



# 2024 Northeast BC Drought Update

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# Water Management Overview

- Regulate water use for oil and gas purposes
  - Water Licences (WSA S.9)
  - Short-Term Use Approvals (WSA S.10)
  - Provincial Environmental Flow Needs (EFN) Policy (WSA S.15)
- How we sustainably manage water for all needs?
- How do we transform data/information into decision making?



# Water Allocation Principles

- Protect environmental flows for fish and wildlife
- Protect present and future water needs for all users and First Nations
- Understand and manage for natural variability and future change
- Recognize and respond to unusual low flow conditions (e.g. drought)
- Be fully transparent with information and decisions
- Collaborate and innovate





# Monitoring Conditions

**Date of Issuance:** July 12, 2023  
**Effective Date:** July 12, 2023  
**Application Submission Date:** December 13, 2022  
**Application Determination Number:** 100117241

**Short Term Water Use No.:** 0006455

**Point of Diversion No.:** 001

## Conditions

### Environmental

2. Prior to any water withdrawals the flow of the Beaton River must be monitored at the Water Survey of Canada Beaton River Station near Ft. St. John (07FC001). Water withdrawals are prohibited when the flow of the Beaton River as measured at the Water Survey of Canada Beaton River Station near Ft. St. John (07FC001) is at or below the following thresholds.

April: 13.0 m<sup>3</sup>/s

May: 57.5 m<sup>3</sup>/s

June: 42.2 m<sup>3</sup>/s

July: 24.0 m<sup>3</sup>/s

August: 9.3 m<sup>3</sup>/s

September: 6.5 m<sup>3</sup>/s

October: 5.4 m<sup>3</sup>/s

On any day when water is being withdrawn the license holder shall keep records of daily water withdrawals in units of cubic metres (m<sup>3</sup>) and the discharge of the Beaton River as measured at the Water Survey of Canada Beaton River Station near Ft. St. John (07FC001) in units of cubic metres per second (m<sup>3</sup>/s). These records must be made available to the Regulator upon request.



# Drought in BC

## Core Drought Indicators & Thresholds

Table 3: Drought Indicators Criteria Summary\*.

Indicator	Core Indicators	Timing of Use	
		Early Season	Drought Season
		Basin Snow Measures	7-Day Average Stream flow (Percentiles)
Indicator	Core Indicators	Seasonal Volume Runoff Forecasts	30 Day Precipitation (Percentiles)
		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)	>30 <sup>th</sup>	21 <sup>st</sup> - 30 <sup>th</sup>	11 <sup>th</sup> - 20 <sup>th</sup>	6 <sup>th</sup> - 10 <sup>th</sup>	2 <sup>nd</sup> - 5 <sup>th</sup>	< 2 <sup>nd</sup>
7-Day Average Streamflow (Percentiles)	>30 <sup>th</sup>	21 <sup>st</sup> - 30 <sup>th</sup>	11 <sup>th</sup> - 20 <sup>th</sup>	6 <sup>th</sup> - 10 <sup>th</sup>	2 <sup>nd</sup> - 5 <sup>th</sup>	< 2 <sup>nd</sup>

\*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".



# Drought in BC

## Drought levels

- Level 0



- Level 1



- Level 2



- Level 3



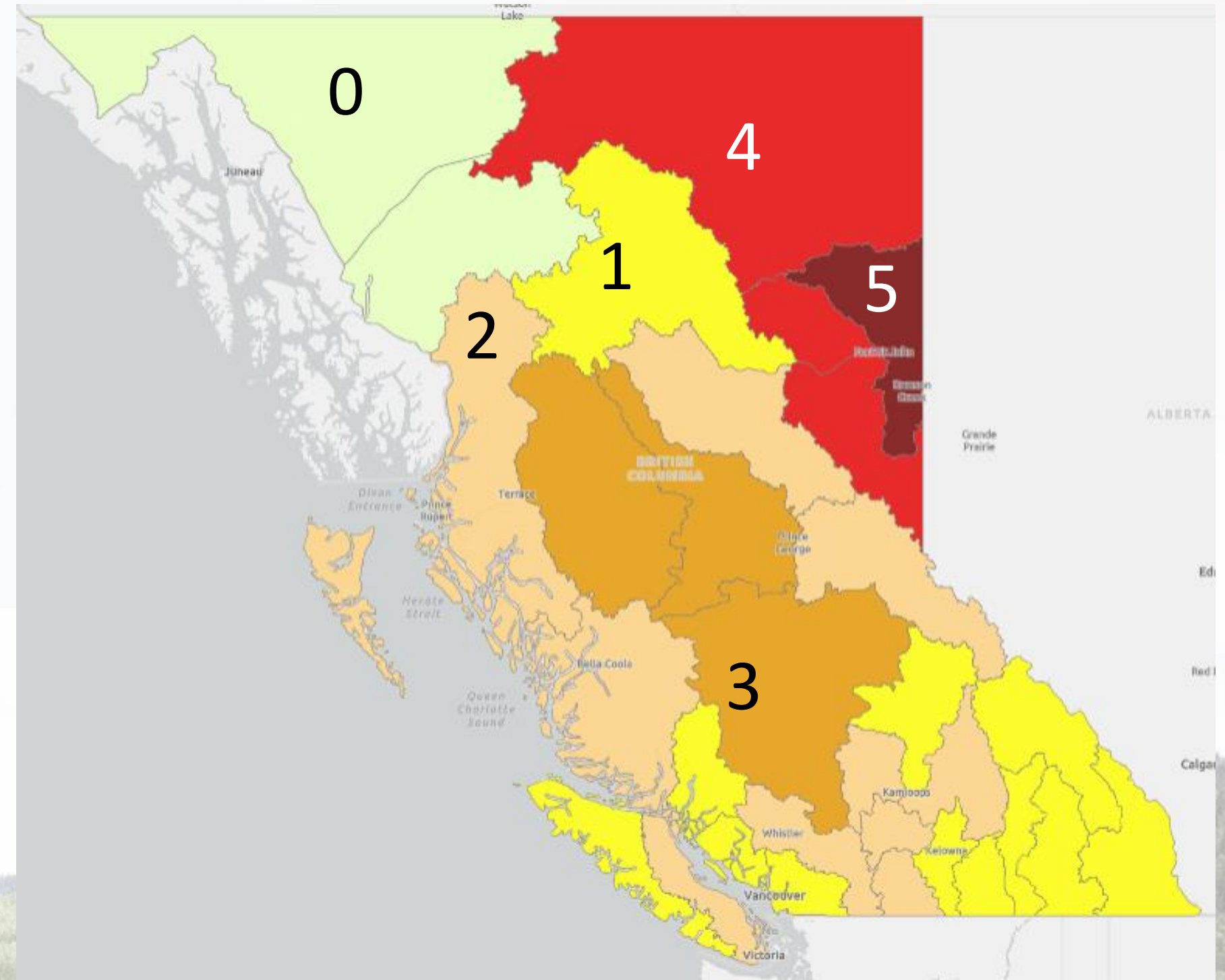
- Level 4



- Level 5



## 34 Provincial Administrative Drought Regions



# Current Conditions

2024 DROUGHT LEVELS AT A GLANCE																											
Drought Levels:	0		1		2		3		4		5		*	Not updated outside of core drought season													
BASINS	02-May	09-May	16-May	23-May	30-May	06-Jun	13-Jun	20-Jun	27-Jun	04-Jul	11-Jul	18-Jul	25-Jul	01-Aug	08-Aug	15-Aug	22-Aug	29-Aug	05-Sep	12-Sep	19-Sep	26-Sep	03-Oct	10-Oct	17-Oct	24-Oct	31-Oct
Fort Nelson	3	3	4	4	4	4	4	4	3	3	3	4	4	4	4	4	4	5	5	5	5	5	5	4	3	3	*
East Peace	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	5	5	5	5	4	4	4	4	*
North Peace	4	4	4	4	4	4	4	4	3	3	3	3	3	2	2	3	3	3	4	4	4	4	4	3	2	2	*
South Peace	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	5	5	4	3	2	2	2	*
Northwest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
Stikine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	1	0	0	0	0	*	*
Skeena-Nass	1	1	2	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4	4	1	0	0	0	*	*
Bulkley-Lakes	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	5	5	5	5	5	5	3	3	3	0	*	*
Finlay	2	2	2	2	1	1	1	1	1	1	1	1	1	0	1	1	2	2	2	2	2	1	0	0	0	0	0
Parsnip	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	2	1	1	0	0	0
Upper Fraser West	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5	5	5	5	5	5	4	4	3
Upper Fraser East	3	3	3	3	2	2	2	2	2	2	1	2	2	2	2	3	3	3	2	3	4	1	0	0	0	0	0
Upper Columbia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0
Lower Columbia	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	4	3	3	3	3	3	3	3	3	2	0	0
West Kootenay	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	2	3	3	4	5	5	4	2	2
East Kootenay	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	2	1	1
Kettle	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	3	3	3	3	3	3	3	3	1	1
Middle Fraser	3	3	3	3	3	3	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	1	0	0	0	*	*
Lower Thompson	2	2	3	3	2	2	2	2	1	1	1	2	2	2	3	3	3	3	2	2	2	1	0	0	0	0	*
North Thompson	2	2	2	2	1	1	1	1	1	1	1	1	2	3	3	3	3	3	2	2	2	1	0	0	0	0	*
South Thompson	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2	3	3	3	2	2	1	1	1	1	0	0	*
Nicola	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	4	4	4	4	4	4	3	3	2	2	*
Okanagan	2	2	2	2	1	1	1	1	1	1	1	2	3	3	3	3	3	3	2	2	2	2	2	2	2	2	*
Similkameen	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	4	3	2	2	2	1	2	2	2	1	1	*
Central Pacific Range	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	0	0	0	*	*
Eastern Pacific Range	2	2	2	2	2	2	1	1	1	1	1	1	1	2	2	2	3	3	2	2	2	2	1	1	0	*	*
Sunshine Coast	1	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	3	3	3	2	2	1	0	0	0	*	*
Lower Mainland	2	2	2	2	1	1	1	1	1	1	1	2	3	3	3	3	3	3	3	2	2	1	0	0	0	*	*
Central Coast	2	2	2	2	2	2	1	1	1	1	2	3	3	3	3	3	3	3	2	2	3	0	0	0	0	*	*
West Vancouver Island	1	1	2	2	1	1	0	0	1	1	2	3	4	4	4	5	5	4	4	4	4	2	1	1	0	*	*
East Vancouver Island	1	1	2	2	2	2	1	1	2	2	3	4	4	4	4	5	5	4	4	4	4	3	2	2	0	*	*
Haida Gwaii	2	2	2	2	2	2	0	0	0	0	1	1	2	2	2	3	4	4	3	3	3	0	0	0	0	*	*



# Active and Engaged Water Management

- Prioritize environmental and community water needs
- Issue Directives suspending water use under WSA S10
- Proactive engagement of industry in preparation for the 2024 drought season
- Actively monitor conditions across B.C. and work with provincial staff to identify other basins outside of the northeast in need of suspension



# 2024 BCER Drought Management Summary

At the start of the 2024 drought season, the following s.10 Directives were still in force from 2023:

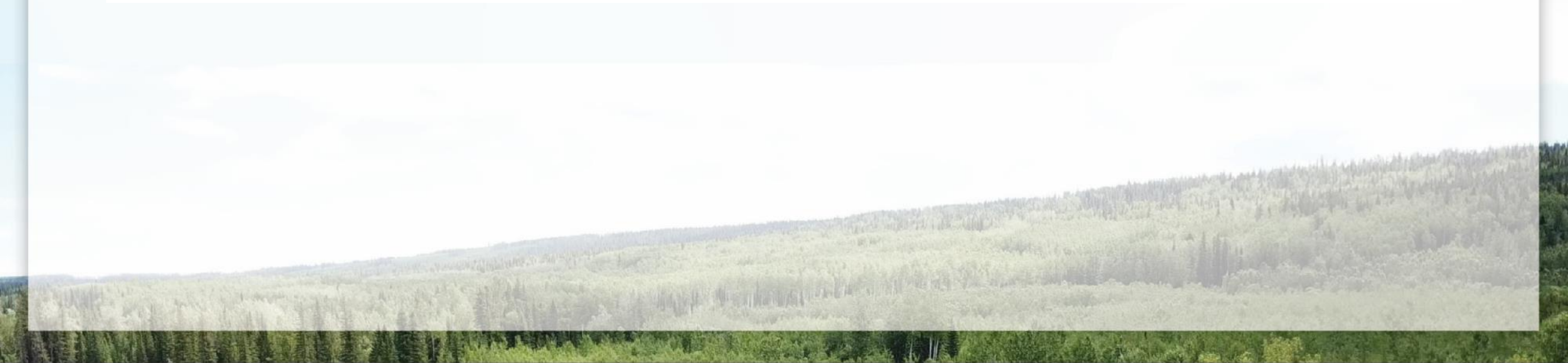
<b>Watershed</b>	<b>River</b>	<b>Date Issued</b>
Fraser River Watershed	Salmon River	July 24, 2023
Peace River Watershed	Beatton River (Doig River, Osborn River, Blueberry River)	May 25, 2023
	Kiskatinaw River	May 25, 2023
	Sukunka River	June 30, 2023
	Murray River	July 12, 2023
	Pack River	July 24, 2023
Liard River Watershed	Fontas River	May 25, 2023
	Sikanni Chief River	June 30, 2023
	Prophet River	June 30, 2023
	Kiwigana River	June 30, 2023



# 2024 BCER Drought Management Summary

In 2024 the following s. 10 Directive was issued:

Watershed	River	Date Issued
Fraser River Watershed	Coldwater River	July 19, 2024





# 2024 BCER Drought Management Summary

At the time of preparing this presentation, several suspensions have been lifted and only the following s.10 Directives are in effect:

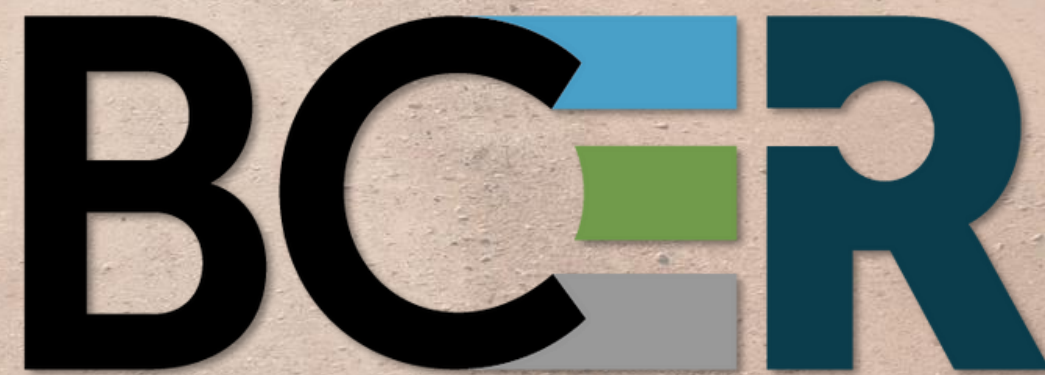
Watershed	River	Mainstem	Tributaries (incl lakes)
Fraser River Watershed	Salmon River	Open	Open
	Coldwater River	Open	Open
Peace River Watershed	Beatton River (Doig River, Osborn River, Blueberry River)	Open	Closed
	Kiskatinaw River	Closed	Closed
	Sukunka River	Open	Closed
	Murray River	Open	Closed
	Pack River	Open	Closed
Liard River Watershed	Fontas River	Closed	Closed
	Sikanni Chief River	Open	Closed
	Prophet River	Open	Closed
	Kiwigana River	Open	Closed

- “Open” = water diversion/use suspension has been lifted
- “Closed” = water diversion/use suspension remains in effect



# Thank You

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