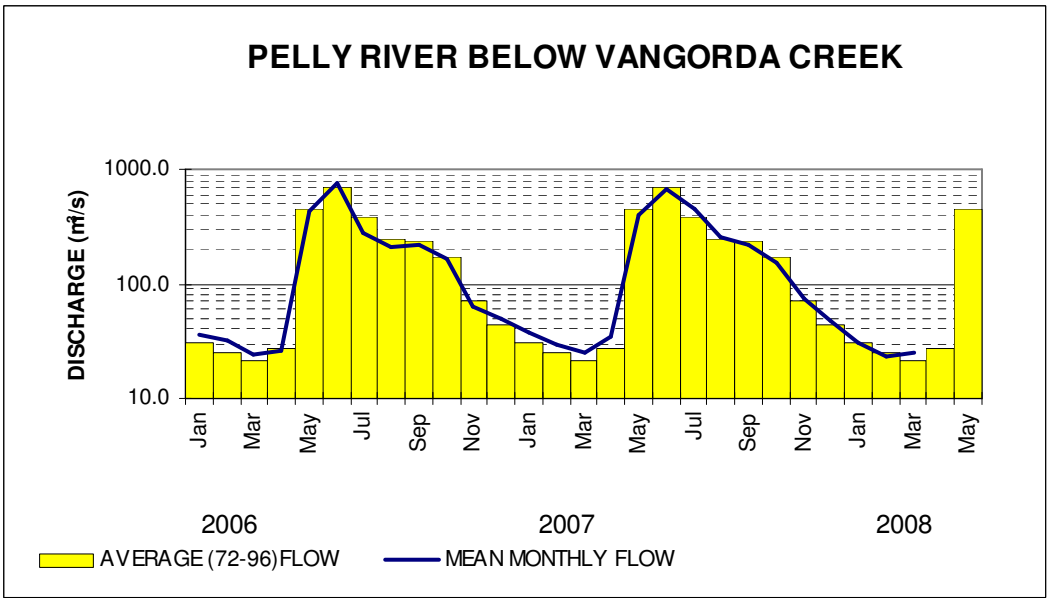
PELLY RIVER SUB-BASIN

Snowpack conditions in the Pelly River watershed are above normal. Values of snow water equivalent range from 109 percent of normal at Twin Creeks to 123 percent of normal at Hoole River. A basin wide average has been estimated to be 115 percent of normal.

Mean March streamflow for the watershed was 116 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 100 percent and 105 percent of normal respectively.



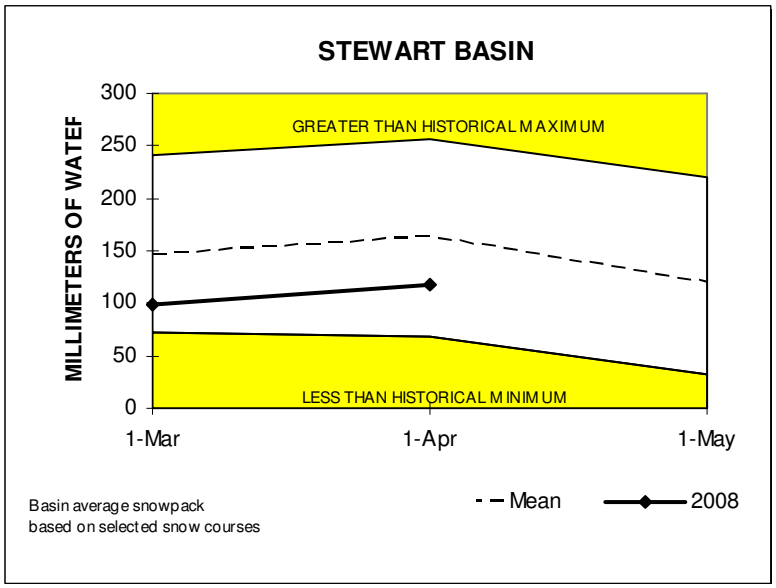

SNOW PILLOW STATION DATA
MT SHELDON, No: 09BA-SC6
MILLIMETERS OF WATEF
300
250
200
150
100
50
0
2006
2007
2008
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
LAT 62° 16' LONG 139° 12'
ELEVATION 900 metres
DRAINAGE PELLY BASIN

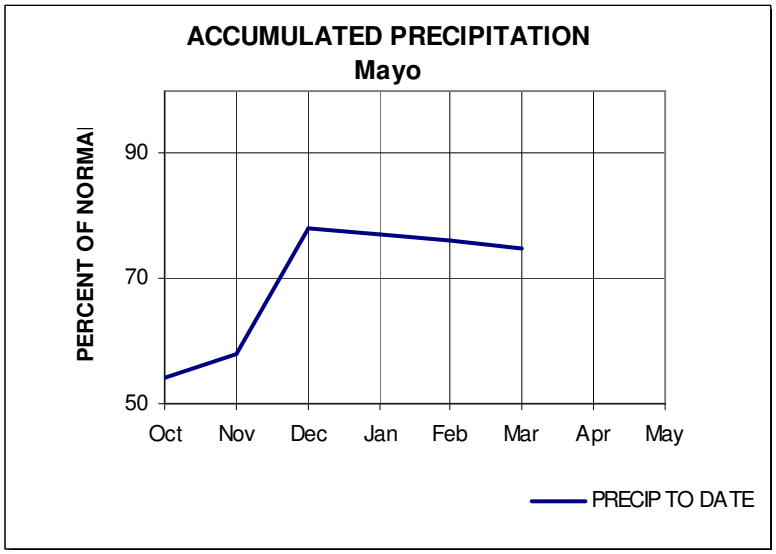

PELLY RIVER BELOW VANGORDA CREEK
DISCHARGE (m³/s)
1000.0
100.0
10.0
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
2006
2007
2008
AVERAGE (72-96) FLOW
MEAN MONTHLY FLOW

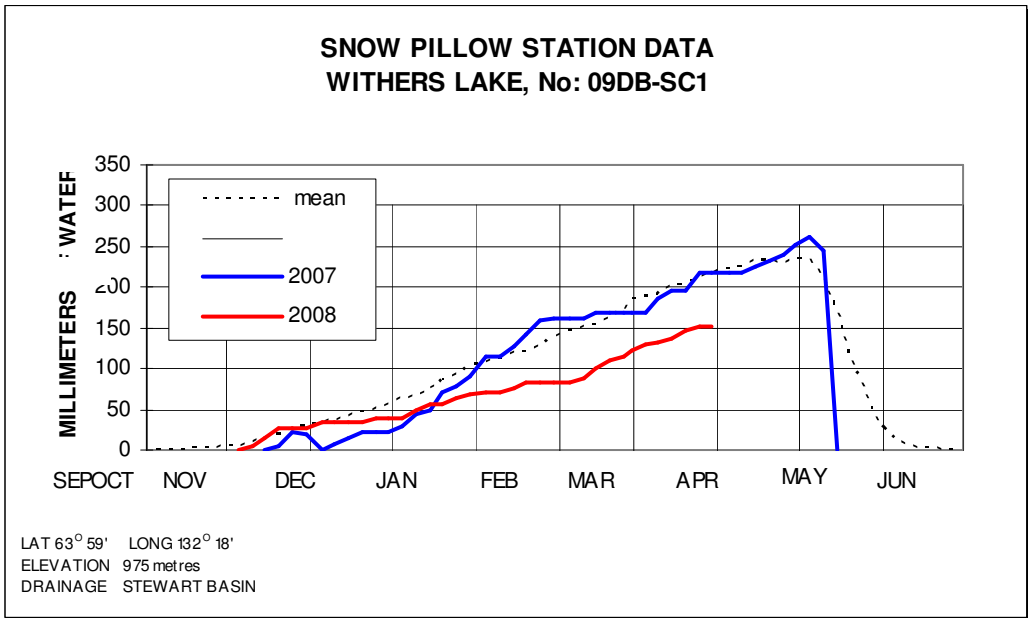
STEWART RIVER SUB-BASIN

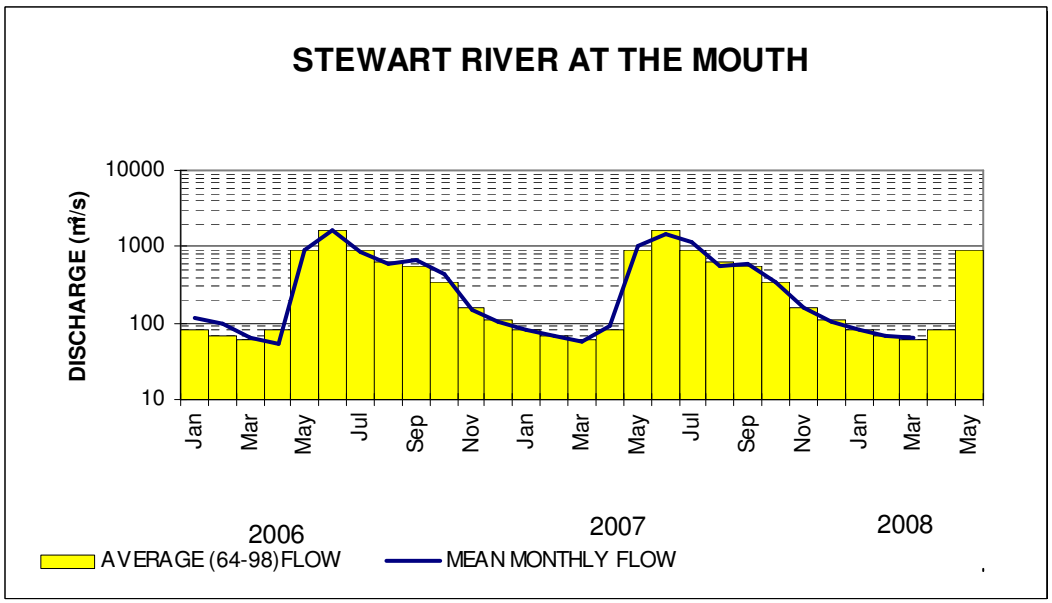
Snowpack conditions in the Stewart River watershed are below normal for April 1st. Values of snow water equivalent range from 55 percent of normal at Calumet to 89 percent of normal at Plata Airstrip. A basin wide average has been estimated to be 72 percent of normal.

The Stewart River near the Mouth indicates March streamflow at 101 percent of average. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 80 percent and 80 percent of normal respectively.



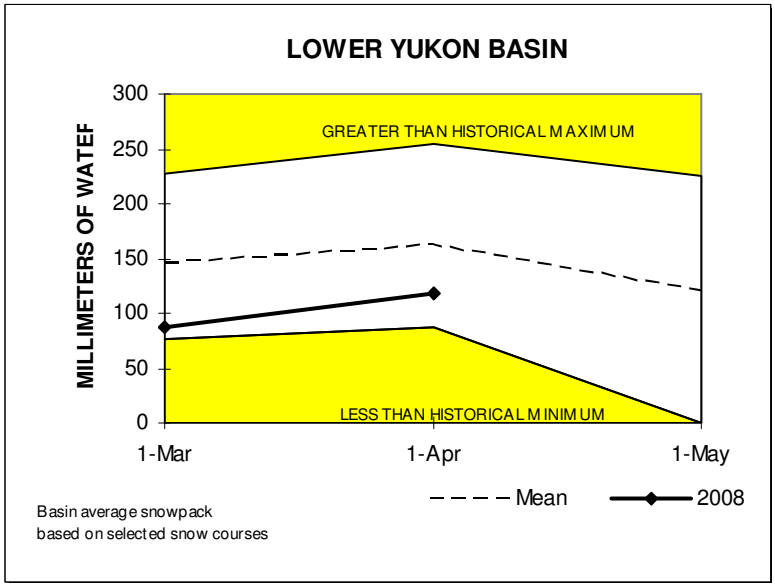


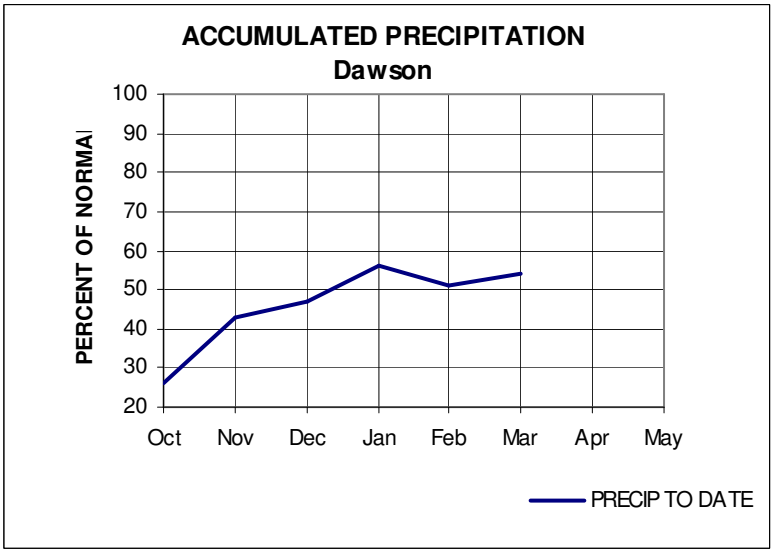

SNOW PILLOW STATION DATA
WITHERS LAKE, No: 09DB-SC1
MILLIMETERS : WATEF
350
300
250
200
150
100
50
0
mean
2007
2008
SEPOCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
LAT 63° 59' LONG 132° 18'
ELEVATION 975 metres
DRAINAGE STEWART BASIN


STEWART RIVER AT THE MOUTH
DISCHARGE (m³/s)
10000
1000
100
10
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
2006
2007
2008
AVERAGE (64-98) FLOW
MEAN MONTHLY FLOW

LOWER YUKON RIVER BASIN
(DAWSON AREA)

Snowpack conditions in the Dawson area are well below normal for April 1st. Values of snow water equivalent range from 66 percent of normal at Grizzly Creek to 83 percent of normal at King Solomon Dome. An area wide average has been estimated to be 73 percent of normal.

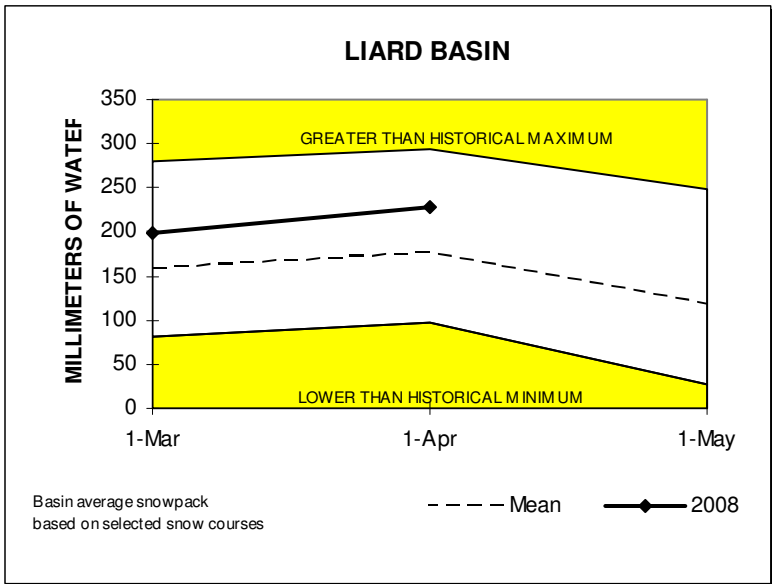


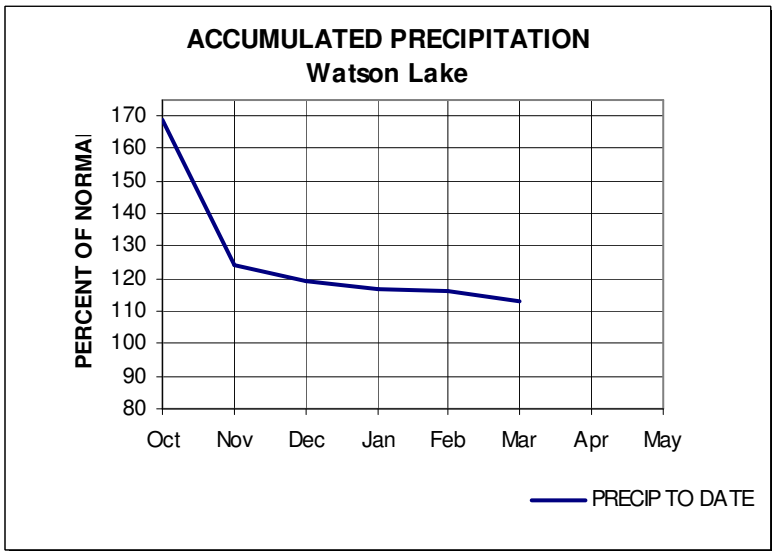


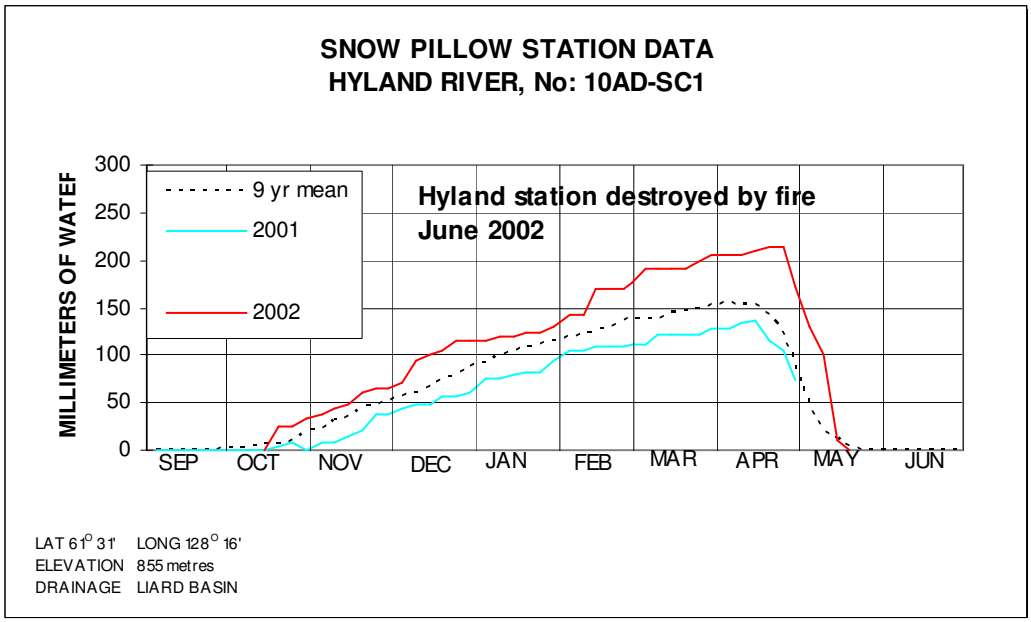
LIARD RIVER BASIN

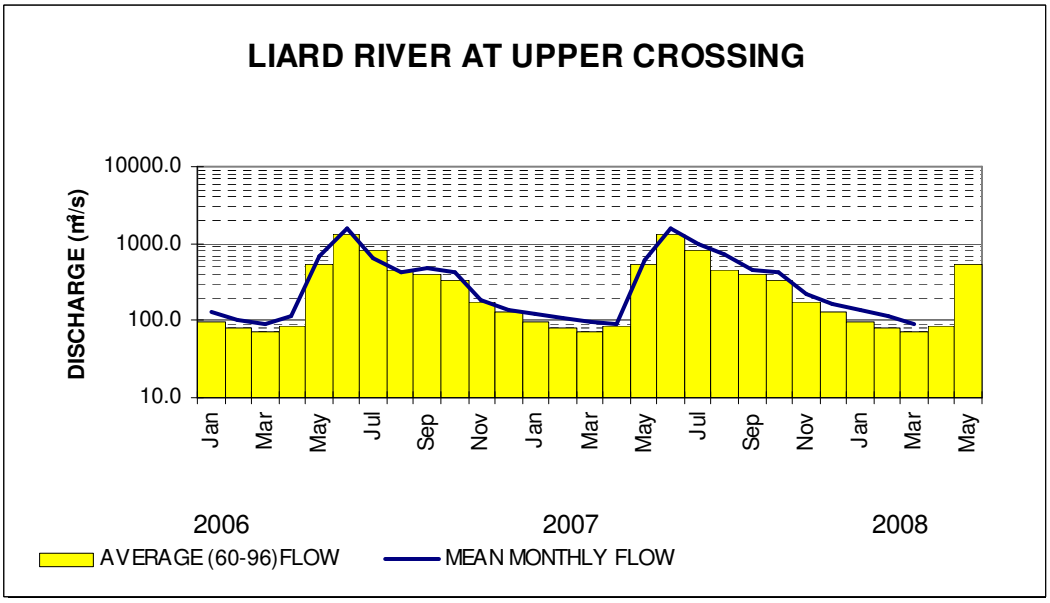
Snowpack conditions within the Liard River watershed are well above normal. Values of snow water equivalent range from 121 percent of normal at the Hyland River to 140 percent of normal at Tintina Airstrip. A basin wide average has been estimated to be 130 percent of normal.

Mean March streamflow for the Liard River upstream of Upper Liard was 129 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.





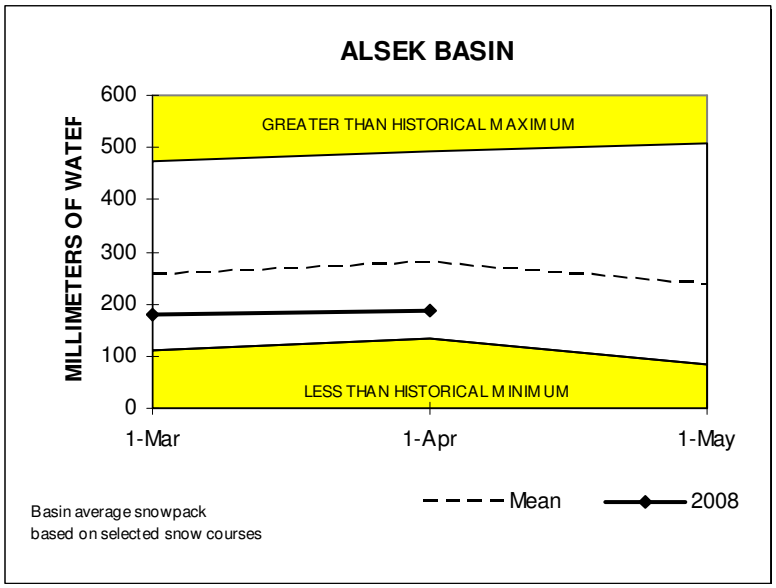

SNOW PILLOW STATION DATA
HYLAND RIVER, No: 10AD-SC1
MILLIMETERS OF WATEF
300
250
200
150
100
50
0
9 yr mean
2001
2002
Hyland station destroyed by fire
June 2002
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
LAT 61° 31' LONG 128° 16'
ELEVATION 855 metres
DRAINAGE LIARD BASIN

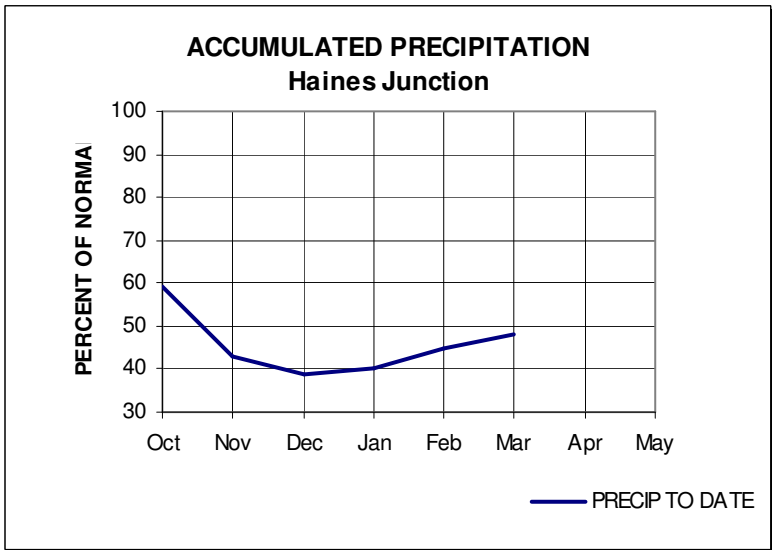

LIARD RIVER AT UPPER CROSSING
DISCHARGE (m³/s)
10000.0
1000.0
100.0
10.0
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
2006
2007
2008
AVERAGE (60-96) FLOW
MEAN MONTHLY FLOW

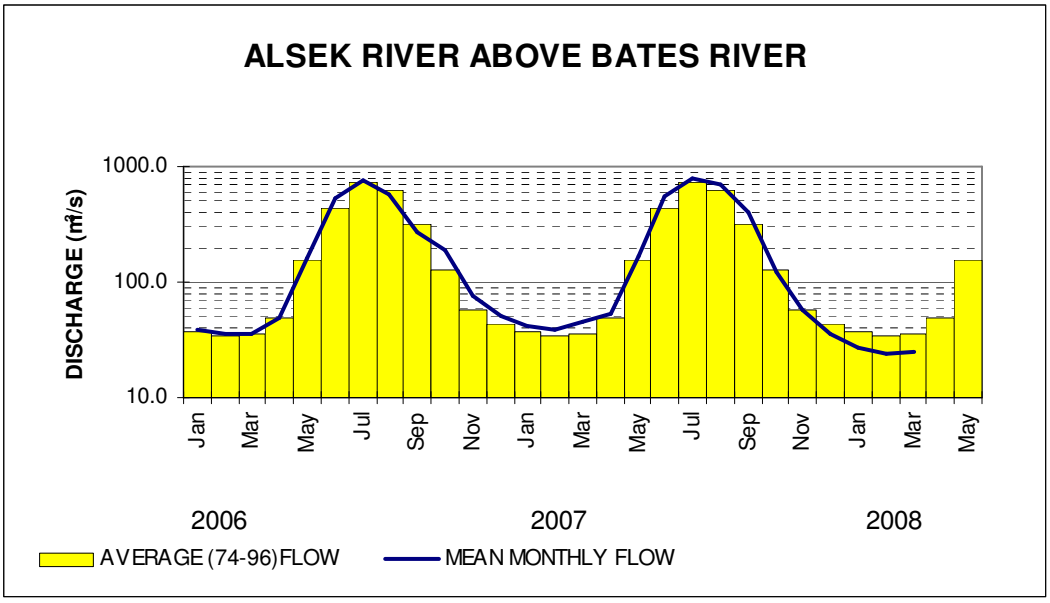
ALSEK RIVER BASIN

Snowpack conditions within the Alsek River watershed are well below normal for April 1st. Values of snow water equivalent range from 60 percent of normal at Alder Creek to 99 percent of normal at Canyon Lake. A basin wide average has been estimated to be 67 percent of normal.

Mean monthly streamflow for March as indicated by the Alsek River above Bates River was 69 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 80 and 80 percent of normal respectively.



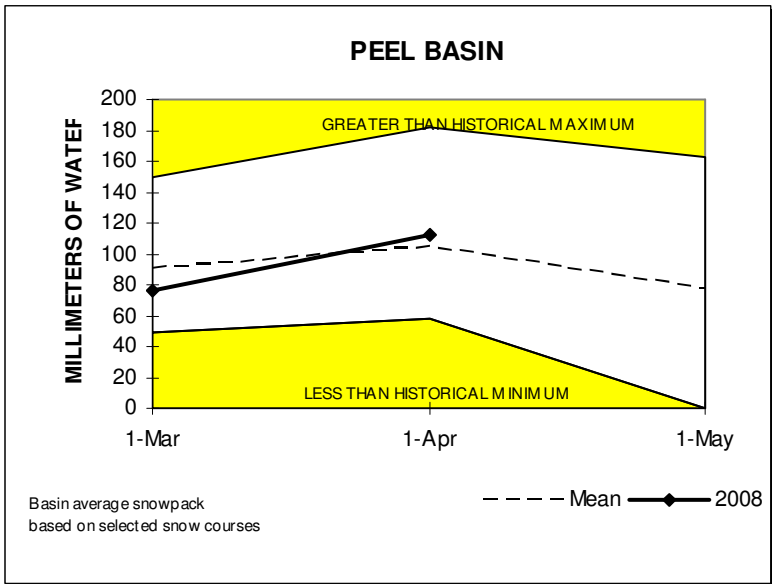


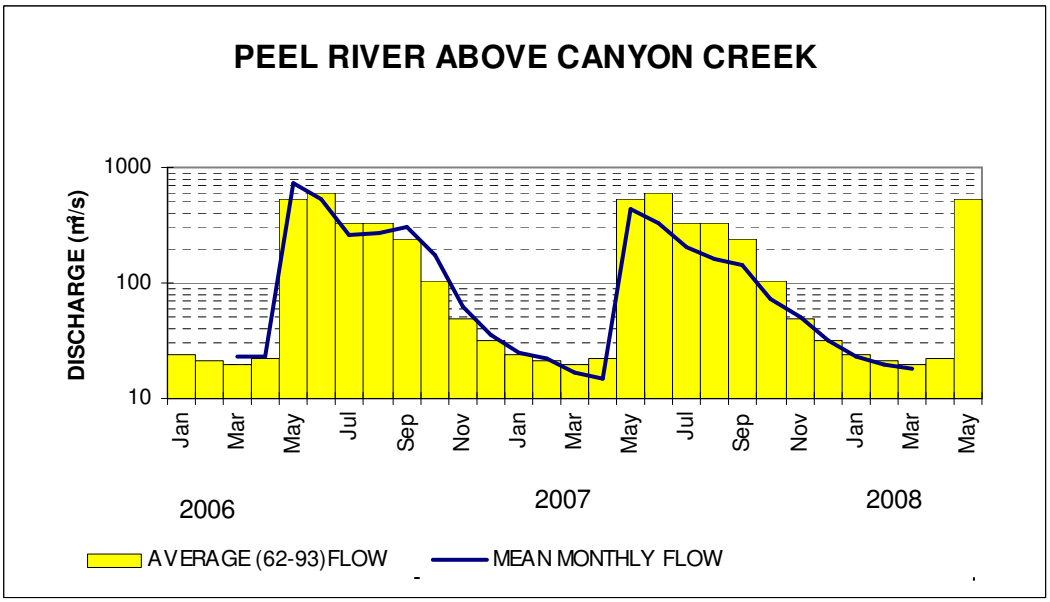

ALSEK RIVER ABOVE BATES RIVER
DISCHARGE (m³/s)
1000.0
100.0
10.0
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
2006
2007
2008
AVERAGE (74-96) FLOW
MEAN MONTHLY FLOW

PEEL RIVER BASIN

Snowpack conditions in the Peel River watershed are near normal with values of snow water equivalent ranging from 89 percent of normal at Ogilive to 124 percent of normal at Blackstone. A basin wide average has been estimated to be 106 percent of normal.

Mean monthly streamflow for March as indicated by the Peel River above Canyon Creek station was 92 percent of normal. Given normal summer meteorological conditions, volume runoff and peak flows for the season are expected to be 90 and 95 percent of normal respectively.

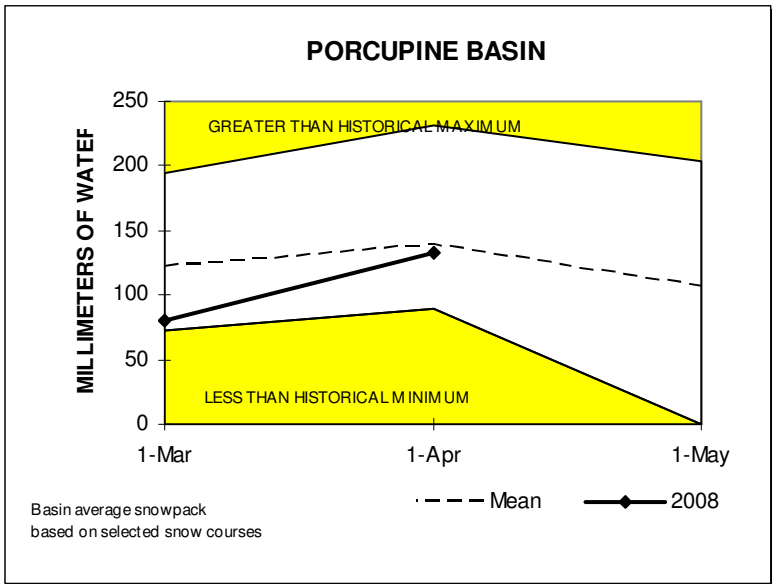


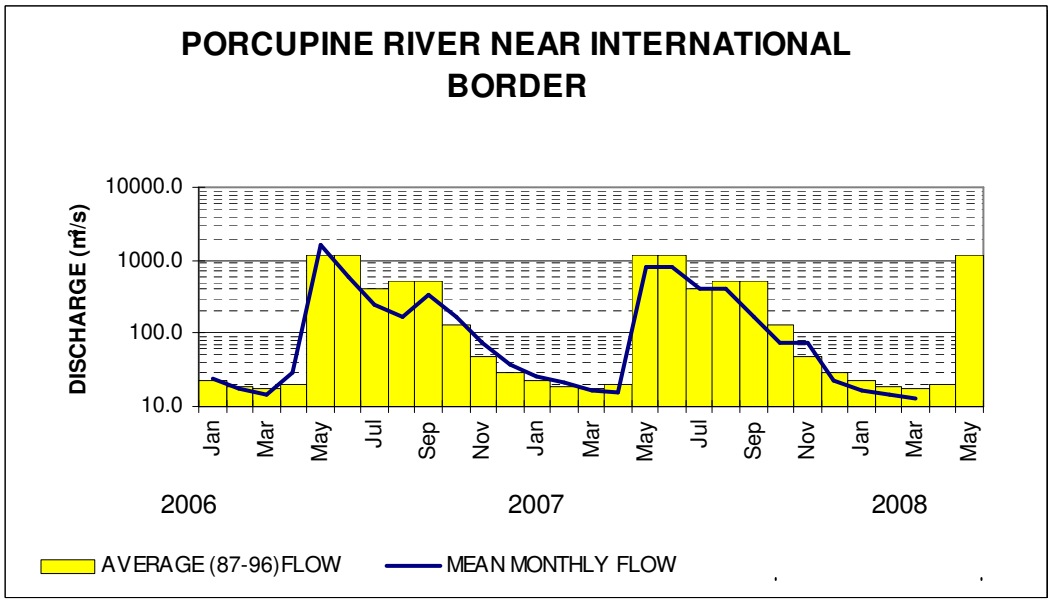


PORCUPINE RIVER BASIN

Snowpack conditions in the Porcupine River watershed are near normal with values of snow water equivalent ranging from 91 percent of normal at Eagle River to 100 percent of normal at Eagle Plains. A basin wide average has been estimated to be 96 percent of normal.

Mean March streamflow for the basin as indicated by the Porcupine River near the International Boundary is 75 percent of normal. Porcupine River volume and peak flow forecasts are not available at this time.





Drainage Basin and Snow Course

For Sample Date: 2008-04-01

Name	Number	Elev (m)	Date of Survey	This Year Snow Depth (cm)	This Year Water Content (mm)	Water Content Last Year (mm)	Water Content Average (mm)	Water Content Yrs of Rec
Alsek River Basin								
Canyon Lake	08AA-SC01	1160	3/31/2008	43	90	133	91	29
Alder Creek	08AA-SC02	768	3/29/2008	45	94	165	157	28
Aishihik Lake	08AA-SC03	945	3/31/2008	38	73	120	72	14
Haines Junction Farm	08AA-SC4	610	3/26/2008	31	43	123	106	8
Clay Creek	08AB-SC02	670	3/27/2008	141	400	633	607	29
Summit	08AB-SC03	1000	3/25/2008	81	170 B	277	266	28
Profile Mountain	08AB-SC04	900	3/27/2008	88	219	317	313	21
Yukon River Basin								
Tagish	09AA-SC01	1080	3/26/2008	77	177	242	143	32
Montana Mountain	09AA-SC02	1020	3/26/2008	66	150	228	139	31
Log Cabin (B.C.)	09AA-SC03	884	3/29/2008	125	382	560	368	48
Atlin (B.C)	09AA-SC04	730	3/31/2008	50	105	267	123	43
Mt McIntyre B	09AB-SC01B	1097	3/28/2008	66	144	209	150	32
Whitehorse Airport	09AB-SC02	700	4/1/2008	49	94	165	100	41
Meadow Creek	09AD-SC01	1235	3/26/2008	156	415	331	269	31
Jordan Lake	09AD-SC02	930	3/27/2008	79	185	170	135	21
Morley Lake	09AE-SC01	824	3/26/2008	75	178	199	154	20
Mount Berdoe	09AH-SC01	1035	3/26/2008	68	128	84	104	32
Satasha Lake	09AH-SC03	1106	3/26/2008	62	143	114	95	21
Williams Creek	09AH-SC04	914	3/26/2008	62	120	106	89	13
Twin Creeks	09BA-SC02	900	3/26/2008	93	207	211	190	30
Hoole River	09BA-SC03	1036	3/27/2008	80	163	173	132	31
Burns Lake	09BA-SC04	1112	3/27/2008	110	283	220	217	22
Finlayson Airstrip	09BA-SC05	988	3/27/2008	69	144	102	103	21
Fuller Lake	09BB-SC03	1126	3/26/2008	89	203	194	198	22
Russell Lake	09BB-SC04	1060	3/26/2008	89	195	248	233	21
Rose Creek	09BC-SC01	1080	3/26/2008	63	131	82	98	14
Mount Nansen	09CA-SC01	1021	3/26/2008	52	124	86	74	32
MacIntosh	09CA-SC02	1160	3/26/2008	64	145	130	96	32
Burwash Airstrip	09CA-SC03	810	3/26/2008	21	29	53	43	31
Duke River	09CA-SC05	1310	3/27/2008	52	96	115	106	22
Beaver Creek	09CB-SC01	655	3/26/2008	41	69	68	83	33
Chair Mountain	09CB-SC02	1067	No Surv			76	92	20
White River	09CB-SC03	823	No Surv			N.S.	76	5
Casino Creek	09CD-SC01	1065	3/26/2008	68	111	102	126	30
Pelly Farm	09CD-SC03	472	3/30/2008	40	78	86	76	22

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Drainage Basin and Snow Course

For Sample Date: 2008-04-01

Name	Number	Elev (m)	Date of Survey	This Year Snow Depth (cm)	This Year Water Content (mm)	Water Content Last Year (mm)	Water Content Average (mm)	Water Content Yrs of Rec
Yukon River Basin								
Plata Airstrip	09DA-SC01	830	3/26/2008	72	170	190	192	30
Arrowhead Lake	09DA-SC02	1120	No Surv			N.S.	198	17
Withers Lake	09DB-SC01	975	3/26/2008	77	159	220	238	22
Rackla Lake	09DB-SC02	1040	3/26/2008	65	119	199	199	21
Mayo Airport A	09DC-SC01A	540	3/31/2008	44	72	112	95	39
Mayo Airport B	09DC-SC01B	540	3/31/2008	42	82	124	107	21
Edwards Lake	09DC-SC02	830	3/26/2008	62	114	176	166	21
Calumet	09DD-SC01	1310	4/1/2008	71	110	186	201	29
King Solomon Dome	09EA-SC01	1080	3/26/2008	73	132	171	159	33
Grizzly Creek	09EA-SC02	975	3/27/2008	54	118	173	180	32
Midnight Dome	09EB-SC01	855	3/26/2008	60	103	145	147	33
Boundary (Alaska)	09EC-SC02	1005	3/30/2008	48	102	N.S.	135	38
Porcupine River Basin								
Riff's Ridge	09FA-SC01	650	4/1/2008	62	147	103	143	21
Eagle Plains	09FB-SC01	710	4/1/2008	73	165	130	165	24
Eagle River	09FB-SC02	340	4/2/2008	64	126	N.S.	138	24
Old Crow	09FD-SC01	299	3/26/2008	65	108 E	82	113	26
Liard River Basin								
Watson Lake Airport	10AA-SC01	685	3/31/2008	77	175	215	134	43
Tintina Airstrip	10AA-SC02	1067	3/27/2008	108	278	240	199	30
Pine Lake Airstrip	10AA-SC03	995	3/26/2008	109	286	240	224	32
Ford Lake	10AA-SC04	1110	3/27/2008	99	230	188	190	21
Frances River	10AB-SC01	730	3/27/2008	83	200	213	156	33
Hyland River	10AD-SC01	855	3/26/2008	87	203	221	168	31
Peel River Basin								
Blackstone River	10MA-SC01	920	3/27/2008	46	93	75	105	32
Ogilvie River	10MA-SC02	595	4/1/2008	54	130	94	105	31
Bonnet Plume Lake	10MB-SC01	1120	3/26/2008	59	98	156	190	21
Alaska Snow Courses								
Eaglecrest	08AK-SC01	305	3/31/2008	221	800	1008	460	20
Moore Creek Bridge	08AK-SC02	700	3/31/2008	170	604	671	546	16

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INDEX OF YUKON SNOW COURSES 2008

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