From: <u>ECAlertMe</u>

 To:
 Robertson, Steve TRAN: EX

 Subject:
 Alert for EC Alerts (00dM9)

 Date:
 November 29, 2022 5:31:48 AM

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Issued at 2022-11-29 13:15 UTC by Environment Canada:

Snowfall warning issued for:

Metro Vancouver, B.C. (082600-082713-082714) Fraser Valley, B.C. (082711-082712-082720-082730)

Current details:

Significant snowfall accumulations expected.

When: Late this afternoon through Wednesday morning for Metro Vancouver and Abbotsford. Late this afternoon through Wednesday for Fraser Valley east of Abbotsford.

Hazards: Heavy snow. Snow transitioning to rain early Wednesday morning resulting in difficult driving conditions.

Strong southwest wind gusts 40 to 70 km/h may cause snow-covered tree branches to break Wednesday morning.

Remarks: A strong low pressure system is approaching Vancouver Island today. This will bring significant snowfall from late afternoon to early Wednesday morning. Snow will transition to rain or taper off to a few showers or flurries early Wednesday morning for Metro Vancouver and Abbotsford. For Fraser Valley east of Abbotsford, snow will taper off Wednesday evening.

Snowfall accumulations will vary across the Lower Mainland. The heaviest snowfall is expected in North Vancouver, Coquitlam, and Maple Ridge, with 10 to 20 cm expected, except 25 cm over higher terrain. For the city of Vancouver, Burnaby, New Westminster, Surrey, Langley, and Abbotsford, 10 to 15 cm of snow is expected. For Richmond and Delta, 5 to 10 cm of snow is expected.

For Chilliwack and Hope, 20 to 25 of snow is expected from this evening to Wednesday evening.

On Wednesday morning, strong southwest winds will mix down wind gusts in the 40 to 70 km/h range. This may cause snow-covered tree branches to break and possible power outages.

Rapidly accumulating snow will make travel difficult. Visibility may be suddenly reduced at times in heavy snow.

Be prepared to adjust your driving with changing road conditions.

Please continue to monitor alerts and forecasts issued by Environment Canada. To report severe weather, send an email to BCstorm@ec.gc.ca or tweet reports using #BCStorm.

More details on the alert are available here.

The latest status and details on all alerts, including alerts that are not part of your subscription, can be found here: http://www.weather.gc.ca/warnings/index e.html

This is an automated email from EC Alert me and replies to this message will neither be read nor receive a response.

To unsubscribe from these emails please log in here https://ecalertme.weather.gc.ca. If you wish to contact us, please email us at ecmeteo@ec.gc.ca.

From: s.21

To: XT:Weisbrod, Rick TRAN:IN

Cc: Robertson, Steve TRAN:EX; XT:Mtcon, Barend Thirion TRAN:IN

Subject: RE: Alex Fraser

Date: November 29, 2022 7:30:11 PM

Attachments: image002.png

image003.png

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Copy that – pardon late reply internet is quite slow Regards,

s.21



From: Rick Weisbrod < rweisbrod@mainroad.ca>

Sent: November 29, 2022 6:29 PM

To: 8.21

Cc: Steve Robertson - BC Govt <Steve.Robertson@gov.bc.ca>; Barend Thirion

<bthirion@mainroad.ca>

Subject: Alex Fraser

[External] This message comes from an external organization. Be careful of embedded links.

s.21

Please have your crews do observation every 15 min at each of the tower tops.

Thank you,

Rick Weisbrod, Bridge Manager

Mainroad Lower Mainland Contracting LP

Des	Description: mainroad							

17474-56 Ave Surrey BC V3S-1C3 Cell 604-240-2458

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From: Robertson, Steve TRAN:EX

Farmer, Elena TRAN:EX; Stevenson, Christie TRAN:EX

Cc: Price, Amanda TRAN:EX; Kazemi, Maziar TRAN:EX; Drury, Krista TRAN:EX

Subject: November 29/30th snow event numbers Date: November 30, 2022 8:17:00 AM

Attachments: image001.png image002.jpg

Good Morning,

A few high level numbers to capture last nights snow event:

- Snow pack between 14:00 06:00 20cm.
- · Actual snowfall amounts would be much higher, as the snowpack was settling quite fast as the snow was falling. With the high precipitation rates we saw I would expect 25-30cm fell in some areas.
- High snow fall rates: 16:00 to 19:00 3-4cm/hr.
- At 19:00 snow fall rates increased to about 5-6cm/hr. Snow pack jumped from 7cm to 11cm in less than 1 hour between 19:00 - 20:00. These rates continued until approx. 22:30
- High winds throughout the first 75% of the event. Winds were steady from the East 30-40 KM/Hr Gusting to 60km/hr from 14:00 - 22:30. This blowing snow greatly affected the roads by reducing visibility and depositing snow drifts on the roads.
- Temps at PMB started at -2.5°c and ended at +0.5°c when precipitation stopped.

Thank you,

Steve Robertson Snow & Ice Program Manager

Ministry of Transportation and Infrastructure

310 - 1500 Woolridge Street Coquitlam, British Columbia

Canada V3K 0B8

Cell: 604-868-0256 Office: 236-468-1927 Fax: 604-527-2222

Steve.Robertson@gov.bc.ca



For current Hwy conditions: www.drivebc.ca

Visit us at: www.gov.bc.ca/tran

From: PMB Alert Information

TRAN SYS PMB CHECKLIST ALERTS PRD

Subject: PMB Checklist - Alert Level 3
Date: November 29, 2022 9:27:53 AM

Port Mann Bridge Alert Level Checklist

Date and Time

SI Technician

Nov 29 2022, 9:25am PST

Robertson, Steve TRAN:EX

Previous Alert Level

Present Alert Level

Alert Level 2

(2022-11-28 01:30:00)

Alert Level 3

(2022-11-29 09:30:00)

Present Accretion Removal Status

Mobilizing

SI Tech Comments on Critical Weather Forecasts & Alert Level Status

Snow & Ice teams mobilizing to the Bridge ahead of forecast snowfall warning this afternoon/tonight.

B.C. Ministry of Transportation and Infrastructure

Form #H1277

From: AFB Alert Information

TRAN SYS AFB CHECKLIST ALERTS PRD

Subject: AFB Checklist - Alert Level 3
Date: November 29, 2022 9:28:19 AM

Alex Fraser Bridge Alert Level Checklist

Date and Time

SI Technician

Nov 29 2022, 9:27am PST

Robertson, Steve TRAN:EX

Previous Alert Level

Present Alert Level

Alert Level 2

(2022-11-28 01:30:00)

Alert Level 3

(2022-11-29 09:30:00)

Present Accretion Removal Status

Mobilizing

SI Tech Comments on Critical Weather Forecasts & Alert Level Status

Snow & Ice teams mobilizing to the Bridge ahead of forecast snowfall warning this afternoon/tonight.

B.C. Ministry of Transportation and Infrastructure

Form #H1277

From: Kazemi, Maziar TRAN:EX

To: TRAN LMD Executive Incident Response

Subject: PMB/AFB Snow & Ice Status Update - Nov 29 2022 0930hrs

Date: November 29, 2022 9:23:49 AM

Attachments: image001.png

image002.png image003.png image004.png image005.png

Good morning,

The latest forecast is showing flurries are possible later this morning, but the steadier snow won't arrive until closer to 3-4pm this afternoon. Around 2-5cm accumulations will be possible this afternoon, mainly in the late afternoon, and is likely to continue steadily overnight tonight with significant accumulations expected. The snow will decrease going into Wednesday morning, tapering off by around 9-10am. The rest of the day is looking dry on Wednesday and temperatures will rise a few degrees above freezing with some sun breaks as well. Strong winds are a concern.

We're now moving to an ALERT LEVEL 3 on both bridges.

The reporting frequencies for snow and ice events will change this week. An email update will be provided whenever crews are mobilizing to the bridges (Alert Level 3). A summary of snow and ice control will be provided by 9am and 4pm each day until the end of the event. Changes in Alert Levels will continue to be provided via the Alert Information System. Any required full bridge closures will also be communicated by the District Manager as per current incident management procedures.

Please find below an update on the status of the Port Mann Bridge and Alex Fraser Bridges.

ALERT LEVEL 2 ALERT LEVEL 3

Weather Update:

Current Condition:

Cloudy, -2 degrees.

Discussion:

A few flurries will be possible later this morning, starting around 10-11am, but the steadier snow won't arrive until closer to 3-4pm this afternoon. Around 2-5cm accumulations will be possible this afternoon, mainly in the late afternoon as snow picks up and the snow will continue steadily overnight tonight.

We could start to see some rain mixing with snow closer to the water late overnight tonight, but the precipitation type is still expected to primarily be snow tonight with significant accumulations for all crossings. The snow will decrease going into Wednesday morning, tapering off by around 9-10am. The rest of the day is looking dry on Wednesday and temperatures will rise a few degrees above freezing with some sun breaks as well.

It will be cooler Wednesday night and there will be a chance for a few snow showers during the evening hours, especially closer to the water, but otherwise, the rest of the night is looking dry. Dry conditions will continue on Thursday and overnight Thursday night with chilly temperatures.

Extended:

Looking dry on Friday, but more snow will be likely Friday night. However, this is looking like a short-lived event, potentially only lasting around 4-6 hours before tapering off again. We then look dry over the weekend, followed by another chance for snow Sunday night night, though temperatures are looking warmer by Sunday night so snow is not a sure thing at this point.

Control:

No accumulations.

_

Work Crews:

Snow and Ice Management team preparing to mobilize on-station to monitor conditions.

Maintenance Contractor crews and Rope Access Technicians (RATs) preparing to mobilize on-station at both bridges.

Traffic:

EB HOV lane closure will be in effect at Port Mann. Intermittent lane closures in both directions can be expected throughout the week at Port Mann to support snow and ice operations.

At Alex Fraser, traffic management will be stationed at the closest interchanges located at either end of the bridge structure and mobilized for short-response times if lane closures are required.

Sincerely,

Maziar Kazemi

Operations Manager, Metro Vancouver

Ministry of Transportation and Infrastructure Lower Mainland District Office 310-1500 Woolridge Street Coquitlam, BC Canada V3K 0B8 direct line: 778-704-0024 fax: 604-527-2222 maziar.kazemi@gov.bc.ca

Pronouns I use: he, him, his

For the latest ministry news and information, click one of the icons below:



**Vacation Alert: I will be on annual leave s.22

Highway Permits & Approvals website: http://www.gov.bc.ca/highway-use-permits

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From: Kazemi, Maziar TRAN:EX

Subject: 2022-11-29 1000AM – Ministry Bridge & Weather Update

Date: November 29, 2022 10:02:37 AM

Attachments: image001.png

image002.png image003.png image004.png

Good morning, everyone,

Our latest forecast indicates flurries will be possible later this morning, starting around 10-11am. Steadier snow is expected closer to 3-4pm this afternoon. Around 2-5cm accumulations will be possible this afternoon, mainly in the late afternoon as snow picks up. The snow will continue steadily overnight tonight with significant accumulations expected for all major bridge and tunnel crossings. The snow will decrease going into Wednesday morning, tapering off by around 9-10am. The rest of the day is looking dry on Wednesday and temperatures will rise a few degrees above freezing with some sun breaks as well.

It is expected to be cooler Wednesday night and there will be a chance for a few snow showers during the evening hours, especially closer to the water, but otherwise, the rest of the night is looking dry. Dry conditions will continue on Thursday and overnight Thursday night with chilly temperatures. Snow possible Friday night.

Ministry personnel are monitoring the forecast and will be mobilizing on-station this morning at both the Port Mann and Alex Fraser Bridges, along with maintenance contractor crews, to monitor the weather and any snow accumulations that may occur on the bridge cable stays. Any snow accumulations on the bridge cable stays will be cleared as required.

An HOV lane closure will be in place at the Port Mann Bridge in the eastbound direction to support winter operations. Intermittent lane closures in both directions can be expected throughout the week at Port Mann to support snow and ice operations. At Alex Fraser, rolling and/or stationary right lane closures can be expected in both directions, as needed, to support snow and ice operations and can be expected throughout the week as needed.

For the latest information on road conditions and lane closures please check DriveBC.ca or Twitter via @DriveBC.

If you have any questions, please feel free to contact me directly via email at Maziar.Kazemi@gov.bc.ca or at 1-604-793-8523.

Please note I will be away \$.22 inclusive. During this time, please contact Christie Stevenson at Christie.Stevenson@gov.bc.ca or at 604-837-1741.

Sincerely,

Maziar Kazemi

Operations Manager, Metro Vancouver

Ministry of Transportation and Infrastructure Lower Mainland District Office 310-1500 Woolridge Street Coquitlam, BC Canada V3K 0B8 direct line: 778-704-0024 fax: 604-527-2222 maziar.kazemi@gov.bc.ca

Pronouns I use: he, him, his

For the latest ministry news and information, click one of the icons below:

shift-into-winter		
	?	

**Vacation Alert: I will be on annual leave \$.22

Highway Permits & Approvals website: http://www.gov.bc.ca/highway-use-permits

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From: forecasts@weathernet.us

To: Lastoria, Keith TRAN:EX; Sekhon, Pravdeep TRAN:EX; Jeffares, Jordan TRAN:EX; XT:Weisbrod, Rick TRAN:IN;

Dyckson, Darren TRAN:EX; Mok, Klassen TRAN:EX; s.22 XT:Rehbein, Steve TRAN:IN; Khorsandi, Porya TRAN:EX; Moulton, Neal TRAN:EX; XT:Warmenhoven, John TRAN:IN; Pilkington, Ian TRAN:EX; Clements, Tim TRAN:EX; XT:Moore, Mark TRAN:IN; s.22 : White, Daniel TRAN:EX; Freinhofer,

Dylan TRAN:EX; Port Mann Bridge Operational Weather Forecasts TRAN:EX; Kazemi, Maziar TRAN:EX; Robertson, Steve TRAN:EX; Loglisci, Shawn TRAN:EX; Braun, Michael TRAN:EX; XT:Mtcon, Didiuk, Matt

TRAN:IN; XT:Moller, Rob TRAN:IN; Markham, Jennifer TRAN:EX; XT:McVey, Todd TRAN:IN;

Geoff.Freer@gov.bc.ca; XT:Breti, Kevin TRAN:IN; Drury, Krista TRAN:EX; Blancher, Michael TRAN:EX; jsturrock@mainroad.ca; Bhatti, Ashok A TRAN:EX; s. 22 XT:University of Cincinnati Civil engineering TRAN:IN; XT:Ell, Darren TRAN:IN; Deane, Jody TRAN:EX; Bonhomme, Korry TRAN:EX; XT:Taylor, Justin TRAN:IN; Anderson, Sean TRAN:EX; Simpson, Ashton TRAN:EX; s. 22 Staite, Janelle A TRAN:EX; Norrish, Jonathan TRAN:EX; Stevenson, Christie TRAN:EX; Grant.A.Smith@gov.bc.ca; Farmer, Elena

TRAN:EX; XT:Mtcon, Barend Thirion TRAN:IN; Richard, Norm TRAN:EX

Subject: BC MoT Fraser River Crossings Afternoon Weather Forecast Tuesday, November 29, 2022

Date: November 29, 2022 11:16:33 AM

Attachments: BCMoTFraserRiverCrossings 2022-11-29 1100.PDF

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Discussion

Occasional flurries are expected today before increasing to steadier and heavier snow around 2-3pm. The snow will then continue overnight tonight, becoming moderately heavy at times this evening with tower accumulations likely. The snow will then start to decrease a bit after midnight tonight.

Temperatures are expected to either sit steady or gradually rise later tonight, so there will be a chance that snow will start to mix with rain late tonight, especially near the George Massey Tunnel and Alex Fraser Bridge. However, the precipitation will begin to break up into showers late tonight as well and lingering showers will be tapering off early Wednesday morning.

It will be dry Wednesday afternoon with temperatures rising a few degrees above freezing. There will be a chance for a few flurries Wednesday night, mainly between 10pm and 3am with trace accumulations possible. Clouds will clear partially Wednesday night and temperatures are expected to drop off, especially after midnight. Dry and chilly conditions are expected Thursday through Friday.

Extended

Snow will be possible again Friday night as the next weather system moves into the region. It is currently looking like a relatively short period of light snow Friday night, likely drying out again late overnight with only a few centimeter accumulations likely. Otherwise, it looks dry on Saturday and Sunday with another chance for precipitation Sunday night. The situation on Sunday night is looking very borderline with rain, snow, or a mix possible. We will provide more detail as more reliable information becomes available over the next few days.

MOT Fraser River Crossings Forecast

Web Access: https://www.nw-weathernet.com/MOTFraserRiver/index.php

24/7 Toll Free: **1-800-937-8676**

Web Click Options: RADAR SATELLITE Observations

Forecast Date: Tuesday, November 29, 2022

Forecast Begins: 2:00 PM

Forecaster: ka

Short Term Discussion

Occasional flurries are expected today before increasing to steadier and heavier snow around 2-3pm. The snow will then continue overnight tonight, becoming moderately heavy at times this evening with tower accumulations likely. The snow will then start to decrease a bit after midnight tonight.

Temperatures are expected to either sit steady or gradually rise later tonight, so there will be a chance that snow will start to mix with rain late tonight, especially near the George Massey Tunnel and Alex Fraser Bridge. However, the precipitation will begin to break up into showers late tonight as well and lingering showers will be tapering off early Wednesday morning.

It will be dry Wednesday afternoon with temperatures rising a few degrees above freezing. There will be a chance for a few flurries Wednesday night, mainly between 10pm and 3am with trace accumulations possible. Clouds will clear partially Wednesday night and temperatures are expected to drop off, especially after midnight. Dry and chilly conditions are expected Thursday through Friday.

Technical Synopsis

The 12z Euro has now come into closer agreement with the NAM/HRDPS/GFS, bringing this system in faster with steady and moderately heavy snow picking up earlier this afternoon now. Still some decent uncertainty regarding how much warming there will be at the surface later tonight, especially closer to the water, but historically, models seem to raise temperatures too fast in these sorts of patterns so I leaned toward snow being the primary p-type through early Wednesday morning when considering accumulations. Given the marginal temperatures, I also favored the Kuchera ratio.

10 Day General Extended Forecast

Snow will be possible again Friday night as the next weather system moves into the region. It is currently looking like a relatively short period of light snow Friday night, likely drying out again late overnight with only a few centimeter accumulations likely. Otherwise, it looks dry on Saturday and Sunday with another chance for precipitation Sunday night. The situation on Sunday night is looking very borderline with rain, snow, or a mix possible. We will provide more detail as more reliable information becomes available over the next few days.

Important Note

All "DAY" forecasts are from 0600 in the morning to 1800 late afternoon (6:00 a.m. to 6:00 p.m.)

All "NIGHT" forecasts are from 1800 in the evening through 0600 the next morning.

Daytime temperatures are a daytime high.

Nighttime temperatures are an overnight low.

Important: This is a document describing the weather forecaster's current thinking of how the weather scenario will develop. There are varying amounts of confidence in different elements of the forecast.

Red Concern = 5 cm or more snowfall in any 12 hour period; shedding of previous accumulations of snow; significant freezing rain.

Yellow Concern = Less than 5 cm of snowfall in any 12 hour period; 5 cm or more snow nearby or at slightly higher snow levels.

Port Mann Bridge

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
This Afternoon	Cloudy. Occasional flurries, increasing to steady snow after 2-3pm.	1	E 15-30		0	3-6	Red
Tuesday night	Cloudy. Steady snow PM, decreasing a bit after midnight.	0	SE 15-25		0	6-12	Red
Wednesday	Partly to mostly cloudy. Snow tapers off around 6-8am.	2	S 15-25		0-100	0-1	Yellow
Wednesday night	Partly to mostly cloudy. A flurry or two possible between 10pm-3am. Likely dry.	-5	E 15-30		0	0-Trace	Yellow
Thursday	Clearing skies.	-1	Becoming light				Green
Thursday night	Partly cloudy.	-8	Light				Green
Friday	Increasing clouds.	1	E 15-30				Green

Alex Fraser Bridge

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
This Afternoon	Cloudy. Occasional flurries, increasing to steady snow after 2-3pm.	1	E 20-40 G50		0	2-5	Red
Tuesday night	Cloudy. Steady snow PM, decreasing a bit after midnight.	0	E shifting SE 20-40 G50		0	5-10	Red
Wednesday	Partly to mostly cloudy. Snow or a rain/snow mix tapers off around 6-7am.	3	S 15-30		0-100	0	Yellow
Wednesday night	Partly to mostly cloudy. A flurry or two possible between 10pm-3am. Likely dry.	-4	E 15-30		0	0-1	Yellow
Thursday	Clearing skies.	0	E 10-20				Green
Thursday night	Partly cloudy.	-7	E 10-15				Green
Friday	Increasing clouds.	1	E 20-40				Green

George Massey Tunnel Replacement

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
This Afternoon	Cloudy. Occasional flurries, increasing to steady snow after 2-3pm.	1	E 20-40 G50		0	2-5	Red
Tuesday night	Cloudy. Steady snow PM, decreasing a bit after midnight.	1	E shifting SE 20-40 G50		0	5-10	Red
Wednesday	Partly to mostly cloudy. Snow or a rain/snow mix tapers off around 6-7am.	3	S 15-30		0-100	0	Yellow
Wednesday night	Partly to mostly cloudy. A flurry or two possible between 10pm-3am. Likely dry.	-4	E 15-30		0	0-1	Yellow
Thursday	Clearing skies.	0	E 10-20				Green
Thursday night	Partly cloudy.	-5	E 10-20				Green
Friday	Increasing clouds.	2	E 20-40				Green

Tuesday November 29th, 2022 – Snow and Ice Meeting – 11:30am

Attendees, MoTI: Krista Drury, Christie Stevenson, Steve Robertson, Maziar Kazemi, Keith Lastoria, Elena Farmer, Korry Bonhomme

Attendees, Mainroad: BC Thirion, Kevin Breti, Jenna Sturrock, Rob Mollar

Forecast:

Not too much has changed with the forecast, snow is still forecasted to start with intensity later this afternoon and continue to be pretty intense, a couple of cms an hour, until early Wednesday morning and continue snowing until somewhere around noon Wed. Temps are supposed to remain quite cool and quite blustery. It may not be too much of a cable stay problem, it may be more of a road problem, until we see that transition in temperatures early Wednesday, transition to rain and snow becomes stickier. I haven't seen any forecasts for freezing rain anywhere else and NW doesn't see it either, but we'll watch for it.

Once we get through midday Wed we'll have a bit of a break, then more snow Wed night. Break thru Friday pretty much all day, agreement that we'll get a short shot of snow over 4-5 hours starting around midnight Friday night into Saturday morning. Snowfall totals have dramatically decreased as the cold air mass dries out the air and removes precip.

It's going to be quite windy tonight with this system. Would be really surprised if we're able to deploy the RATs at AFB. The highest winds are when it's the coldest, as temps warm up winds are supposed to drop, but we should be prepared to close the FAB sometime tomorrow morning. Easterly wind, so maybe just a NB closure. Try to manage rush tomorrow, it will be interesting.

AFB: (Full complement is 13 RATs & 10 traffic trucks)

We had a lot of success on the AFB last year with our risk management strategy and we'll continue that moving forward through this event.

13 RATs and 10 traffic control on 6-6, RATs 7-7.

PMB: (Full complement is 7 RATs [3 per tower + foreman] and single HOV closure)

Both EB and WB lane closures are in at PMB right now, Kevin will look at it. I think we were anticipating the EB lane closure to stay in, it's not our preference but we at least don't want the morning commute affected so we'd at least like the WB closure gone. Kevin will update us via email.

Shifts: Mainroad 6-6, RATs 7-7. Have three traffic trucks, could close the Surrey side but not the Coq side. We need to start calling more in now as backup in case of bridge closure – full closure crew.

Coq RCMP is standing by if we need support.

Misc:

Resources staying in place throughout the week, might be a bit of a break Thurs/Fri, but we need them in place anyway for reloading.

Internal Scheduling:

Steve 12noon-midnight at AFB. Krista 6pm-6am at PMB. Korry 11:00pm at AFB to whenever in the morning. Keith 6:00am at PMB. Steve 8:00am to spell Korry off. We will have a hotel room in Coquitlam for sleeping.

From: Drury, Krista TRAN:EX

XT:Breti, Kevin TRAN:IN; Robertson, Steve TRAN:EX; XT:Mtcon, Didiuk, Matt TRAN:IN; Bonhomme, Korry TRAN:EX; Stevenson, Christie TRAN:EX; Markham, Jennifer TRAN:EX; Norrish, Jonathan TRAN:EX; XT:Mtcon, Barend Thirion TRAN:IN; Kazemi, Maziar TRAN:EX;

Sekhon, Pravdeep TRAN:EX; Lastoria, Keith TRAN:EX; XT:Weisbrod, Rick TRAN:IN; Farmer, Elena TRAN:EX; Jenna Sturrock; Drury, Krista

TRAN:EX

Subject: Snow & Ice Meeting Minutes November 29, 2022 12:10:56 PM Date:

Attachments: Nov 29 2022 Snow and Ice Meeting Minutes.docx

image001.png image002.jpg

Krista Drury

Snow & Ice Technician **Development Services Assistant**

(she/her/hers)

Ministry of Transportation and Infrastructure

310 - 1500 Woolridge Street Coquitlam, British Columbia

Canada V3K 0B8 Capture



For current Hwy conditions: www.drivebc.ca

From: Drury, Krista TRAN:EX <Krista.Drury@gov.bc.ca>

Sent: November 28, 2022 11:58 AM

To: XT:Breti, Kevin TRAN:IN kDreti@mainroad.ca; Robertson, Steve TRAN:EX <Steve.Robertson@gov.bc.ca; XT:Mtcon, Didiuk, Matt TRAN:IN <mdidiuk@mainroad.ca>; Bonhomme, Korry TRAN:EX <Korry.Bonhomme@gov.bc.ca>; Stevenson, Christie TRAN:EX < Christie.Stevenson@gov.bc.ca>; Markham, Jennifer TRAN:EX

Office: 778-572-3778

Cell: 604-991-0735

Fax: 604-527-2222

Krista.Drury@gov.bc.ca

<Jennifer.Markham@gov.bc.ca>; Norrish, Jonathan TRAN:EX <Jonathan.Norrish@gov.bc.ca>; XT:Mtcon, Barend Thirion TRAN:IN bthirion@mainroad.ca; Kazemi, Maziar TRAN:EX maziar.Kazemi@gov.bc.ca; Sekhon, Pravdeep TRAN:EX <Pravdeep.Sekhon@gov.bc.ca>; Lastoria, Keith TRAN:EX <Keith.Lastoria@gov.bc.ca>; Drury, Krista TRAN:EX

<Krista.Drury@gov.bc.ca>; XT:Weisbrod, Rick TRAN:IN <rweisbrod@mainroad.ca>

Subject: Snow & Ice Meeting Minutes

Krista Drury

Snow & Ice Technician Development Services Assistant (she/her/hers)

Ministry of Transportation and Infrastructure

310 - 1500 Woolridge Street Coquitlam, British Columbia

Canada V3K 0B8

Fax: 604-527-2222 Krista.Drury@gov.bc.ca

Capture





For current Hwy conditions: www.drivebc.ca

From: Drury, Krista TRAN:EX < Krista. Drury@gov.bc.ca>

Sent: November 27, 2022 12:28 PM

To: XT:Breti, Kevin TRAN:IN < kbreti@mainroad.ca; Robertson, Steve TRAN:EX < Steve.Robertson@gov.bc.ca; XT:Mtcon, Didiuk, Matt TRAN:IN < mdidiuk@mainroad.ca >; Bonhomme, Korry TRAN:EX < Korry.Bonhomme@gov.bc.ca >;

Office: 778-572-3778

Cell: 604-991-0735

Stevenson, Christie TRAN:EX < Christie.Stevenson@gov.bc.ca>; Markham, Jennifer TRAN:EX

<Jennifer.Markham@gov.bc.ca>; Norrish, Jonathan TRAN:EX <<u>Jonathan.Norrish@gov.bc.ca</u>>; XT:Mtcon, Barend Thirion
TRAN:IN <<u>bthirion@mainroad.ca</u>>; Kazemi, Maziar TRAN:EX <<u>Maziar.Kazemi@gov.bc.ca</u>>; Sekhon, Pravdeep TRAN:EX
<<u>Pravdeep.Sekhon@gov.bc.ca</u>>; Lastoria, Keith TRAN:EX <<u>Keith.Lastoria@gov.bc.ca</u>>; Drury, Krista TRAN:EX

Office: 778-572-3778

Cell: 604-991-0735

Fax: 604-527-2222

<Krista.Drury@gov.bc.ca>

Subject: Snow & Ice Meeting Minutes

Krista Drury
Snow & Ice Technician
Development Services Assistant
(she/her/hers)

Ministry of Transportation and Infrastructure
310 - 1500 Woolridge Street
Coquitlam, British Columbia

Canada V3K OB8

Capture

For current Hwy conditions: www.drivebc.ca

From: Drury, Krista TRAN:EX < Krista.Drury@gov.bc.ca>

Sent: November 26, 2022 12:07 PM

To: XT:Breti, Kevin TRAN:IN kbreti@mainroad.ca; Robertson, Steve TRAN:EX <<u>Steve.Robertson@gov.bc.ca</u>; XT:Mtcon, Didiuk, Matt TRAN:IN mainroad.ca; Bonhomme, Korry TRAN:EX <<u>Korry.Bonhomme@gov.bc.ca</u>; Stevenson, Christie TRAN:EX <<u>Christie.Stevenson@gov.bc.ca</u>; Markham, Jennifer TRAN:EX <<u>Jennifer.Markham@gov.bc.ca</u>; Norrish, Jonathan TRAN:EX <<u>Jonathan.Norrish@gov.bc.ca</u>; XT:Mtcon, Barend Thirion TRAN:IN bthirion@mainroad.ca; Kazemi, Maziar TRAN:EX <<u>Maziar.Kazemi@gov.bc.ca</u>; Sekhon, Pravdeep TRAN:EX <<u>Pravdeep.Sekhon@gov.bc.ca</u>; Lastoria, Keith TRAN:EX <<u>Keith.Lastoria@gov.bc.ca</u>; Drury, Krista TRAN:EX

Subject: Snow & Ice Meeting Minutes

<Krista.Drury@gov.bc.ca>

Krista Drury Snow & Ice Technician Development Services Assistant (she/her/hers)

Ministry of Transportation and Infrastructure 310 - 1500 Woolridge Street Coquitlam, British Columbia

Canada V3K 0B8 Capture Office: 778-572-3778 Cell: 604-991-0735 Fax: 604-527-2222

Krista.Drury@gov.bc.ca

?

For current Hwy conditions: www.drivebc.ca

From: Drury, Krista TRAN:EX < Krista.Drury@gov.bc.ca>

Sent: November 25, 2022 12:05 PM

To: XT:Breti, Kevin TRAN:IN <<u>kbreti@mainroad.ca</u>>; Robertson, Steve TRAN:EX <<u>Steve.Robertson@gov.bc.ca</u>>; Drury, Krista TRAN:EX <<u>Krista.Drury@gov.bc.ca</u>>; XT:Mtcon, Didiuk, Matt TRAN:IN <<u>mdidiuk@mainroad.ca</u>>; Bonhomme, Korry TRAN:EX <<u>Korry.Bonhomme@gov.bc.ca</u>>; Stevenson, Christie TRAN:EX <<u>Christie.Stevenson@gov.bc.ca</u>>;

Markham, Jennifer TRAN:EX < Jennifer.Markham@gov.bc.ca; Norrish, Jonathan TRAN:EX

 $<\underline{Jonathan.Norrish@gov.bc.ca}; XT:Mtcon, Barend Thirion TRAN:IN < \underline{bthirion@mainroad.ca}; Kazemi, Maziar TRAN:EX$

<Keith.Lastoria@gov.bc.ca>

Subject: Snow & Ice Meeting Minutes

Krista Drury Snow & Ice Technician Development Services Assistant (she/her/hers)

Ministry of Transportation and Infrastructure

310 - 1500 Woolridge Street Coquitlam, British Columbia

Canada V3K 0B8

Office: 778-572-3778
Cell: 604-991-0735
Fax: 604-527-2222
Krista.Drury@gov.bc.ca

Capture

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?

For current Hwy conditions: www.drivebc.ca

From: Kazemi, Maziar TRAN:EX

To: <u>Kazemi, Maziar TRAN:EX; TRAN LMD Executive Incident Response</u>

Subject: PMB/AFB Snow & Ice Status Update - Nov 29 2022 1600hrs

Date: November 29, 2022 4:00:17 PM

Attachments: image001.png

image002.png image003.png image004.png

Good afternoon,

It is currently snowing in Metro Vancouver. Forecasts indicate 2-5cm accumulations are possible this afternoon and likely to continue steadily overnight tonight with significant accumulations (10-20cm) expected. Strong winds remain a concern. Snowfall warnings have been issued by Environment Canada. The snow is expected to decrease going into Wednesday morning, tapering off by around 9-10am. The rest of the day is looking dry on Wednesday and temperatures will rise a few degrees above freezing with some sun breaks as well.

We remain at an ALERT LEVEL 3 on both bridges.

A summary of snow and ice control will be provided by 9am and 4pm each day until the end of the event. Changes in Alert Levels will continue to be provided via the Alert Information System. Any required full bridge closures will also be communicated by the District Manager as per current incident management procedures.

Please find below an update on the status of the Port Mann Bridge and Alex Fraser Bridges.

ALERT LEVEL 3

Weather Update:

Current Condition:

Snowing, -1 degrees.

Discussion:

Occasional flurries are expected today before increasing to steadier and heavier snow around 2-3pm. The snow will then continue overnight tonight, becoming moderately heavy at times this evening with tower accumulations likely. The snow will then start to decrease a bit after midnight tonight.

Temperatures are expected to either sit steady or gradually rise later tonight, so there will be a chance that snow will start to mix with rain late tonight, especially near the George Massey Tunnel and Alex Fraser Bridge. However, the precipitation will begin to break up into showers late tonight as well and lingering showers will be tapering off early Wednesday morning.

It will be dry Wednesday afternoon with temperatures rising a few degrees above freezing. There will be a chance for a few flurries Wednesday night, mainly between 10pm and 3am with trace accumulations possible. Clouds will clear partially Wednesday night and temperatures are expected to drop off, especially after midnight. Dry and chilly conditions are expected Thursday through Friday.

Extended:

Snow will be possible again Friday night as the next weather system moves into the region. It is currently looking like a relatively short period of light snow Friday night, likely drying out again late overnight with only a few centimeter accumulations likely. Otherwise, it looks dry on Saturday and Sunday with another chance for precipitation Sunday night. The situation on Sunday night is looking very borderline with rain, snow, or a mix possible. We will provide more detail as more reliable information becomes available over the next few days.

Control:

No accumulations observed on bridge cable stays.

-

Work Crews:

Snow and Ice Management team mobilized on-station and monitoring conditions.

Maintenance Contractor crews and Rope Access Technicians (RATs) are mobilized on-station at both bridges.

-Traffic:

EB HOV lane closure in effect at Port Mann. Intermittent lane closures in both directions can be expected throughout the week at Port Mann to support snow and ice operations.

At Alex Fraser, traffic management is stationed at the closest interchanges located at either end of the bridge structure and mobilized for short-response times if lane closures are required.

Heavy congestion currently observed on all Metro Vancouver highways due to winter driving conditions.

Next update:

Nov 30, 2022, at 0900hrs

Sincerely,

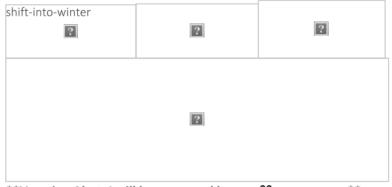
Maziar Kazemi

Operations Manager, Metro Vancouver

Ministry of Transportation and Infrastructure Lower Mainland District Office 310-1500 Woolridge Street Coquitlam, BC Canada V3K 0B8 direct line: 778-704-0024 fax: 604-527-2222 maziar.kazemi@gov.bc.ca

Pronouns I use: he, him, his

For the latest ministry news and information, click one of the icons below:



^{**}Vacation Alert: I will be on annual leave \$.22

Highway Permits & Approvals website: http://www.gov.bc.ca/highway-use-permits

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From: XT:Weisbrod, Rick TRAN:IN

To: s.21

Cc: Robertson, Steve TRAN:EX; XT:Mtcon, Barend Thirion TRAN:IN

Subject: Alex Fraser

Date: November 29, 2022 6:29:26 PM

Attachments: <u>image001.png</u>

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

s.21

Please have your crews do observation every 15 min at each of the tower tops.

Thank you,

Rick Weisbrod, Bridge Manager

Mainroad Lower Mainland Contracting LP



17474-56 Ave Surrey BC V3S-1C3 Cell 604-240-2458

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From: Kazemi, Maziar TRAN:EX

To: Stevenson, Christie TRAN:EX; Bonhomme, Korry TRAN:EX; Lastoria, Keith TRAN:EX; Robertson, Steve TRAN:EX;

Drury, Krista TRAN:EX; Sekhon, Pravdeep TRAN:EX; Mustaq, Andaleeb TRAN:EX

Cc: <u>Freinhofer, Dylan TRAN:EX</u>

Subject: s.17; s.21

Date: November 29, 2022 7:05:11 PM

Attachments: s.17; s.21 image001.png

Hey, everyone,

s.17; s.21

Sincerely,

Maziar Kazemi

Operations Manager, Metro Vancouver

Pronouns I use: he, him, his

Highway Permits & Approvals website: http://www.gov.bc.ca/highway-use-permits

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**Vacation Alert: I will be on annual leave \$.22

From: Darren Ell <dell@mainroad.ca>

Sent: November 3, 2022 3:12 PM

To: Kazemi, Maziar TRAN:EX < Maziar. Kazemi@gov.bc.ca>

Cc: XT:Breti, Kevin TRAN:IN < kbreti@mainroad.ca>; XT:MTCon, Sarn Banwait TRAN:IN

<sbanwait@mainroad.ca>; Jenna Sturrock <jsturrock@mainroad.ca>

Subject: s.17; s.21

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Good afternoon Maz

s.17; s.21

Please let me know if you have any

**

questions.

Darren Ell, AScT General Manager

Mainroad Lower Mainland Contracting LP

Direct: 604-575-7020, 1121

www.mainroad.ca

Page 27 of 97 to/à Page 75 of 97

Withheld pursuant to/removed as

s.17; s.21

From: PMB Alert Information

TRAN SYS PMB CHECKLIST ALERTS PRD

Subject: PMB Checklist - Alert Level 4

Date: November 29, 2022 8:57:58 PM

Port Mann Bridge Alert Level Checklist

Date and Time

SI Technician

Nov 29 2022, 8:56pm PST

Drury, Krista TRAN:EX

Previous Alert Level

Present Alert Level

Alert Level 3

(2022-11-29 09:30:00)

Alert Level 4

(2022-11-29 20:55:00)

Present Accretion Removal Status

Commencing

SI Tech Comments on Critical Weather Forecasts & Alert Level Status

We have some light accumulations on the cables, heavier towards the bottom. We are going to drop chains on all cables in a random pattern. Since traffic is moving so slowly we want to be cautious and drop while the mass is still light enough.

B.C. Ministry of Transportation and Infrastructure

Form #H1277

From: AFB Alert Information

TRAN SYS AFB CHECKLIST ALERTS PRD

Subject: AFB Checklist - Alert Level 4

Date: November 29, 2022 10:35:27 PM

Alex Fraser Bridge Alert Level Checklist

Date and Time

SI Technician

Nov 29 2022, 10:32pm PST

Robertson, Steve TRAN:EX

Previous Alert Level

Present Alert Level

Alert Level 3

(2022-11-29 09:30:00)

Alert Level 4

(2022-11-29 22:40:00)

Present Accretion Removal Status

Active-Accumulation-Control

SI Tech Comments on Critical Weather Forecasts & Alert Level Status

At the Alex Fraser, precipitation rates and winds have greatly diminished. There is a small, thin strip of snow on the east side of the stays. We are going to drop a full round of chains to remove accumulation while we have the chance.

B.C. Ministry of Transportation and Infrastructure

Form #H1277

From: <u>ECAlertMe</u>

 To:
 Robertson, Steve TRAN: EX

 Subject:
 Alert for EC Alerts (00dM9)

 Date:
 November 30, 2022 1:39:14 AM

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Issued at 2022-11-30 09:31 UTC by Environment Canada:

Snowfall warning continued for:

Metro Vancouver - northeast including Coquitlam and Maple Ridge, B.C. (082630-082714)

Metro Vancouver - southeast including Surrey and Langley, B.C. (082640-082713)

Fraser Valley, B.C. (082711-082712-082720-082730)

Snowfall warning ended for:

Metro Vancouver - North Shore including West Vancouver and North Vancouver, B.C. (082610)

Metro Vancouver - central including the City of Vancouver Burnaby and New Westminster, B.C. (082620)

Metro Vancouver - southwest including Richmond and Delta, B.C. (082650)

Current details:

Snowfall is expected to continue.

When: Now through this morning for Abbotsford, Metro Vancouver - northeast including Coquitlam and Maple Ridge, and Metro Vancouver - southeast including Surrey and Langley.

Hazards: Snowfall will continue to result in difficult driving conditions.

Remarks: A strong low pressure system presently residing over Vancouver Island will continue to generate snowfall. Snow will taper off to a few showers early this morning for Metro Vancouver northeast, southeast, and Abbotsford. For Fraser Valley east of Abbotsford, snow will cease sometime this afternoon.

For Chilliwack, an additional 5 cm of snowfall accumulation is expected. For Hope, up to 10 cm will fall before easing this afternoon.

Rapidly accumulating snow will make travel difficult. Visibility may be suddenly reduced at times in heavy snow.

Be prepared to adjust your driving with changing road conditions.

Please continue to monitor alerts and forecasts issued by Environment Canada. To report severe weather, send an email to BCstorm@ec.gc.ca or tweet reports using #BCStorm.

More details on the alert are available here.

The latest status and details on all alerts, including alerts that are not part of your subscription, can be found here: http://www.weather.gc.ca/warnings/index_e.html

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To unsubscribe from these emails please log in here https://ecalertme.weather.gc.ca. If you wish to contact us, please email us at ecmeteo@ec.gc.ca.

From: AFB Alert Information

TRAN SYS AFB CHECKLIST ALERTS PRD

Subject: AFB Checklist - Alert Level 3

November 30, 2022 4:29:24 AM

Alex Fraser Bridge Alert Level Checklist

Date and Time

SI Technician

Nov 30 2022, 4:20am PST

Bonhomme, Korry TRAN:EX

Previous Alert Level

Present Alert Level

Alert Level 4

(2022-11-29 22:40:00)

Alert Level 3

(2022-11-30 04:20:00)

Present Accretion Removal Status

Nothing Required

SI Tech Comments on Critical Weather Forecasts & Alert Level Status

Cables largely free of accumulations; rain is clearing remaining trace amounts. No control required at this time. Transitioning to Alert Level 3.

B.C. Ministry of Transportation and Infrastructure

Form #H1277

From: PMB Alert Information

TRAN SYS PMB CHECKLIST ALERTS PRD

Subject: PMB Checklist - Alert Level 3
Date: November 30, 2022 5:56:26 AM

Port Mann Bridge Alert Level Checklist

Date and Time

SI Technician

Nov 30 2022, 5:53am PST

Drury, Krista TRAN:EX

Previous Alert Level

Present Alert Level

Alert Level 4

(2022-11-29 20:55:00)

Alert Level 3

(2022-11-30 05:55:00)

Present Accretion Removal Status

Returning-to-on-site-standby

SI Tech Comments on Critical Weather Forecasts & Alert Level Status

Any precipitation has been light rain for the past half hour and we're not seeing much precipitation in the forecast moving forward. Crews will remain on site. Four full rounds of chains were dropped through the night and cables are currently clear.

B.C. Ministry of Transportation and Infrastructure

Form #H1277

From: forecasts@weathernet.us

To: Lastoria, Keith TRAN:EX; Sekhon, Pravdeep TRAN:EX; Jeffares, Jordan TRAN:EX; XT:Weisbrod, Rick TRAN:IN;

Dyckson, Darren TRAN:EX; Mok, Klassen TRAN:EX; s.22 XT:Rehbein, Steve TRAN:IN; Khorsandi, Porya TRAN:EX; Moulton, Neal TRAN:EX; XT:Warmenhoven, John TRAN:IN; Pilkington, Ian TRAN:EX; Clements, Tim TRAN:EX; XT:Moore, Mark TRAN:IN; s.22 : White, Daniel TRAN:EX; Freinhofer,

Dylan TRAN:EX; Port Mann Bridge Operational Weather Forecasts TRAN:EX; Kazemi, Maziar TRAN:EX; Robertson, Steve TRAN:EX; Loglisci, Shawn TRAN:EX; Braun, Michael TRAN:EX; XT:Mtcon, Didiuk, Matt

TRAN:IN; XT:Moller, Rob TRAN:IN; Markham, Jennifer TRAN:EX; XT:McVey, Todd TRAN:IN;

Geoff.Freer@gov.bc.ca; XT:Breti, Kevin TRAN:IN; Drury, Krista TRAN:EX; Blancher, Michael TRAN:EX; jsturrock@mainroad.ca; Bhatti, Ashok A TRAN:EX; \$ 22 ; XT:University of Cincinnati Civil engineering TRAN:IN; XT:Ell, Darren TRAN:IN; Deane, Jody TRAN:EX; Bonhomme, Korry TRAN:EX; XT:Taylor, Justin TRAN:IN; Anderson, Sean TRAN:EX; Simpson, Ashton TRAN:EX; \$ 29 Staite, Janelle A TRAN:EX; Norrish, Jonathan TRAN:EX; Stevenson, Christie TRAN:EX; Grant.A.Smith@gov.bc.ca; Farmer, Elena

TRAN:EX; XT:Mtcon, Barend Thirion TRAN:IN; Richard, Norm TRAN:EX

Subject: BC MoT Fraser River Crossings Morning Weather Forecast Wednesday, November 30, 2022

Date: November 30, 2022 6:07:46 AM

Attachments: BCMoTFraserRiverCrossings 2022-11-30 0600.PDF

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Discussion

Lingering showers in the area will be tapering off by around 8-9am this morning with no further concern for tower accumulations. The rest of the day will be dry today with temperatures rising above freezing across the area.

Dry conditions will continue overnight tonight and through Friday with cold temperatures expected both Wednesday and Thursday night. The next weather system will move into the area early Friday evening and occasional light snow is likely for most of the night, though the Alex Fraser Bridge and George Massey Tunnel may start to transition to rain before the snow ends late overnight. However, accumulations will still be a concern, especially for the Port Mann Bridge Friday night.

Extended

It is now looking dry over the weekend and through Monday night. The next chance for precipitation will come on Tuesday and into Wednesday, but it's looking more likely to be rain than snow. However, models are not in strong agreement for how much cold air will still be in the region next week, so it is still possible things could change back to a snow potential early-to-mid next week.

MOT Fraser River Crossings Forecast

Web Access: https://www.nw-weathernet.com/MOTFraserRiver/index.php

24/7 Toll Free: **1-800-937-8676**

Web Click Options: <u>RADAR</u> <u>SATELLITE</u> <u>Observations</u>

Forecast Date: Wednesday, November 30, 2022

Forecast Begins: 4:00 AM

Forecaster: ka

Short Term Discussion

Lingering showers in the area will be tapering off by around 8-9am this morning with no further concern for tower accumulations. The rest of the day will be dry today with temperatures rising above freezing across the area.

Dry conditions will continue overnight tonight and through Friday with cold temperatures expected both Wednesday and Thursday night. The next weather system will move into the area early Friday evening and occasional light snow is likely for most of the night, though the Alex Fraser Bridge and George Massey Tunnel may start to transition to rain before the snow ends late overnight. However, accumulations will still be a concern, especially for the Port Mann Bridge Friday night.

Technical Synopsis

Temperatures have warmed up sufficiently to lower concerns significantly for the remaining showers over the next few hours this morning. The George Massey Tunnel/Alex Fraser Bridge are both well above freezing now and the Port Mann Bridge is near +1 degrees with either wet snow or a mix likely there so no accumulating snow showers are likely.

The next system comes in Friday night and while surface temperatures will likely be more marginal to start, 925-850mb temps are looking pretty cold for at least the first half of the night. It will definitely be a close call and the precip may be too light for cold air aloft to infiltrate the warmer surface temps. The Port Mann Bridge will definitely have the highest concerns, but it could be a close call there as well for the reasons just mentioned.

10 Day General Extended Forecast

It is now looking dry over the weekend and through Monday night. The next chance for precipitation will come on Tuesday and into Wednesday, but it's looking more likely to be rain than snow. However, models are not in strong agreement for how much cold air will still be in the region next week, so it is still possible things could change back to a snow potential early-to-mid next week.

Important Note

All "DAY" forecasts are from 0600 in the morning to 1800 late afternoon (6:00 a.m. to 6:00 p.m.)

All "NIGHT" forecasts are from 1800 in the evening through 0600 the next morning.

Daytime temperatures are a daytime high.

Nighttime temperatures are an overnight low.

Important: This is a document describing the weather forecaster's current thinking of how the weather scenario will develop. There are varying amounts of confidence in different elements of the forecast.

Red Concern = 5 cm or more snowfall in any 12 hour period; shedding of previous accumulations of snow; significant freezing rain.

Yellow Concern = Less than 5 cm of snowfall in any 12 hour period; 5 cm or more snow nearby or at slightly higher snow levels.

Port Mann Bridge

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
Wednesday	Partial clearing. Lingering snow or rain/snow mix showers end around 8-9am.	3	SW shifting E 15-25		200	0	Yellow
Wednesday night	Partly cloudy.	-4	E 10-15				Green
Thursday	Mostly clear.	-1	Light				Green
Thursday night	Mostly clear. Clouds increase late.	-7	E 10-20				Green
Friday	Mostly cloudy.	2	E 10-20				Green
Friday night	Cloudy. Light snow begins around 6-7 pm and tapers off around 3-4 am.	-1	Light		0	2-4	Yellow

Alex Fraser Bridge

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
Wednesday	Partial clearing. Rain showers tapering off around 8-9 am.	4	SW shifting E 15-30		200		Yellow
Wednesday night	Partly cloudy.	-4	E 10-15				Green
Thursday	Mostly clear.	-1	Light				Green
Thursday night	Mostly clear. Clouds increase late.	-6	E 10-20				Green
Friday	Mostly cloudy.	2	E 15-15				Green
Friday night	Cloudy. Light snow begins around 6-7 pm and tapers off around 3-4 am.	0	ESE 10-15		0	1-3	Yellow

George Massey Tunnel Replacement

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
Wednesday	Partial clearing. Rain showers tapering off around 8-9 am.	4	SW shifting E 20-40		200		Yellow
Wednesday night	Partly cloudy.	-3	E 10-20				Green
Thursday	Mostly clear.	0	E 10-15				Green
Thursday night	Mostly clear. Clouds increase late.	-5	E 10-20				Green
Friday	Mostly cloudy.	2	E 15-15				Green
Friday night	Cloudy. Light snow begins around 6-7 pm and tapers off around 3-4 am.	0	ESE 10-15		0	0-3	Yellow

From: XT:Breti, Kevin TRAN:IN
To: Robertson, Steve TRAN:EX

Cc: Bonhomme, Korry TRAN:EX; Stevenson, Christie TRAN:EX; Lastoria, Keith TRAN:EX; Kazemi, Maziar TRAN:EX;

Drury, Krista TRAN:EX; XT:Weisbrod, Rick TRAN:IN; XT:Mtcon, Barend Thirion TRAN:IN; Jenna Sturrock;

XT:Moller, Rob TRAN:IN; XT:Mtcon, Didiuk, Matt TRAN:IN

Subject: SNIC both Bridges

Date: November 30, 2022 7:44:50 AM

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Steve

As discussed we are demobilizing Rope Access and Traffic control from the AFB now.

We are sending the traffic control to help cover abandoned vehicles in the area on Hwy 91 and Queensborough.

The Rats currently onshift at the AFB will be sent home.

The RATs scheduled for AFB dayshift today will be rerouted to the PMB for reloading and installing the faulty Exlar Drive(again). The exact start time will be around 1:00pm. All Rats scheduled for night shift tonight will be sent to PMB for reloading.

Full closure traffic control currently at the PMB is being utilized to cover abandoned vehicles on the PMB. s.21 s.21

Please call if you see any issues with this plan

Thank you

Kevin

From: PMB Alert Information

TRAN SYS PMB CHECKLIST ALERTS PRD

Subject: PMB Checklist - Alert Level 2
Date: November 30, 2022 8:55:23 AM

Port Mann Bridge Alert Level Checklist

Date and Time

SI Technician

Nov 30 2022, 8:54am PST

Robertson, Steve TRAN:EX

Previous Alert Level

Present Alert Level

Alert Level 3

(2022-11-30 08:54:00)

Alert Level 2

(2022-11-30 08:55:00)

Present Accretion Removal Status

 \blacktriangleright

Reloading-in-progress

SI Tech Comments on Critical Weather Forecasts & Alert Level Status

Standing down from snow and ice operations. Rope access teams are reloading chain collars.

B.C. Ministry of Transportation and Infrastructure

Form #H1277

From: AFB Alert Information

TRAN SYS AFB CHECKLIST ALERTS PRD

Subject: AFB Checklist - Alert Level 2

November 30, 2022 8:56:13 AM

Alex Fraser Bridge Alert Level Checklist

Date and Time

SI Technician

Nov 30 2022, 8:55am PST

Robertson, Steve TRAN:EX

Previous Alert Level

Present Alert Level

Alert Level 3

(2022-11-30 04:20:00)

Alert Level 2

(2022-11-30 08:55:00)

Present Accretion Removal Status

 \blacktriangleright

Standing-down

SI Tech Comments on Critical Weather Forecasts & Alert Level Status

Standing down from snow and ice operations

B.C. Ministry of Transportation and Infrastructure

Form #H1277

From: forecasts@weathernet.us

To: Lastoria, Keith TRAN:EX; Sekhon, Pravdeep TRAN:EX; Jeffares, Jordan TRAN:EX; XT:Weisbrod, Rick TRAN:IN;

Dyckson, Darren TRAN:EX; Mok, Klassen TRAN:EX; s. 22 XT:Rehbein, Steve TRAN:IN; Khorsandi, Porya TRAN:EX; Moulton, Neal TRAN:EX; XT:Warmenhoven, John TRAN:IN; Pilkington, Ian TRAN:EX; Clements, Tim TRAN:EX; XT:Moore, Mark TRAN:IN; s. 22 ; White, Daniel TRAN:EX; Freinhofer,

Dylan TRAN:EX; Port Mann Bridge Operational Weather Forecasts TRAN:EX; Kazemi, Maziar TRAN:EX; Robertson, Steve TRAN:EX; Loglisci, Shawn TRAN:EX; Braun, Michael TRAN:EX; XT:Mtcon, Didiuk, Matt

TRAN:IN; XT:Moller, Rob TRAN:IN; Markham, Jennifer TRAN:EX; XT:McVey, Todd TRAN:IN;

Geoff.Freer@gov.bc.ca; XT:Breti, Kevin TRAN:IN; Drury, Krista TRAN:EX; Blancher, Michael TRAN:EX; jsturrock@mainroad.ca; Bhatti, Ashok A TRAN:EX; s.22 ; XT:University of Cincinnati Civil engineering TRAN:IN; XT:Ell, Darren TRAN:IN; Deane, Jody TRAN:EX; Bonhomme, Korry TRAN:EX; XT:Taylor, Justin TRAN:IN; Anderson, Sean TRAN:EX; Simpson, Ashton TRAN:EX; s.22 Staite, Janelle A TRAN:EX; Norrish, Jonathan TRAN:EX; Stevenson, Christie TRAN:EX; Grant.A.Smith@gov.bc.ca; Farmer, Elena

TRAN:EX; XT:Mtcon, Barend Thirion TRAN:IN; Richard, Norm TRAN:EX

Subject: BC MoT Fraser River Crossings Morning Weather Forecast Wednesday, November 30, 2022

Date: November 29, 2022 11:30:39 PM

Attachments: BCMoTFraserRiverCrossings 2022-11-29 2300.PDF

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Discussion

Snow should continue off and on most of the night for the Port Mann Bridge, but the other 2 sites will see the change-over to rain happening within the next few hours. Looks like there will be melting conditions overnight tonight for George Massey and Alex Fraser, but melting conditions will occur late tonight/early Wednesday for Port Mann. An additional wave of light snow will be possible overnight Wednesday night/early Thursday, but snow may remain off to the S and W.

Snow continues off and on overnight tonight with snow gradually going over to rain as SE winds warm temperatures up above freezing for all sites by Wednesday morning. There is a good amount of confidence that Alex Faser and George Massey warm up within the next few hours, but the timing of the warm-up is less certain for Port Mann. There is a chance that the warming doesn't occur until early Wednesday morning when winds turn SW, but think that SE winds will bring just enough warming to push precipitation over to rain.

Dry Wednesday afternoon and Wednesday evening. There will be a wave of light snow going over Vacouver Island overnight Wednesday night/early Thursday and there is a chance that this light snow moves over Lower Mainland at times, as well. At this time, would expect a little bit of light snow at times between midnight and 8 am, but snow totals should remain under 3 cm. Temperatures will be colder on Wednesday night and Thursday with highs on Thursday just above freezing so melting conditions may not occur until late morning/midday Thursday if there is some light snow.

Extended

Dry Thursday night and Friday, but another wave of snow is expected Friday night/Saturday. Snow spreads into the area on Friday evening and continues overnight before tapering off on Saturday morning. Looks like that snow could mix with or go over to rain late Friday

night/Saturday morning, though. Even if precipitation remains all snow, it will be pretty light, but there could be around 3-6 cm of snow before tapering off as snow looks like it could potentially last awhile. Dry Saturday night and Sunday. Looks like there will be the chance for snow again Sunday night/Monday morning, as an arctic front moves into the area, but precipitation will at least start out as rain. There is a good chance that rain goes over to snow overnight Sunday night/Monday morning before precipitation ends, but snow accumulations are looking pretty minor at this time. Looking dry and cold Monday night through mid-week next week as outflow winds on Monday night bring a return of colder temperatures. Next system moving through Wednesday night could bring more snow, though.

MOT Fraser River Crossings Forecast

Web Access: https://www.nw-weathernet.com/MOTFraserRiver/index.php

24/7 Toll Free: **1-800-937-8676**

Web Click Options: RADAR SATELLITE Observations

Forecast Date: Tuesday, November 29, 2022

Forecast Begins: 10:00 PM

Forecaster: zd

Short Term Discussion

Snow should continue off and on most of the night for the Port Mann Bridge, but the other 2 sites will see the change-over to rain happening within the next few hours. Looks like there will be melting conditions overnight tonight for George Massey and Alex Fraser, but melting conditions will occur late tonight/early Wednesday for Port Mann. An additional wave of light snow will be possible overnight Wednesday night/early Thursday, but snow may remain off to the S and W.

Snow continues off and on overnight tonight with snow gradually going over to rain as SE winds warm temperatures up above freezing for all sites by Wednesday morning. There is a good amount of confidence that Alex Faser and George Massey warm up within the next few hours, but the timing of the warm-up is less certain for Port Mann. There is a chance that the warming doesn't occur until early Wednesday morning when winds turn SW, but think that SE winds will bring just enough warming to push precipitation over to rain.

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Technical Synopsis

Model agreement in the near-term is pretty good with models generally showing precipitation decreasing, breaking up, and going over to rain overnight tonight. Temperatures have already started to warm around Richmond/White Rock so the George Massey Tunnel should be seeing that warming soon with the Alex Fraser Bridge likely seeing warming in the next few hours as well. SE winds will be slower to warm up the Port Mann Bridge and there is a chance that they could remain cold enough for snow until winds turn SW early Wednesday morning.

Model agreement is much lower for Wednesday night/early Thursday, but models are showing dry or mainly dry conditions at least. However, models have had a tendancy to underdo snow on these marginal calls for Lower Mainland the last few weeks, so going with a more pessimistic solution. Think that light snow will likely spread into the Lower Mainland at times and produce some minor accumulations, but not more than 3 cm. We will have to watch new model runs closely for any changes on this system so keep an eye on upcoming reports.

10 Day General Extended Forecast

Dry Thursday night and Friday, but another wave of snow is expected Friday night/Saturday. Snow spreads into the area on Friday evening and continues overnight before tapering off on Saturday

morning. Looks like that snow could mix with or go over to rain late Friday night/Saturday morning, though. Even if precipitation remains all snow, it will be pretty light, but there could be around 3-6 cm of snow before tapering off as snow looks like it could potentially last awhile. Dry Saturday night and Sunday. Looks like there will be the chance for snow again Sunday night/Monday morning, as an arctic front moves into the area, but precipitation will at least start out as rain. There is a good chance that rain goes over to snow overnight Sunday night/Monday morning before precipitation ends, but snow accumulations are looking pretty minor at this time. Looking dry and cold Monday night through midweek next week as outflow winds on Monday night bring a return of colder temperatures. Next system moving through Wednesday night could bring more snow, though.

Important Note

All "DAY" forecasts are from 0600 in the morning to 1800 late afternoon (6:00 a.m. to 6:00 p.m.) All "NIGHT" forecasts are from 1800 in the evening through 0600 the next morning.

Daytime temperatures are a daytime high.

Nighttime temperatures are an overnight low.

Important: This is a document describing the weather forecaster's current thinking of how the weather scenario will develop. There are varying amounts of confidence in different elements of the forecast.

Red Concern = 5 cm or more snowfall in any 12 hour period; shedding of previous accumulations of snow; significant freezing rain.

Yellow Concern = Less than 5 cm of snowfall in any 12 hour period; 5 cm or more snow nearby or at slightly higher snow levels.

Port Mann Bridge

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
Wednesday	Partial clearing am; clouds increase pm. Rain showers tapering off around 8-9 am.	4	SW 10-20		200	0	Red
Wednesday night	Cloudy. Light snow possible at times after midnight-1 am.	-4	E 5-10		0	0-3	Yellow
Thursday	Clearing skies. Light snow possible at times before 7-8 am.	0	E 5-10		surface	0-1	Red
Thursday night	Mostly clear; fog/low clouds develop.	-7	ENE 5-15				Green
Friday	Fog/low clouds.	2	ENE 10-20				Green
Friday night	Cloudy. Light snow begins around 7-8 pm and tapers off around 2-3 am.	-1	ENE 5-15		surface	3-6	Red

Alex Fraser Bridge

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
Wednesday	Partial clearing am; clouds increase pm. Rain showers tapering off around 8-9 am.	5	SW 15-30		200	0	Green
Wednesday night	Cloudy. Light snow possible at times after midnight-1 am.	-3	E 5-15		0	0-3	Yellow
Thursday	Clearing skies. Light snow possible at times before 7-8 am.	1	E 5-15		surface	0-1	Red
Thursday night	Mostly clear; fog/low clouds develop.	-6	ENE 10-20				Green
Friday	Fog/low clouds.	3	ENE 15-25				Green
Friday night	Cloudy. Light snow begins around 6-7 pm and tapers off around 1-2 am.	0	ENE 10-20		surface	2-5	Red

George Massey Tunnel Replacement

	Weather	Temp (deg C)	Wind (kph)	Rainfall (mm)	Snow Level (m)	Road Snow	Icing Concerns
Wednesday	Partial clearing am; clouds increase pm. Rain showers tapering off around 8-9 am.	5	SW 20-40		200	0	Green
Wednesday night	Cloudy. Light snow possible at times after midnight-1 am.	-3	E 10-20		0	0-3	Yellow
Thursday	Clearing skies. Light snow possible at times before 7-8 am.	1	E 10-20		surface	0-1	Red
Thursday night	Mostly clear; fog/low clouds develop.	-6	ENE 15-25				Green
Friday	Fog/low clouds.	3	ENE 15-30				Green
Friday night	Cloudy. Light snow begins around 6-7 pm and tapers off around 1-2 am.	0	ENE 15-25		surface	2-5	Red