BRITISH COLUMBIA | Ministry of Emergency Management and Climate Readiness

VIC 2023 Spring Seasonal Readiness Workshop Agenda – Day 1

Tuesday, May 9, 2023

8:30-8:50 **Opening Prayer**

Karen Anderson – Nuxalk Nation

Welcome, Introductions, and Opening Comments

8:50-9:10 **Provincial and Regional Updates**

Emergency Management and Climate Readiness (EMCR)

9:10-9:40 **Seasonal Weather Forecasting Trends**

Environment and Climate Change Canada (ECCC)

9:40-10:00 **Drought Outlook**

River Forecast Centre (RFC)

10:00-10:20 **Break**

10:20-11:00 **Wildfire Seasonal Outlook**

BC Wildfire Service (BCWS)

11:00-11:30 ***It's time to get FireSmart about wildfires in B.C.***

BCWS

11:30-12:00 **Community Recovery Update**

EMCR Recovery Team

12:00-12:30 **Emergency Support Services (ESS) Update**

EMCR ESS Team









EMCR Update

Seasonal Readiness Spring 2023

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Executive Update

- Vision and Mission
- Organizational Changes
- Branch Updates
  - Disaster Preparedness
  - Funding - CEPF
- Emergency Program Act Modernization

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VISION

A disaster resilient British Columbia.

MISSION

Ministry of Emergency Management and Climate Readiness leads provincial emergency and disaster risk management, builds and fosters collaborative relationship and partnerships, advances reconciliation with Indigenous Peoples, and supports all people in British Columbia to reduce climate and disaster risk.

EMCR CORPORATE VALUES

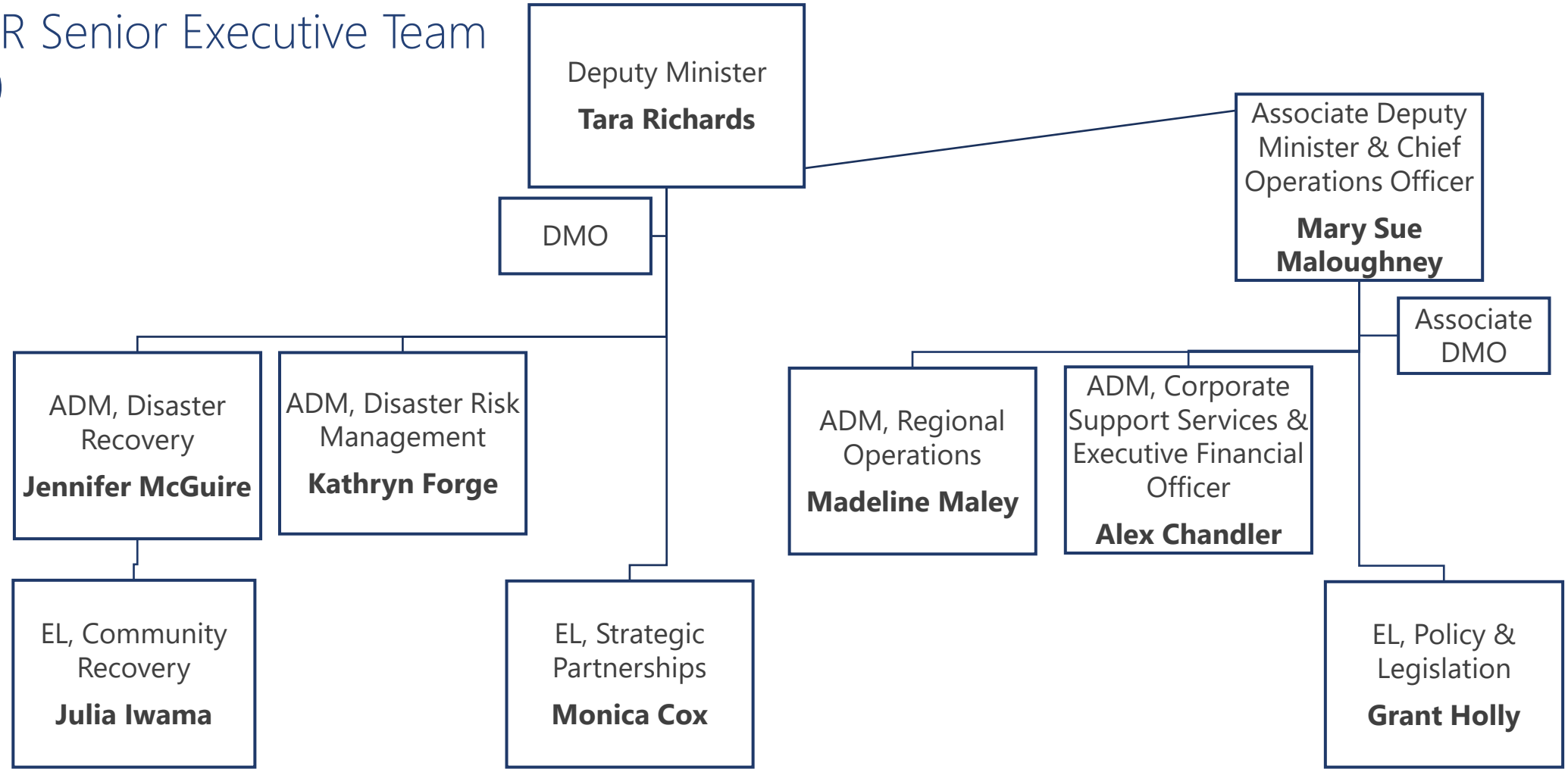
Collaboration Respect Innovation

BC PUBLIC SERVICE CORPORATE VALUES

Teamwork Curiosity Courage Service Passion Accountability Integrity

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EMCR Senior Executive Team (SET)



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Regional Partnership Coordinators

- Provide direct outreach to First Nations communities to support the following:
  - Setting up coordination calls
  - Access to training, tools, guidance documents
  - Assistance on EAF's, Response Claims
- Staff First Nations branch roles
  - Daily check-ins
  - Re-direct/escalate priority issues for follow up by PECC Strategic Advisor leveraged through trusted partnerships (e.g. TEMWG, FNESS/FNHA LoU's, IAWG)

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First Nations Community Navigators

- What are Community Navigators?
  - Main point of contact for communities
  - Link to policy
- Who can apply?
  - Evacuating community or Host community
- How to apply?
  - Through EMCR Regional Offices

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Cultural Activities Location Support

- Spaces for evacuees to gather
  - cultural, health and wellness support
- Spaces determined by communities
    - e.g. Friendship Centers
- Costs covered include venue rental
- Link to policy



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Disaster Preparedness Branch

- Provides support to the online Hazard, Risk, and Vulnerability Assessment (HRVA) tool:
  - https://www2.gov.bc.ca/gov/content/safety/emergency-management/local-emergency-programs/assessment-analysis#hrva
- Delivers emergency management, emergency support services, and search & rescue training courses:
  - Will be conducting a training needs assessment with emergency management partners in 2023
- Exploring opportunities to facilitate delivery of regional/local level exercises (e.g. table-top exercises)
- Responsible for updating provincial emergency management plans:
  - Initiating an update to the All-Hazard Plan in 2023

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Disaster Mitigation & Adaptation Policy – Key initiatives for 2023/24

Disaster and Climate Risk and Resilience Assessment

- Provincial assessment – 2023-2024
- Regional assessments – 2024-2026
- Engagement will start in April 2023

Earthquake Readiness

- Early Warning System launching spring 2023
- Microzonation maps for Metro Vancouver
- EGBC professional practice guidelines

ClimateReadyBC.gov.bc.ca

- New “one-stop-shop” to deliver data, maps, guidance, research, etc. for disaster mitigation and climate adaptation
- Integrate with FNESS’ Lightship platform
- Built out over time as new data and information become available (e.g., risk assessment results, floodplain maps, etc.



Disaster Risk Reduction Funding Programs

EMCR funding programs:

- EMBC's disaster mitigation program (grants and year end)
- Community Emergency Preparedness Fund
- Adaptation, Resilience and Disaster Mitigation:
  - Green Infrastructure
  - Covid Vulnerability and Resilience Infrastructure
- National Disaster Mitigation Program (NDMP)

Other disaster risk reduction funding programs:

- Disaster Mitigation and Adaptation Fund (DMAF)
- Natural Infrastructure Program

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Community Emergency Preparedness Fund (CEPF)

- The Community Emergency Preparedness Fund (CEPF) is a suite of funding streams intended to enhance the resiliency of local governments, First Nations and communities in responding to emergencies.
- The Province is committing a further $180 million to the Community Emergency Preparedness Fund (CEPF) to support projects that help local governments and First Nations prepare communities for the risks of natural hazards and lessen the effects before disasters happen.
- Funding is provided by the Province of BC and is administered by UBCM for the following:
- **Disaster Risk Reduction-Climate Adaptation**
- **Emergency Operations Centres & Training**
- **Emergency Support Services**
- **Extreme Heat Risk Mapping, Assessment, and Planning**
- **Indigenous Cultural Safety & Cultural Humility Training**
- **Public Notification & Evacuation Route Planning**
- **Volunteer & Composite Fire Departments Equipment & Training**

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CEPF Funding Streams – Next Intakes



Public Notification & Evacuation Route Planning

April 26, 2023



Extreme Temperature Risk Mapping, Assessment, and Planning

June 2, 2023



Disaster Risk Reduction-Climate Adaptation

October 1, 2023



Volunteer & Composite Fire Departments Equipment & Training

October 20, 2023



Indigenous Cultural Safety & Cultural Humility Training

November 3, 2023



Emergency Support Services

January 26, 2024



Emergency Operations Centres & Training

February 23, 2024

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Exercise Coastal Response 2023 (CR23)

- **Aim:** CR23 aims to **practice strategy, coordination, and communication** through an integrated whole-of-government and partner response to a catastrophic earthquake in BC

- **Scenario:** In the early morning hours (Pacific Time) on February 3, 2023, a **6.8 magnitude earthquake** occurs at a depth of 63 kilometers centered approximately 12 kilometers northwest of Tsawwassen

  The earthquake is strongly felt in most areas of southwestern BC. Serious damage is reported in Greater Vancouver

- **Exercise Information:**
  - Dates **February 7-9, 2023** (Earthquake plus 5 to 7 days)
  - Emergency Operation Centre (EOC) Exercise
  - Transition from Immediate to Sustained Response



EXERCISE OBJECTIVES

- Continuity of Government / Business Continuity
- Critical Infrastructure / Damage Assessment
- Logistics
- Strategic Decision Making
- Strategic Communications
- Humanitarian Assistance / Mass Care

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CR23 – Did we achieve the aim?

Exercise Coastal Response aimed to **practice strategy, coordination, and communication** through an integrated whole-of-government and partner response to a catastrophic earthquake in BC

- Whole of Government Exercise (Federal/Provincial/Local Authority)
  - 50 emergency operations centres participated: Federal, Provincial, Regional, Local Government, Agency and Industry
  - Over 200 participant surveys
  - Ministry and organization observations



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Indigenous Youth & EMCR

Indigenous Youth in Emergency Management (IYEM)

EMCR investing in Indigenous youth.

In partnership with IYIP.

REMIIs working across the regions.

Developing skills to support communities.

Indigenous Youth Internship Program (IYIP)

Award-winning program.

Supports youth leadership skills.

25 youth interns each year.

BRITISH COLUMBIA

Ministry of Emergency Management and Climate Readiness

First Nations Guide to Emergency Management Self-Resiliency

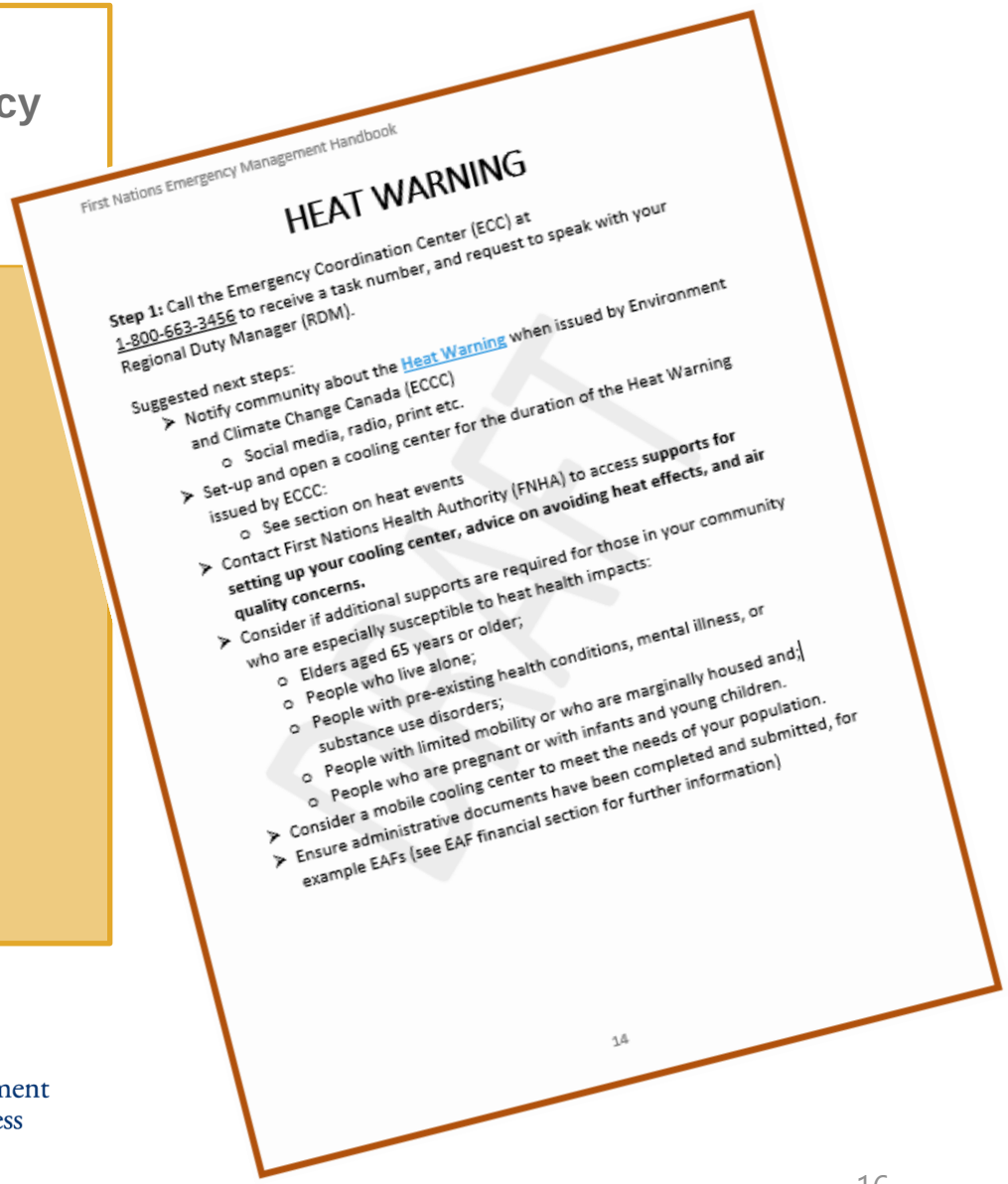
"The Handbook"

Developed for First Nations by IYIPs.

Designed to bring information together and improve accessibility.

Information across the 4 pillars of EM.

Supports self-resiliency and FPIC.



First Nations Emergency Management Handbook

HEAT WARNING

Step 1: Call the Emergency Coordination Center (ECC) at 1-800-663-3456 to receive a task number, and request to speak with your Regional Duty Manager (RDM).

Suggested next steps:

- Notify community about the Heat Warning when issued by Environment and Climate Change Canada (ECCC)
  - Social media, radio, print etc.
- Set-up and open a cooling center for the duration of the Heat Warning issued by ECCC:
  - See section on heat events
- Contact First Nations Health Authority (FNHA) to access **supports for setting up your cooling center, advice on avoiding heat effects, and air quality concerns.**
- Consider if additional supports are required for those in your community who are especially susceptible to heat health impacts:
  - Elders aged 65 years or older;
  - People who live alone;
  - People with pre-existing health conditions, mental illness, or substance use disorders;
  - People with limited mobility or who are marginally housed and;
  - People who are pregnant or with infants and young children.
- Consider a mobile cooling center to meet the needs of your population.
- Ensure administrative documents have been completed and submitted, for example EAFs (see EAF financial section for further information)

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Thank you!

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Environment and Climate Change Canada | Environnement et Changement climatique Canada

SPRING/SUMMER 2023 WEATHER UPDATE

EMCR VI & Central Coast
May 9th, 2023

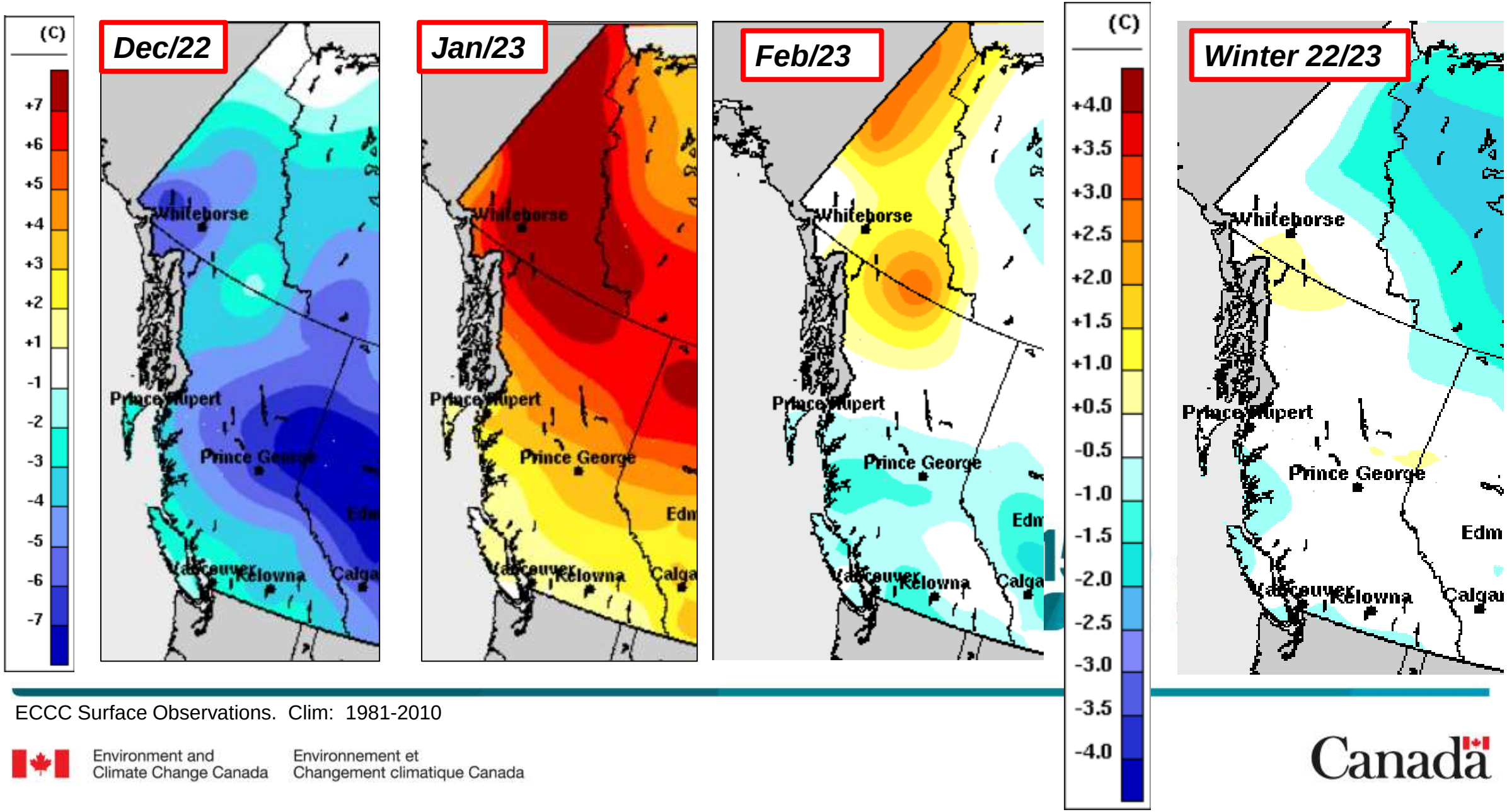
Armel Castellan
Warning Preparedness Meteorologist

Canada

WHERE WE'RE GOING…

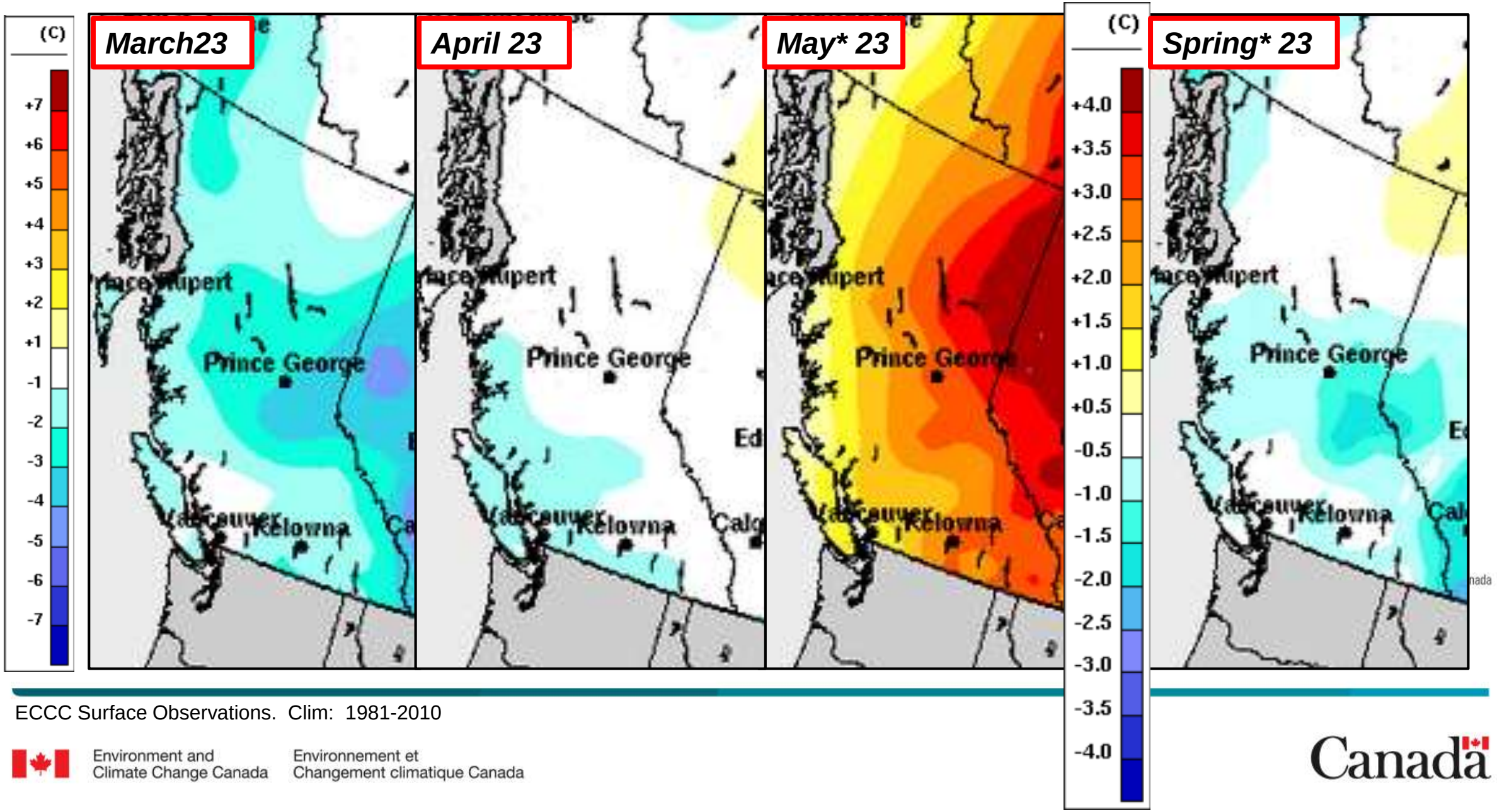
- Winter and Spring recap
- Spring Summer Weather Hazards
- Heat Program update
- Short, mid and long range forecast
- What are your weather vulnerabilities?
- Contact information

Temperature Anomaly for Dec/22 – Feb/23



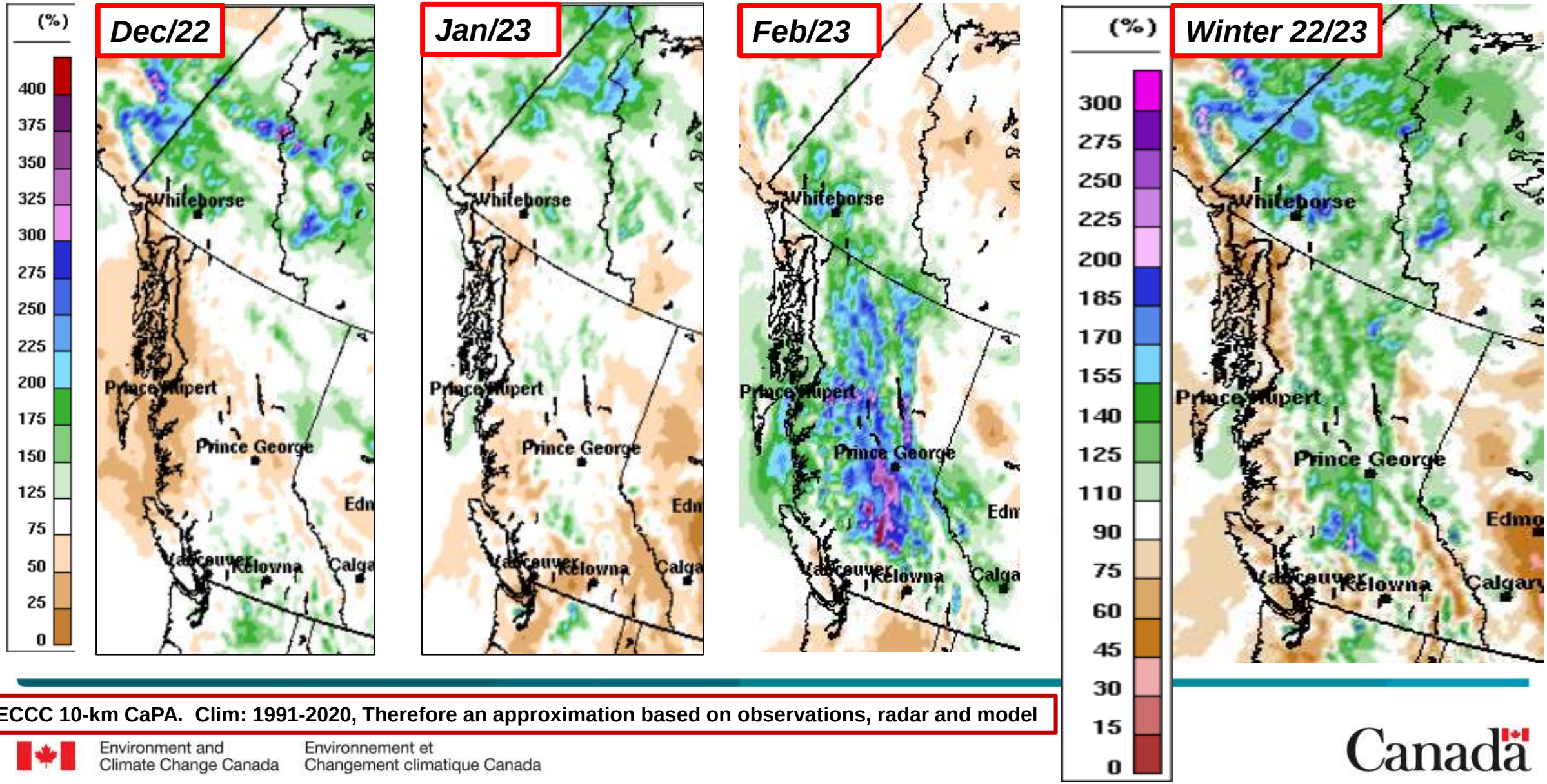
ECCC Surface Observations. Clim: 1981-2010

Temperature Anomaly for March – April – (part of) May



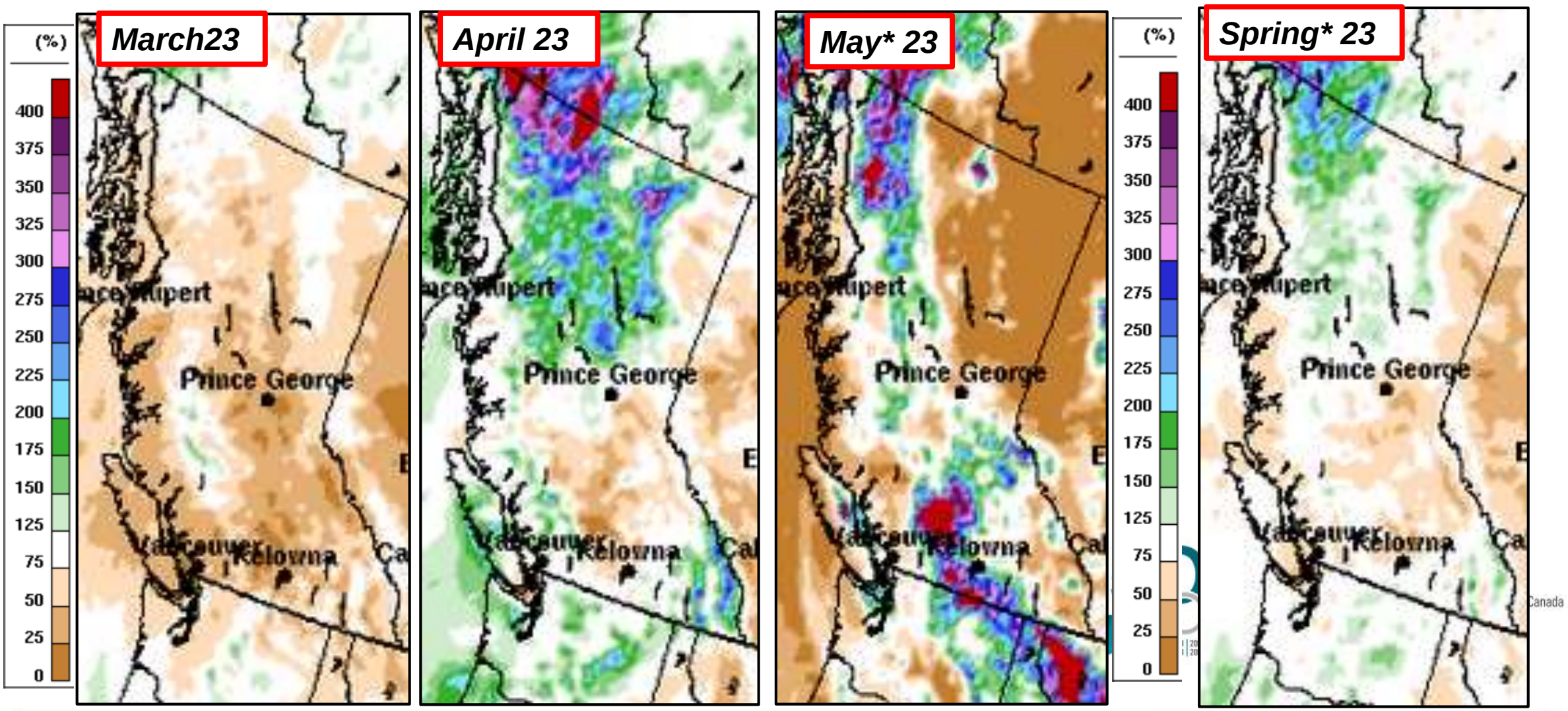
ECCC Surface Observations. Clim: 1981-2010

Percent of Normal Precipitation for Dec/22 – Feb/23



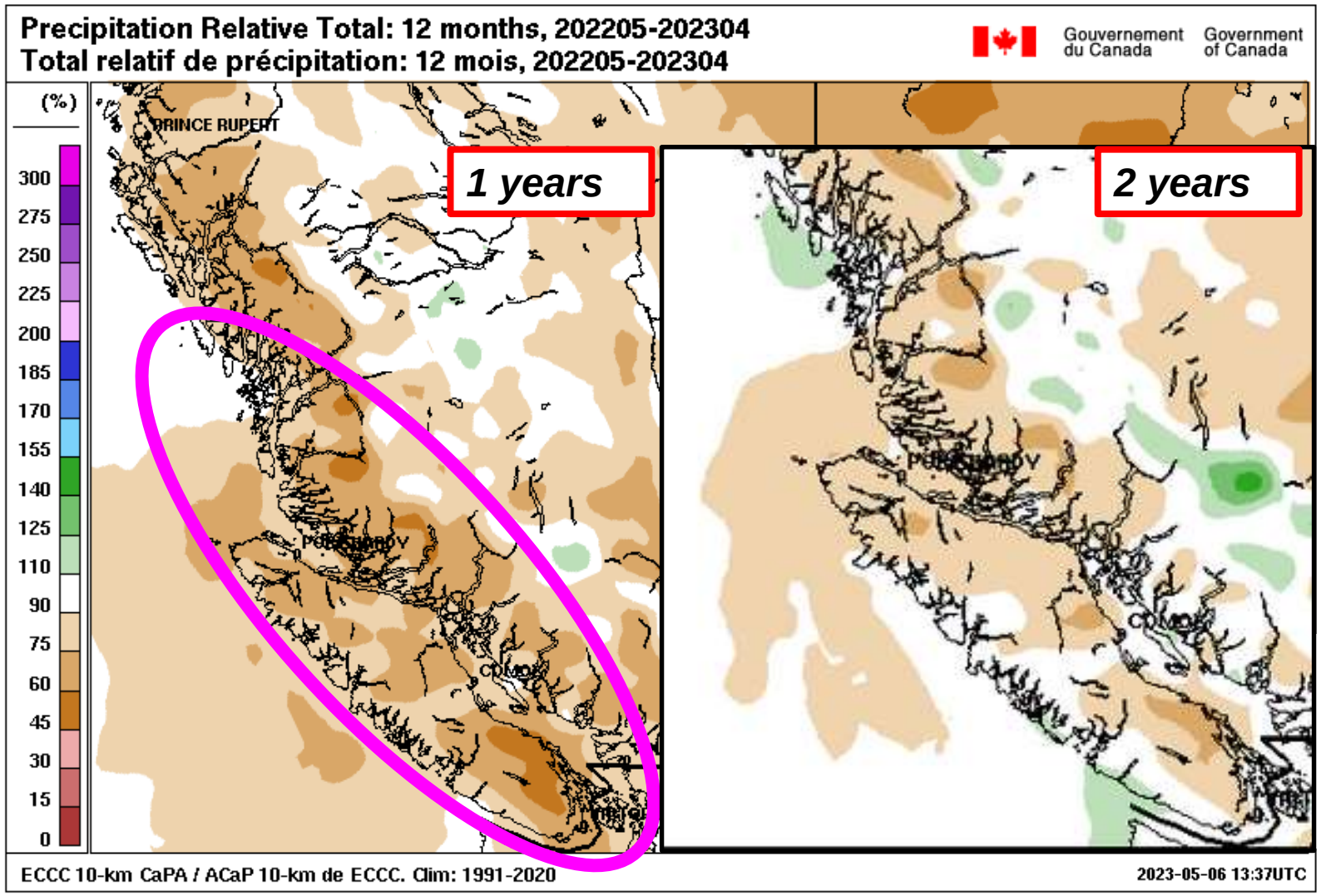
ECCC 10-km CaPA. Clim: 1991-2020, Therefore an approximation based on observations, radar and model

Percent of Normal Precipitation for March – April – (part of) May



ECCC 10-km CaPA. Clim: 1991-2020, Therefore an approximation based on observations, radar and model

Percent of Normal Precipitation for May 22 - April 23

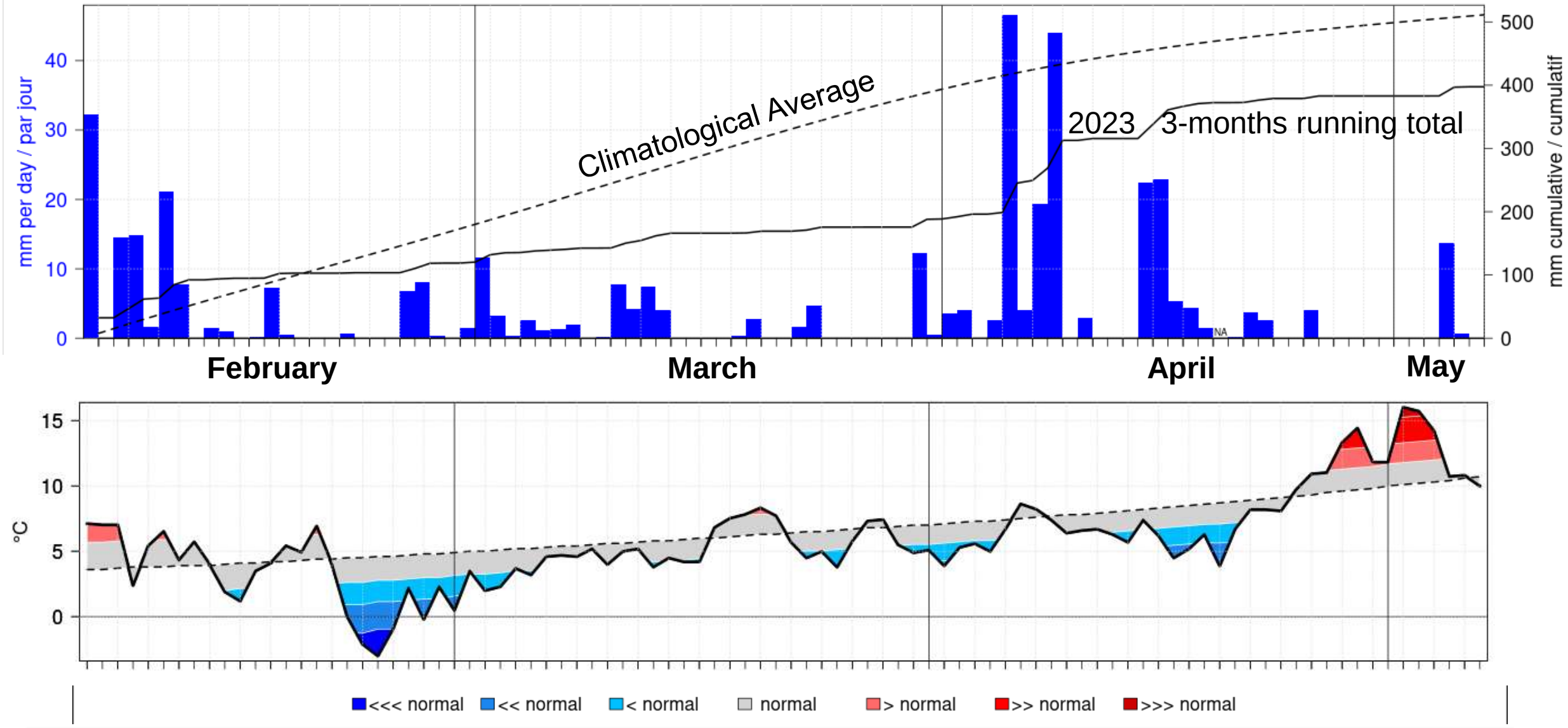


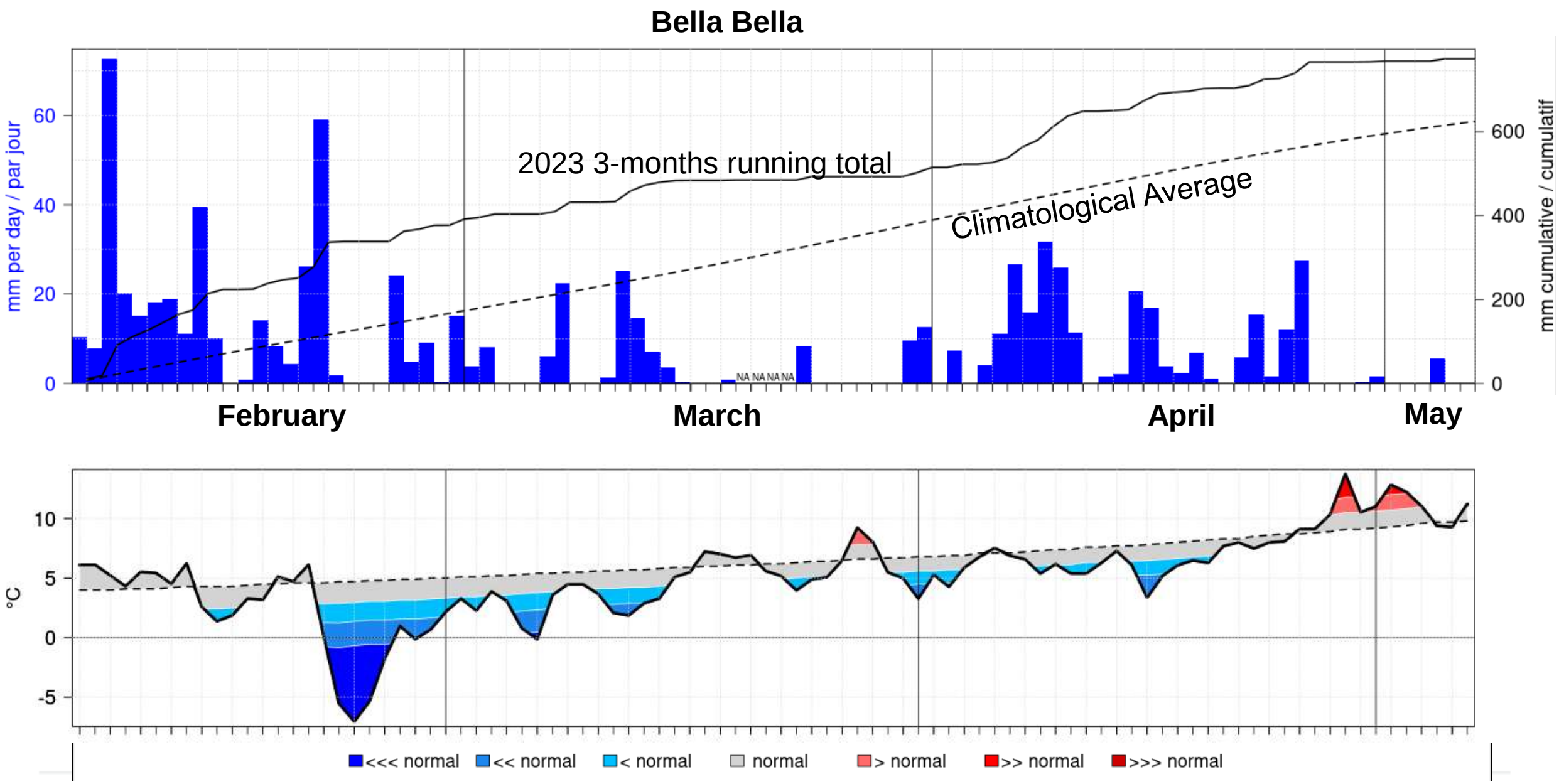
Despite recent wet weather, overarching reality is a dry past year +

*an approximation based on observations, radar and model

Canada

Port Alberni




Bella Bella
2023 3-months running total
Climatological Average
mm per day / par jour
mm cumulative / cumulatif
NA NA NA NA
February
March
April
May
°C
<<< normal
<< normal
< normal
normal
> normal
>> normal
>>> normal

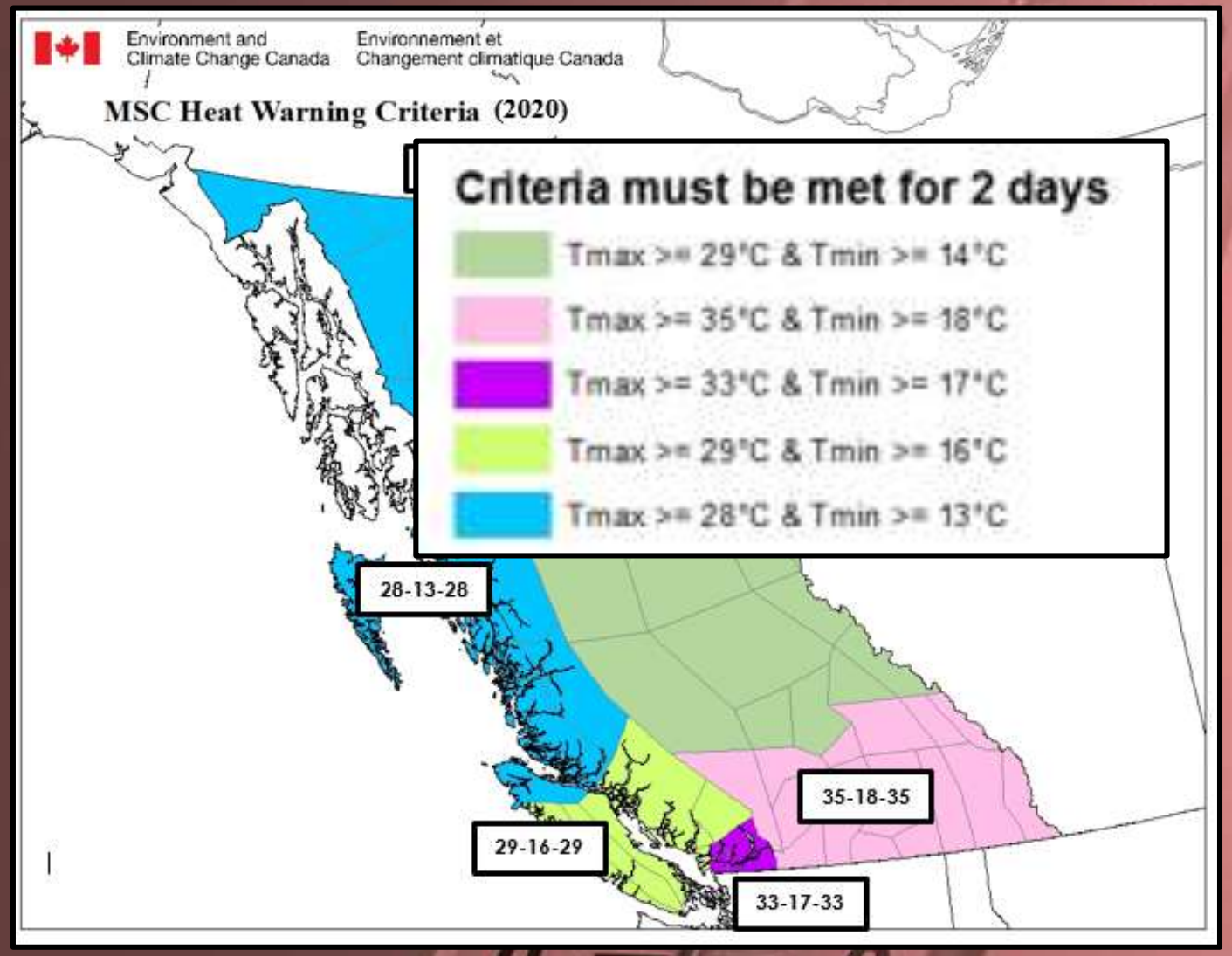
SPRING/SUMMER HAZARDS

	Threat	Potential Impact
Heat Warnings	Extreme Heat	Illness, death, melt/flood, ice jams
Special Air Quality Statements	Forest fires, smoke, air quality	Loss of lives/property, respiratory illness, reduced visibility
	Dry weather	Dust/AQ, Drought
Special Weather Statement	Cold low/ “June-uary”	Flood, late season mountain snow
Severe TS Warnings/Watches	Thunderstorms/ lightning	Flood, landslides,fire, severe wind/tornado
Special Weather Statement/Wind Warning	Wind	Infrastructure & tree damage, power outages





HEAT



- First heat of the season (spoiler – t weekend) for temperatures approa criteria
  - Sent as a WN (yesterday) & ev a Special Weather Statement t
- New: 3-day/2-night, longer event, c the 3rd heat event of the season! A acclimatization.
- Extreme Heat Emergency (EHE) is alert for when daytime and nighttim temperatures get hotter every day well above seasonal norms for 3 d minimum
- ***We need to stay informed and s prepared ***ahead*** of extreme weath

AIR QUALITY



https://www.canada.ca/en/environment-climate-change/services/weather-general-tools-resources/weathercan/weathercan-notifications.html

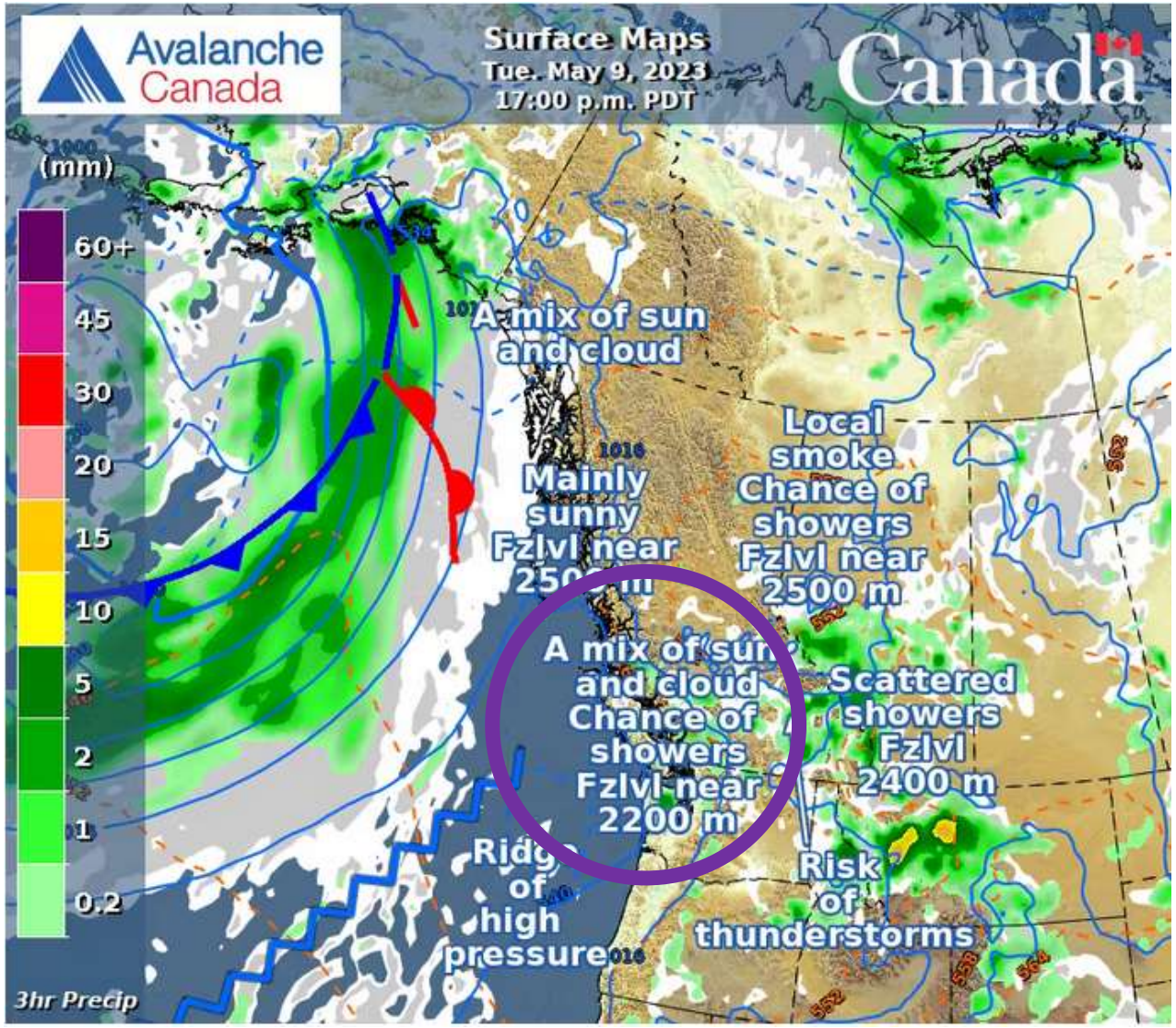
- Poor AQ can be caused by wildfire smoke or trapped pollutants
- Stay tuned to AQ, especially for those with respiratory illness

WEATHER HAZARD PREDICTABILITY



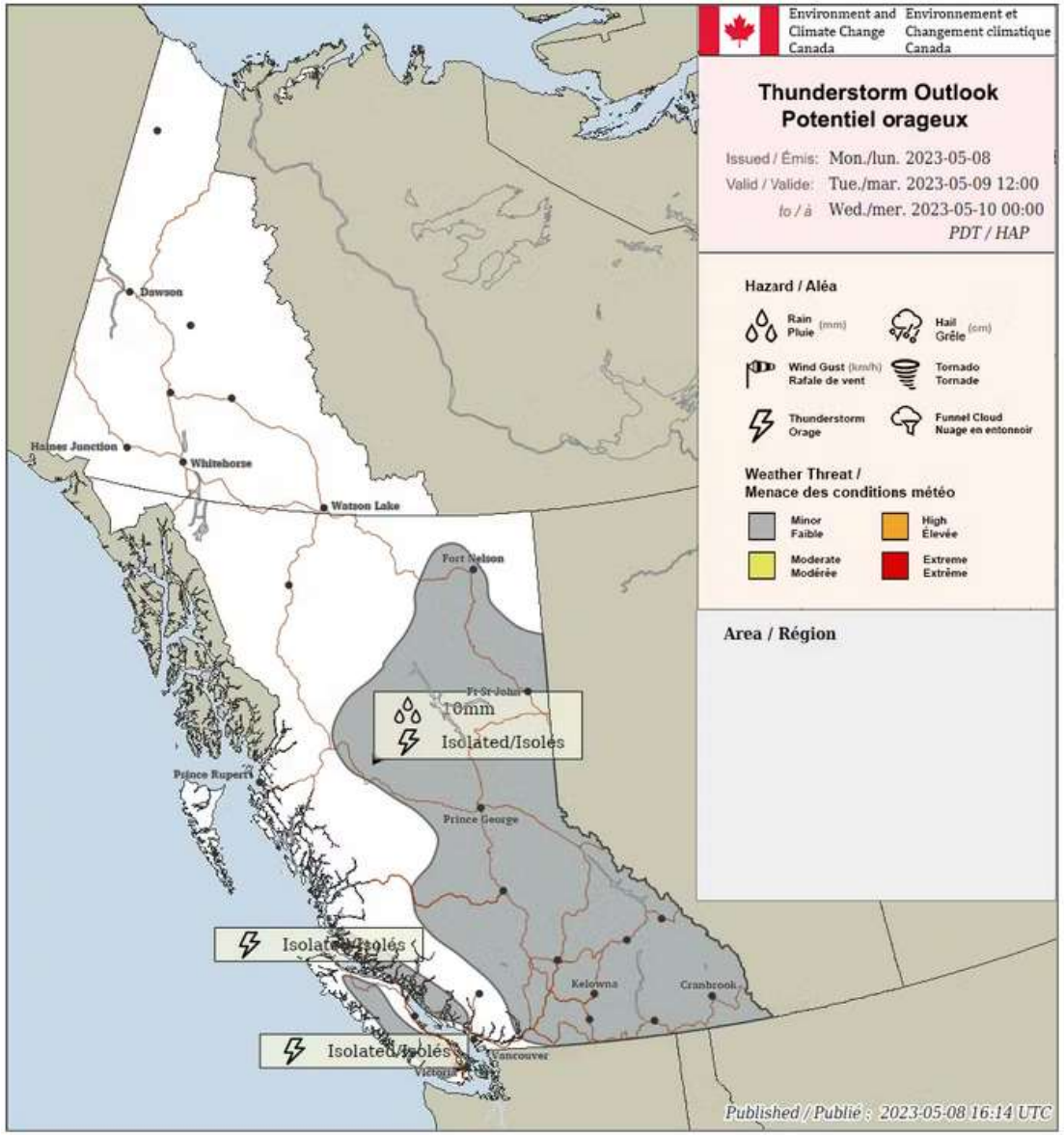
- Forecast lead times are general and may **vary greatly** event to event
- Even if an event can be predicted well in advance, details may not be known until much closer to the event

TODAY'S WEATHER



- 2nd start of warmer, drier weather
- Ridge of high pressure building in from SW (blue zigzag)

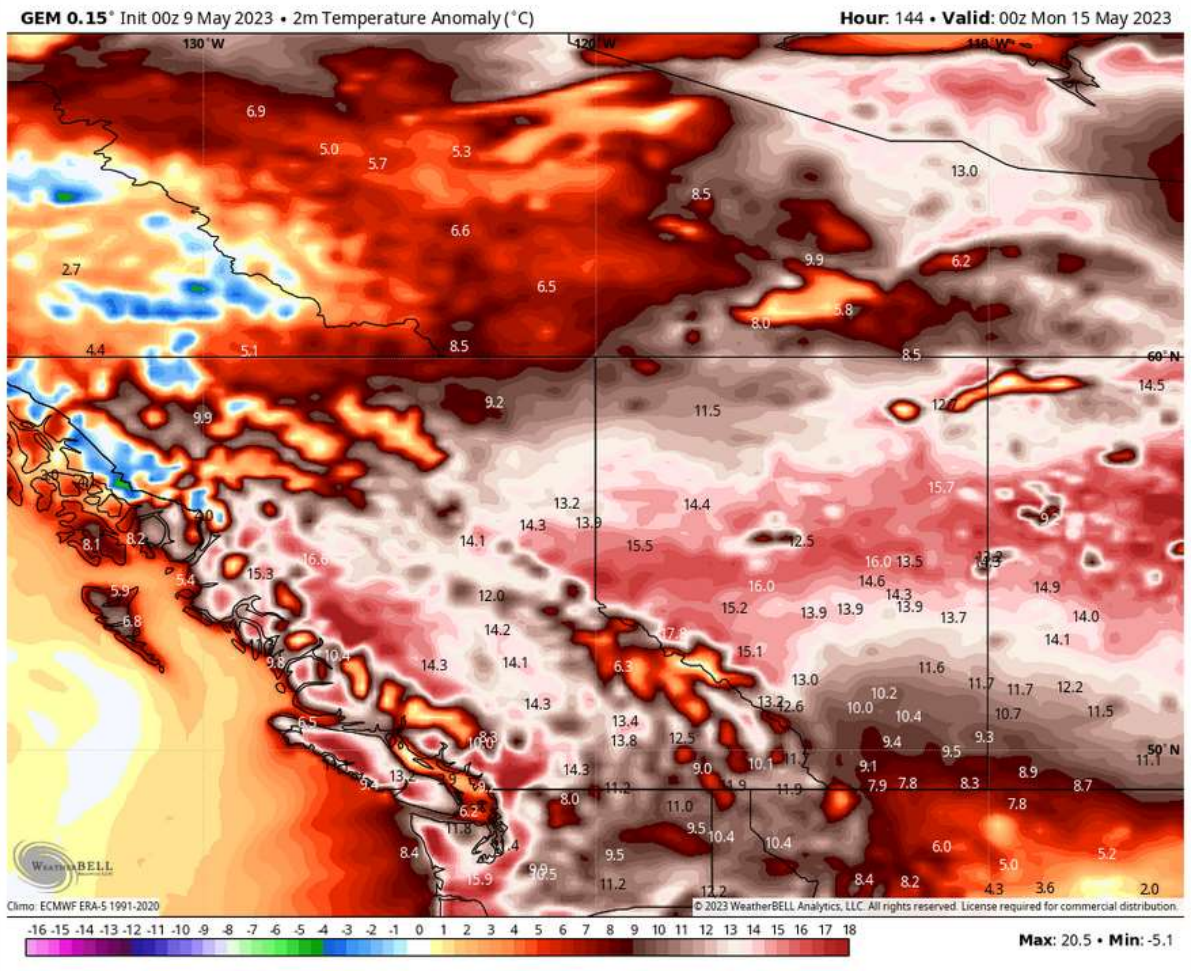
TODAY'S CONVECTIVE (THUNDERSTORM) WEATHER



- Non super-cellular thunderstorms (TS) over inland Vancouver Island
- Not dangerous – "garden variety" from a HAIL, Strong Gusts, abundant rain in normal times
- Lightning is always dangerous in any TS

https://www.avalanche.ca/weather/forecast in Tab "Day 1"

SUNDAY PM WEATHER

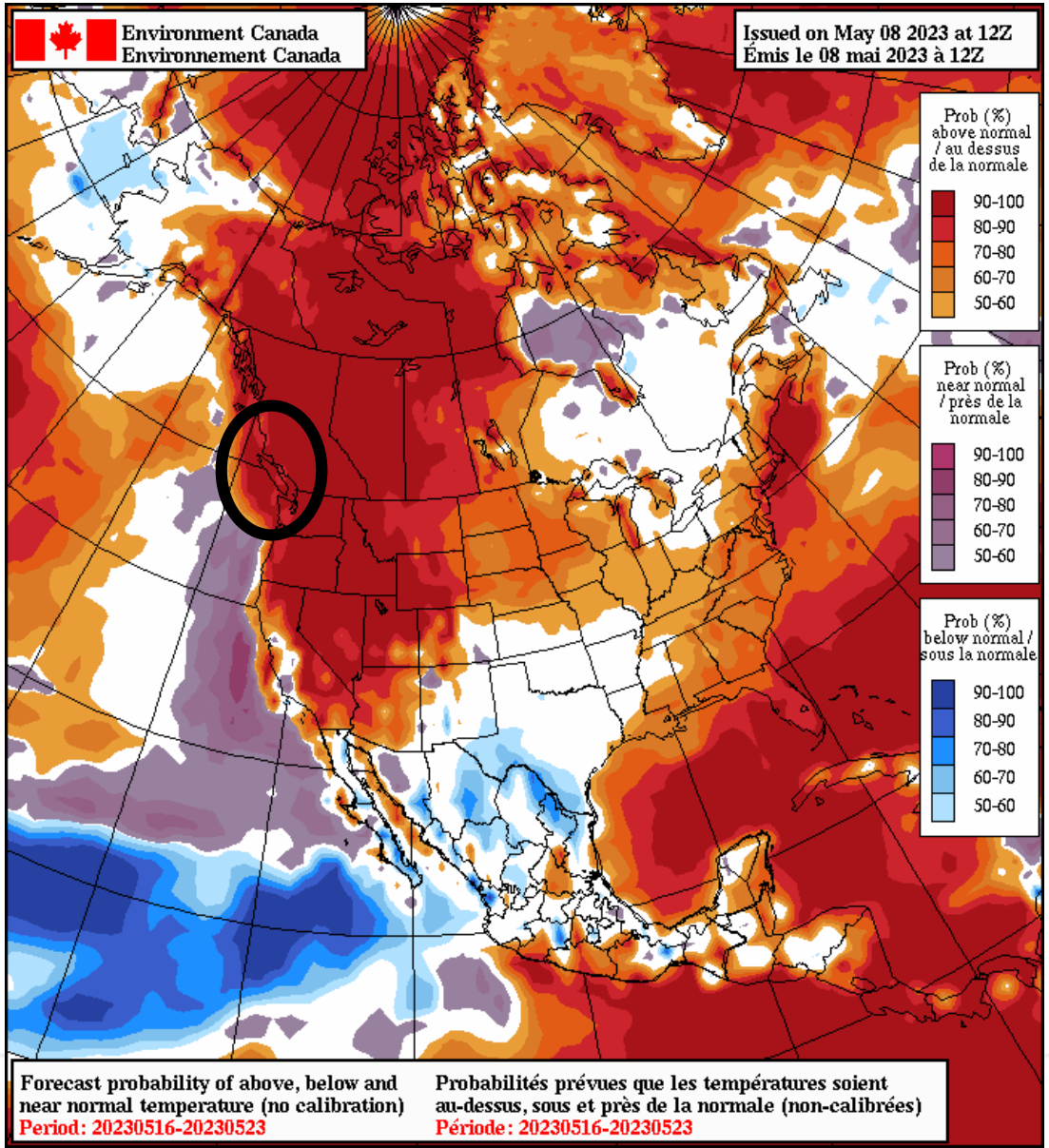


- Hot and dry
- Ridge peaking Saturday – Monday+*, inland temperatures in high-20's**
- Freezing levels up to 4500 m
- Potential impacts:
  - Increased avalanche risk
  - Risk of flooding(Interior big watersheds)
  - Cold water hazards
- Overnight minimum Temps will recover, making this very different from June 2021 "heat dome"
- Ridge only gradually moves eastward.

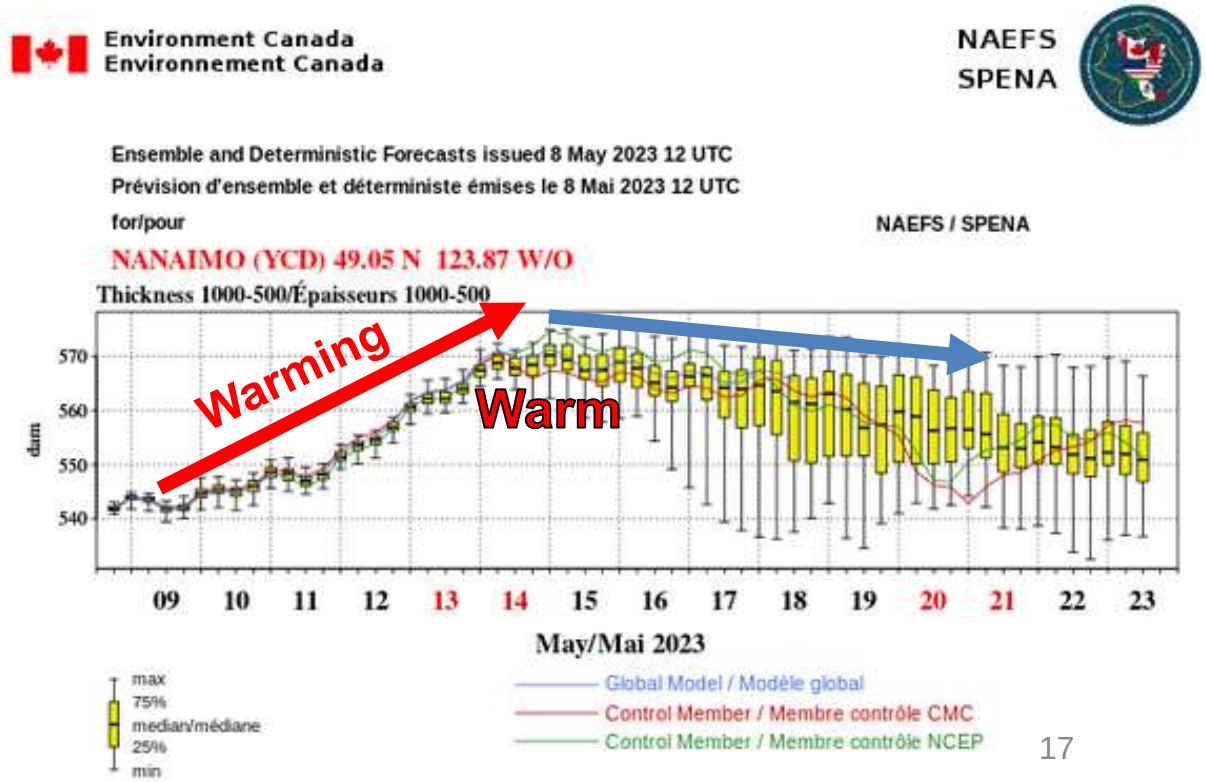
* Trending longer over the last 2-days of modelling

**into the 30s is possible.

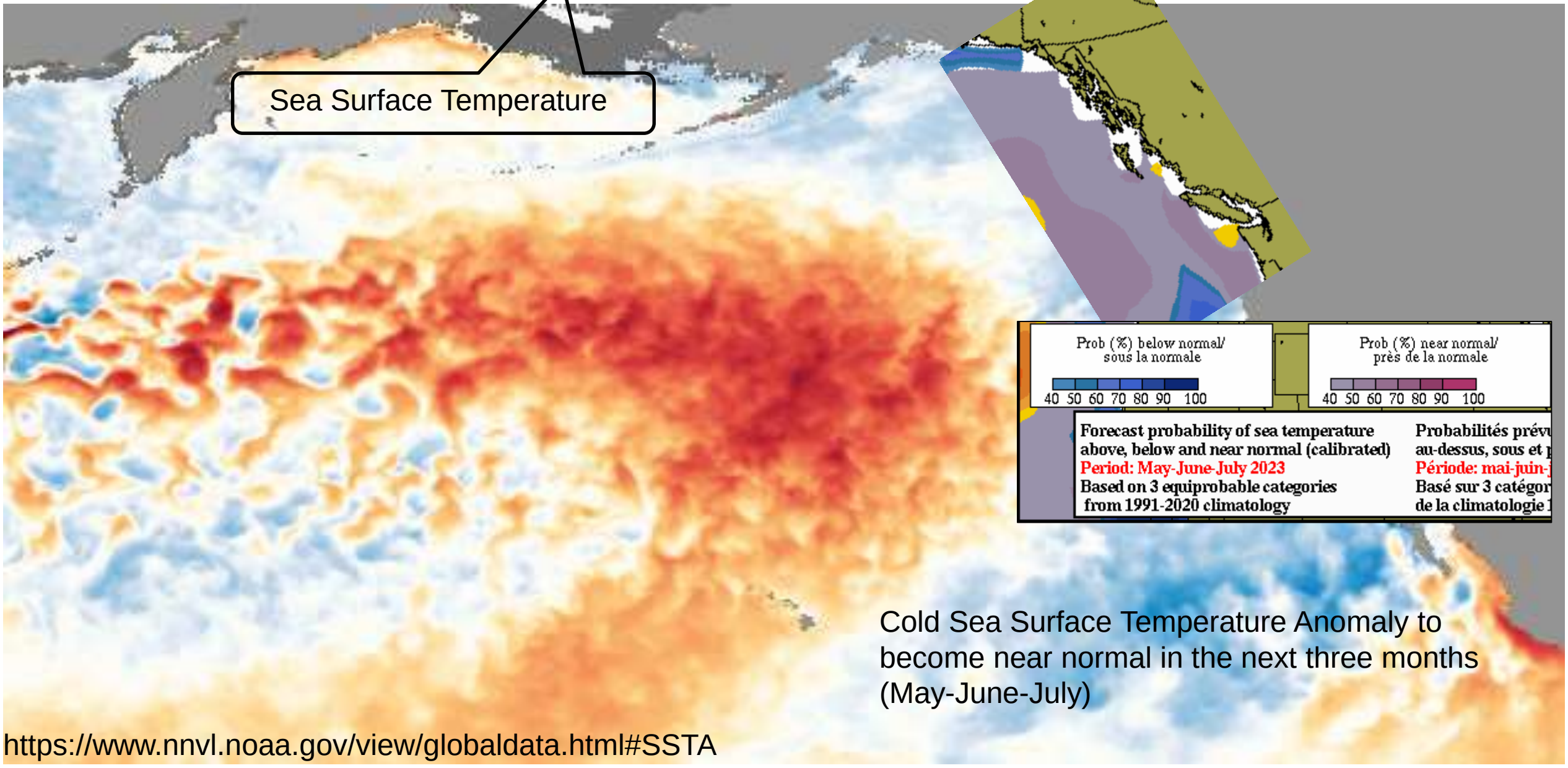
MID-TERM TEMPERATURE TREND



- May 12-16: high probability of above average temperatures over W NA



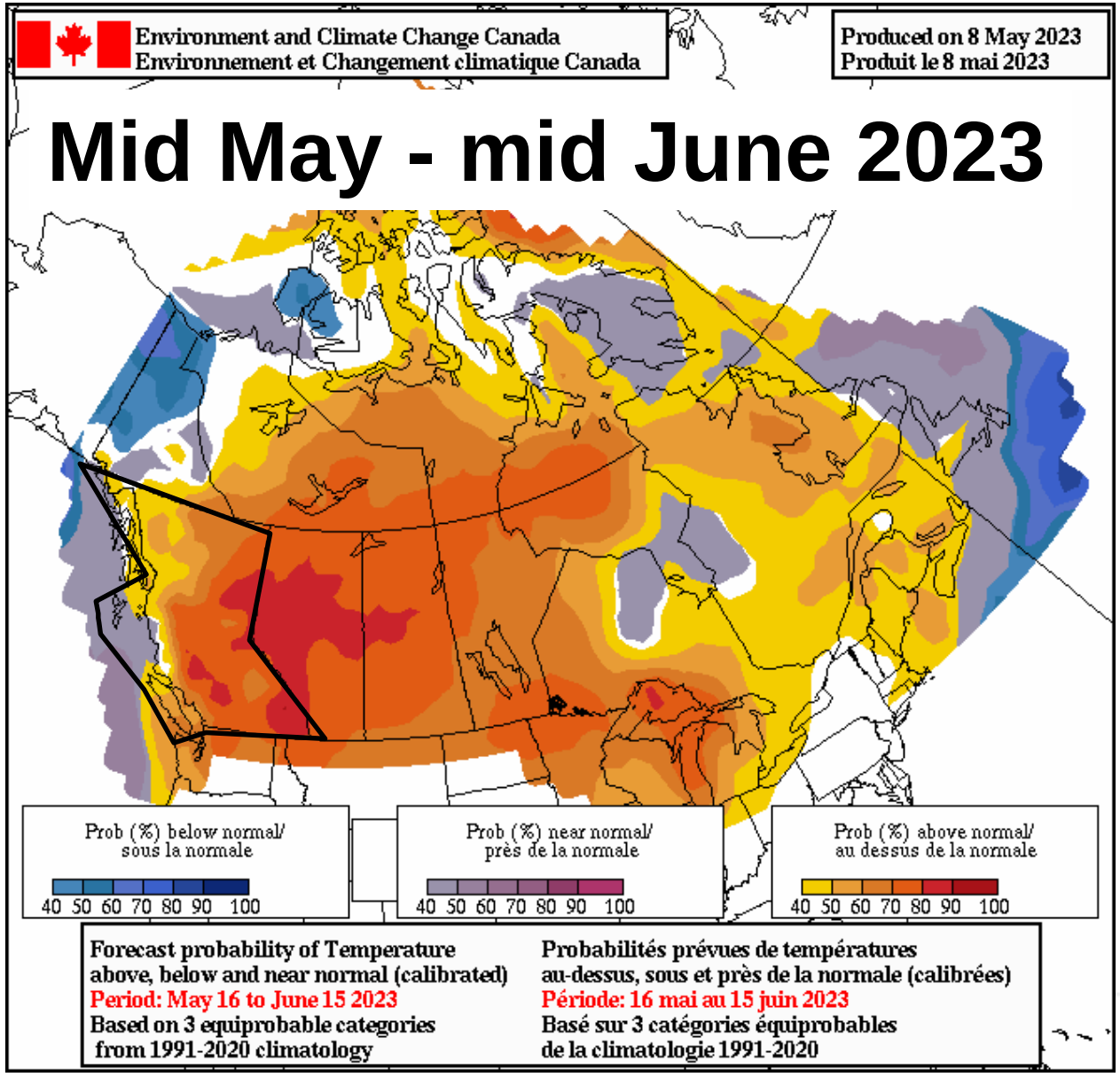
COLD SST ANOMALY PERSISTS

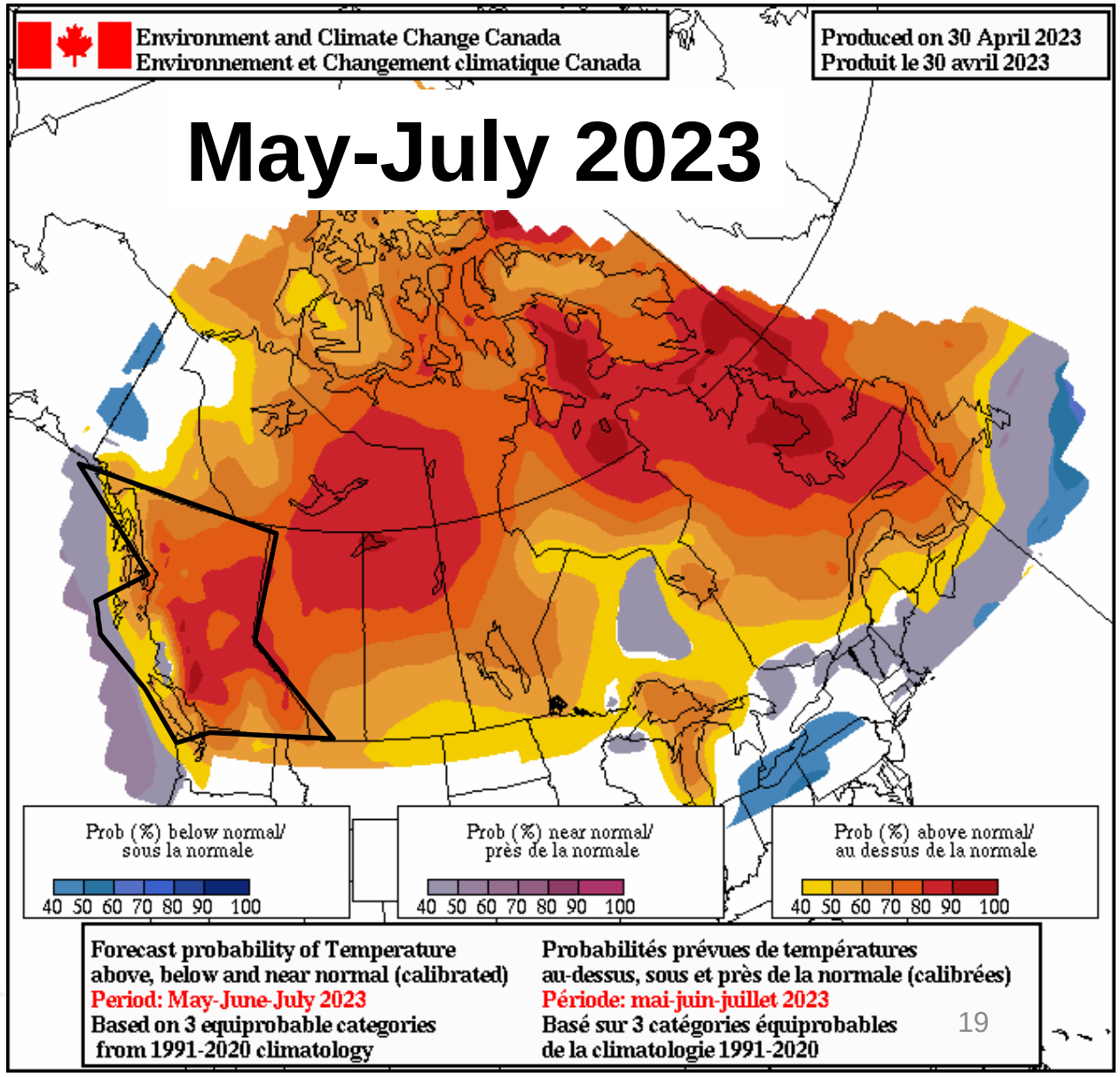


Cold Sea Surface Temperature Anomaly to become near normal in the next three months (May-June-July)

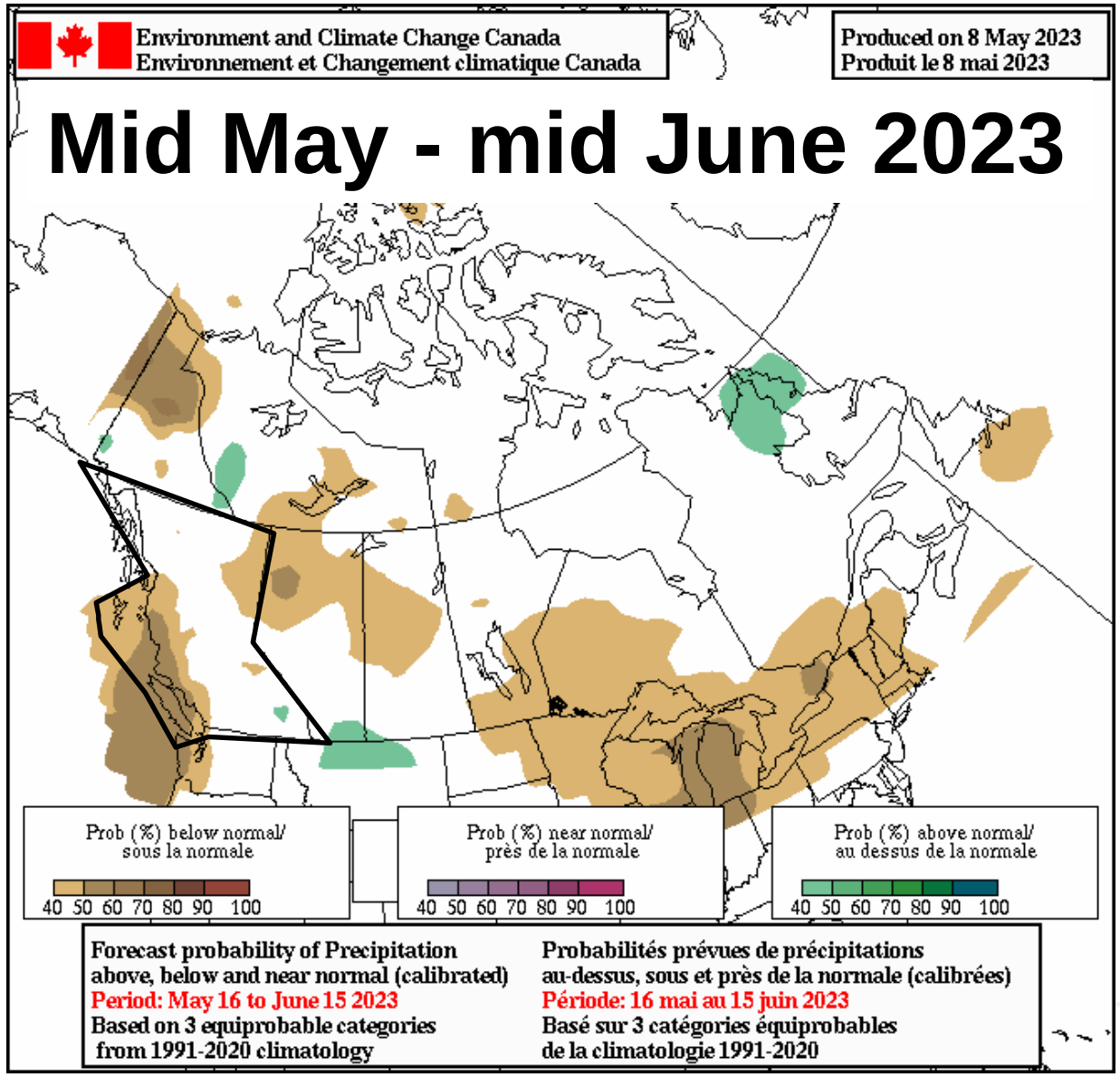
https://www.nnvl.noaa.gov/view/globaldata.html#SSTA

SEASONAL TEMPERATURE TREND





SUB-SEASONAL PRECIPITATION TREND



May-July 2023

Not useful,
not real signal

WEATHER TOOLS/RESOURCES

Stay tuned to the weather



WEATHER.GC.CA

British Columbia - Weather Conditions and Forecast by Locations



Weather Information

Use this site to access weather information as layers on an interactive map. An **alert table** is available below for an alternative view of all **active alerts**. Learn more about the layers.



▾ Weather Alerts for Canada

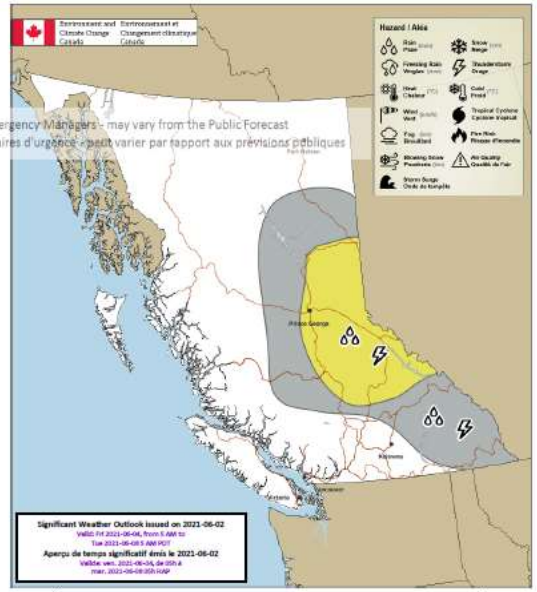


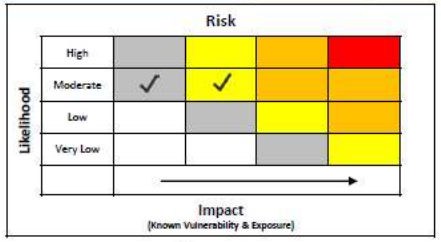
WEATHER NOTIFICATIONS

Environment and Climate Change Canada | Environnement et Changement climatique Canada

Major Weather Pattern Shift: Heat → Showers

Event Duration: Fri June 4 to Tues June 8, 2021





Impacts

- Rapid snowmelt due to recent heat has increased river flows throughout much of the BC interior; incoming precipitation could increase flows to greater levels of concern

June 2, 2021

Environment and Climate Change Canada | Environnement et Changement climatique Canada

Certainty

- **Transition from hot & dry to cool & wet:** We have a high degree of certainty in the overall pattern change.
- **Precipitation amounts:** We have moderate certainty in widespread showers occurring throughout the interior, however, the showery nature of the event and the possibility of thunderstorms may lead to highly varying amounts of total precipitation over short distances.

Key Points

- A strong ridge of high pressure brought summer-like temperatures (5-10°C above average) and freezing levels (3500-4000 m) to much of the B.C. interior this week.
- A major pattern shift takes place beginning as early as Friday as a cool, unstable air mass settles over the province.
- Periods of widespread showers with embedded thunderstorms will fall on river basins already vulnerable from snowmelt as depicted on the page 1 map
- Total rainfall amounts for a 4-day period stretching from Friday morning to Tuesday morning are as follows:
  - 20-30 mm is forecast for the higher terrain of the Upper Fraser East, Quesnel and North Thompson river basins; small pockets up to 40 mm possible
  - 10-20 mm for valley bottoms
- Freezing levels bottom out near 1800-2200 m Saturday morning through early next week
- The long range forecast beyond the event carries a great deal of uncertainty.

Next Update/WebEx

- No update expected. Please tune into ECCC and partner links to follow the latest weather and river forecasts.

Long Range Forecast – For BC Interior

Subsequent weather notifications will be issued as needed

Wed June 9	Thurs June 10	Fri June 11

June 2, 2021 1

Environment and Climate Change Canada | Environnement et Changement climatique Canada

Additional Information

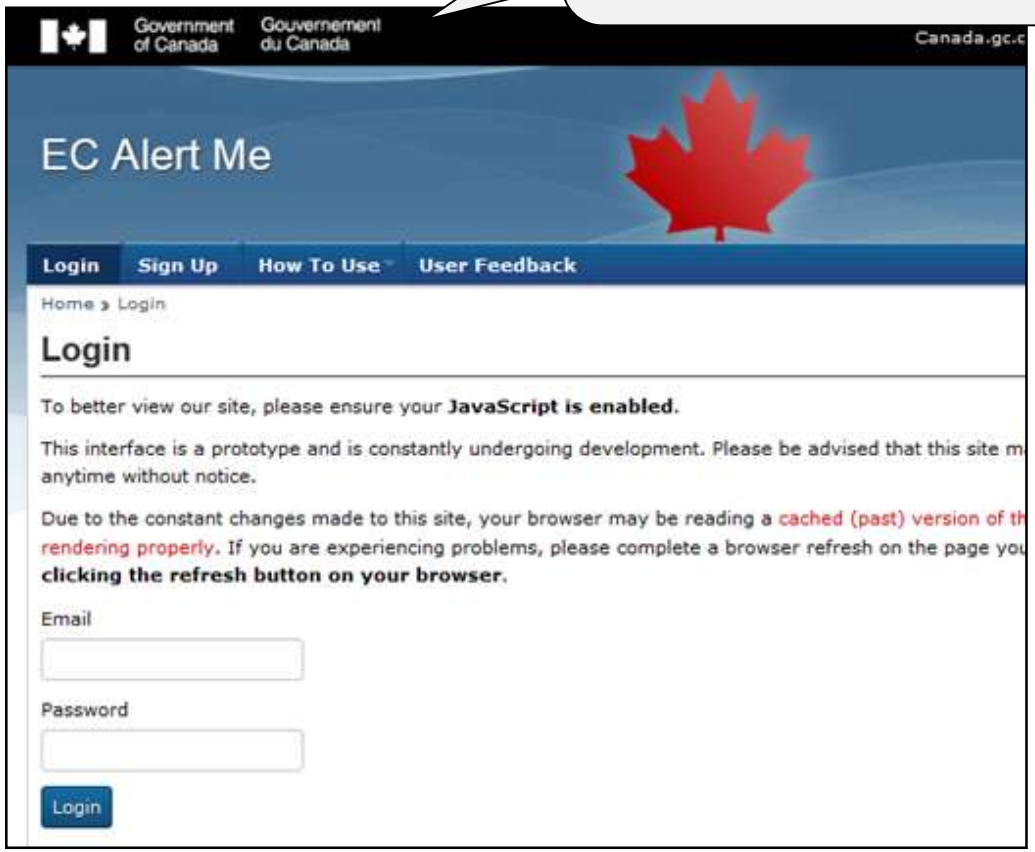
- Please monitor current weather forecasts and alerts:
  http://weather.gc.ca/canada_e.html
  http://weather.gc.ca/warnings/index_e.html
- Please consult the following websites for further information:
  http://bcrfc.env.gov.bc.ca/freshet/map_all_wsc.html
  http://bcrfc.env.gov.bc.ca/warnings/index.htm
  https://www.avalanche.ca/weather/forecast
  www.drivebc.ca

To get on the distribution list, please contact us: MeteoPac@ec.gc.ca

June 2, 2021 2

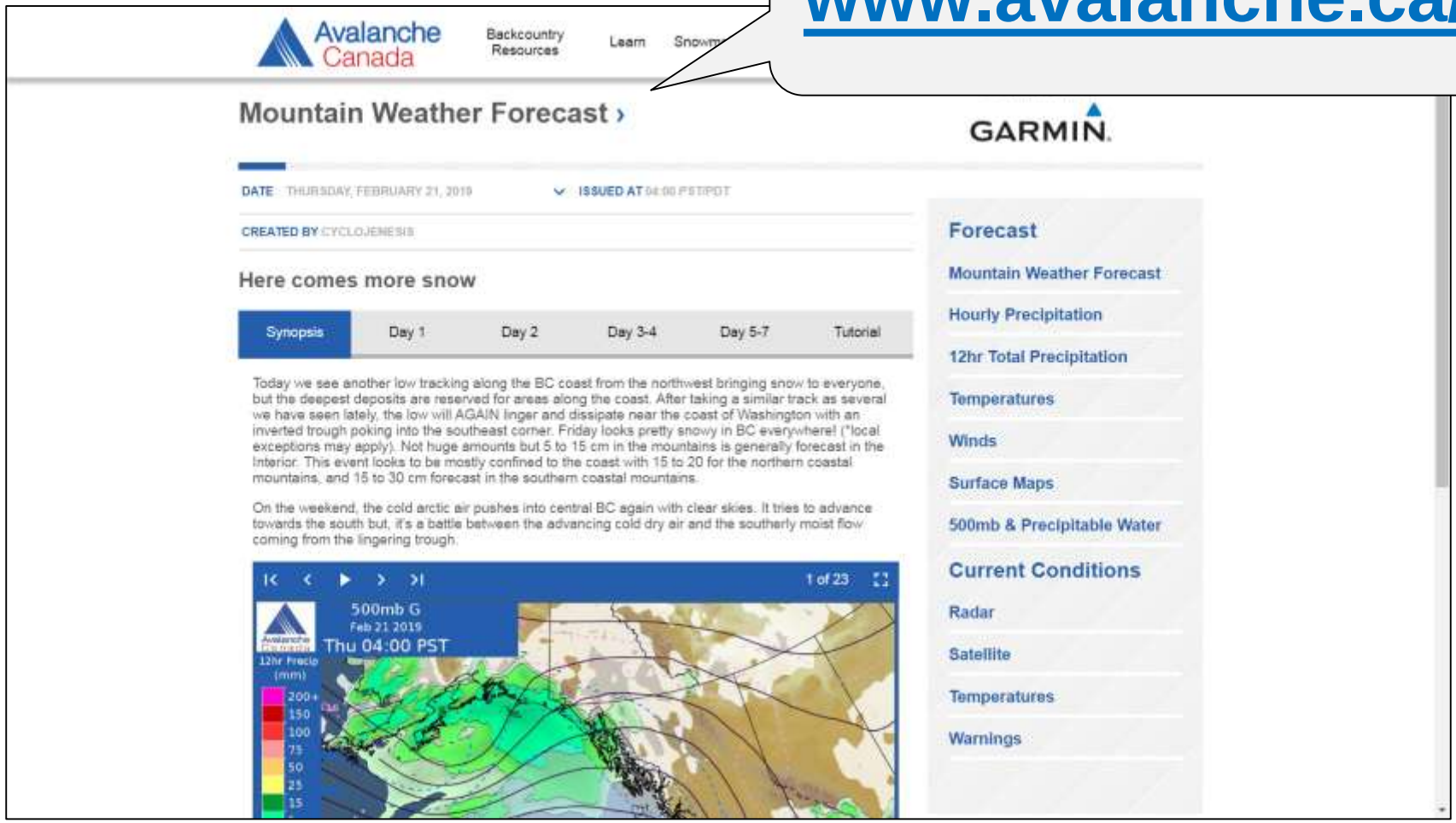
EC ALERT ME

ecalertme.weather.gc.ca



DAILY WEATHER BLOG

www.avalanche.ca/weather



GETTING SPECIFIC WEATHER INFORMATION

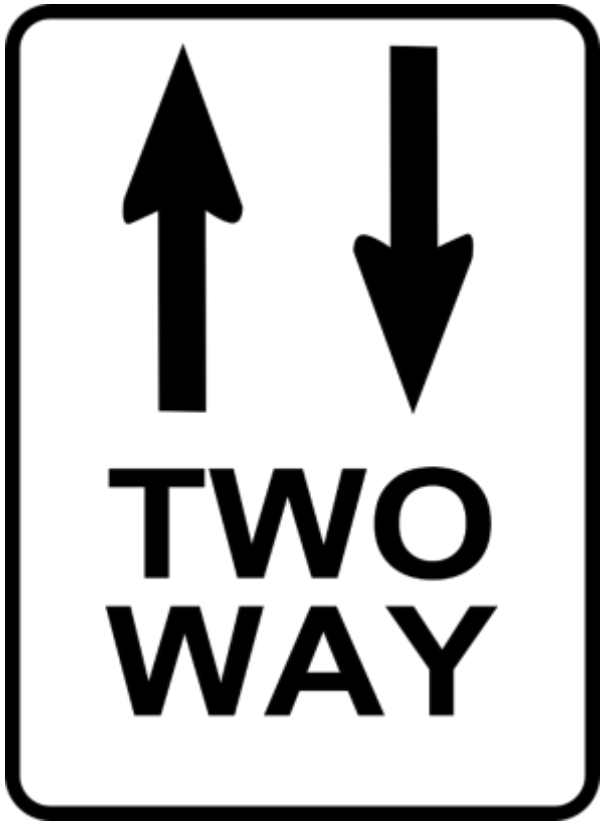
Immediate Support Needed

- Contact EMCR PDM who will get in touch with us or the NEEC

Non-urgent weather question

- You may contact us directly at meteopac@ec.gc.ca

HOW CAN WORKING WITH YOU HELP?



- Two way communication
- Awareness about local weather sensitivities
- Improve future alerts and messaging

HOW CAN WORKING WITH YOU HELP?



- EMCR coordination calls – feel free to send questions ahead of time
- Share impacts, lack of impacts
- EMCR emergency number:

  1 800 663-3456

SUMMARY

- Spring is a transition season to warm and dry weather
- Watch out for hazards, especially from outside of region
- Recent wet weather has only partially helped with the precipitation deficit from March and past year
- Warmest weather of the season so far, coming this weekend
- Seasonal outlook indicates warm trend
- For urgent weather/environmental needs, please go through EMCR

For non-urgent weather information here is our team email:

MeteoPac@ec.gc.ca



Vancouver Island Coastal 2023 Spring Seasonal Readiness Workshop

MAY 9, 2023

JON GOETZ, PAG, HYDROLOGIST

RIVER FORECAST CENTRE

Core Drought Indicators & Thresholds

Table 3: Drought Indicators Criteria Summary.*

		Timing of Use	
		Early Season	**Drought Season**
Indicator	**Core Indicators**	Basin Snow Measures	7-Day Average Stream flow (Percentiles)
		Seasonal Volume Runoff Forecasts	30 Day Precipitation (Percentiles)
	Supplemental Indicators	All supplemental indicators listed above may be used throughout early season or drought season as appropriate	

Table 5: Drought Season Core Indicator Thresholds and Levels.

Indicator	Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
30 Day* Precipitation (Percentiles)	>30th	21st - 30th	11th - 20th	6th - 10th	2nd - 5th	< 2nd
7-Day Average Streamflow (Percentiles)	>30th	21st - 30th	11th - 20th	6th - 10th	2nd - 5th	< 2nd

*The 30-day time scale is used for this criterion, but other timescales (60, 90 or 180 days) will also usually be referred to.

Supplemental Indicators

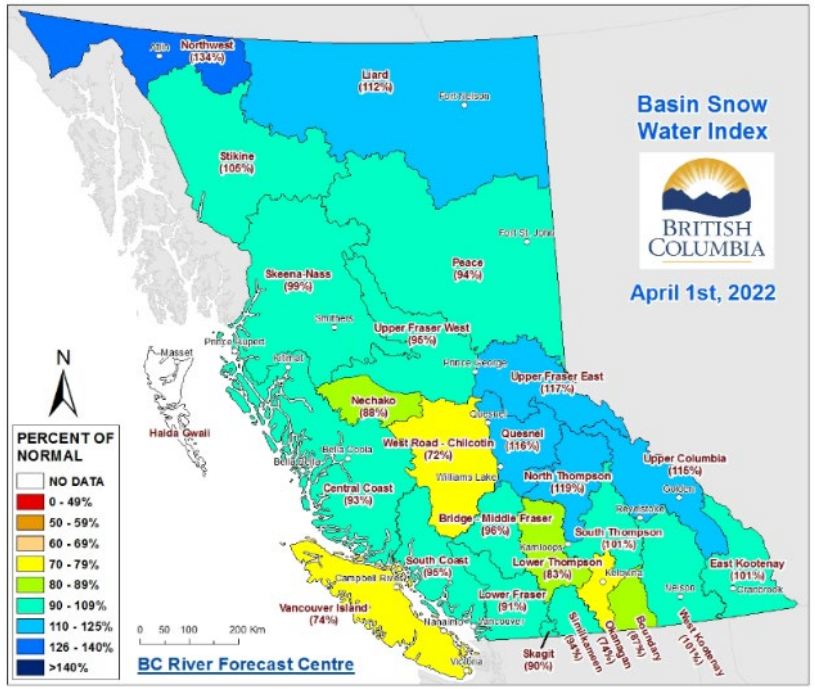
Supplemental indicators that may be considered include:

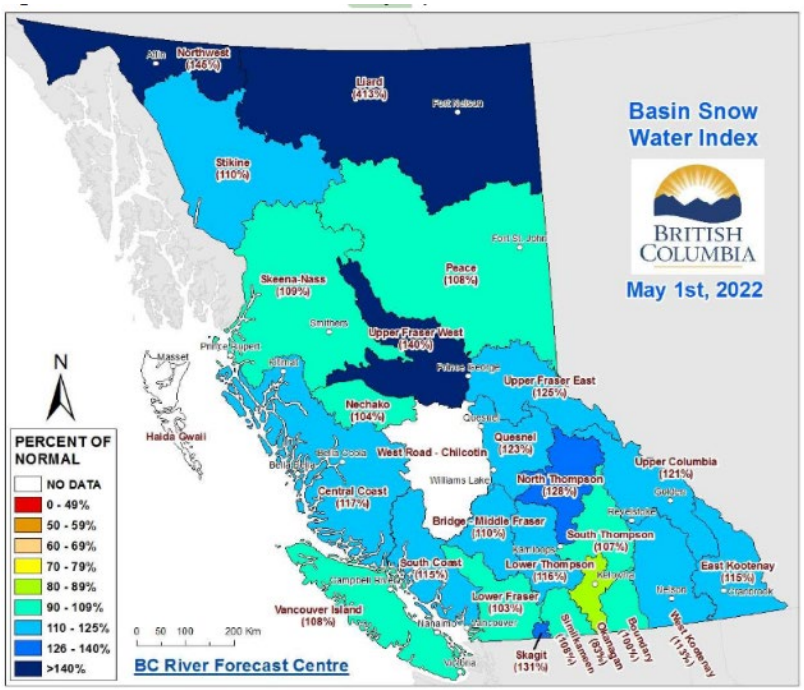
- Air temperatures;
- Stream water temperature;
- Aquifer levels;
- Community or commercial operations responding to low snowpack or low water supplies;
- Forecasts of stream flows from hydrologic models;
- Groundwater levels and soil moisture deficits;
- Indicator aquatic species;
- Individual indicator hydrometric station results;
- Measured flows at discontinued WSC or provincial hydrometric stations;
- Multi-year trends;
- Percent mean annual discharge (% MAD);
- Precipitation deficits at longer timescales (2-6 months);
- Reports of fish stress and other ecosystem impacts;
- Reports of low flows;
- Reservoir inflows, storage, or lake levels;
- Scientific drought indicators (e.g., Palmer Drought Severity Index, Standardized Precipitation Index);
- Short- and long-term weather forecasts;
- Streamflow characteristics at longer timescales (e.g., cumulative streamflow over 1-6-month periods); and,
- Wildfire danger class ratings and wildfire “Drought Codes”.

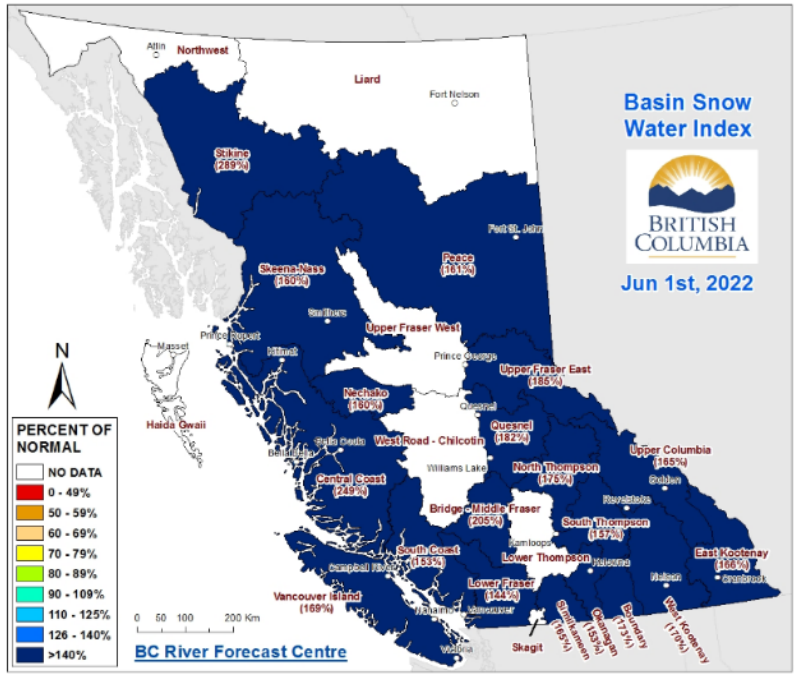
British Columbia Drought and Water Scarcity Response Plan

https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/drought-info/drought_response_plan_final.pdf

Snow Basin Water Index 2022

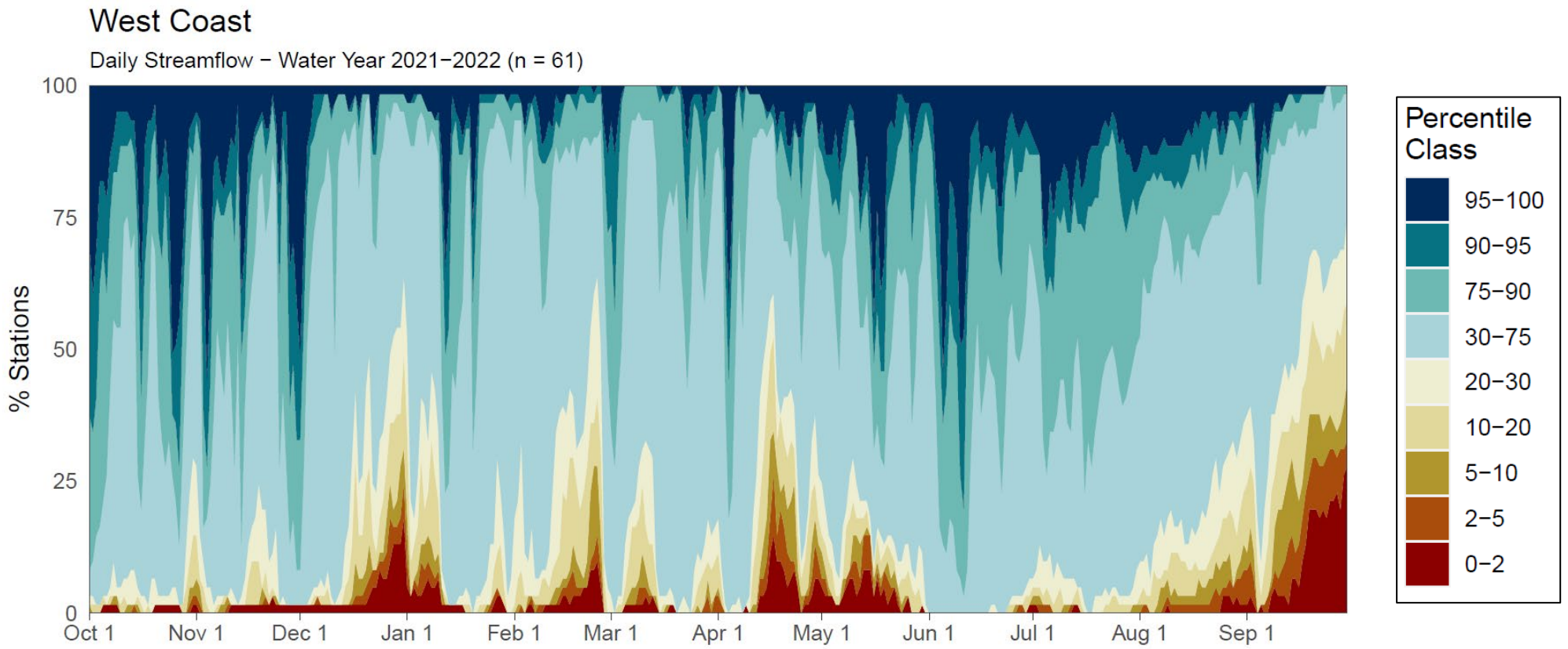




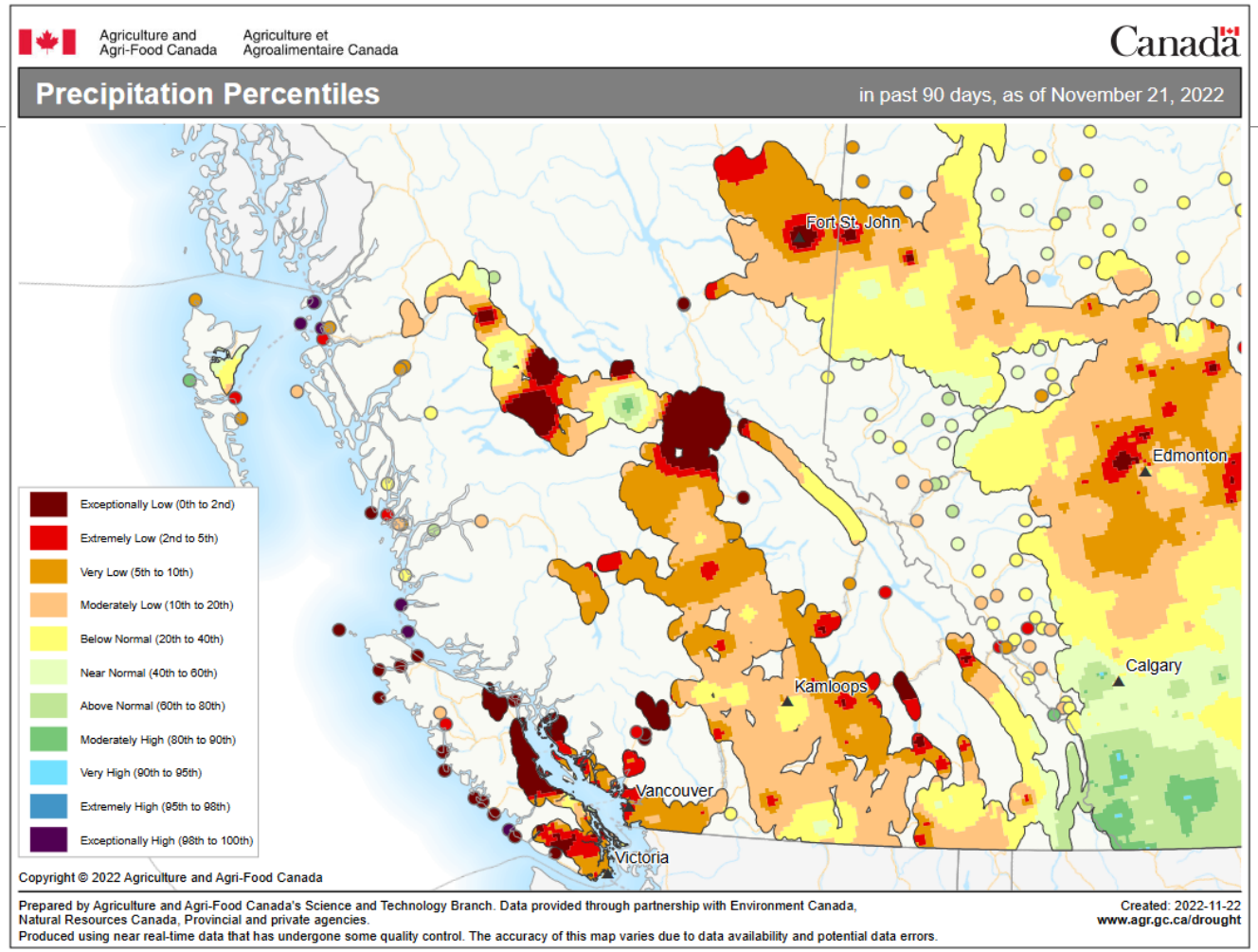


Extended cold weather pushed freshet well into June and July

West Coast Streamflow Percentiles 2022

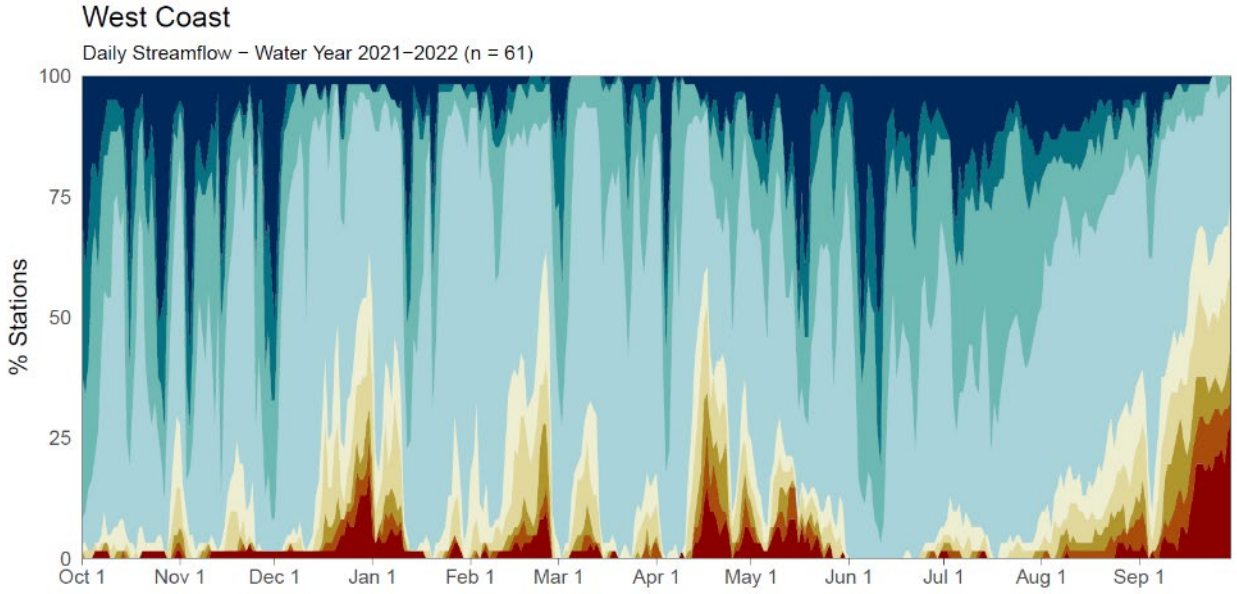


90-Day Precipitation Deficit – Nov 21, 2022

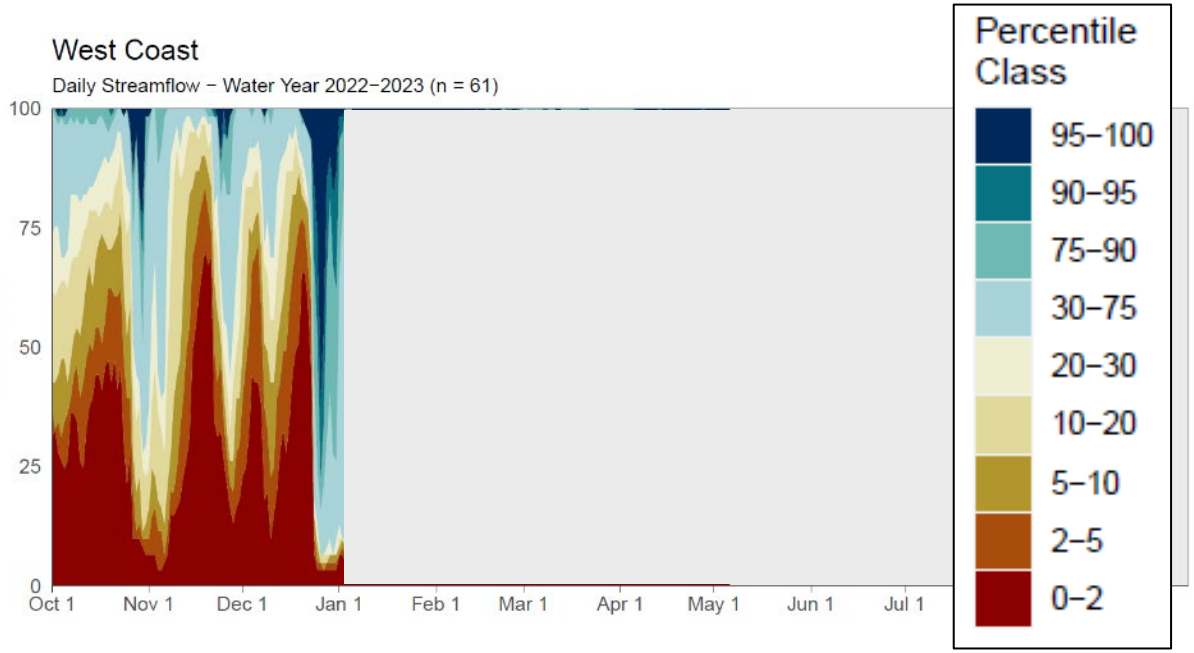


Daily Streamflow Percentiles 2022

2021-2022

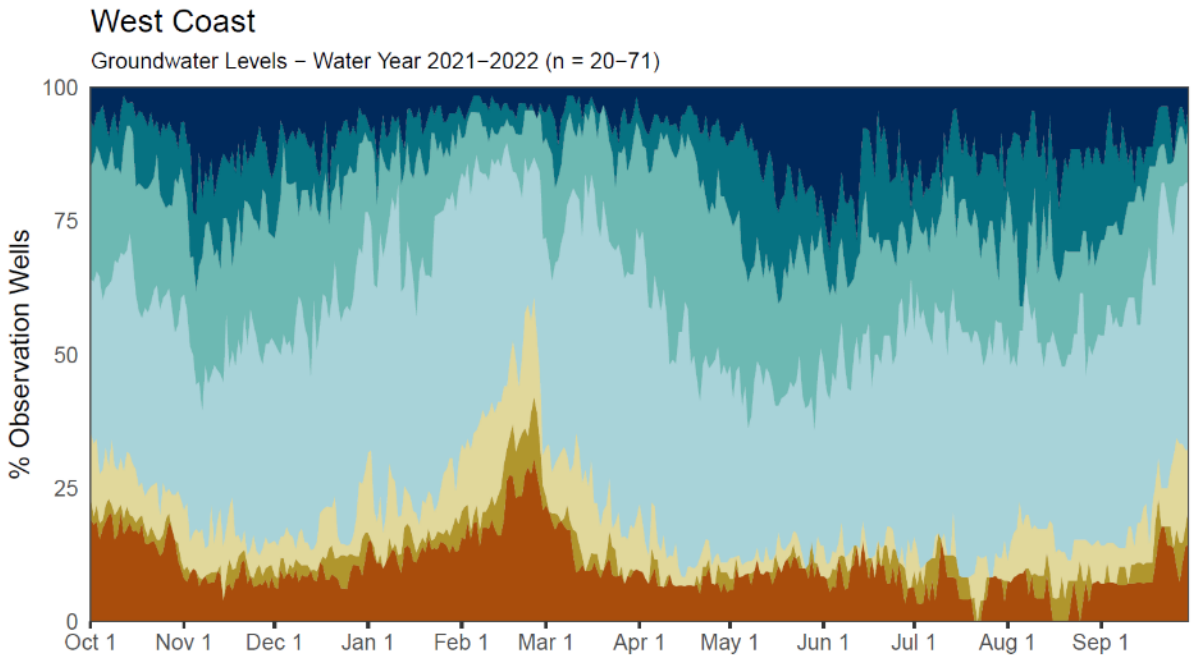


2022-2023

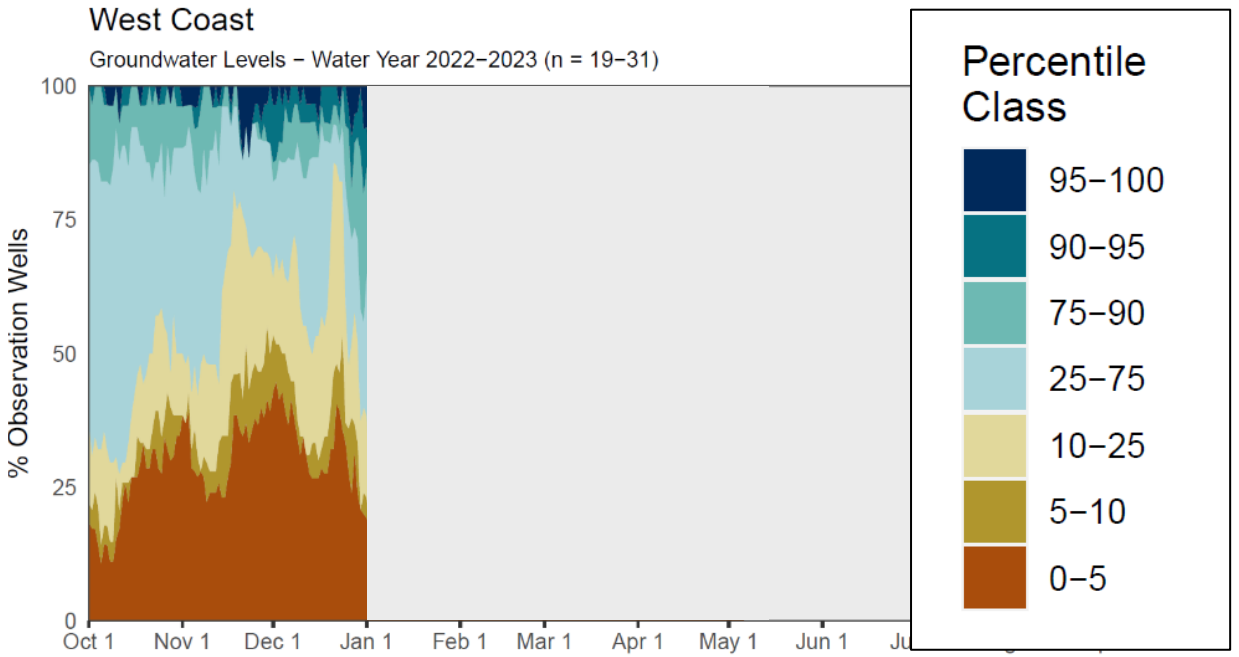


Groundwater Percentiles 2022

2021-2022



2022-2023



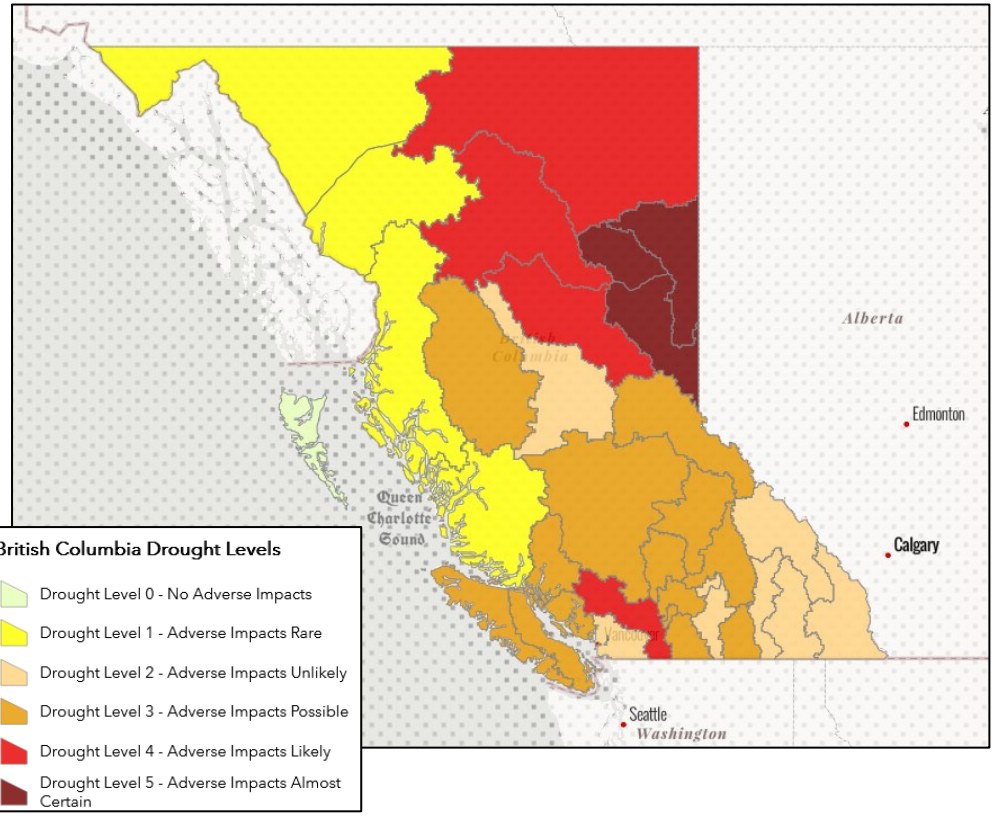
Drought Levels - Dec 1, 2022

2022 DROUGHT LEVELS AT A GLANCE

Drought Levels: 0 | 1 | 2 | 3 | 4 | 5

BASINS	30-Jun	14-Jul	21-Jul	28-Jul	04-Aug	11-Aug	25-Aug	01-Sep	08-Sep	15-Sep	22-Sep	06-Oct	13-Oct	20-Oct	27-Oct	03-Nov	10-Nov	24-Nov	01-Dec
Fort Nelson	0	0	0	0	0	0	1	2	3	3	4	4	5	5	5	5	5	5	4
East Peace	0	0	0	1	1	1	1	2	3	3	3	4	5	5	5	5	5	5	5
North Peace	0	0	0	0	0	0	1	1	2	2	3	4	5	5	5	5	5	5	5
South Peace	0	0	0	0	0	0	1	2	3	3	3	4	5	5	5	5	5	5	5
Northwest	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stikine	0	0	0	1	1	1	1	0	0	0	1	1	1	2	1	1	1	1	1
Skeena-Nass	0	0	0	1	1	1	1	0	0	0	1	2	2	2	2	1	1	1	1
Bulkley-Lakes	0	0	0	1	1	1	1	1	1	1	2	3	3	3	3	3	3	3	3
Finlay	0	0	0	1	1	1	2	2	2	2	2	3	3	4	4	4	4	4	4
Parsnip	0	0	0	1	1	1	1	1	1	1	2	3	3	4	4	4	4	4	4
Upper Fraser West	0	0	0	1	1	1	1	1	1	1	1	2	2	3	2	2	2	2	2
Upper Fraser East	0	0	0	1	1	1	1	1	1	1	1	2	2	3	3	3	3	3	3
Upper Columbia	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
Lower Columbia	0	0	1	1	1	1	1	1	1	1	1	2	2	3	3	3	2	2	2
West Kootenay	0	0	1	1	1	1	1	1	1	1	1	2	2	3	3	3	2	2	2
East Kootenay	0	0	0	0	0	1	1	1	1	1	1	2	2	3	3	3	2	2	2
Kettle	0	0	0	1	1	1	3	3	3	3	3	4	4	5	5	5	3	3	3
Middle Fraser	0	0	0	1	1	1	1	1	1	1	1	2	2	3	3	3	3	3	3
Lower Thompson	0	0	0	0	0	1	1	1	1	1	1	2	2	3	3	3	3	3	3
North Thompson	0	0	0	0	0	1	1	1	1	1	1	2	2	3	3	3	3	3	3
South Thompson	0	0	0	0	0	1	1	1	1	1	1	2	2	3	3	3	3	3	3
-Salmon River	0	0	0	0	0	1	2	2	2	2	2	2	2	3	3	3	2	2	2
Nicola	0	0	0	0	0	1	1	1	2	2	2	3	3	4	4	4	3	3	3
-Coldwater River	0	0	0	0	0	1	2	2	3	3	3	3	3	4	4	4	3	3	3
Okanagan	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2
Central Pacific Range	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	3	3	4	3
Eastern Pacific Range	0	0	0	1	1	1	1	2	2	2	3	4	4	5	5	3	3	4	4
Sunshine Coast	0	0	0	1	1	1	2	2	3	3	4	5	5	5	5	4	4	4	3
Lower Mainland	0	0	0	1	1	1	2	2	3	4	4	5	5	5	4	3	3	4	2
Central Coast	0	0	0	0	1	1	2	1	1	2	2	3	4	4	3	3	3	4	1
West Vancouver Island	0	0	0	1	2	2	3	3	3	3	4	5	5	5	4	2	2	4	3
East Vancouver Island	0	0	0	1	2	2	3	3	3	3	4	4	5	5	5	3	3	4	3
Haida Gwaii	0	0	0	0	1	2	3	1	0	0	1	3	4	4	2	0	0	1	0

Prepared By: Water Management Branch - Ministry of Forests



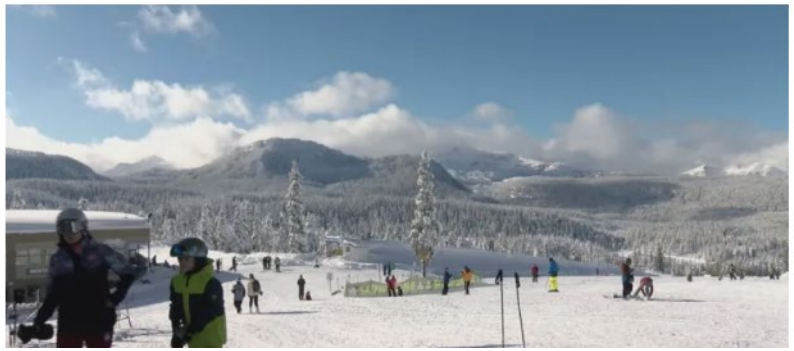
Drought Issues Into Winter

British Columbia

Severe water shortage at B.C. ski resort forces staff to ask visitors to bring their own

Vancouver Island is experiencing its worst drought levels in 15 years, Mount Washington resort says

CBC News · Posted: Dec 08, 2022 1:41 PM PST | Last Updated: December 8, 2022



VANCOUVER SUN

Water restrictions lifted on Sunshine Coast as disastrous drought sidestepped

Effective immediately, Stage 1 water conservation regulations have been removed in the Chapman water system.

CANADIAN PRESS The Canadian Press

Published Feb 06, 2023 · 1 minute read

Join the conversation

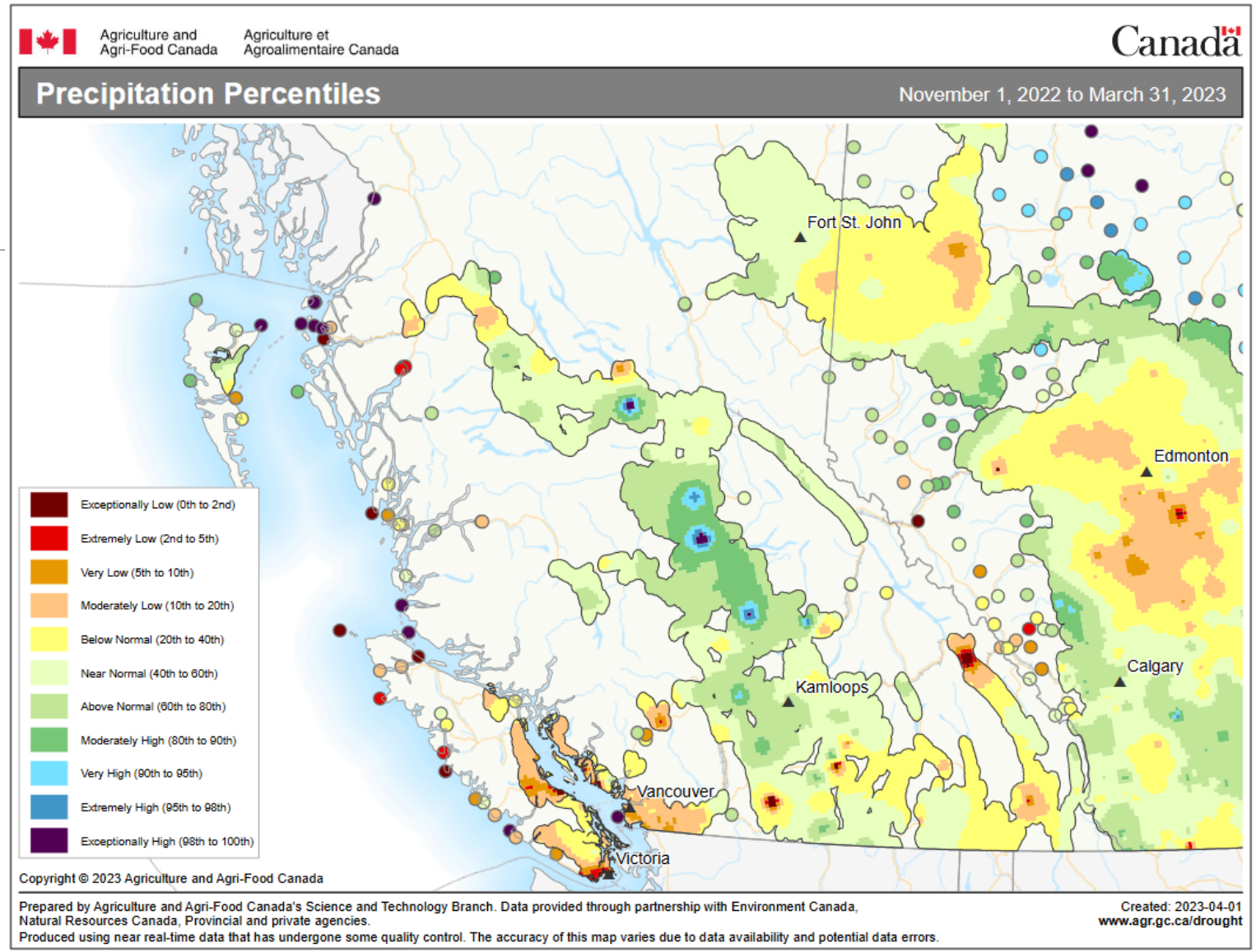


Accumulated Precipitation Nov-Apr

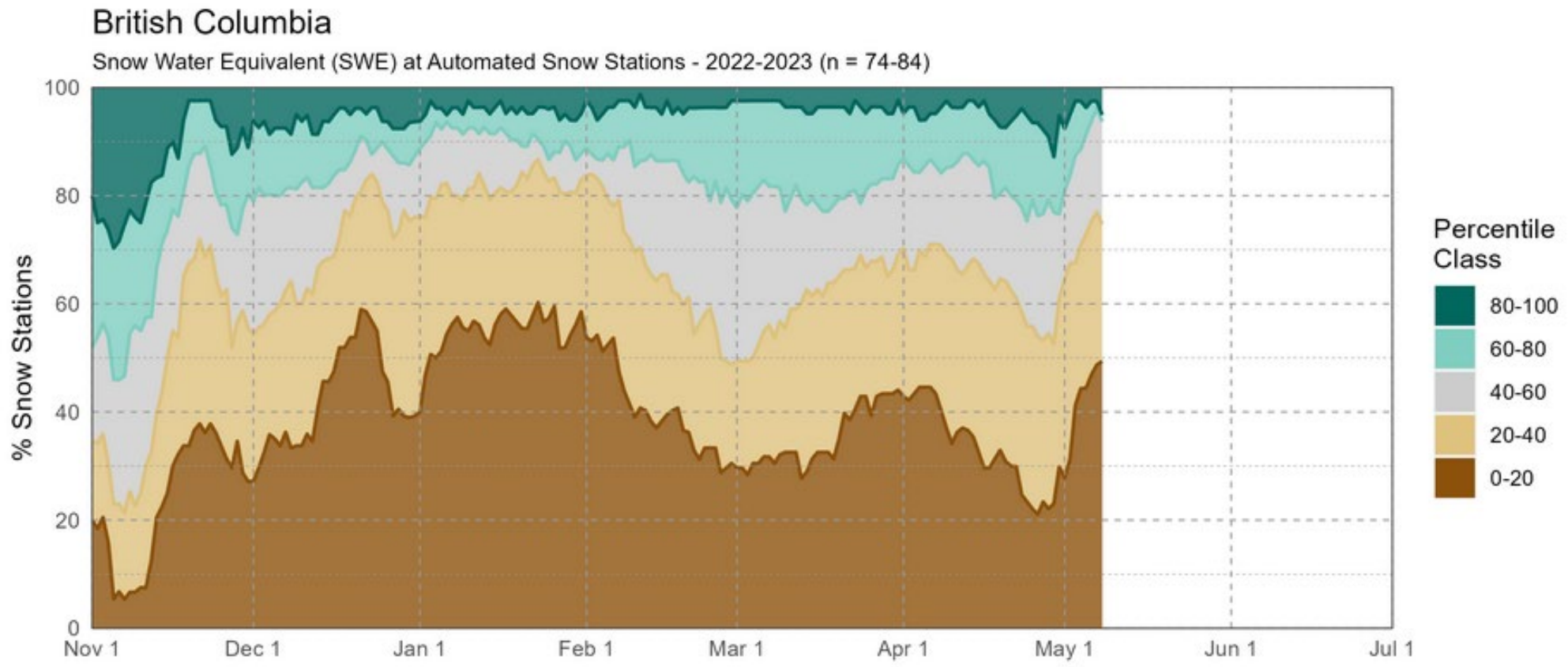
Climate Region Name	Station Name	Nov/22 - Apr/23 Total Precip	Nov - Apr Normal Precip	Nov/22 - Apr/23 Percent of Normal Precip	Locations of Concern
Southeast Vancouver Island	CHEMAINUS	846.3	1050.9	80.5%	
Southeast Vancouver Island	NORTH COWICHAN	557.7	866.9	64.3%	Too Dry
Southeast Vancouver Island	SAANICHTON CFIA	453.5	662.5	68.5%	Too Dry
Southeast Vancouver Island	SHAWNIGAN LAKE	766.8	960.2	79.9%	
Southeast Vancouver Island	VICTORIA INTL A	479.3	653.9	73.3%	
East Vancouver Island	CAMPBELL RIVER A	914.1	1056.7	86.5%	
East Vancouver Island	COMOX A	736.6	844.8	87.2%	
East Vancouver Island	PORT HARDY A	851.9	1254.5	67.9%	Too Dry
West Vancouver Island	CAPE BEALE LIGHT	1668.5	2013.1	82.9%	
South Coast	GIBSONS GOWER POINT	823.2	925.6	88.9%	
South Coast	MERRY ISLAND LIGHTSTATION	511.7	687.2	74.5%	
South Coast	POWELL RIVER A	603.8	798.1	75.7%	
South Coast	SECHELT AUT	540.6	925.6	58.4%	Too Dry
North Coast	ADDENBROKE ISLAND	1557.5	2034.9	76.5%	
North Coast	BELLA COOLA AIRPORT	544.2	712.6	76.4%	
North Coast	DRYAD POINT	1368.3	1524.5	89.8%	
North Coast	MCINNES ISLAND	985.4	1575.4	62.5%	Too Dry
North Coast	TERRACE A	706.7	818	86.4%	

Precipitation Percentiles

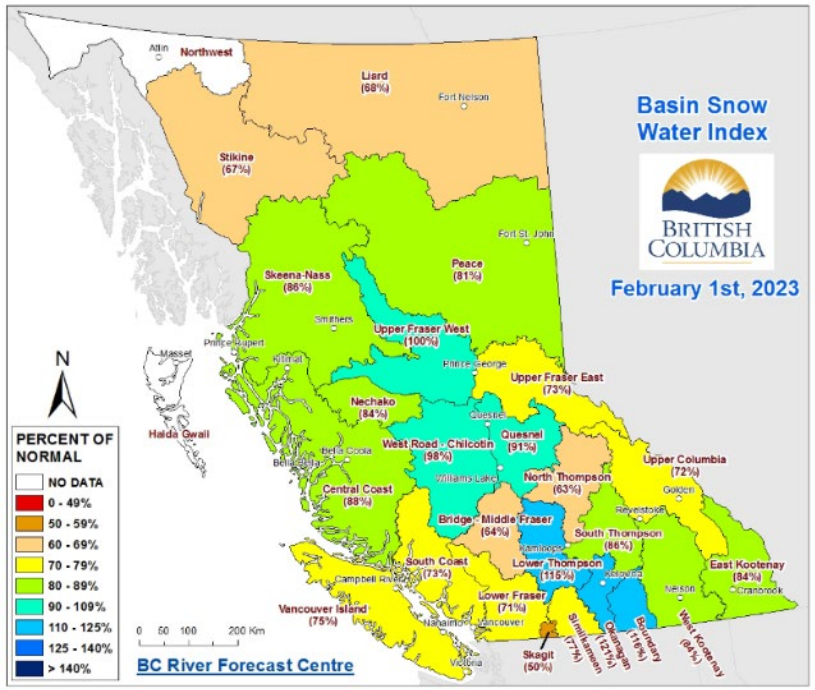
- Precipitation deficit continued in many areas of B.C.
- Low lying coastal areas large precipitation deficit
- Winter snowpack was largely normal to below-normal by end of March

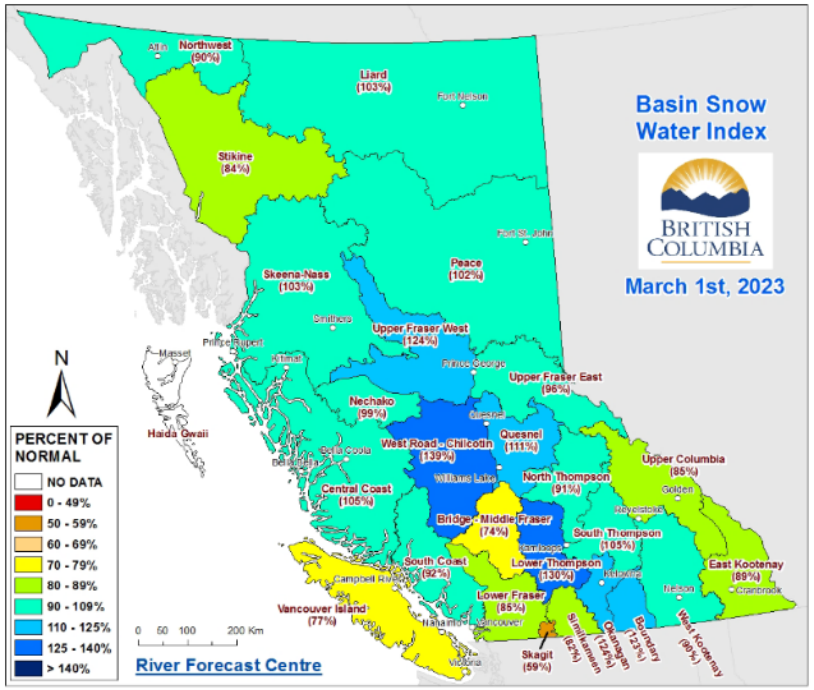


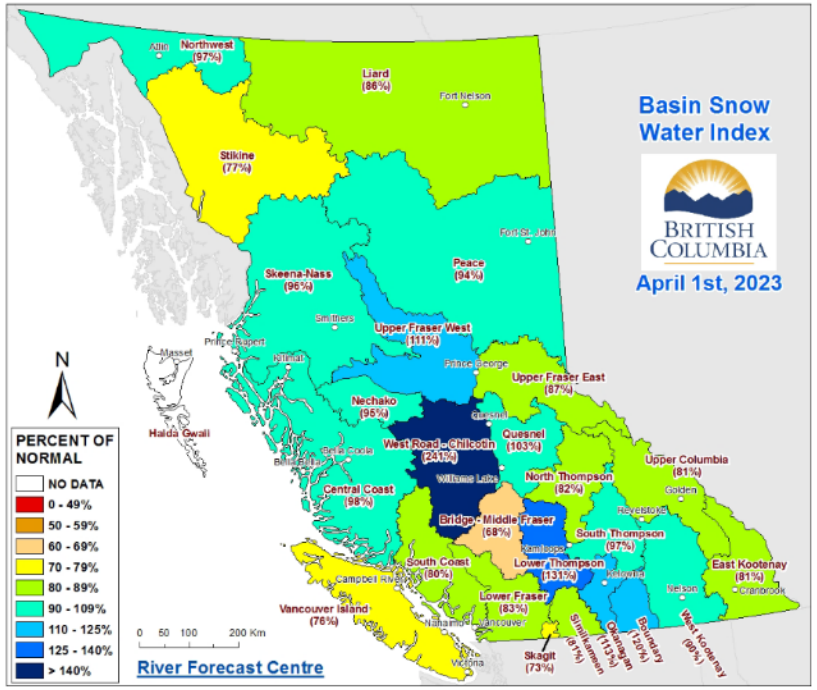
SWE Percentiles



Snow Basin Water Index 2023

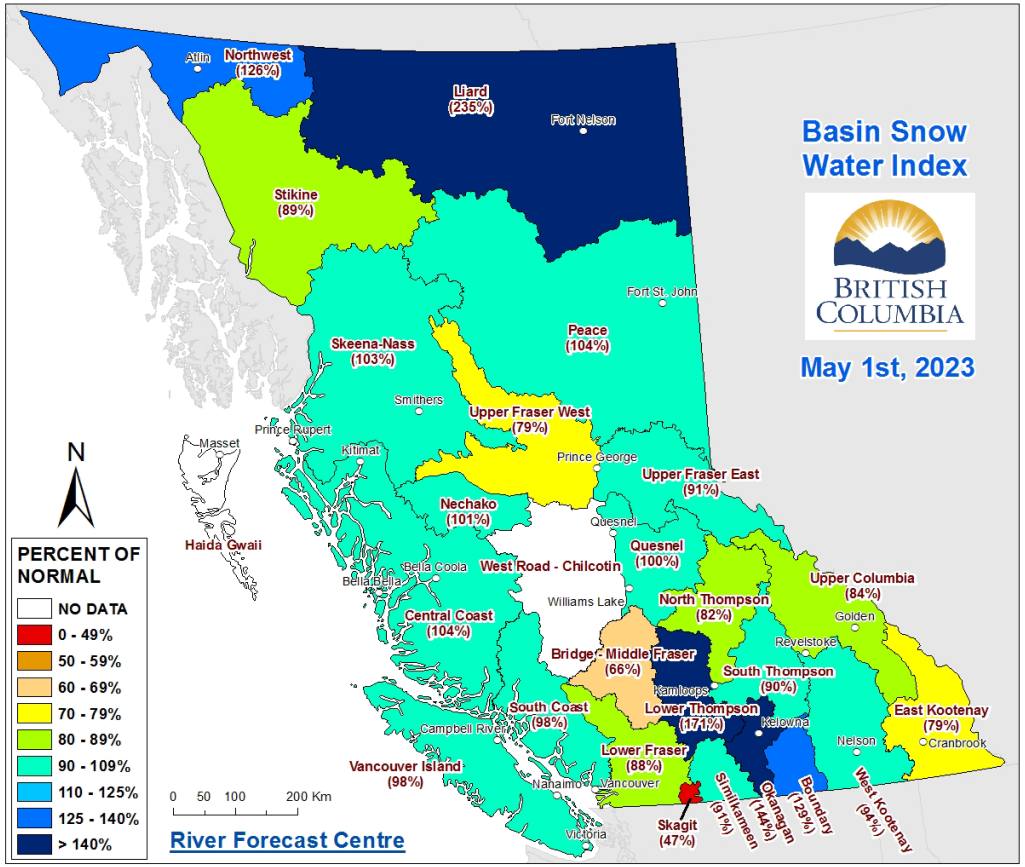




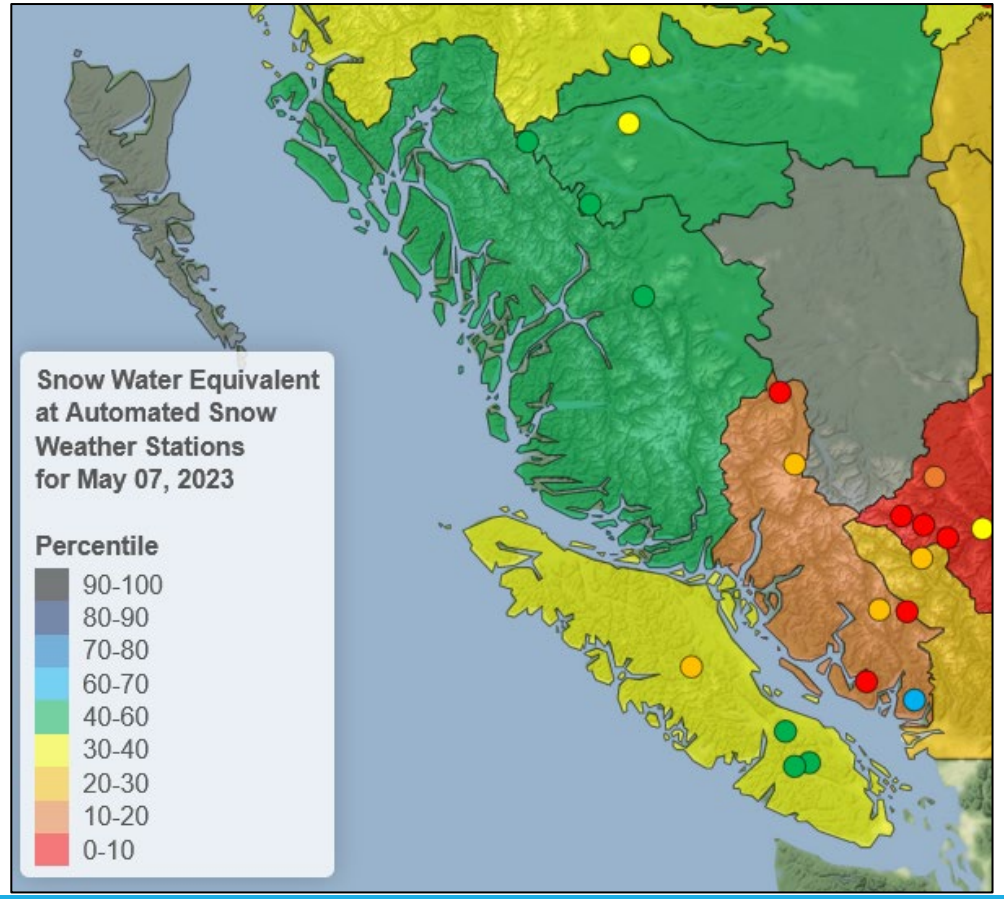


Snow Basin Water Index – May 1 2023

Next Bulletin (May 15th) scheduled for release May 19!

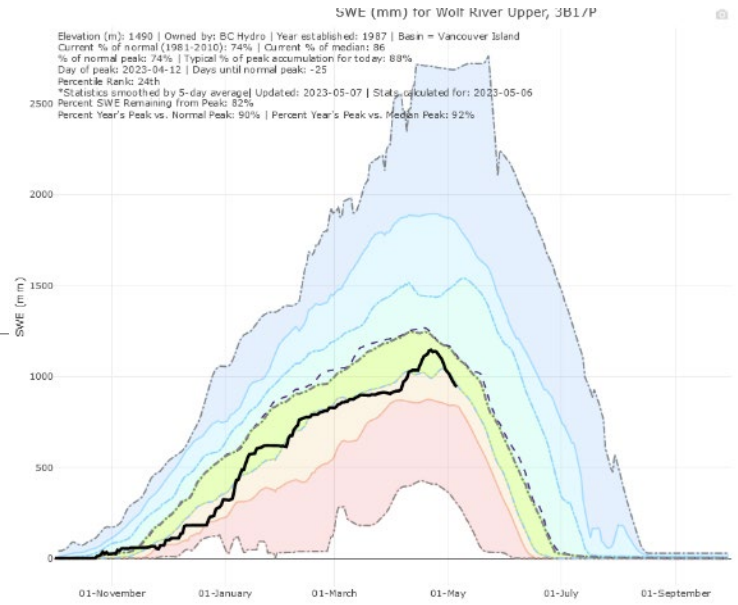


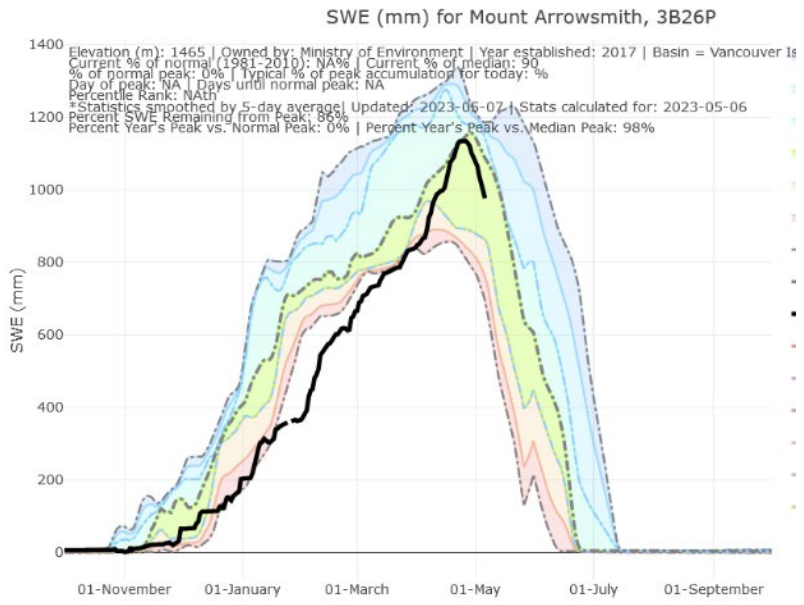
ASWS Snow Percentiles – May 7

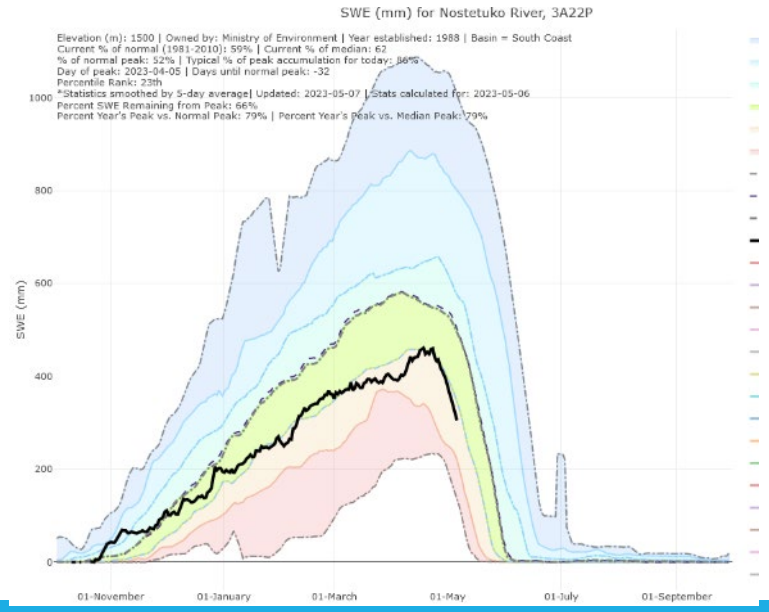


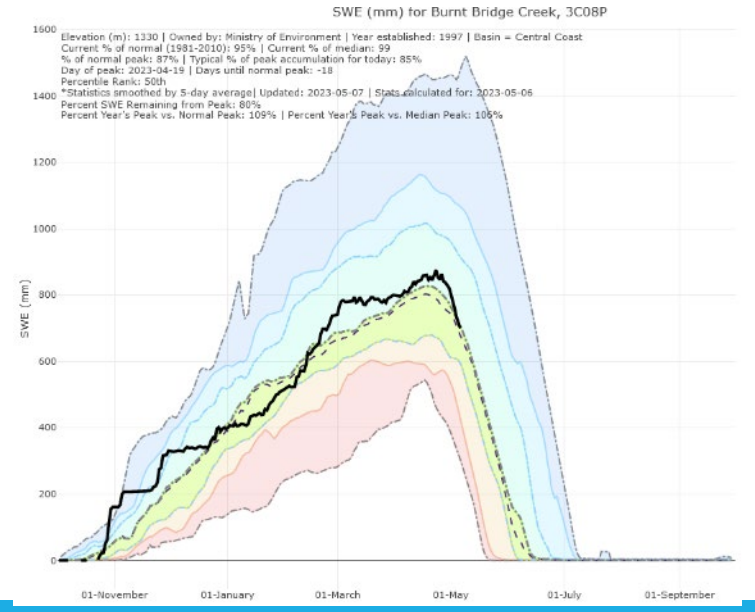
SWE Percentiles

- Island started below normal, relatively dry March, wetand cold April boosted snowpack
- Central coast normal throughout season
- Freshet season melt has begun



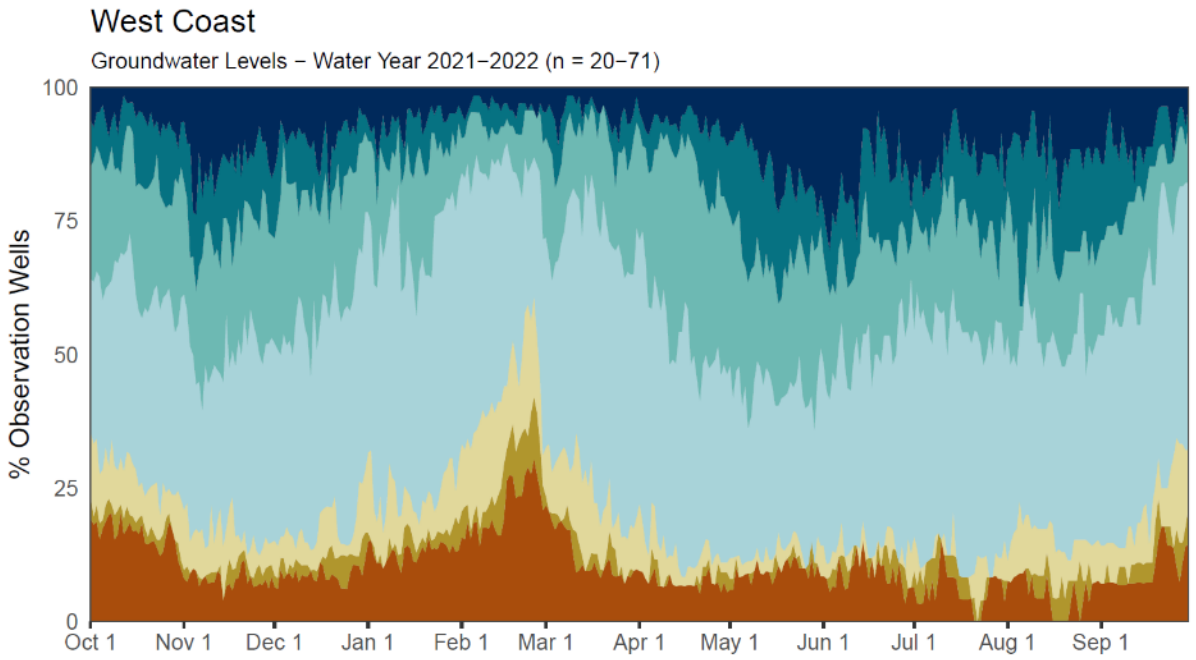




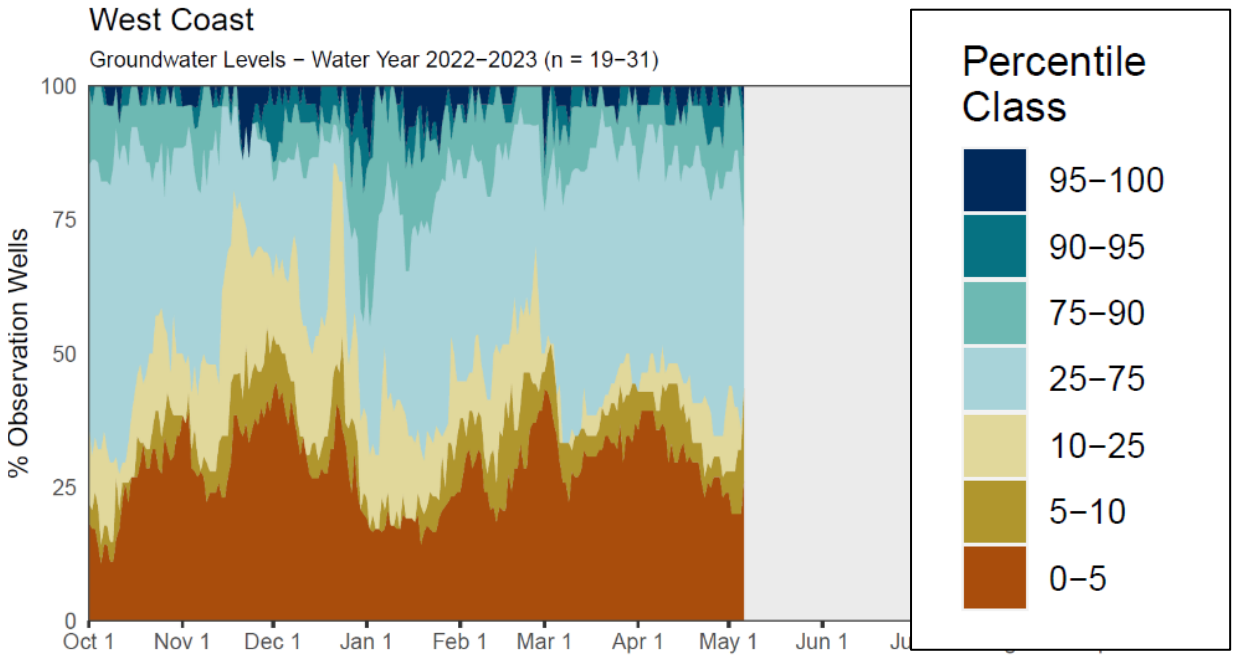


Groundwater Percentiles

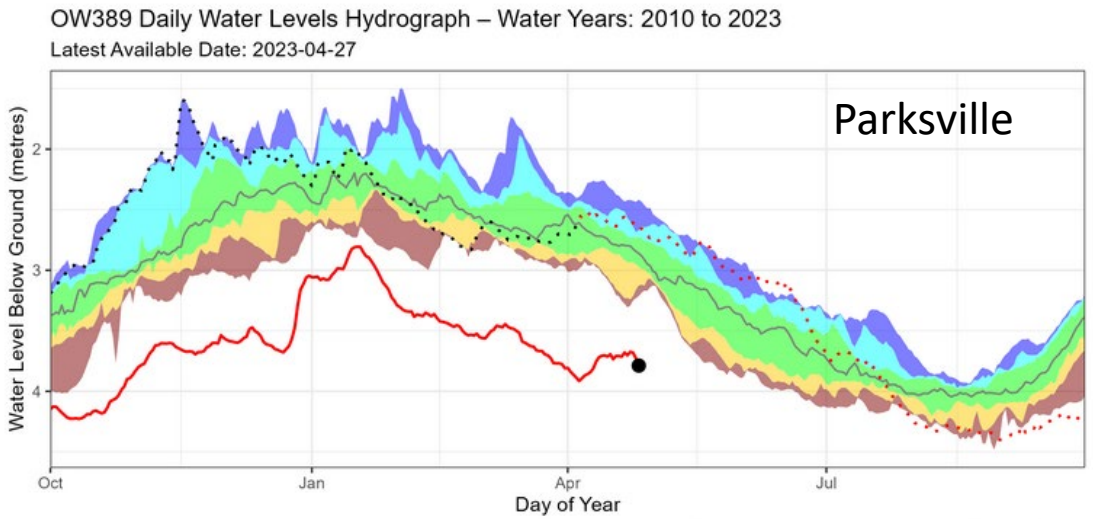
2021-2022

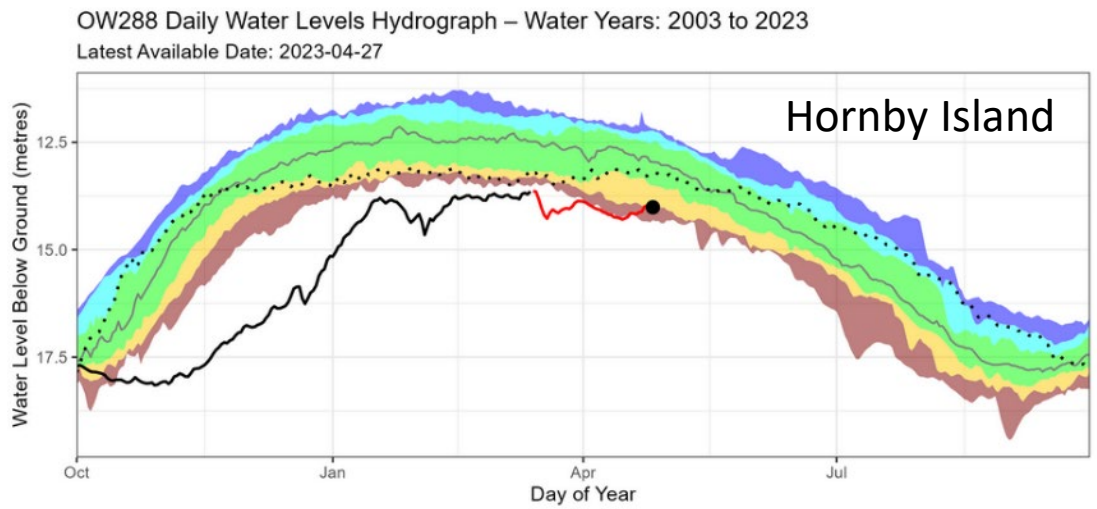


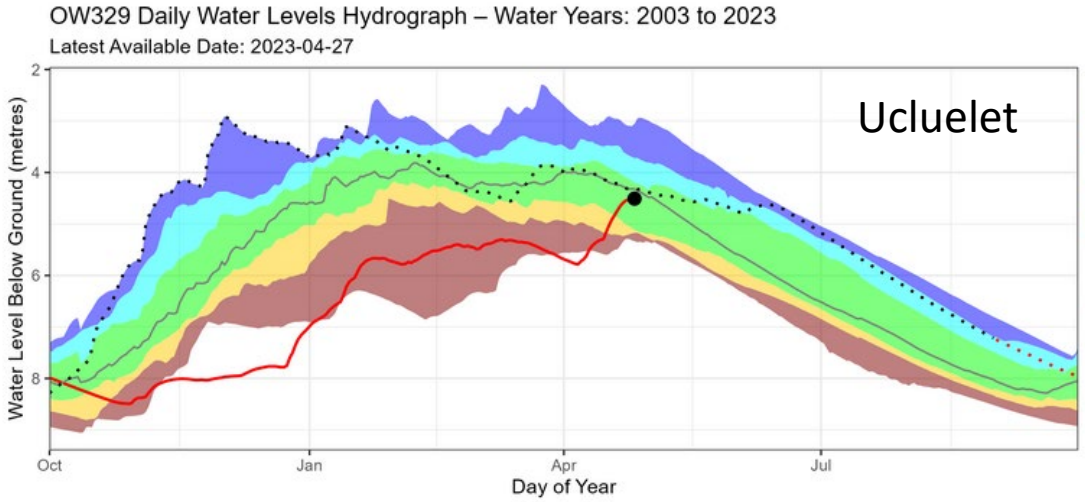
2022-2023

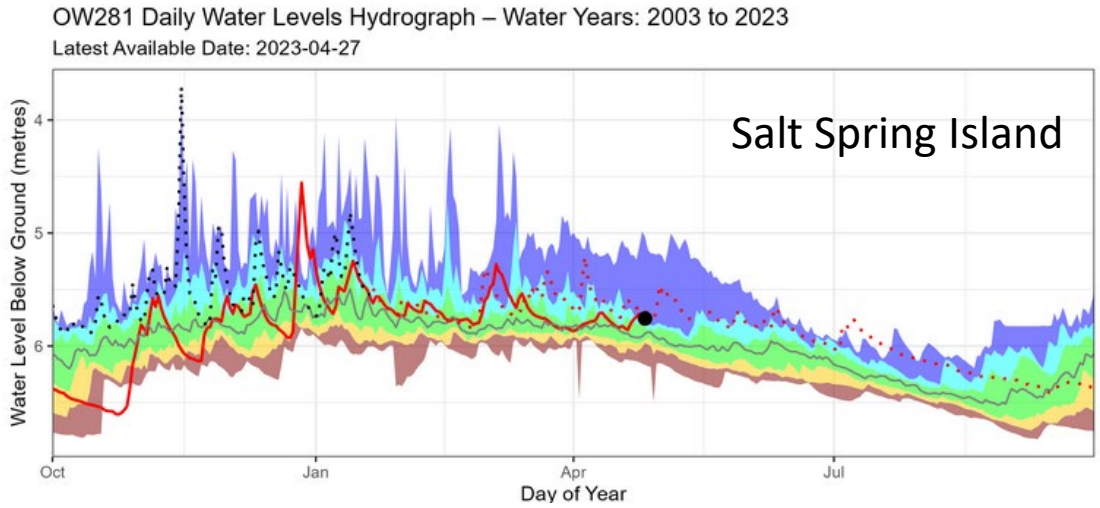


Groundwater Percentiles



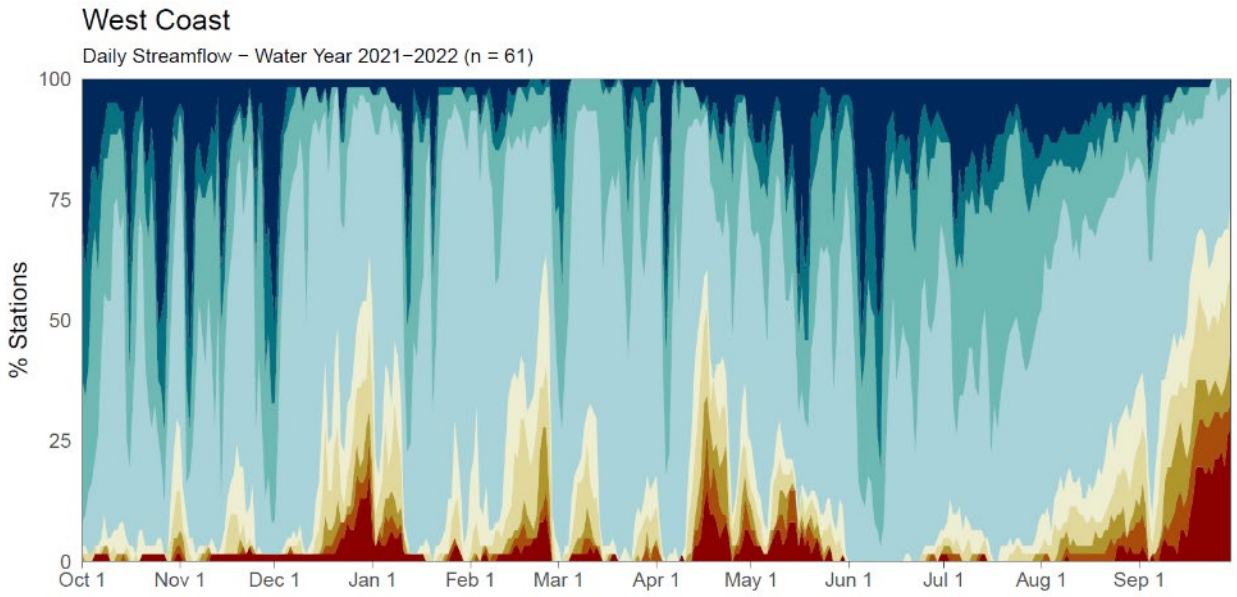




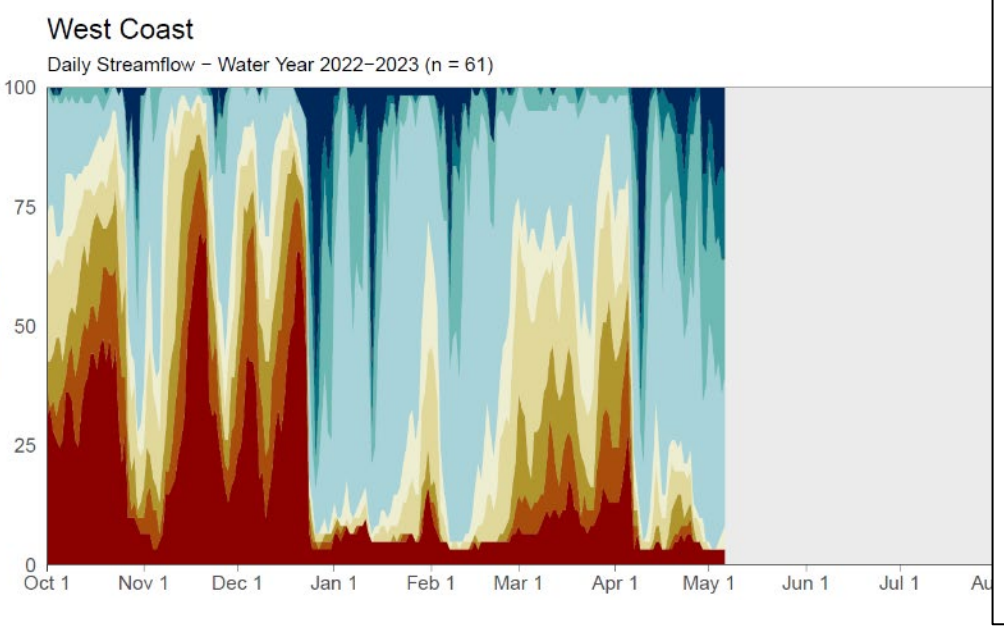


Daily Streamflow Percentiles

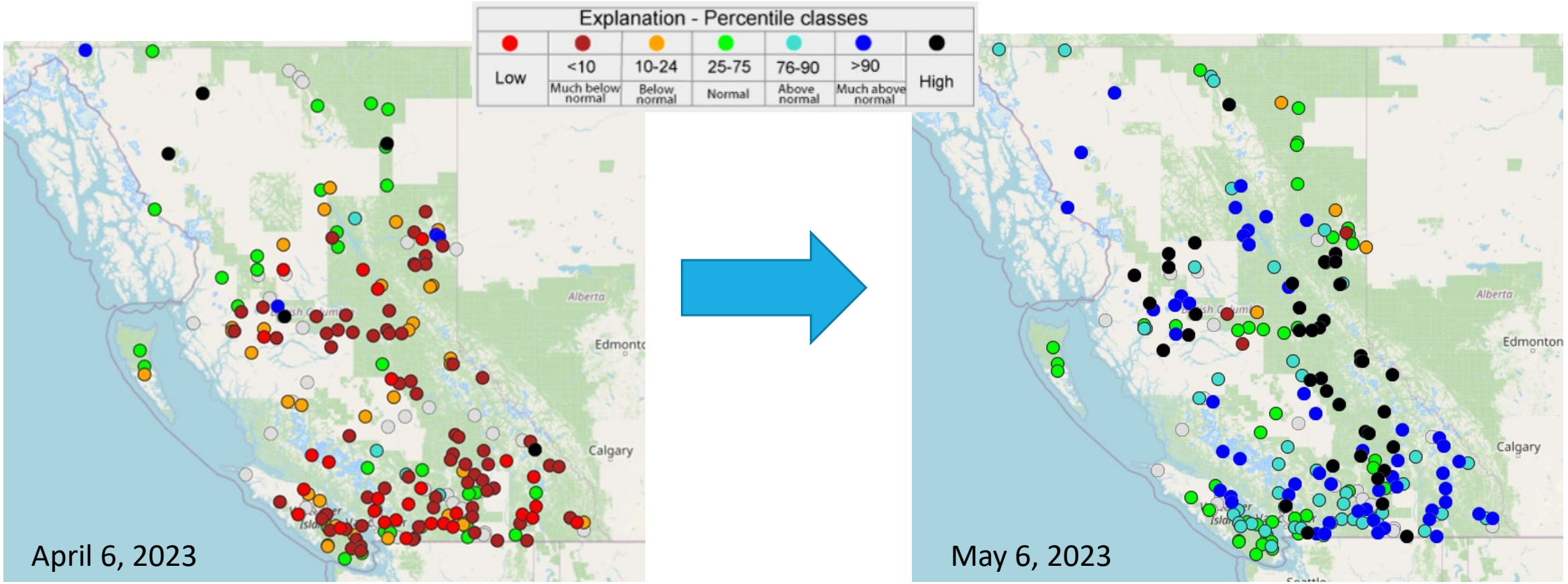
2021-2022



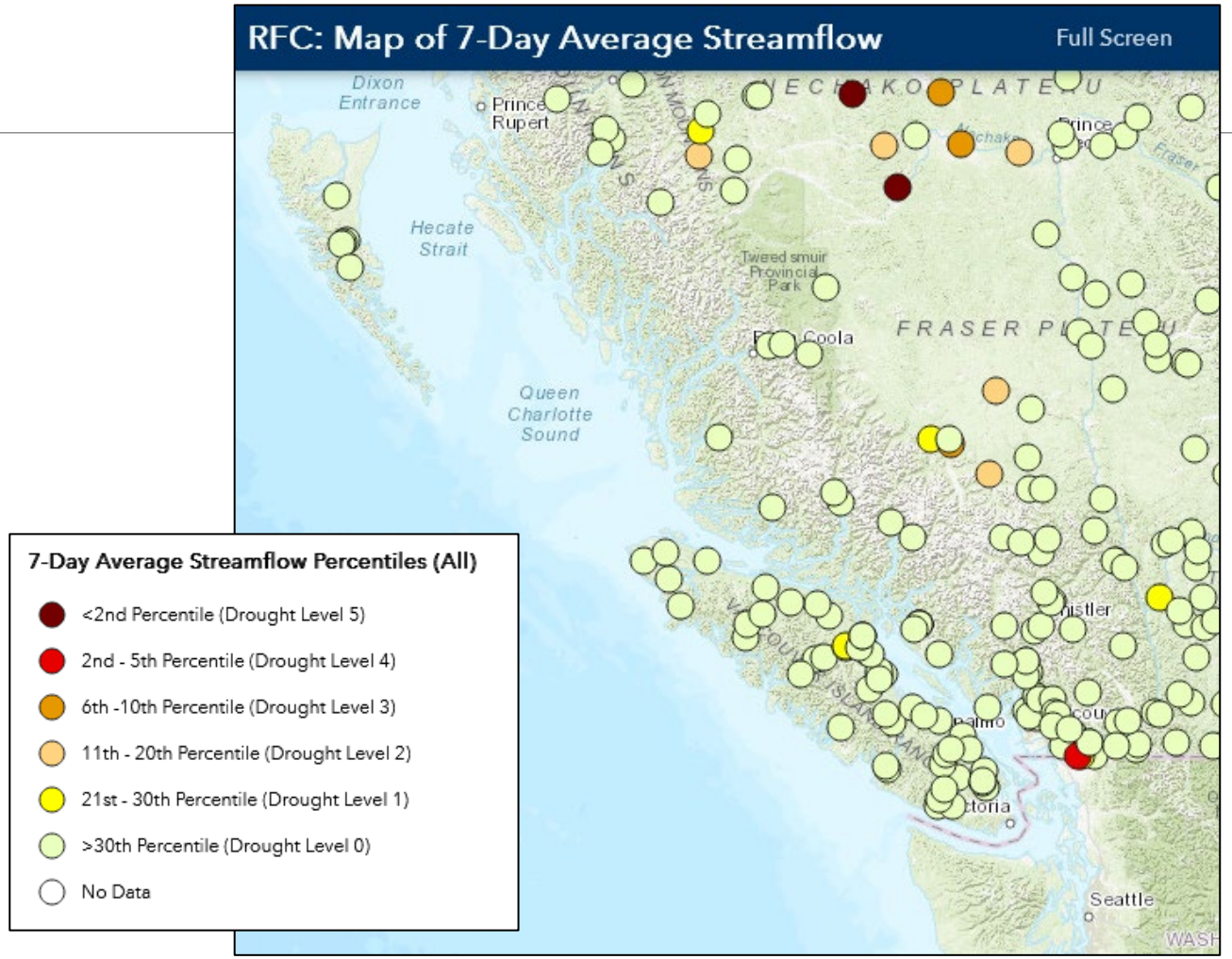
2022-2023



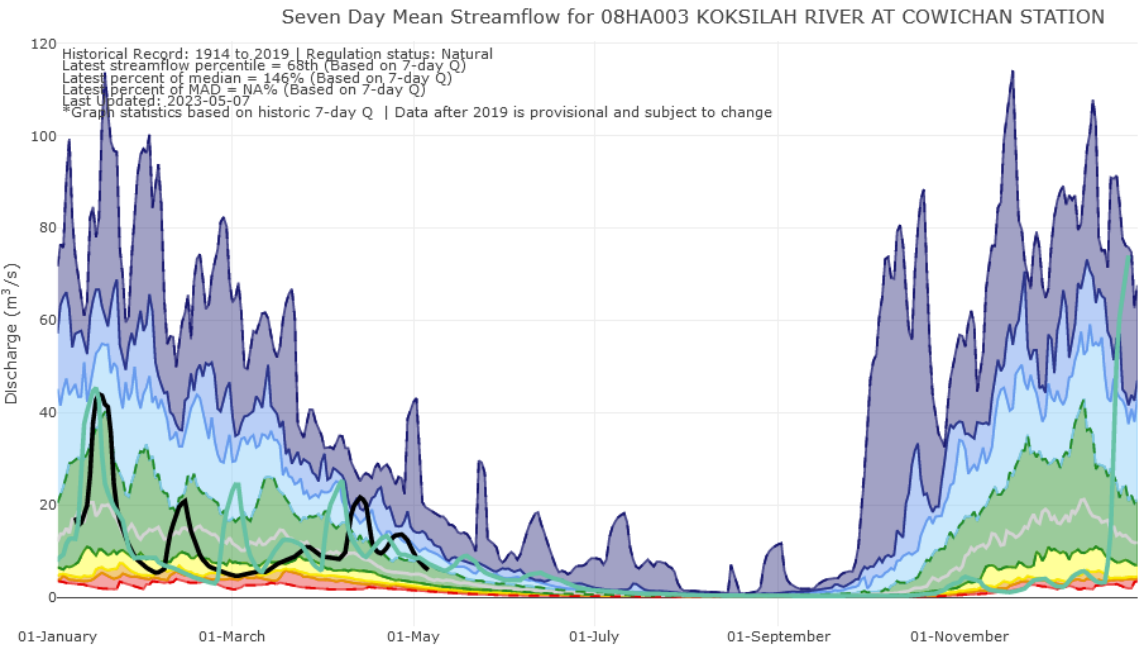
Daily Streamflow Percentiles

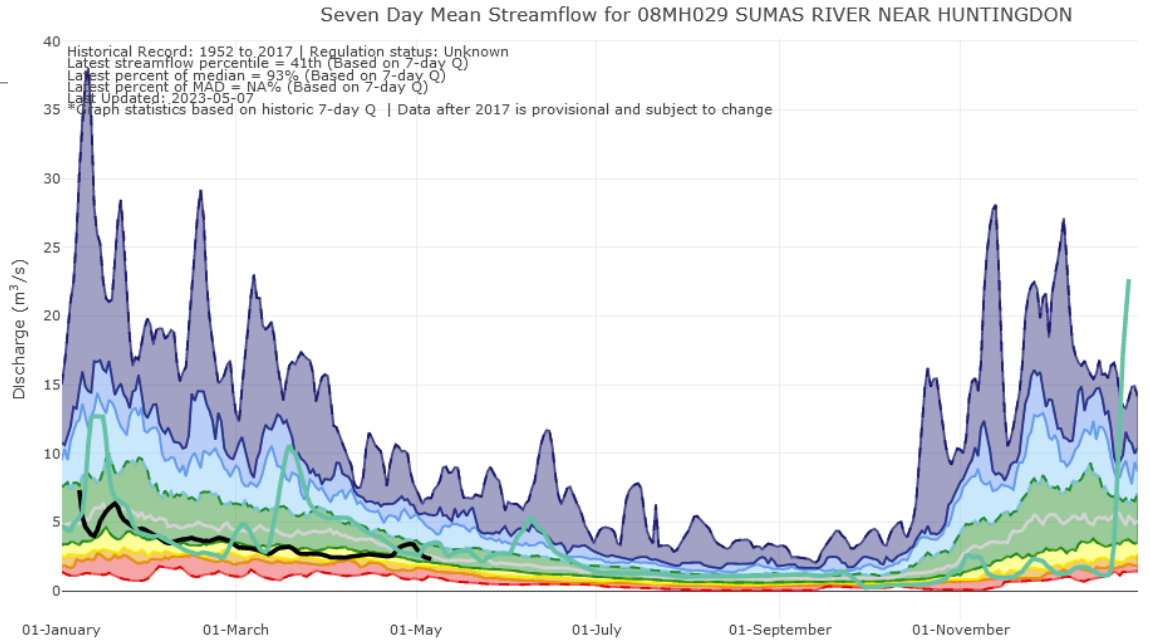


7-Day Streamflows



Vancouver Island and South Coast

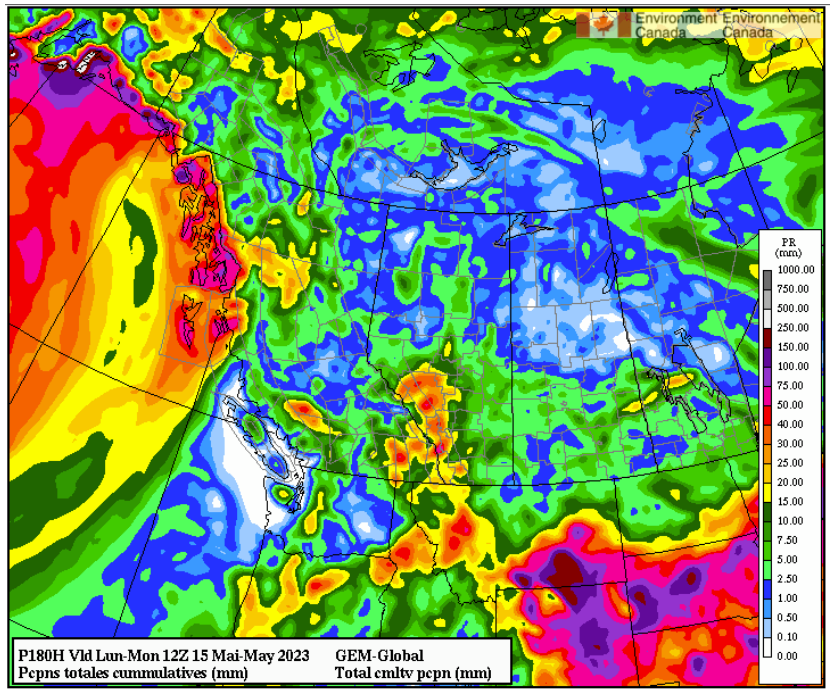




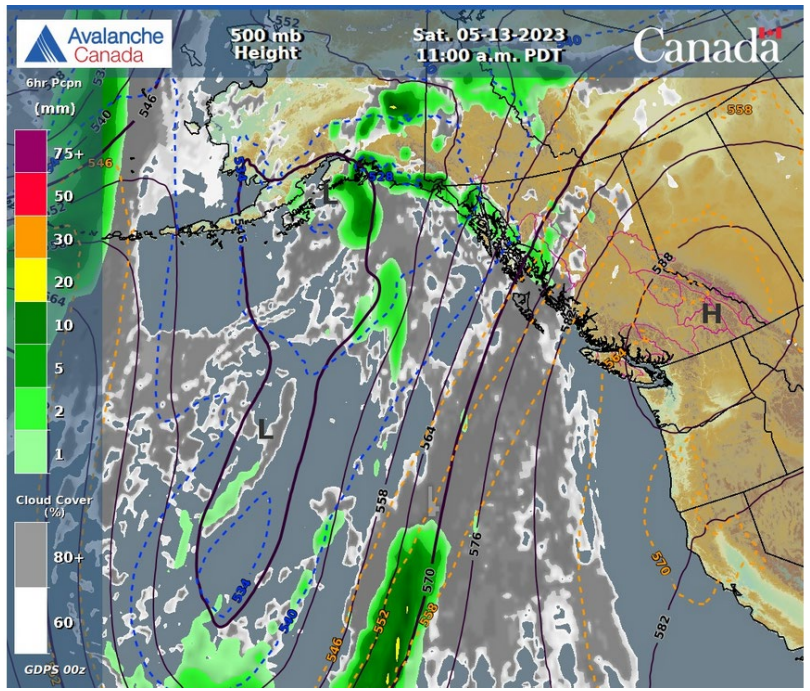
- Low winter baseflows and peaks (low volume)
- Current conditions more typical of normal mid-June flows

Looking Forward…
7-Day Forecast

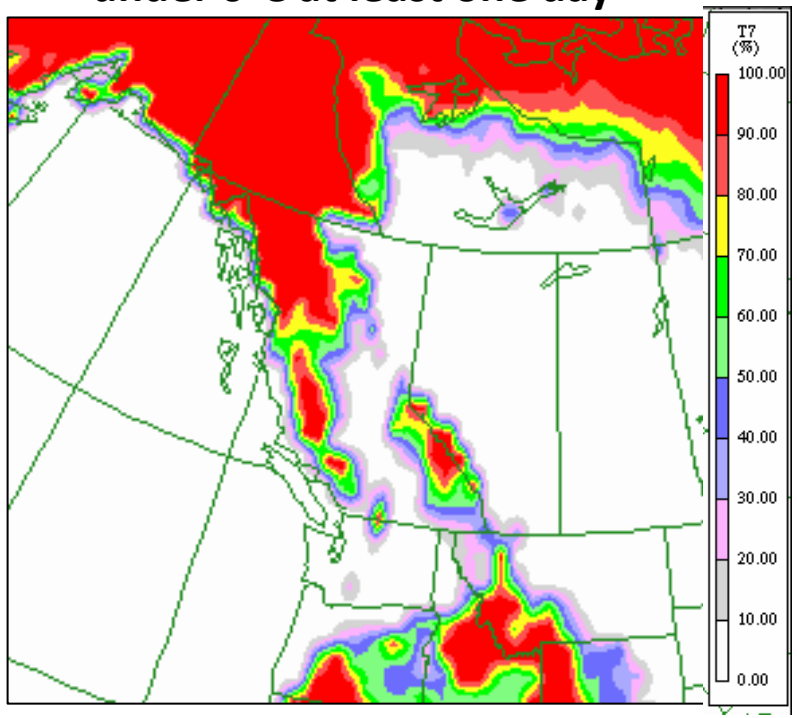
Cumulative Precipitation



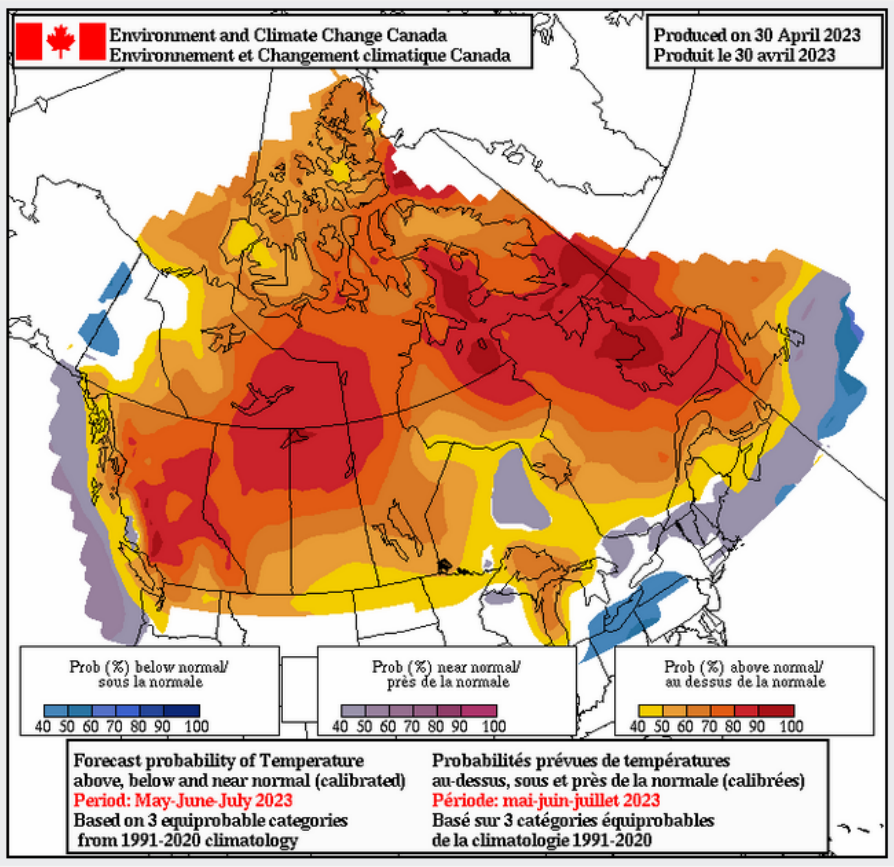
Incoming high pressure ridge

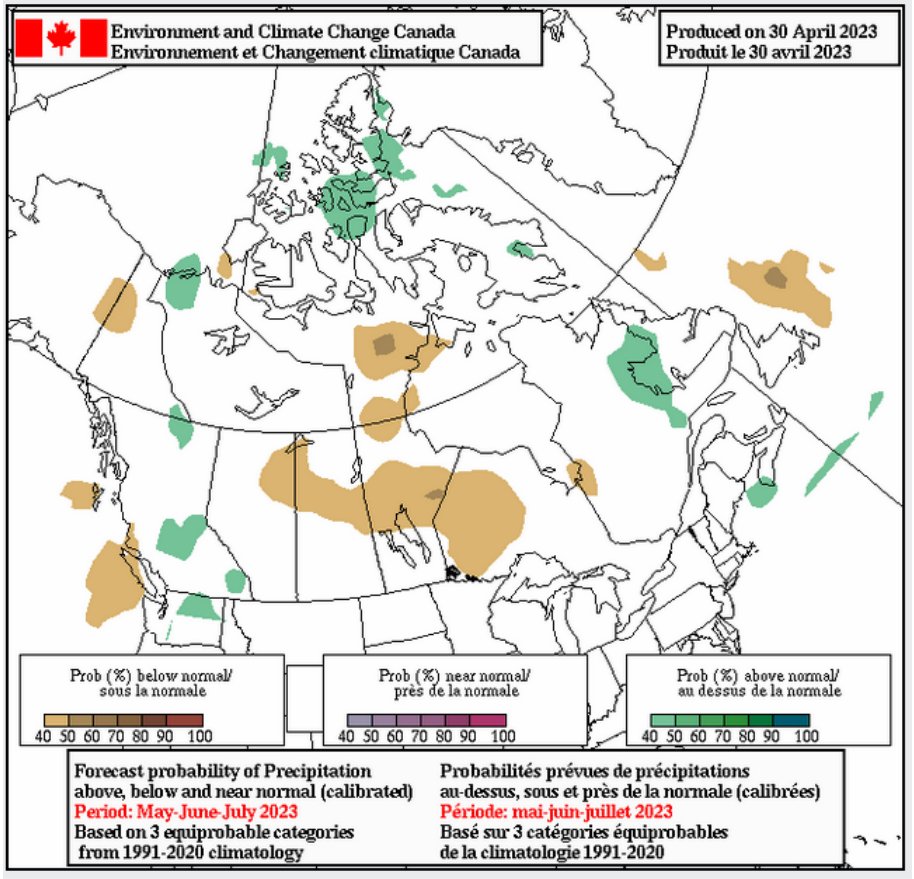


Probability of minimum temperature under 0°C at least one day



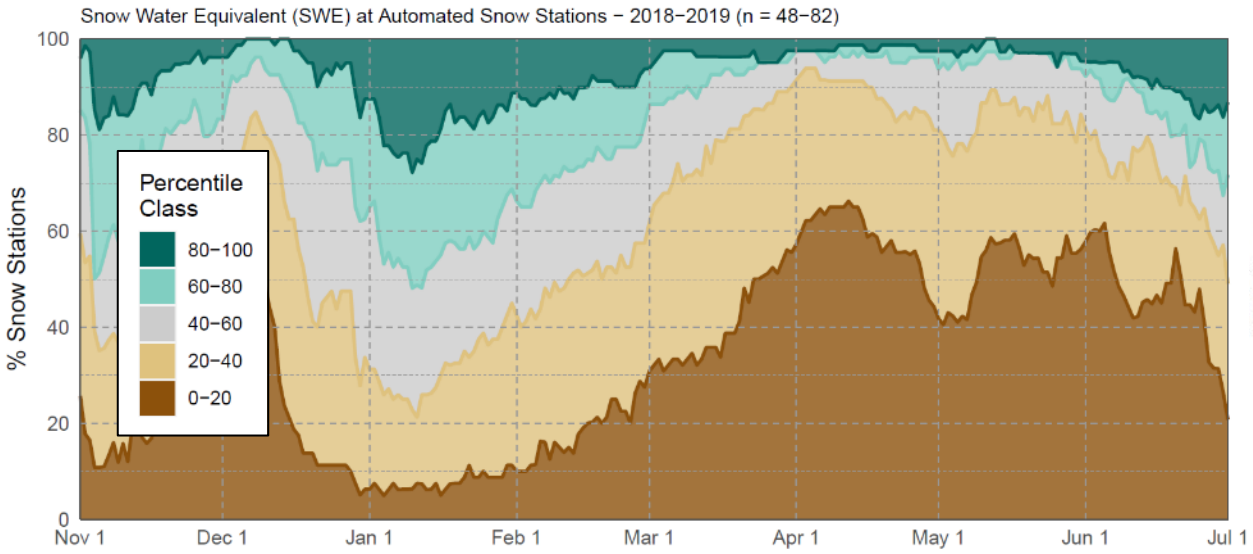
Looking Forward…
May-July Seasonal Forecasts (ECCC)



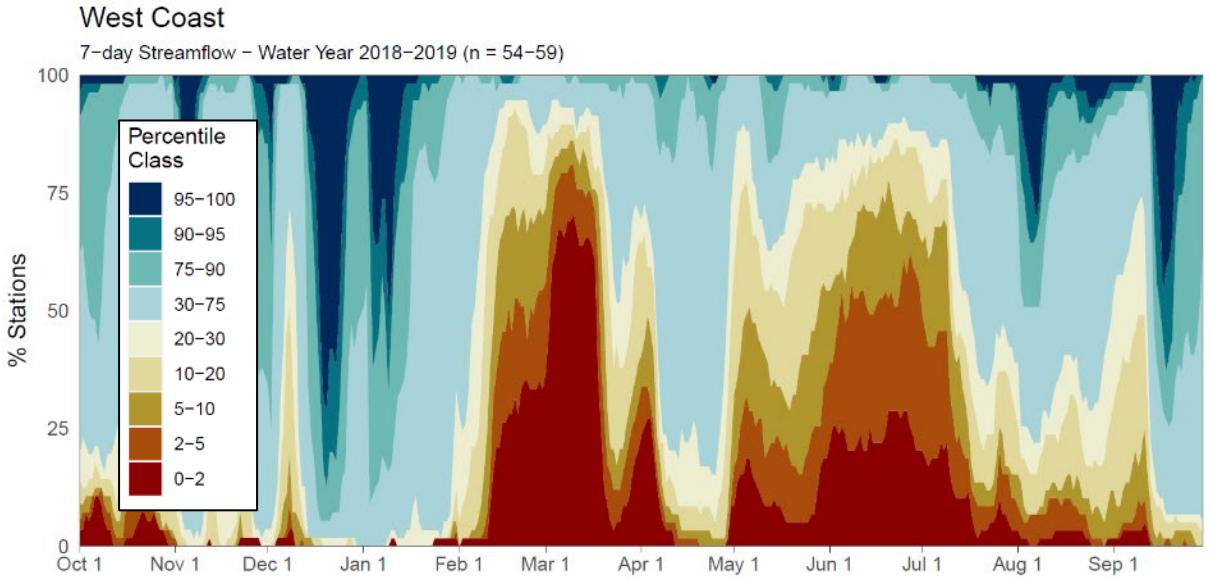


2019 – Low Winter Snowpack, Wet Summer

B.C. Snowpack



West Coast 7-day Streamflow

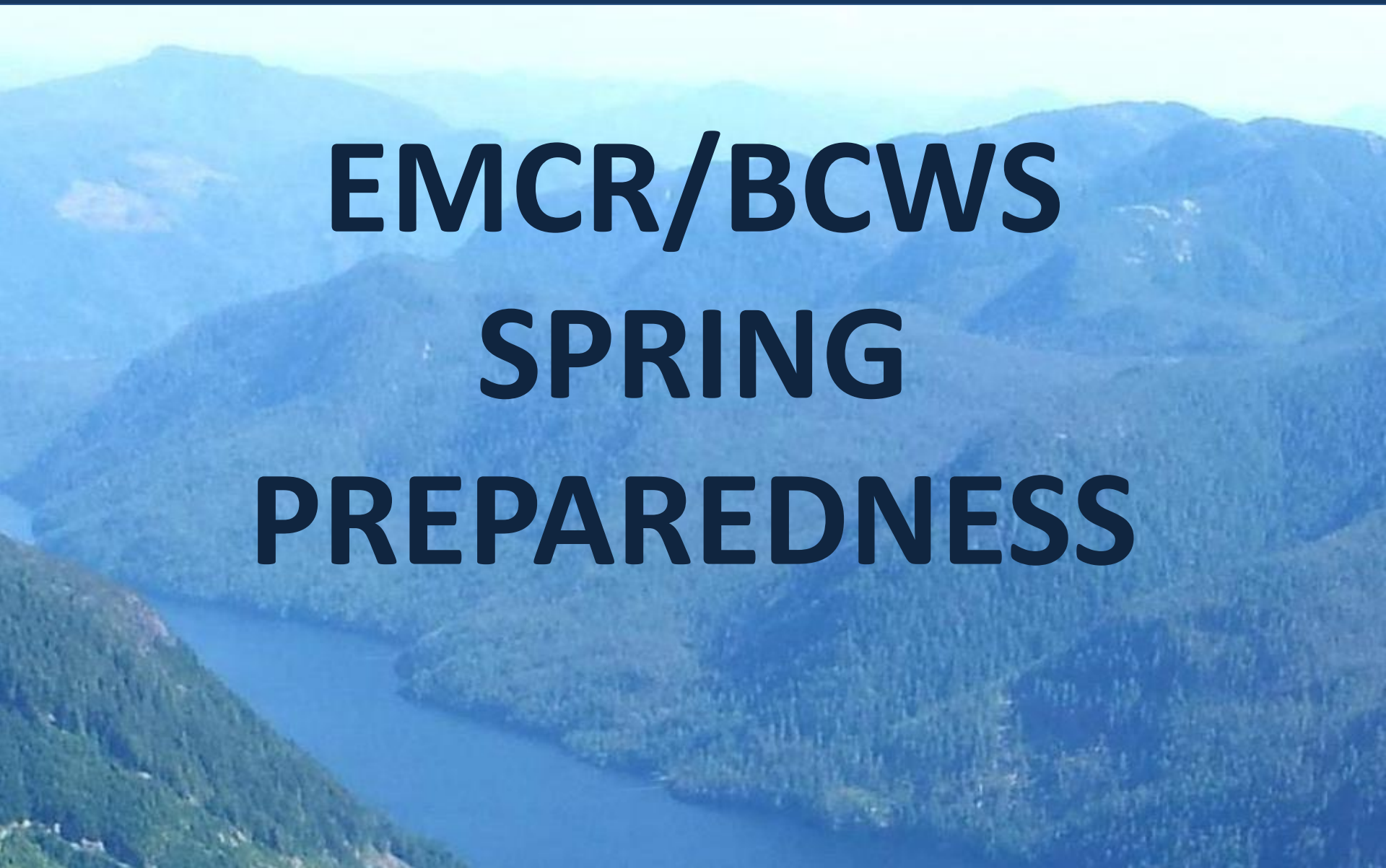


Summary

- Lingering effects from drought last fall and continued precipitation deficit has kept stream flows and aquifer levels low
- Generally still very early season for drought
  - Snowmelt-driven runoff is peaking for low-mid elevation watersheds
- Snowpack conditions and timing of melt trending normal
  - Expect further declines in snow basin indices for May 15th
  - Earlier shift in low flows season (influence from snow) – mid-to-late June?
- Dry weather on Vancouver Island (snow-limited watersheds) leading to low trending flows
- Still significant role for weather, particularly as we are in spring rainfall season
- Drought Information Portal for updates on Drought Levels and Streamflow Conditions

Coastal Fire Centre

BRITISH COLUMBIA | BC Wildfire Service



EMCR/BCWS SPRING PREPAREDNESS

We'll Cover:

- BCWS: Who we are
- Coastal Region
- Integration BCWS & EMCR
- What's New for 2023
- Wildfire Information
- 2023 Seasonal Outlook
- FireSmart Funding



Who we are: BCWS

Headquarters:
Kamloops/Victoria

- 6 Fire Centres
- 33 Fire Zones

- 1600 wildfires/year
- 94% contained within 72 hours



BCWS Provincial Resources









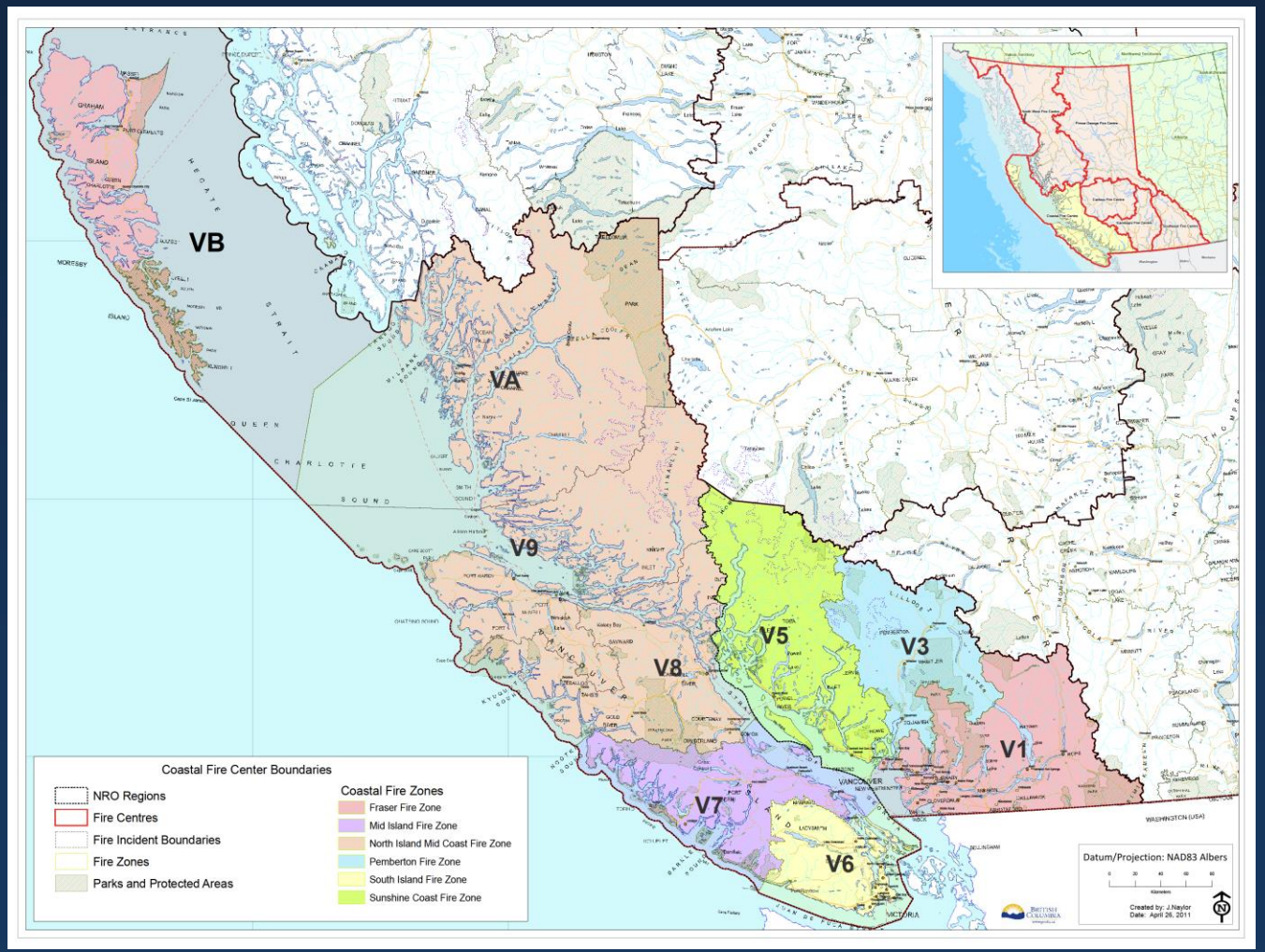
- 6 Type 1 IMT's
- 136 (+6) Initial Attack Crews (4P)
- 26 Unit Crews (22P)
- 41 Rappel Personnel
- 60 Parattack Personnel
- 8 Airtanker Groups
- 9 Contract Helicopters
- 2 Equipment Depots
- Contracted Resources
- Camps

Coastal Fire Centre

- 17 Million Ha
- 85% of BC's Population
- 26 IA Crews
- 5 Unit Crews
- 230+ staff

6 Zones:

- **Fraser Zone (V1, VB)**
- **Pemberton Zone (V3)**
- **Sunshine Coast Zone (V5)**
- **South Island Zone (V6)**
- **Mid Island Zone (V7)**
- **North Island/ Mid-Coast Zone (V8, V9, VA)**



Integration between EMCR and BCWS

EMCR

- EMCR is responsible for people
- Evacuation Alerts and Orders are managed through the guidance and training provided by EMCR by local Emergency Operating Centres
- EMCR helps train local governments to set up Emergency Social Services (ESS)
- EOC's will implement strategic evacuations using information from BCWS
- EMCR will coordinate calls when there are large events or multiple events with all agencies involved in response

BCWS

- BCWS is responsible for the land base during a wildfire event
- BCWS may make recommendations to EOC's as to when and what area should have an Evac Order or Alert
- BCWS will implement tactical evacuations when necessary to preserve life and property
- BCWS may coordinate with various ministries (ie. MoTI) recommending road closures in consultation with local governments.

All Hazards Prep and Response

- All Hazards or 365 Readiness means that BC Wildfire is moving towards a year-round response capability
- BC Wildfire Service has assisted at Big Bar helping to move fish, has assisted during the Avian Flu outbreak in Abbotsford several years ago and during the floods in recent years.
- BC Wildfire Service is taking steps to shift its readiness from fires to other hazards that affect British Columbians.
- This spring BCWS is assisting with sandbagging where needed while at the same time fighting fires in northern BC
- BCWS is providing more training, more equipment and have hired more year-round crews to assist with other hazards.

New for 2023

- 4 Person Initial Attack Crews
- 22 Person Unit Crews
- Crew Supervisor Positions
- Converting 20+ auxiliary employees to FTE
- Uplift in Fire Crews (+7 IA)
- Structure Protection Coordinators
- Community Engagement Specialists
- Wildfire News

BC Wildfire Information

How to Stay Informed

BCWS mobile App or BCWildfire.ca

- Dashboard / Interactive Map
- *New - Wildfire News
- Prohibitions, Evacuation Alerts, Evacuation Orders and more

BCWS Facebook: BCForestFireInfo

BCWS Twitter: @BCGovFireInfo

Information Hotline: 1 888 3FOREST (336-7378)

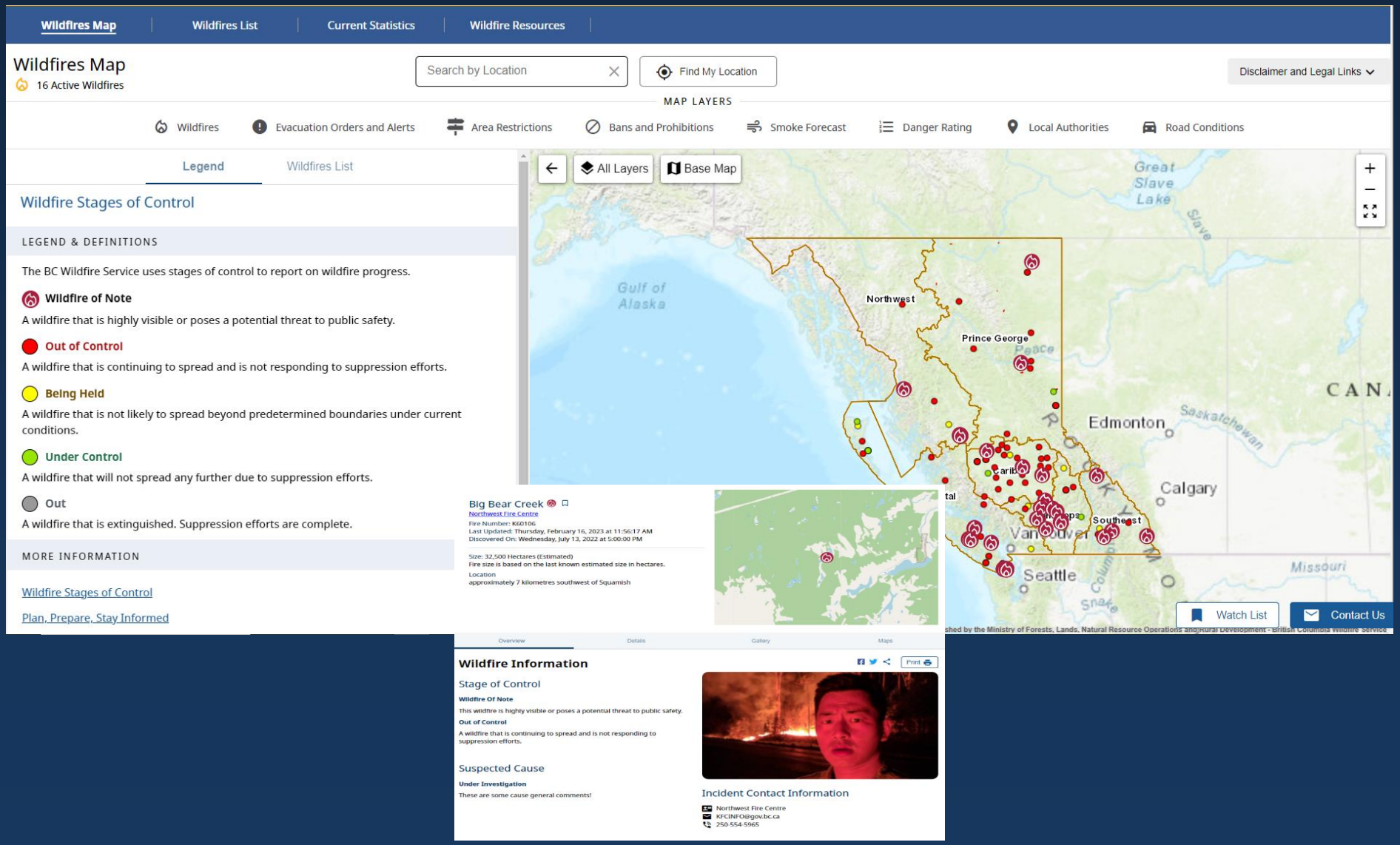
Coastal Wildfire Newsletter:

- bi-monthly newsletter (subscription by request)

For more fire information call the Coastal Fire Centre Information line at: 250-951-4209

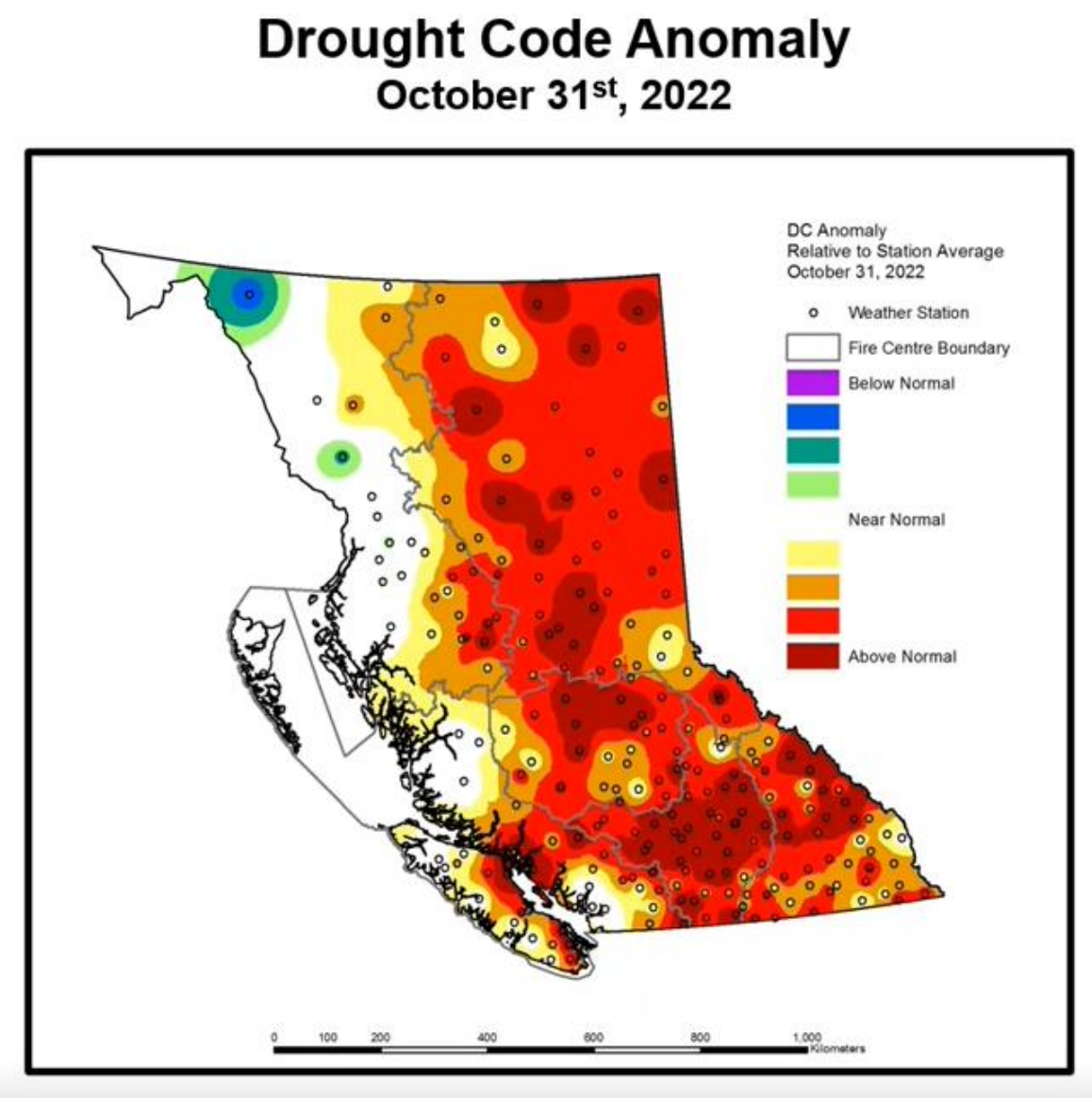
Wildfire NEWS

BC Wildfire Service

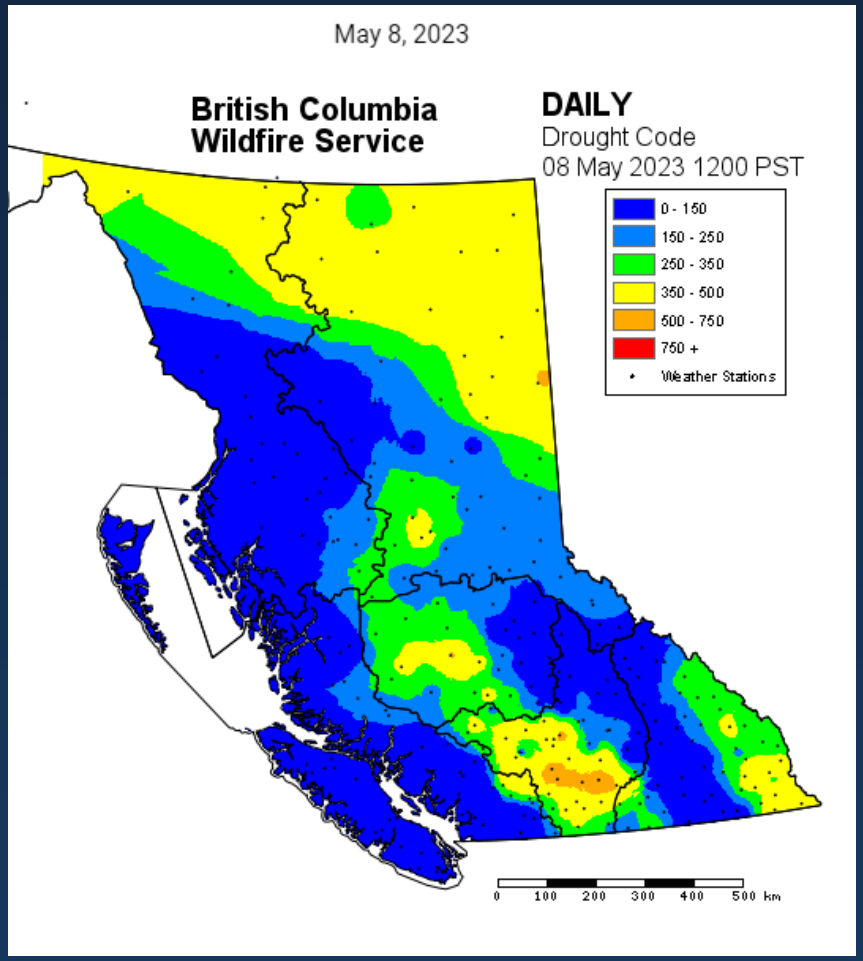


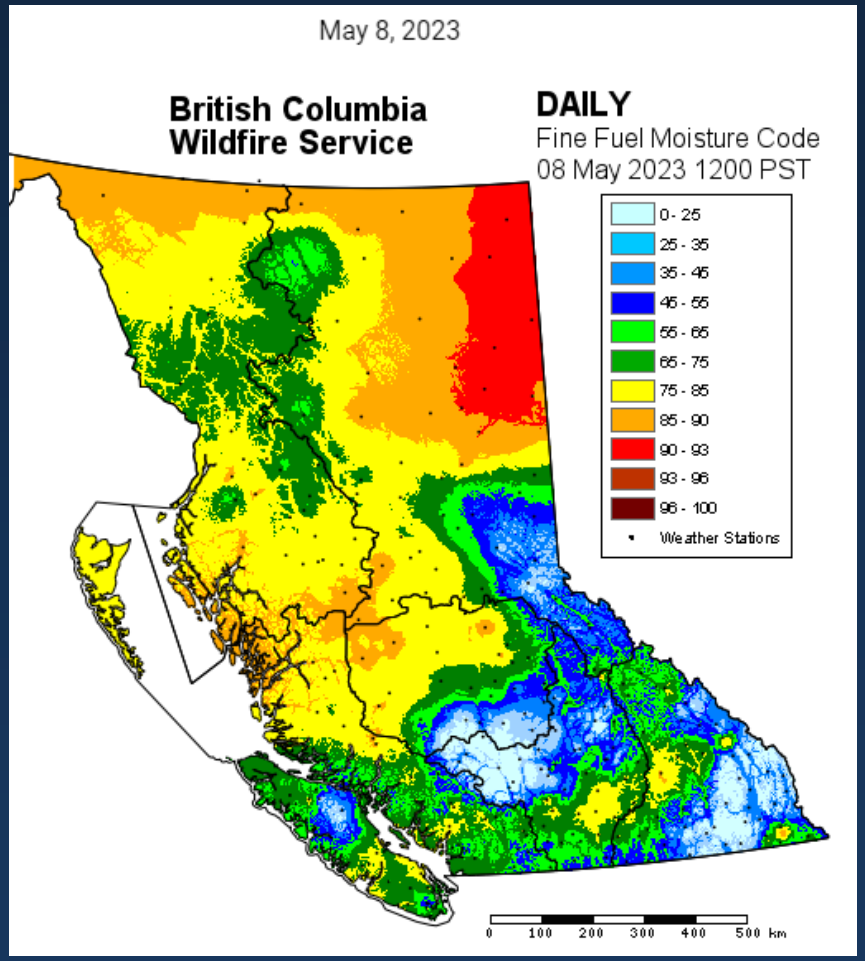
2023 Seasonal Wildfire Outlook

BRITISH COLUMBIA | BC Wildfire Service



Current Fuel Moisture Codes





2023 Wildfires

BRITISH COLUMBIA | BC Wildfire Service

Fire Season as of May 8 (starting April 1):

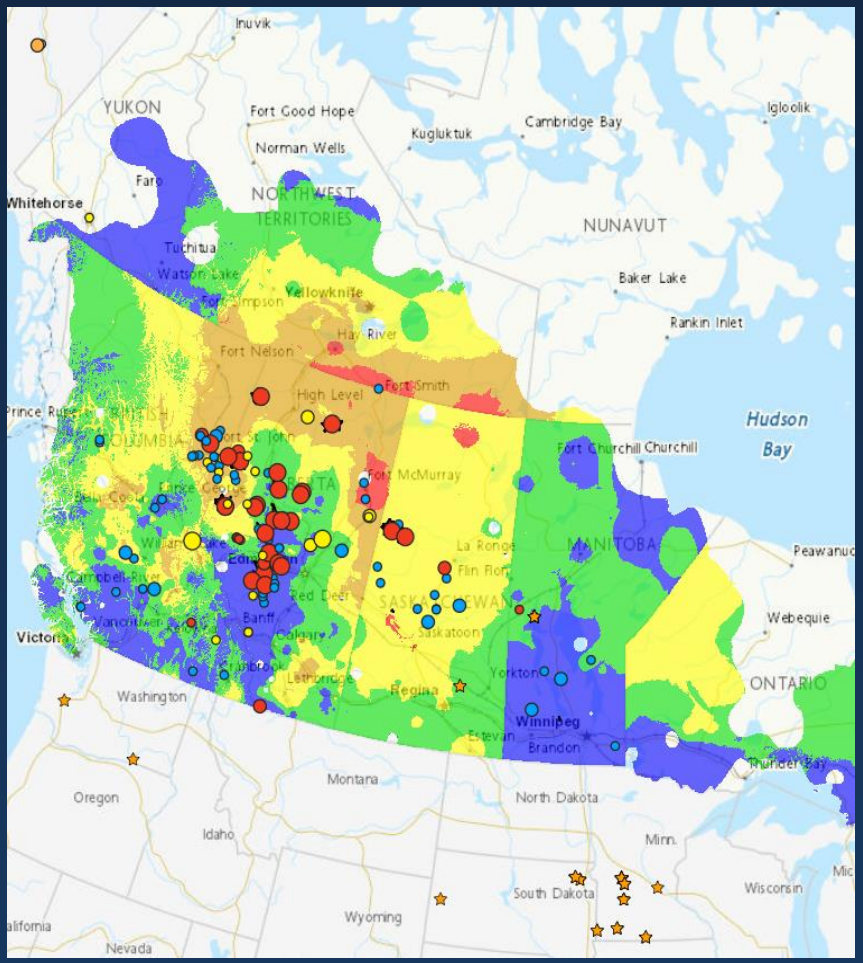
- 172 Fires in BC
- 12 Fires in the Coastal Fire Centre



2023 Wildfires

BC Wildfire Service





FireSmart Funding

Contact Information

UBCM – 250 356-2947 or cri@ubcm.ca

FNESS – 250 377-7600 or qnelson@fness.bc.ca

BCWS Prevention Staff and Wildfire Prevention Officers -

https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prevention/vegetation-and-fuel-management/fire-fuel-management/contacts







BRITISH COLUMBIA FireSmart™

Questions?

BRITISH COLUMBIA | BC Wildfire Service





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FireSmart™

FireSmart BC

today, tomorrow, together

May 2023 – EMCR

BRITISH COLUMBIA
FireSmart™

Agenda

- National and provincial picture
- FireSmart BC team
- Strategies for 2023
- Next steps

National and provincial picture

Nationally

- 2021 move to CIFFC
- Communications, Management and Advisory Committees
- Best practice sharing
- National alignment

Provincially

- BC FireSmart Committee (BCFSC)
- 2021 implemented Strategic Plan



FireSmart BC



Kelsey Winter

FireSmart Program Lead



Helena Marken

FireSmart Research Analyst



Janet Ford

FireSmart Coordinator



Joel Hamilton

FireSmart Home Partners Program Provincial Coordinator



Lynn Eileen

BC FireSmart Committee Coordinator



Amanda Reynolds

FNESS Provincial FireSmart Coordinator



Karla Hoffman

FireSmart Landscaping Expert



Rachel Woodhurst

FireSmart Education Officer

BRITISH COLUMBIA FireSmart™





We've broken every record, and we've broken them several times. Largest, most destructive, deadliest—all of these have now been set and, I think, set again.

— **Daniel Swain**, Institute of the Environment and Sustainability, UCLA

BRITISH COLUMBIA FireSmart™

+90%

of British Columbians believe the issue of wildfires is either an important issue or the most important issue facing BC

Over 8 in 10 British Columbians believe the provincial government holds the greatest responsibility to **prevent** and **fight** wildfires



Once aware of FireSmart BC, more than 8 in 10 say it is **valuable** to the province

BENEFIT-COST RATIO: avoided future losses (benefits) divided by initial construction cost and maintenance cost.

34:1

$1 spent to make a new home fire-resistant

Owners, tenants and sociaty saves up to $34

$1 added cost for new construction ultimately saves up to:

$10 in reduced fire damage to buildings

$8 worth of life safety and avoided cases of PTSD

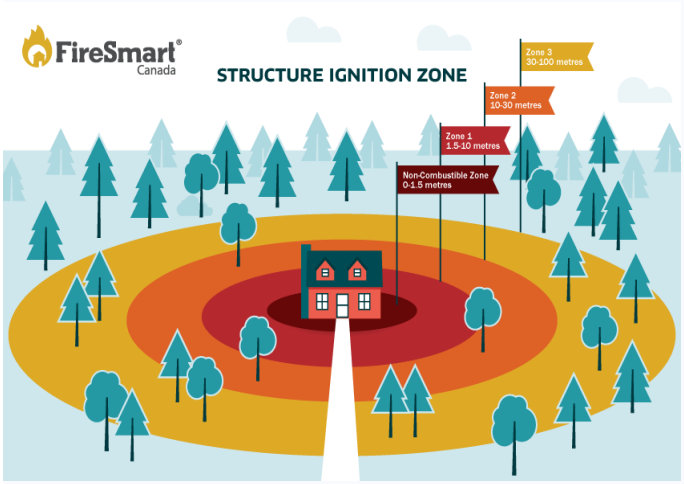
$7 in reduced personal property damage

$7 in lower insurance premiums

$1 less dislocation cost ("additional living expense")

$1 less indirect business interruption and environmental impacts

Benefits are maximized and costs are minimized when the Guide is used for new construction.





The National Guide for Wildland Urban Interface Fires, 2021

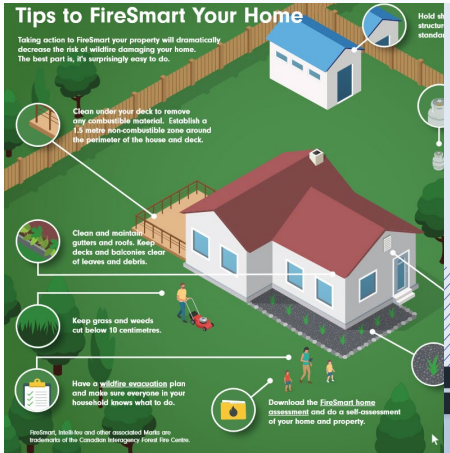
BRITISH COLUMBIA FireSmart COMMITTEE

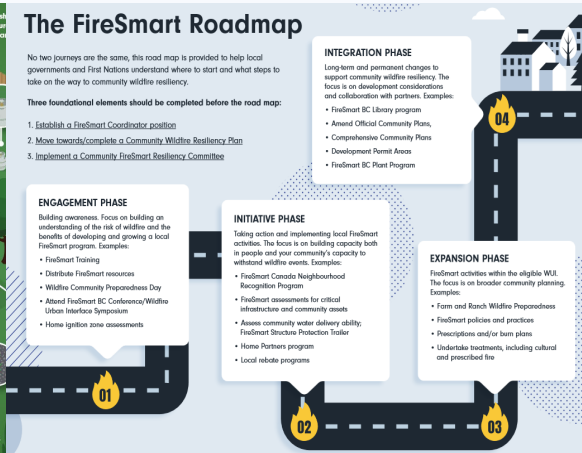
Strategy for 2023

- Increase our baseline brand awareness to 55% (2022: 48% of the population)
- Increase familiarity among those who recognize the brand (2022: somewhat aware 25% / aware 19% / very aware 4%)
- Increase the FireSmart network by at least 10% (2022: 205 recognized communities, 920 LFRs, 82 WMSs, 40 FireSmart Coordinators, 1247 total
- Continue to grow digital engagement and online community through growth of website traffic (25% year/year increase) social network following/engagement, and email subscriber lists



The Get FireSmart™ Podcast



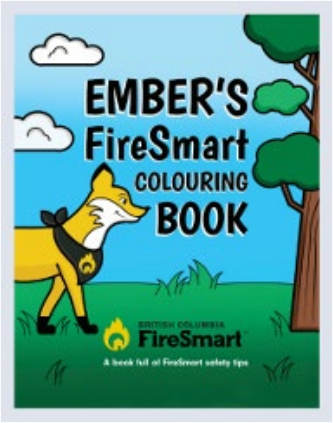


Local Level Involvement

- Plant Program
- Home Partners Program
- FireSmart Canada Neighbourhood Recognition Program
- School Curriculum and Library Program
- Partnerships (Farm and Ranch, NatureKids, Insurance)











BRITISH COLUMBIA
BC Wildfire Service

BCAA Home Insurance

BRITISH COLUMBIA FireSmart™

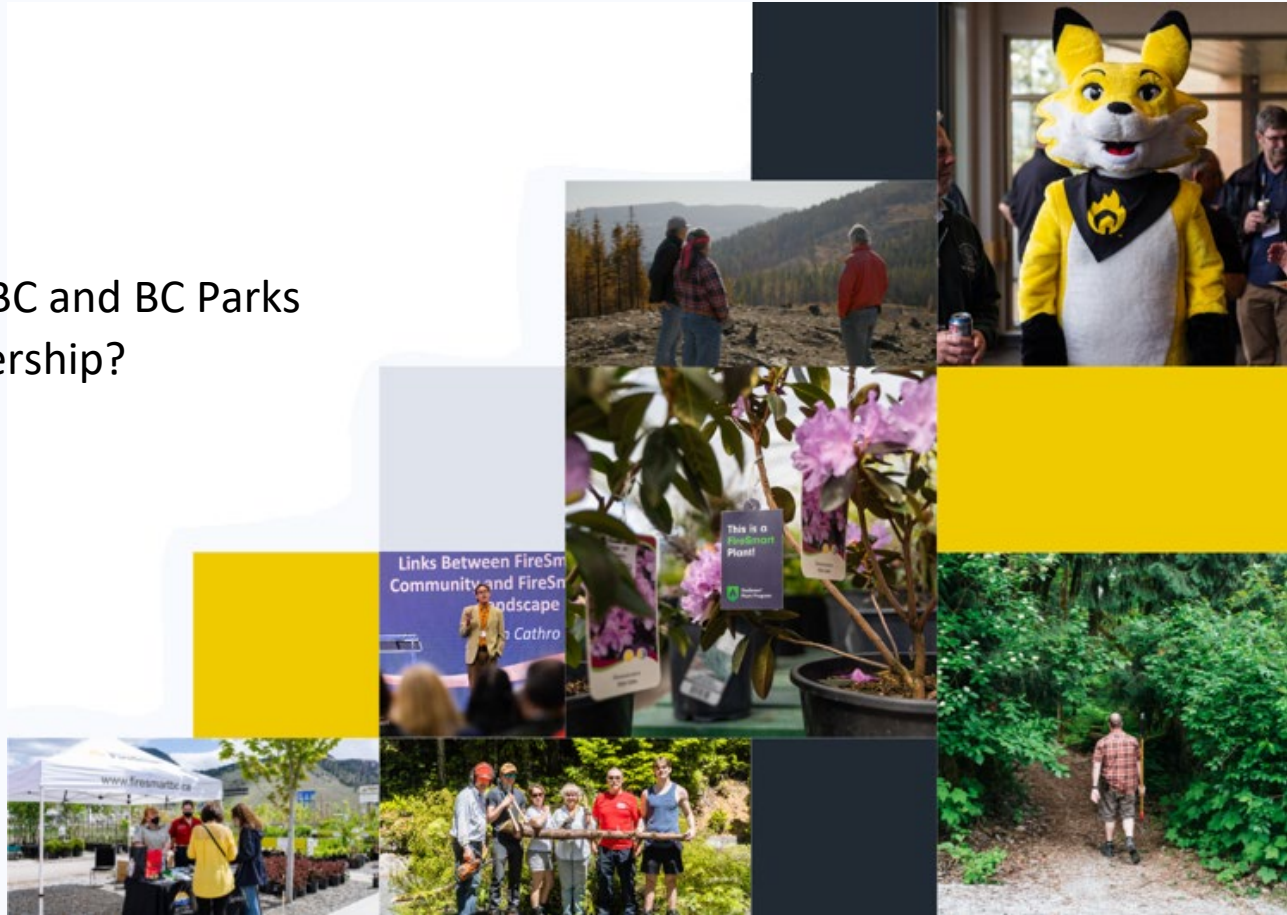
New FireSmart™ BC Education Program

Coming Spring 2023, the new FireSmart BC education program is an all-in-one teaching resource to introduce students in grades K-6 to FireSmart concepts, including how to make homes and communities more resilient to wildfire.



Next steps

How Can FireSmart BC and BC Parks improve their partnership?



Vancouver Island Coastal Seasonal Readiness Workshop

Community Recovery Planning

Brenda Scott and Andrea Olsen

Recovery Operations Specialists

May 9, 2023

BRITISH COLUMBIA | Ministry of Emergency Management and Climate Readiness



Territorial Acknowledgement

We would like to take a moment to acknowledge and respect the lək̓ʷəŋən peoples on whose traditional territory our offices stand and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

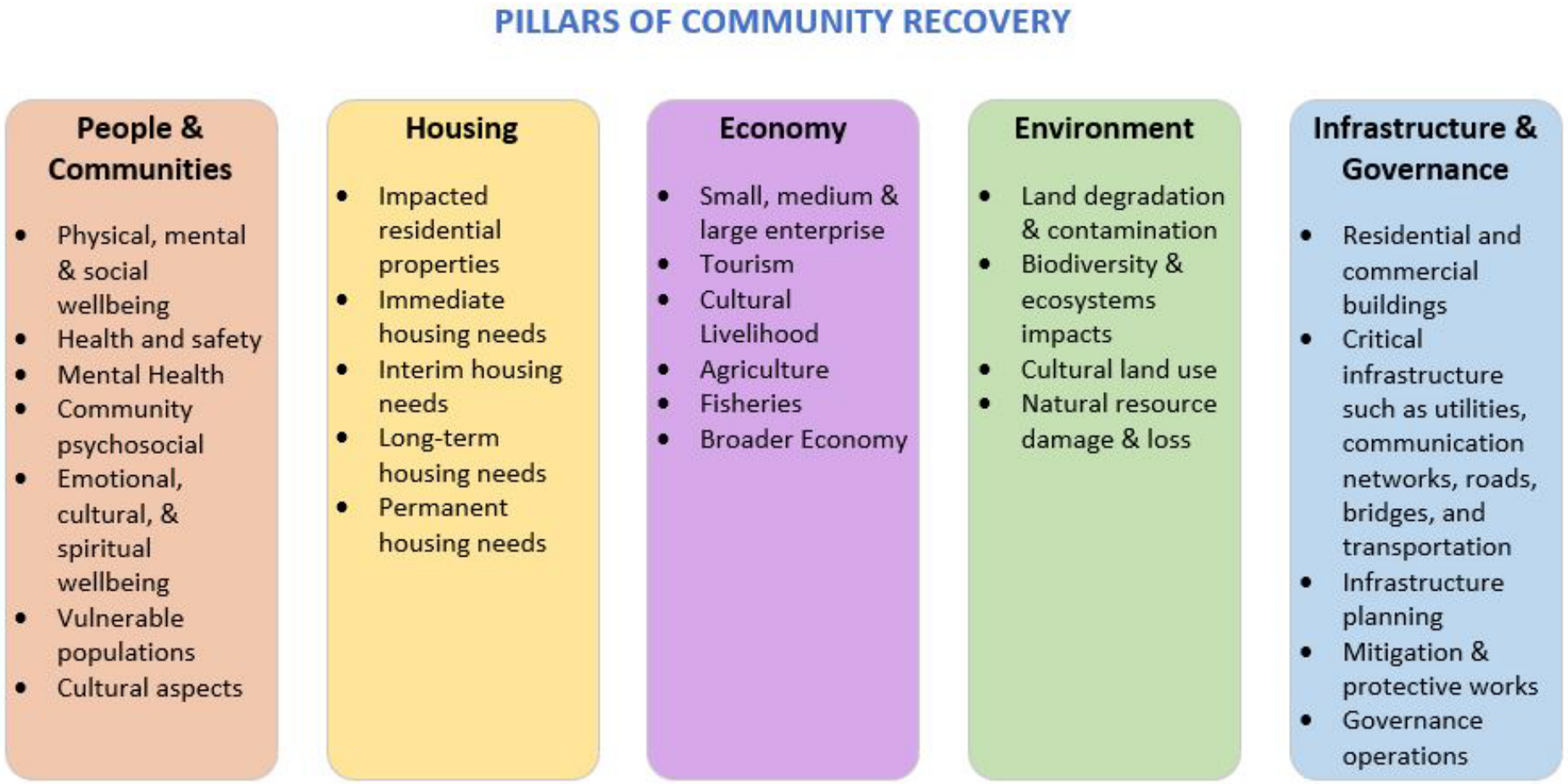
Overview

- Vision for Recovery
- Pillars of Community Recovery
- Response to Recovery Timeline
- Short-term, mid-term, and long-term recovery
- Pre-Recovery Planning
- Early Recovery
- Community Led Recovery
- Resources
- Opportunity to ask questions

Vision for Recovery

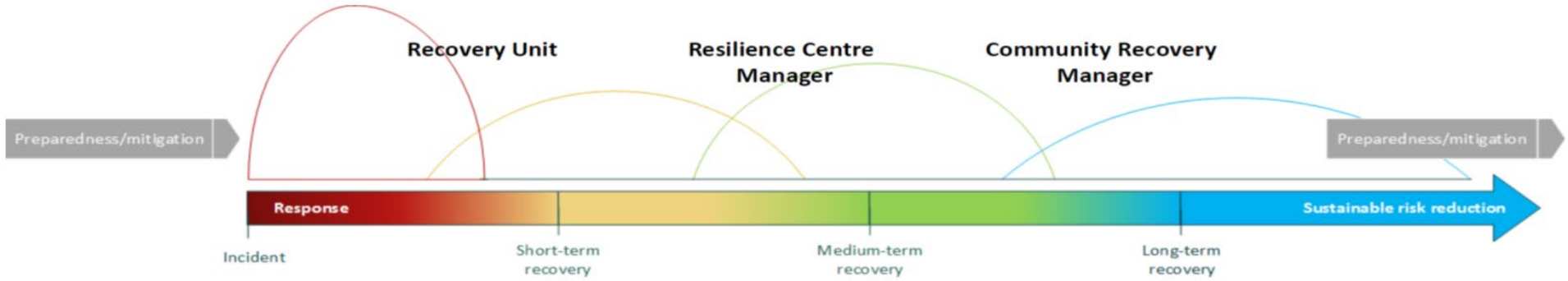
Re-establish social, cultural, physical, economic, personal and community well-being through inclusive measures that reduce vulnerability to disaster, while enhancing sustainability and resilience.

Pillars of Community Recovery



https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/local-government/provincial_disaster_recovery_framework.pdf

Response to Recovery Timeline



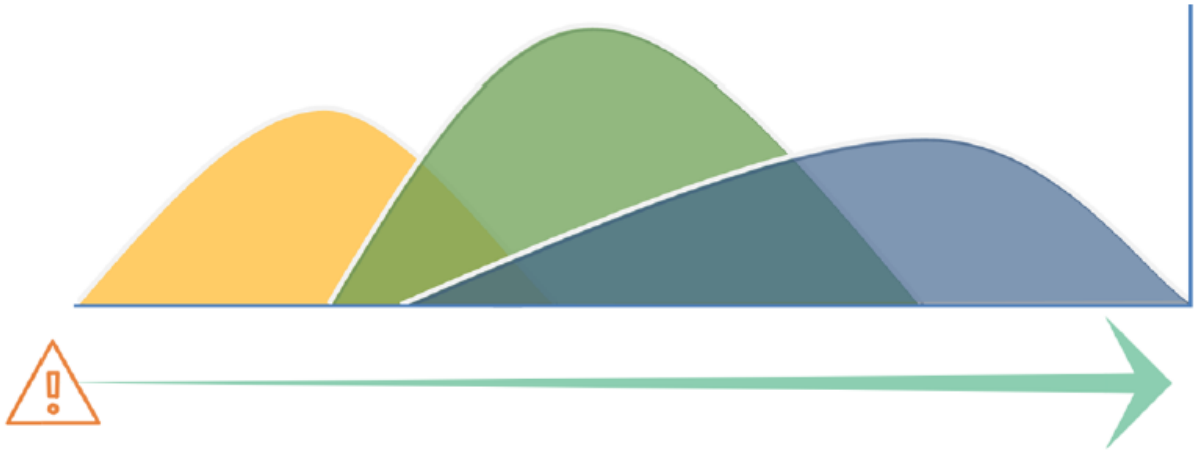
Guiding Idea:

"*Recovery activities should be initiated **as quickly as possible**, generally after risk to life-safety is reduced and life-saving activities, such as search and rescue, are nearing completion. In some cases, recovery activities may be conducted at the same time as response activities.*"

- Recovery staff should be stood up as soon as possible, ideally starting in the initial activation and while the response is the ongoing.
- As response actions decrease recovery actions will increase.

Short-term, Mid-term, and Long-Term Recovery

Figure 1: Timeline of Recovery Operations



SHORT-TERM
e.g., Days-Weeks

- Recovery Unit, Emergency Operations Centre(s)
- Reception Centre(s)
- Emergency Shelter
- Rapid Damage Assessment
- Public Information/Information posts
- Initial Debris Clearance
- Critical Infrastructure Restoration
- Business Continuity
- Disaster Psychosocial Support
- Initial Post- Disaster Needs Assessment

MEDIUM-TERM
e.g., Weeks-Months

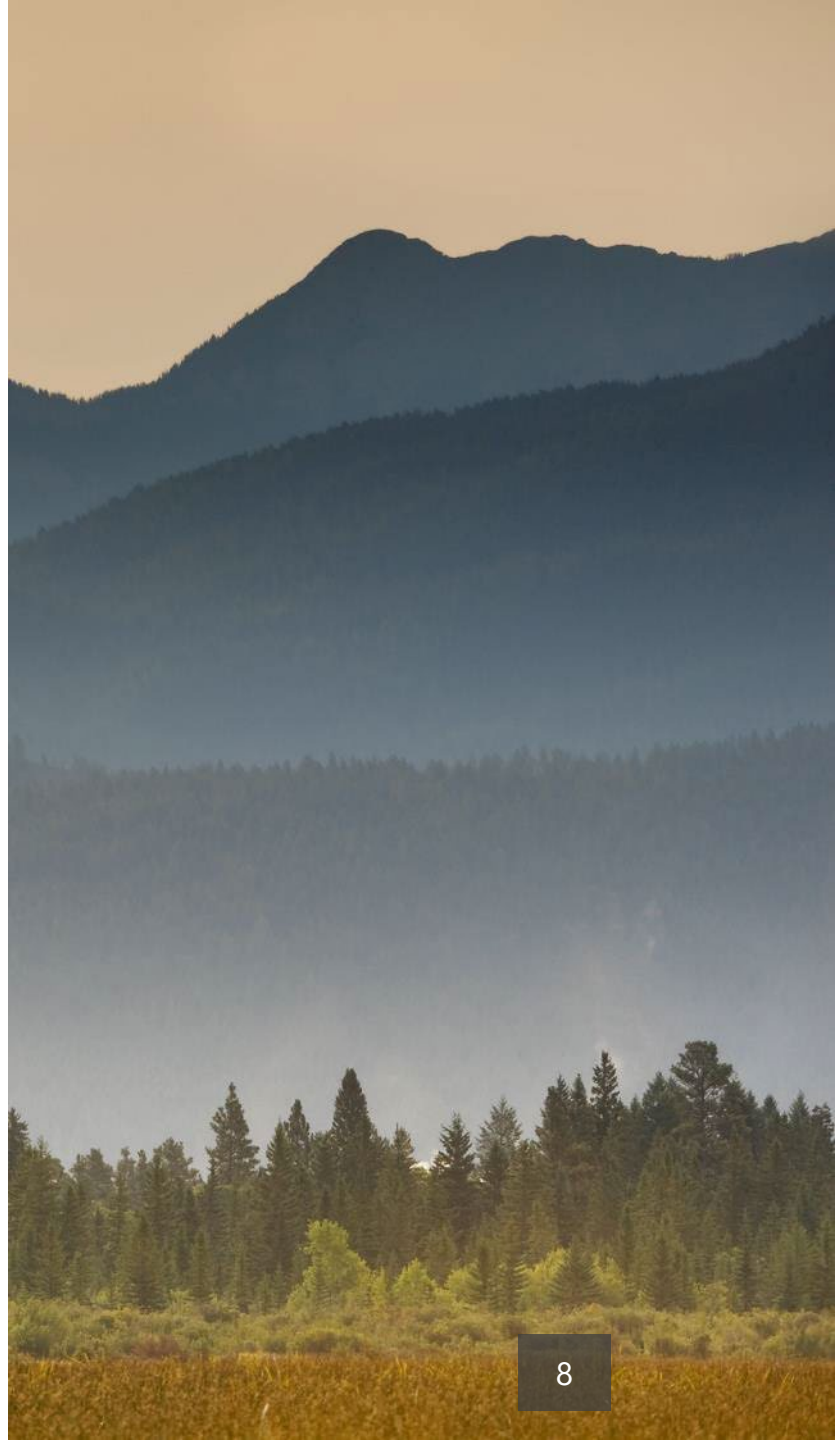
- Recovery Operations Centre(s)
- Resilience Centre(s)
- Temporary Lodging
- Inspection/Damage Assessments
- Demolition/Disaster Debris Management
- Critical Infrastructure Repair
- Business Resumption
- Emotional/Psychosocial Support
- Post-Disaster Needs Assessment

LONG-TERM
e.g., Months-Years

- Recovery Steering Committee
- Long-Term Recovery Structure
- Permanent Housing
- Engineering Assessment/Land Use Planning
- Media and Community Services
- Final Debris Disposal/Recycling
- Critical Infrastructure Rebuild
- Business Recovery
- Counseling and Support Programs
- Demobilization

Pre-Disaster Recovery Planning

- Review current Memorandums of Understanding (MOU) and/or put additional ones in place
- Get to know your local non-profit/partner organizations
- Consider recovery in your Emergency Response Plan
- Identify staff who may have the capacity to work in your EOC recovery unit
- Schedule training (staff/volunteers/partners)
- Review/collect available recovery resources



Community Led Recovery

Suggested early recovery actions

- Document and gather key information
- Conduct recovery coordination calls with EMCR response staff, EMCR recovery staff, relevant partners, and/or consultants
- Conduct Rapid Damage Assessments
- Submit Expenditure Authorization Forms (EAFs) and Disaster Financial Assistance (DFA) application (as applicable)
- Hire a recovery manager and recovery staff as needed
- Conduct a Post-Disaster needs Assessment
- Create a Community Recovery Plan



EMCR Recovery Units

- Cross-Government Recovery Team
- Regional Recovery Team
- Advance Recovery Team

To request support from any of our EMCR Recovery units contact your EMCR regional manager or EMCR PREOC (if activated).

Resources

- Currently Available:
  - Job descriptions for EAF funded recovery positions
  - Community Post Disaster Needs Assessment has been revised and is live on our website (May 8/23)
  - Resilience centre guidelines
- Coming Soon:
  - Community Recovery Plan Template
  - Provincial Government Corporate Supply Arrangement for Recovery Managers
  - Updated Provincial Recovery Framework
- Website Link:
  - https://www2.gov.bc.ca/gov/content/safety/emergency-management



Contact Information

Vancouver Island Coastal Regional Office
EMCR.VICAdmin@gov.bc.ca
Regional Recovery Team
Andrea.Olsen@gov.bc.ca Or Maja.Langrish@gov.bc.ca
Provincial Disaster Recovery Inbox
EMBC.recovery@gov.bc.ca


QUESTIONS?

Ministry of Emergency Management and Climate Readiness

Seasonal Readiness
Recovery Resource Links

Below are links to relevant recovery resources. If you have any questions, please email EMBC.recovery@gov.bc.ca - your email will be forwarded to the appropriate person or business unit.

Webpages

1. Indigenous communities and local government emergency management resource webpage
   https://www2.gov.bc.ca/gov/content/safety/emergency-management/local-emergency-programs

2. Indigenous communities response and recovery operations webpage
   https://www2.gov.bc.ca/gov/content/safety/emergency-management/local-emergency-programs/indigenous-emergency-operations

3. Local governments response and recovery operations webpage
   https://www2.gov.bc.ca/gov/content/safety/emergency-management/local-emergency-programs/local-gov-operations

Documents

1. Community Post-Disaster Needs Assessment Template
   https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/local-government/recovery/community_pdna.docx

2. Disaster Recovery Guide
   https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/local-government/disaster_recovery_guide.pdf

3. Interim Disaster Recovery Framework
   https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/local-government/provincial_disaster_recovery_framework.pdf

4. BC Emergency Management System (BCEMS) Guide
   https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/embc/bcems/bcems_guide.pdf

Seasonal Readiness
Recovery Resource Links

5. Community Re-entry Considerations: Reference Guide
   https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/local-government/recovery/community_re-entry_considerations_reference_guide.pdf

6. Re-entry Considerations Screening Checklist
   https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/local-government/recovery/community_re-entry_considerations_checklist.pdf

7. Recovery Toolkit for First Nations and Local Authorities
   https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/local-government/disaster_recovery_guide.pdf

8. Community Recovery Capacity and Needs Assessment Form
   https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/local-government/community_recovery_capacity__needs_assessment_form.pdf

Helpful ESS links

- ESS ERA Homepage - https://ess.gov.bc.ca/
- Responder Resources -
  - ESS Forms,
  - Guides and Manuals,
  - Program foundation and team resources
- Launch ESS and ERA Onboarding
  - Starting an ESS team,
  - Evacuee Registration & Assistance tool,
  - Onboarding to the ERA tool
- BC Services Card App - Download the app
- JIBC – ESS training – online, hybrid and in person training
- Modernization team essmodernization@gov.bc.ca

Helpful ESS links

https://www.jibc.ca/areas-of-study/emergency-management/emergency-management-webinars

UBCLC -Center for Excellence in Indigenous Health

UBC Learning Circle - YouTube

Webinars — National Indigenous Cultural Safety Learning Series (icscollaborative.com)

Online Indigenous Events

Bob Joseph - Indigenous Corporate Training Inc. President (ictinc.ca)

Friendship Centres — The National Association of Friendship Centres (NAFC)