LATE ITEM: Regular Council Meeting – May 16, 2011

DISTRICT OF Mission ON THE FRASER

Fire/Rescue Service
Memorandum

To: Chief Administrative Officer, Glen Robertson

From: Fire Chief, Ian Fitzpatrick

Date: May 15, 2011

Subject: **Current Spring Freshet Status**

Recommendation

Information only

Background

This year the cooler April has led to an increasing snow pack through most of the province and a delay in the onset of snow melt. As of May 1st the delay in the onset of melt is about two weeks later than normal. Snow conditions comprise only one part of the peak flow and water supply picture. Spring weather has a large influence on the timing and rate at which the snowpack melts, and will determine whether or not significant flooding occurs. The greatest risk for flooding occurs when there is significant snow available for melt and weather brings well above normal temperatures and/or heavy rainfall.

The current weather we are experiencing is in line with predictions in terms of Spring weather. The National Oceanic and Atmospheric Administration (NOAA) have commented that La Nina typically brings cooler than normal and wetter than normal weather to BC. This persistence is expected through May-June with warmer than normal temperatures for the summer period July-August.

I spoke with David Campbell (River Forecast Center) on Friday of last week to seek further clarification to his report of May 9 (attached), and in light of recent news articles on potential flooding in the Province.

David indicated that they are monitoring all areas and do not feel that there are any critical conditions at this point. He reinforced that the weather will play a big part in the snow melt and the resulting peak flows in the rivers.

Specific to Mission David indicated that the peak flow at Mission is realized from the snow melt in the Upper Fraser Basin (Map attached), and in that area the snow pack is just slightly above normal at 109%.

The flow rate at Mission bridge as of May 15, 2011 is just below 3.5 Meters (attached). As a comparison at the same date in 2009 it was 2.5 M, 2008 2.0 M, 2007 3.6 M.

On Wednesday May 18 I will be attending a Spring readiness workshop in Chilliwack were we are expected to get updated information and predictions from the River Forecast Center.

Ian Fitzpatrick

Fire Chief

Emergency Preparedness Co-coordinator

Ian Fitzpatrick

From: Kanya, Greg SG:EX <Greg.Kanya@gov.bc.ca>
Sent: May 9, 2011 13:19
Subject: FW: Snow Survey and Water Supply Bulletin - May 1, 2011

FYI

Greg Kanya
Regional Manager
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From: Campbell, David FLNR:EX
Sent: Monday, May 9, 2011 12:09 PM
To: Campbell, David FLNR:EX
Subject: Snow Survey and Water Supply Bulletin - May 1, 2011

The May 1 snow survey is now complete. Data from 142 snow courses and 55 snow pillows around the province and out-of-province sampling locations, and climate data from Environment Canada, have been used to form the basis for the following reports[1].

Weather

Weather patterns in April have been dominated by cooler than normal temperatures throughout British Columbia. Precipitation in April was variable across the province. Near normal or slightly below normal precipitation was observed through the Interior, and above normal precipitation was observed in the southern and north-western portions of the province. Weather patterns are consistent with the La Niña cycle currently being observed.

Snowpack

Typically the transition from snow accumulation to snow melt occurs at most locations in the province near the middle of April. However this year, the cool April has led to an increasing snow pack through most of the province, and a delay in the onset of snow melt. As of May 1st the delay in the onset of melt is about 2 weeks later than normal for most of the province.

The ongoing snow accumulation and delay in melt has led to increases in snow basin indices across the province. Basin snow water indices for BC at May 1 vary from a low of 103% of normal in the North Thompson to a high of 167% of normal on Vancouver Island. Well above normal snow packs (>120% of normal) are present in the Middle Fraser, Lower Fraser, Nicola, Kootenay, Okanagan-Kettle, Similkameen, South Coast and Vancouver Island. Localized high snow packs are present in the Bulkley River and Lower Columbia.
Slightly above normal snow basin indices are present in the Upper Fraser, Nechako, South Thompson, Columbia, and Skeena/Nass, and normal conditions are present in the North Thompson and Peace.

In most basins, low to mid elevation snow packs are well above normal, consistent with the cooler and wetter than normal accumulation season. Snow sampling in BC is biased towards high elevation sites. Therefore, some caution is warranted in interpreting the snow basin index values reported here, as they do not fully capture the above normal low to mid elevation snow pack that has been observed. Local observations indicate that the low to mid elevation snow has transitioned to melt, or has melted, in many regions.

BC Snow Basin Indices – May 1, 2011

Basin	% of Normal	Basin	% of Normal
Upper Fraser	109%	Kootenay	142%
Nechako	109%	Okanagan-Kettle	145%
Middle Fraser	122%	Similkameen	141%
Lower Fraser	150%	South Coast	157%
North Thompson	103%	Vancouver Island	167%
South Thompson	110%	Peace	103%
Nicola	151%	Skeena-Nass	110%
Columbia	111%		

Water Supply Outlook

Increases in snow pack levels and the delay in the onset of melt have led to increased flood risk potential in areas of the province. Based on elevated snow pack levels, well above normal spring runoff is expected in the Middle Fraser, Lower Fraser, Nicola, Kootenay, Lower Columbia, Okanagan-Kettle, Similkameen, Bulkley, South Coast and Vancouver Island. Increased flood risk is expected in the Middle Fraser, Nicola, Kootenay, Lower Columbia, Okanagan-Kettle, Similkameen, and Bulkley River. Rivers in these systems experience their peak flows during the spring freshet period. Whether or not significant flooding occurs in these systems will depend primarily on the weather during the snowmelt season in May and June.

In contrast, peak flows in the Lower Fraser, South Coast and Vancouver Island regions are typically associated with major flood events during fall and winter rainfall storm events. Moderate spring flooding can occur in basins with a significant portion of the watershed at high elevation (e.g. Lillooet, Birkenhead), but spring snowmelt driven flows are typically of a smaller magnitude than fall/winter events. Above normal spring freshet runoff can be expected in the Coast and Lower Fraser. While well above normal spring runoff (volume) is forecast in these systems, a modest increase in flood risk potential is expected. An exception to this is in the Birkenhead River where there is an increased potential for flooding.

In regions with near or slightly above normal snow packs (Upper Fraser, Nechako, North Thompson, South Thompson, Upper Columbia, Peace, Skeena/Nass), normal flood risk and seasonal runoff is expected.

Snow conditions at the end of the winter snow accumulation period comprise only one part of the peak flow and water supply picture. Spring weather has a large influence on the timing and rate at which the snowpack melts, and will determine whether or not significant flooding occurs. The greatest risk for flooding occurs when there is still significant snow available for melt and weather brings well above normal temperatures and/or heavy rainfall.

Commensurate with existing snow pack levels, slightly above normal to well above normal water supply conditions are forecast for the spring runoff season. This should be particularly beneficial for replenishing groundwater, lake and reservoir levels in regions affected by dry conditions in the 2010 season (north-east BC, Skeena-Bulkley and Middle Fraser).

The La Niña cycle that has been present in the equatorial Pacific Ocean throughout the 2010-2011 winter is continuing to weaken and the National Oceanic and Atmospheric Administration (NOAA) is commenting that La Niña will approach neutral conditions by June 2011. La Niña conditions typically bring cooler than

normal and wetter than normal weather to British Columbia. The persistence of La Niña conditions into the spring period may affect the melt of the snow pack through the freshet period. Environment Canada is forecasting warmer than normal temperatures for the summer period (July-August).

Weather during the May to June period will affect the specific flood risk in snow melt driven rivers of the province. The River Forecast Centre will continue to monitor the snowpack, weather, and stream flow conditions throughout the snow melt period. The next update to the Snow Bulletin will be on May 24, 2011.

The full version of the bulletin including text, data, graphs and basin index map can be viewed at the River Forecast Centre web site: http://bcrfc.env.gov.bc.ca/bulletins/watersupply/current.htm

Produced by: BC River Forecast Centre
May 9, 2011

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http://bcrfc.env.gov.bc.ca/index.htm

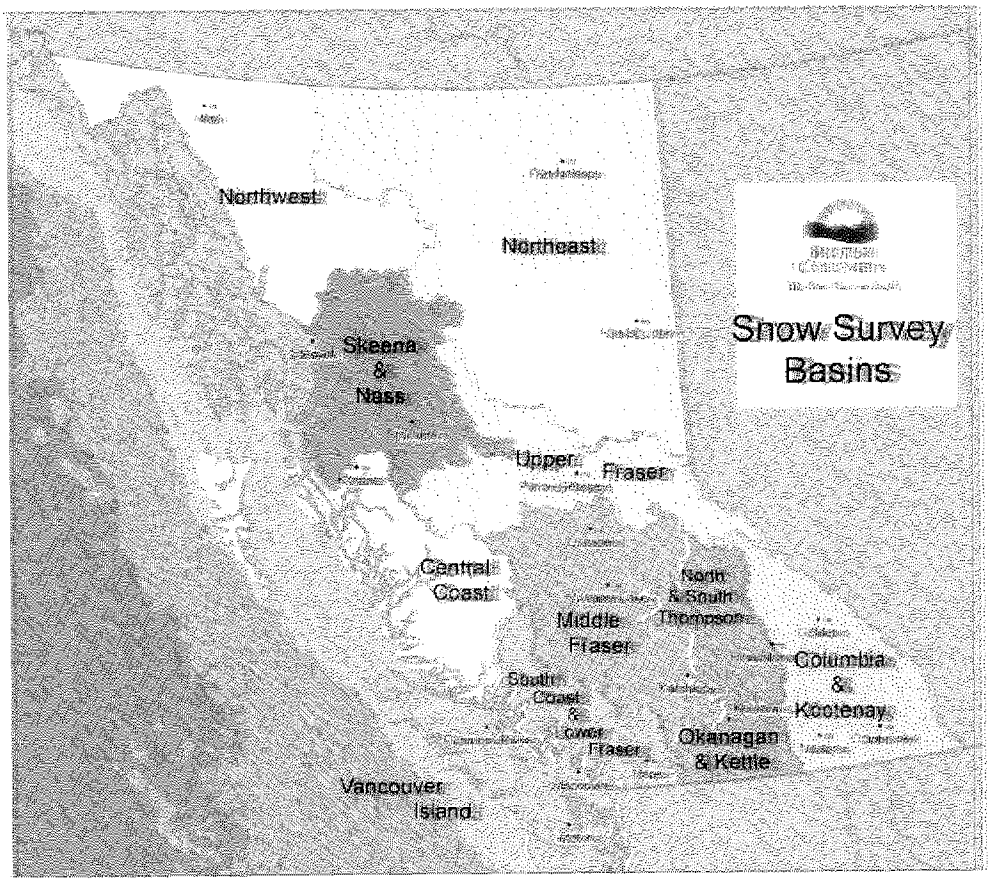
Automated Snow Pillow (ASP) Data

Snow Survey Basin Areas

ASP data can be obtained by 2 methods:

1. Select a station from the dropdown table below.
2. Click on a basin area on the map for a more detailed map and station list.

- Northwest
- Northeast
- Upper Fraser
- Middle Fraser
- North & South Thompson
- Columbia & Kootenay
- Okanagan & Kettle
- South Coast & Lower Fraser
- Vancouver Island
- Central Coast
- Skeena & Nass



MAP

Environment Canada Environnement Canada

Canada

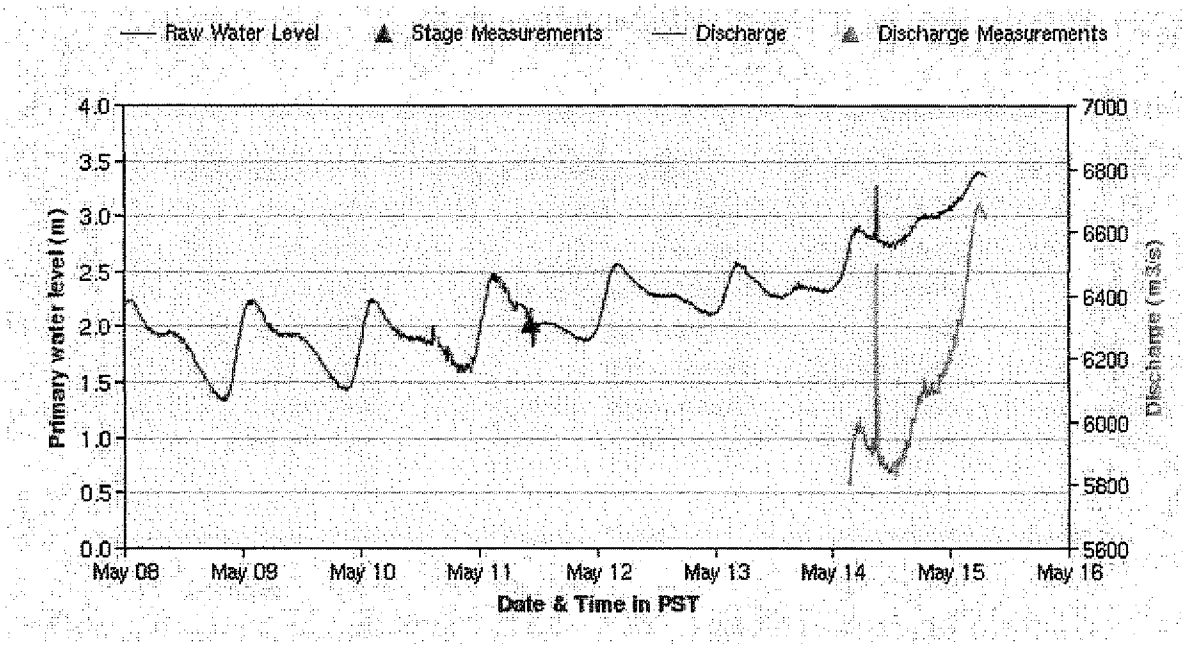
Home > Real Time Graph >

FRASER RIVER AT MISSION [BC] (08MH024)

Data Category: Real Time Go Tabular Data

Parameter Type: Primary water level Discharge Redraw

Note - if primary water level is not current, try redundant water level in parameter drop-down list.



Modify Graph Settings

Start Date: May 8 2011 **End Date:** May 16 2011 Redraw

Y-axis scale (primary)

Min. Limit:

Max. Limit:

Additional statistics

☐ Max ☐ Min
☐ Mean ☐ Median
☐ Upper Quartile ☐ Lower Quartile

Y-axis scale (secondary)

Min. Limit:

Max. Limit:

Additional statistics

☐ Max ☐ Min
☐ Mean ☐ Median
☐ Upper Quartile ☐ Lower Quartile

The current primary water level as of 2011-05-15 07:15:57 is: 3.371 metres. Most recent station visit: 2011-05-11 10:32:00, Measured water level: 2.021 metres, Measured discharge: n/a. Deviation: n/a. Curve 5 is currently used to generate the preliminary discharge values on the graph. If the recent measured discharge deviates from the curve by more than 5%, the displayed discharge information may be inaccurate and will be revised for final publication following detailed review of stage and discharge records.
Click the following links for information on ice conditions at stations, and data spikes and dips.

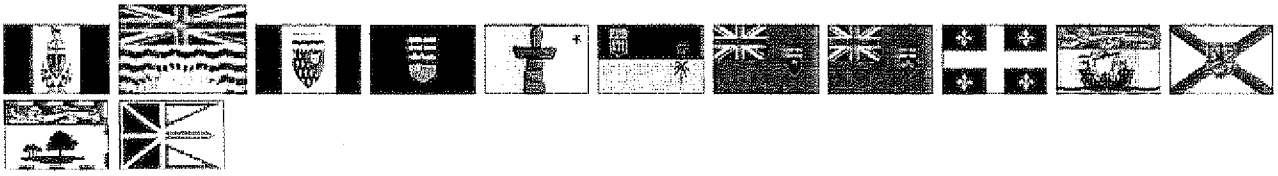
Station Information

Active or discontinued:	Active	**Province / Territory:**	BC
Latitude:	49° 07' 39" N	**Longitude:**	122° 18' 08" W
Gross drainage area:	228000 km^2	**Regulation type:**	Regulated
Record length:	131 Years	**Period of record:**	1876 - 2006
Real-time data available:	Yes	**Sediment data available:**	Yes
Type of water body:	River	**RHBN:**	No
EC Regional Office:	VANCOUVER		
Data contributed by:	N/A		
Datum of published data:	ASSUMED DATUM		

To convert to GEODETIC SURVEY OF CANADA DATUM, add 0.043 m

Data Collection History

Period of record	Type	Operation schedule	Gauge type
1876 - 1899	Level	Seasonal	Manual
1900 - 1935	Level	Seasonal	Manual
1936 - 1964	Level	Continuous	Recorder
1965 - 1996	Flow	Continuous	Recorder
1997 - 1998	Flow & Level	Continuous	Recorder
1999 - 1999	Level	Continuous	Recorder
2000 - 2006	Flow & Level	Continuous	Recorder



Date Modified: 2011-04-04

MAY 16, 2011 LATE ITEM

DISTRICT OF Mission ON THE FRASER

Corporate Administration
Memorandum

To: Chief Administrative Officer

From: Administrative Clerk

Date: May 16, 2011

Subject: **Release from Closed Council – May 16, 2011**

At the May 16, 2011 closed council meeting, following resolutions were released from closed council:

RESOLVED:

a) That Janzen Avenue be gifted to Mission Association for Senior's Housing (MASH) for consolidation into their affordable housing proposal at 32821, 32835 Janzen Avenue and 8352 Cedar Street once the road closure bylaw is adopted by Council. All costs associated with the closure to be covered by MASH as per Road Closure and Sale Policy STR.34; and

b) That this decision be released from closed council immediately.

Tracey Takahashi