



Even with the cooler temperatures and some rain, we continue to experience low water levels throughout the Boundary region. With normal low water levels occurring mid September, we still have a few more weeks to go. For the first time ever in the Boundary Region, a Ministerial Order has been placed on the West Kettle River watershed requiring that all water withdrawal for irrigation (forage) be stopped until the end of September. Shifting into the cooler month of September, we need to continue prioritizing water conservation in support of our communities and ecosystems.

Comparing current stream levels to previous drought years: 2003, 2009 and 2015

- Overall, current water levels are comparable to previous drought years over the past 2 decades (graphs below).
- Record low in the upper West Kettle drainage (Trapping Creek) and Christian Valley (Lost Horse Creek).

Surface and Groundwater levels

There are nine (9) [rivers/streams that have flow monitoring](#)

- All rivers/streams are showing low water levels (below the 25th percentile (lower quartile)); with two at their lowest recorded water level for this time of year.
- All remain below 10% Mean Annual Discharge (MAD), with most under 5% MAD (table below).

There are three (3) [groundwater observation wells](#) in the Boundary (graphs below)

- Beaverdell and Grand Forks observation well are both showing lower water levels than experienced over the past 10 years (for this time of year). Note: this is however not the lowest recorded level over the life of the well.
- With only 2 years of data at the Midway observation well, there is not enough information to do a comparison.

Past Weather and Forecasts

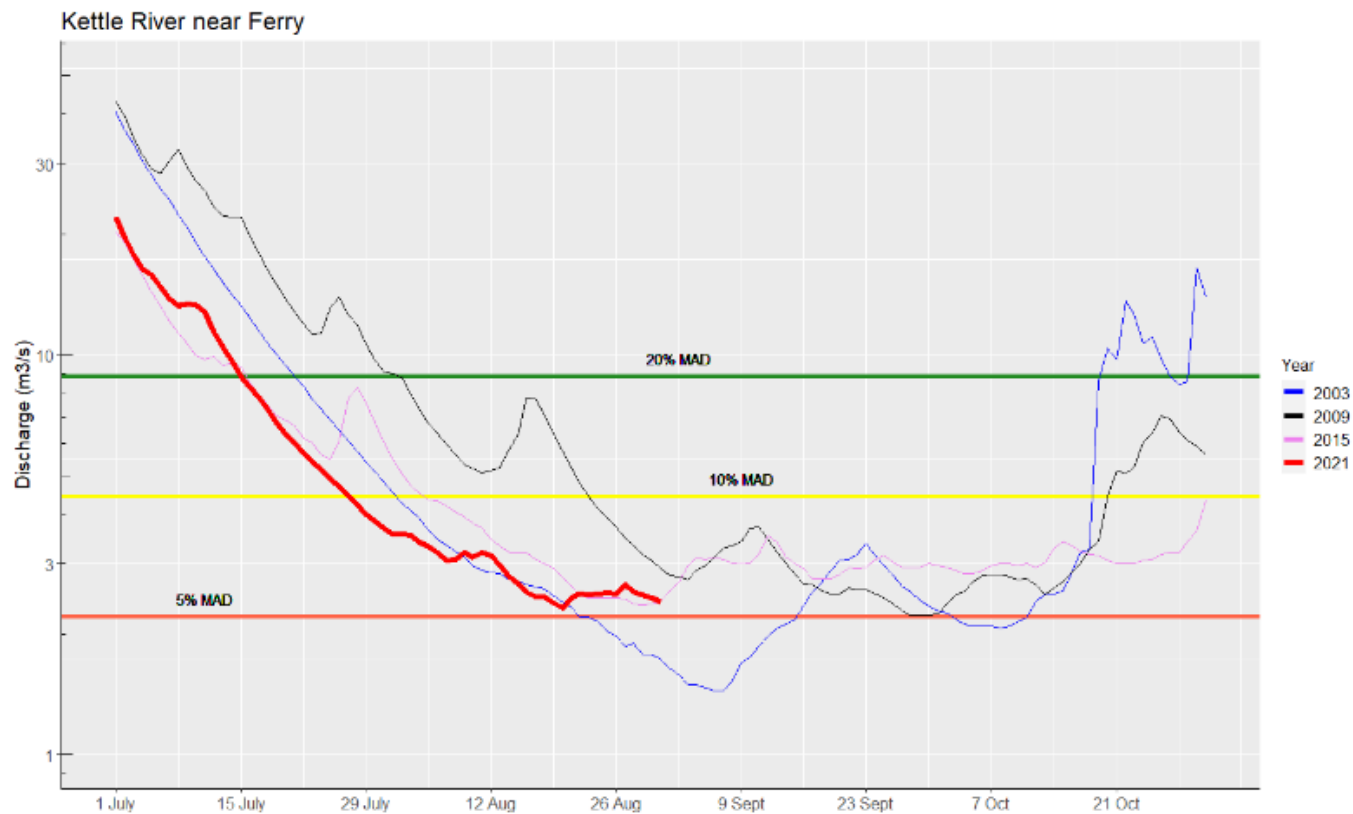
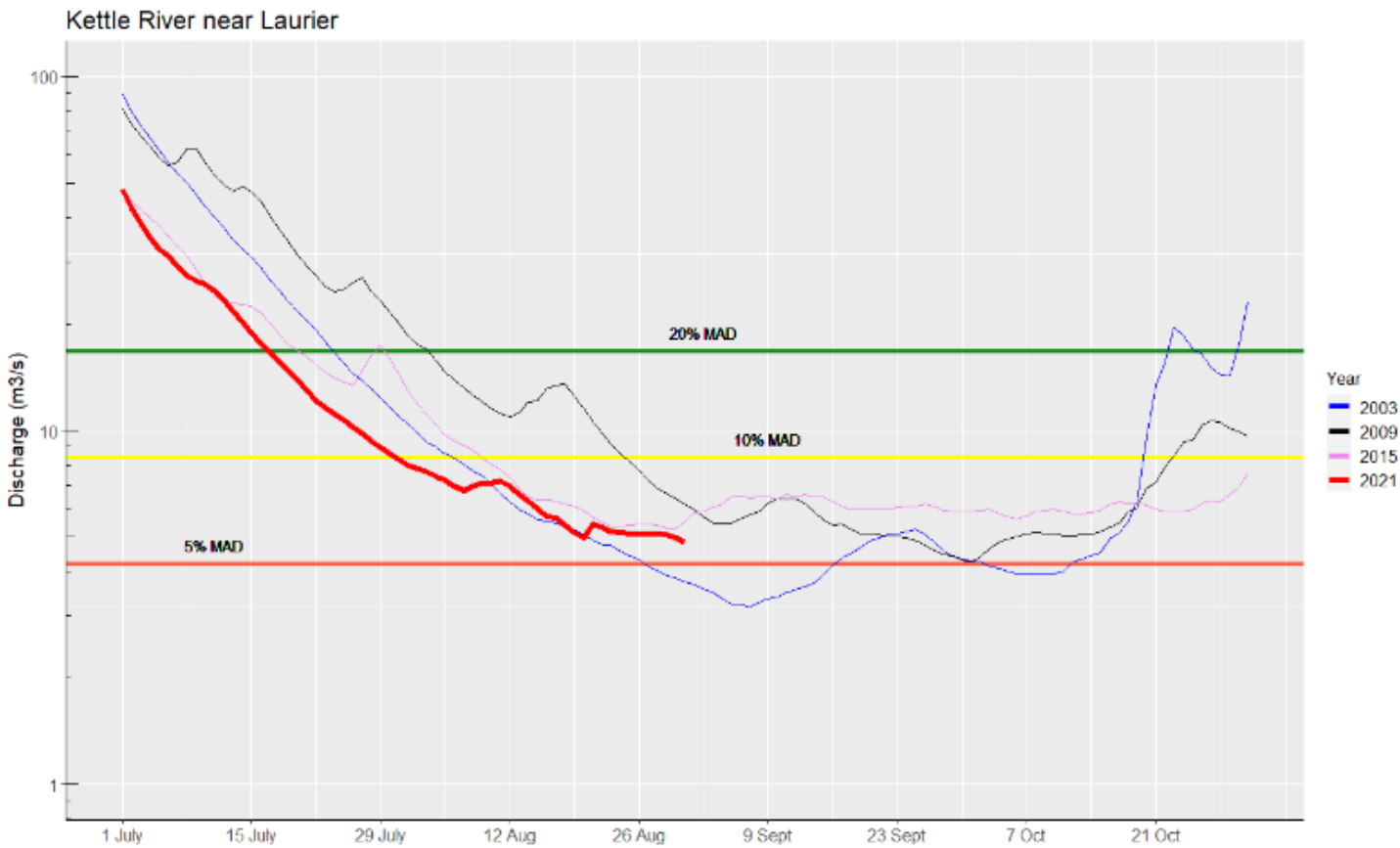
- Total August rain recorded (range of 17-47 mm) was above average for many of our climate stations (table below).
- Even with the percentage of precipitation that fell this past month being slightly above average, the Boundary region is still in a moisture deficit since April 1st - ranging from exceptionally low (upper West Kettle Watershed) to moderately low (Grand Forks and Christina Lake area). (graph below).
- No rain in the immediate forecast, however the long-term forecast (3 months) show a slight increase in precipitation from normal. Temperatures are forecasted to be slightly above normal over the next 3 months.

Provincial Information

- The Provincial [Drought Classification level](#) remains at Level 5 (exceptionally dry) for the Kettle River Watershed and Level 4 for the Okanagan River Watershed (extremely dry).
- RDKB attends meetings weekly with the Province. To report low water concerns contact FrontCounterBC@gov.bc.ca or watershedplanner@rdkb.com.

Be WaterSmart. Use water wisely, as every drop counts

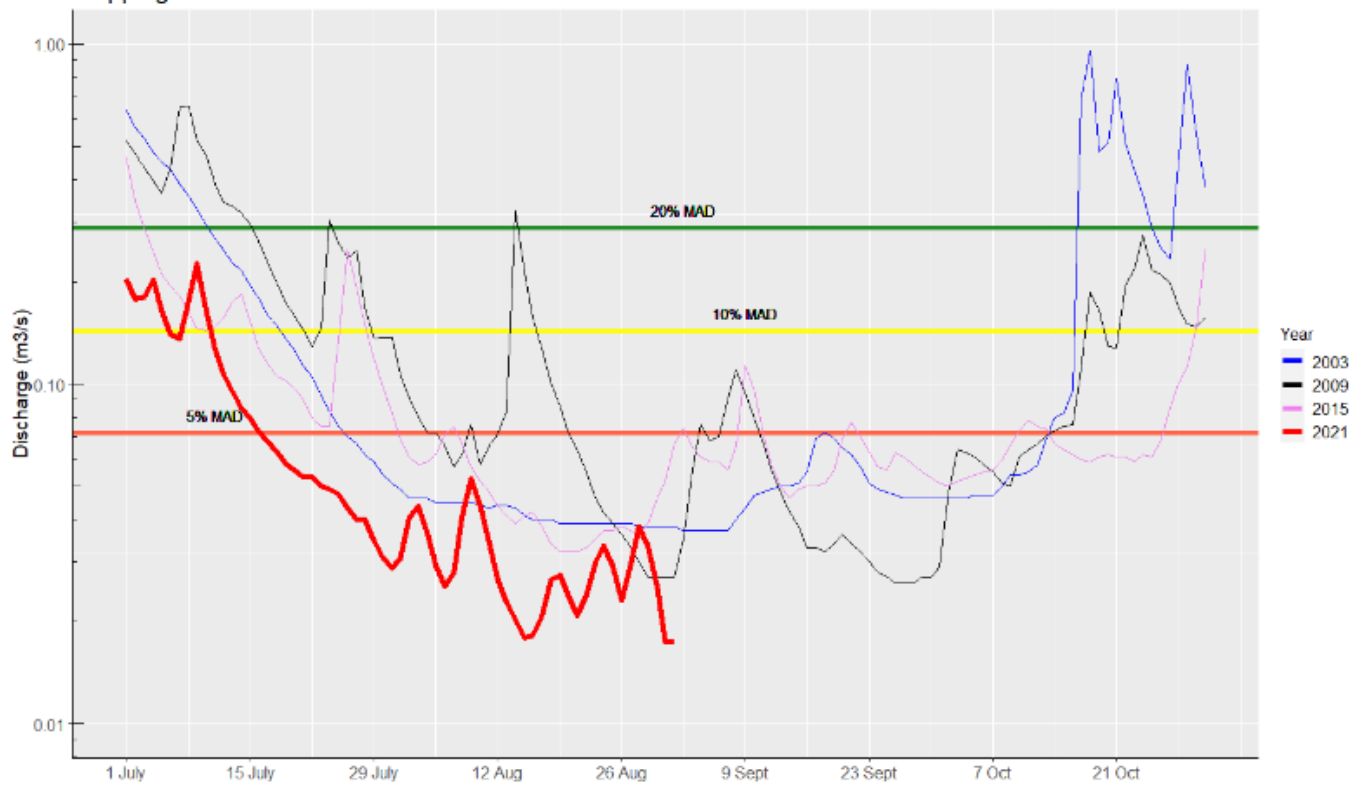
- Water conservation takes many forms: repairing water leaks, fix dripping taps, use soil water meters to effectively (and deeply) water your site, watering during evenings and early mornings to reduce evaporation, while making sure your sprinklers aren't watering pavement. Overall, reducing unnecessary indoor and outdoor water use.
- Think before you turn on the tap outside, does it need to happen, if so can you do something to reduce the evaporation and increase absorption into the ground?
- Ensure your water conservation practices continue to be aligned with FireSmart principles.

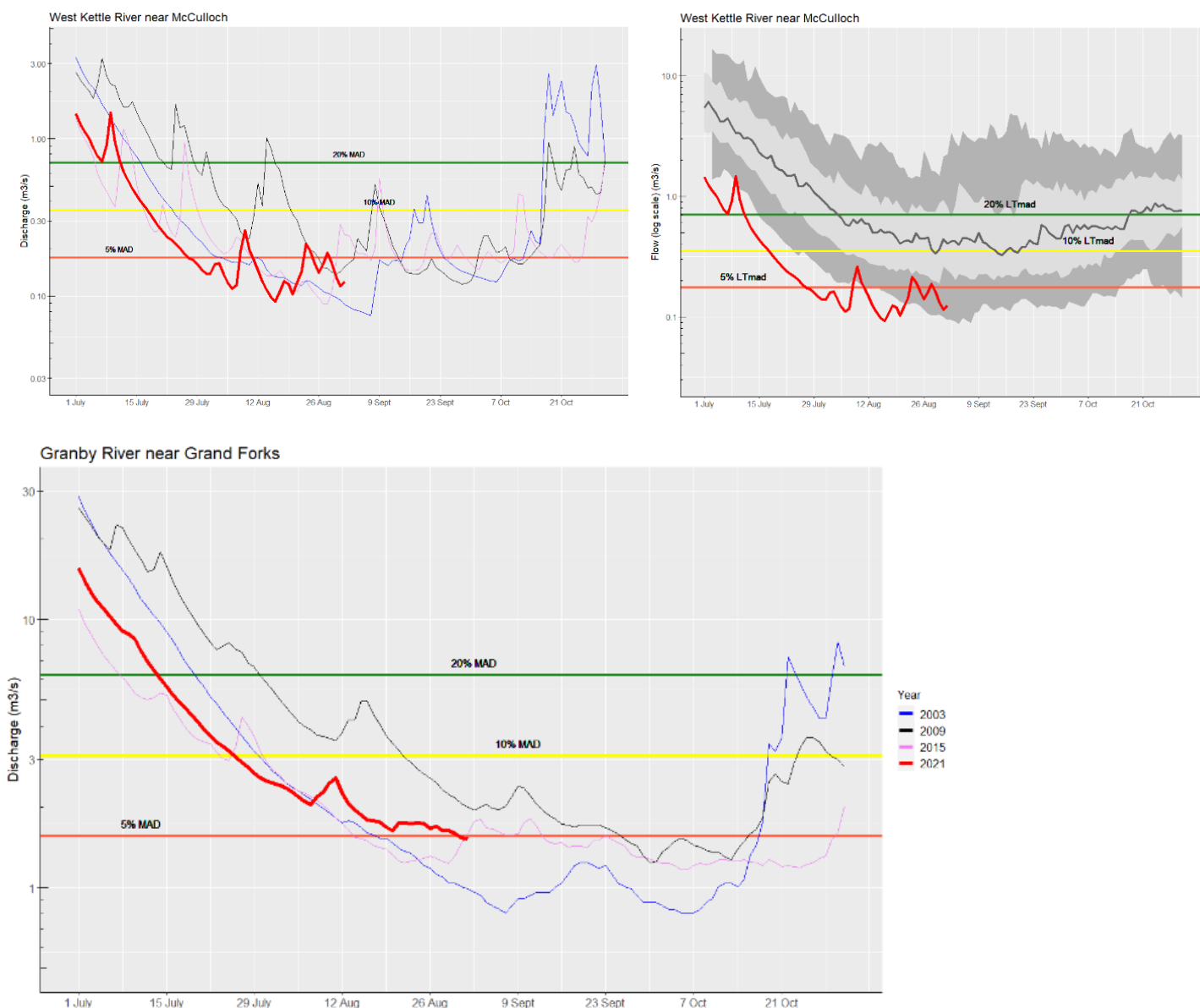


West Kettle River at Westbridge



Trapping Creek near Mouth





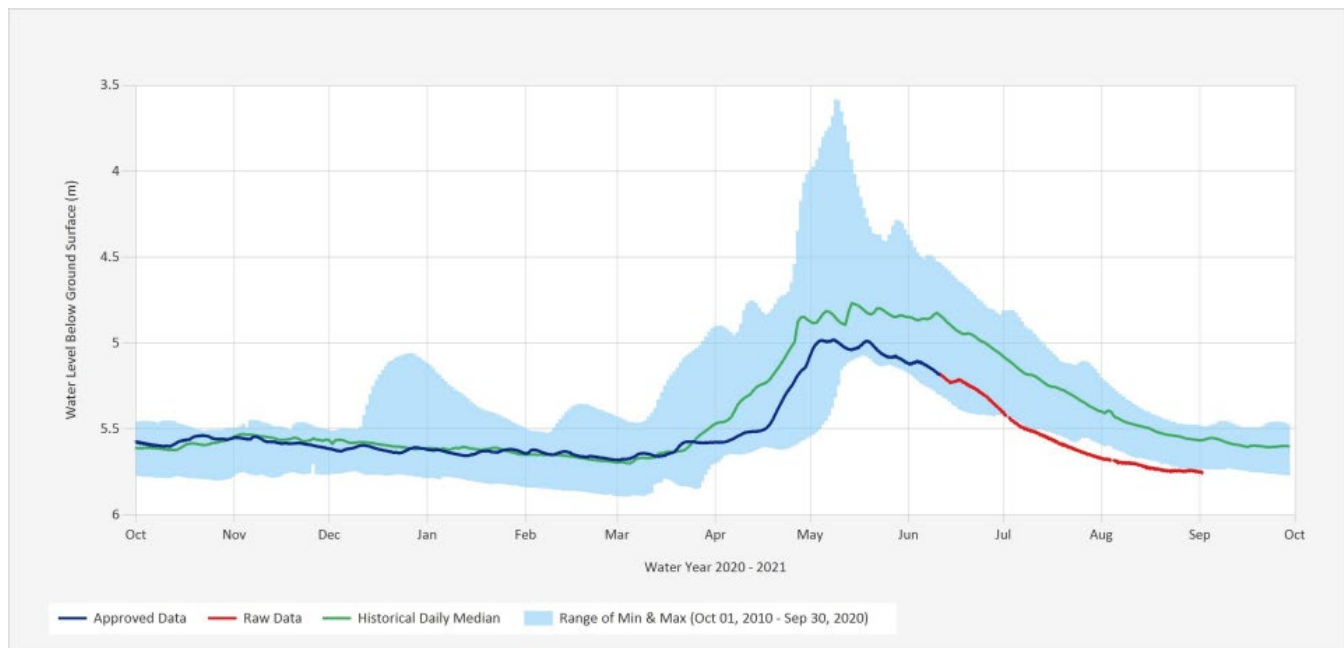
Discharge for monitored streams in the Boundary region relative to their Mean Annual Discharge (MAD). MAD is a value used to assess potential fisheries conditions in streams (in addition to temperature impacts). In general, 10% MAD is needed to support spawning; with 5% MAD to support rearing and sustaining the aquatic habitat.

Stream	Current Discharge (cms)	% of MAD	Comments regarding current water flow compared to previous years.	Water Temp Min (°C)	Water Temp Max (°C)
Granby River at Grand Forks	1.52	4.9%	between minimum to lower quartile	14.5	20.0
West Kettle River at Westbridge	0.64	4.8%	between minimum to lower quartile	11.3	19.4
Kettle River at Westbridge	1.64	5.9%	between minimum to lower quartile	12.5	19.2
West Kettle River near McCulloch	0.12	3.4%	between minimum to lower quartile	n/a	n/a
Lost Horse Near Christian Valley	0.002	1.2%	below minimum level	n/a	n/a
Burrell Creek	0.0877	2.0%	between minimum to lower quartile	n/a	n/a
Trapping Creek	0.018	1.3%	below minimum level	n/a	n/a
Kettle River at Ferry (cms)	2.41	5.4%	between minimum to lower quartile	n/a	n/a
Kettle River at Laurier (cms)	4.67	5.6%	between minimum to lower quartile	n/a	n/a

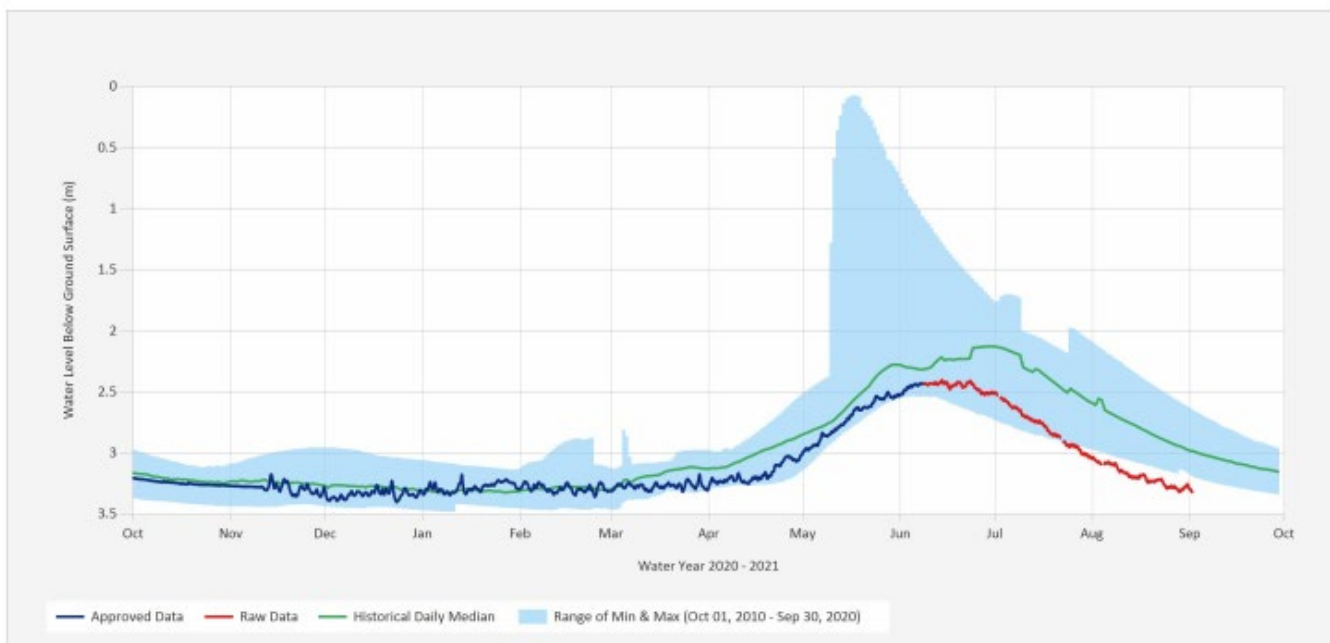
Groundwater Observation Wells

Source: [BC Groundwater Observation Wells](#)

Beaverdell Observation Well (Note: the average range shown here is calculated based on the last 10 years, and does not represent the range of data from the entire life of the well)

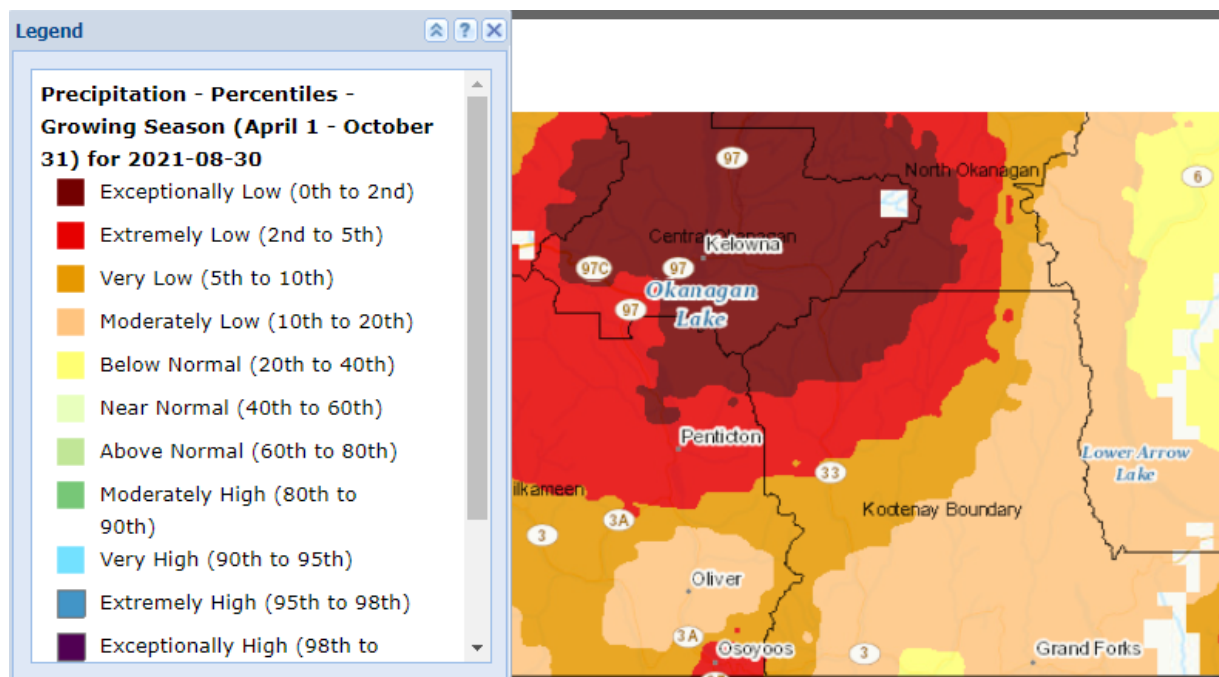
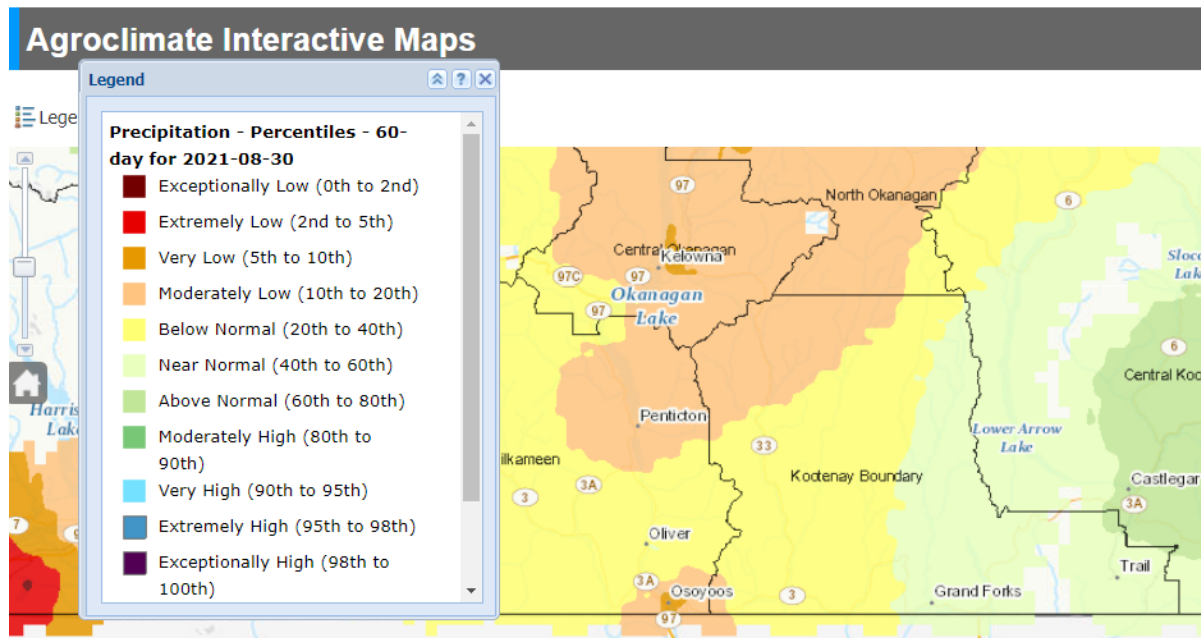


Grand Forks Observation Well (Note: the average range shown here is calculated based on the last 10 years, and does not represent the range of data from the entire life of the well)



Historical and Forecasted Climate Conditions

Source: [Agroclimate Interactive Maps](#)



Total rain recorded at local climate stations over the month of August. Source: [Kootenay Boundary Water Tool](#)

Climate Station	August rain (mm)
Grand Forks	24 mm
Rock Creek	17 mm
Eight Mile (Granby watershed)	35 mm
Nicoll (Granby watershed)	47 mm
Beaverdell	17 mm
Ida Bell	37 mm

Forecasts

Source: [Environment Canada](#)

Grand Forks

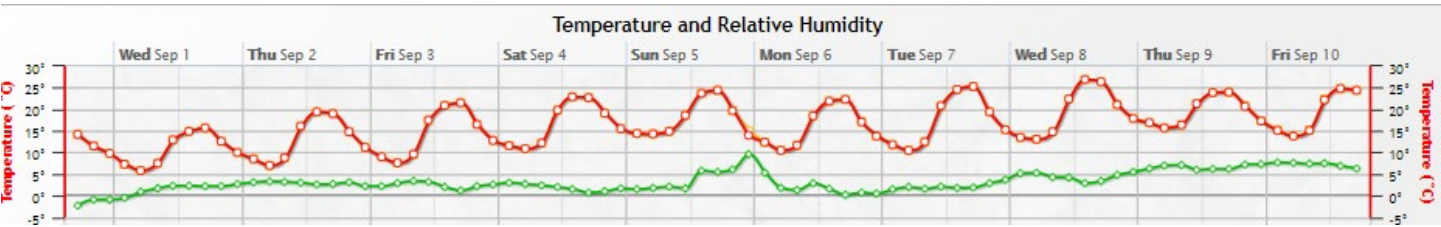
<u>Wed</u> <u>1 Sep</u>	<u>Thu</u> <u>2 Sep</u>	<u>Fri</u> <u>3 Sep</u>	<u>Sat</u> <u>4 Sep</u>	<u>Sun</u> <u>5 Sep</u>	<u>Mon</u> <u>6 Sep</u>	<u>Tue</u> <u>7 Sep</u>
 23°C Mainly sunny	 25°C Sunny	 28°C Sunny	 29°C Sunny	 30°C Sunny	 26°C A mix of sun and cloud	 26°C A mix of sun and cloud
Tonight  9°C A few clouds	Night  7°C Clear	Night  12°C Cloudy periods	Night  15°C Cloudy periods	Night  13°C Cloudy periods	Night  12°C Cloudy periods	

Rock Creek

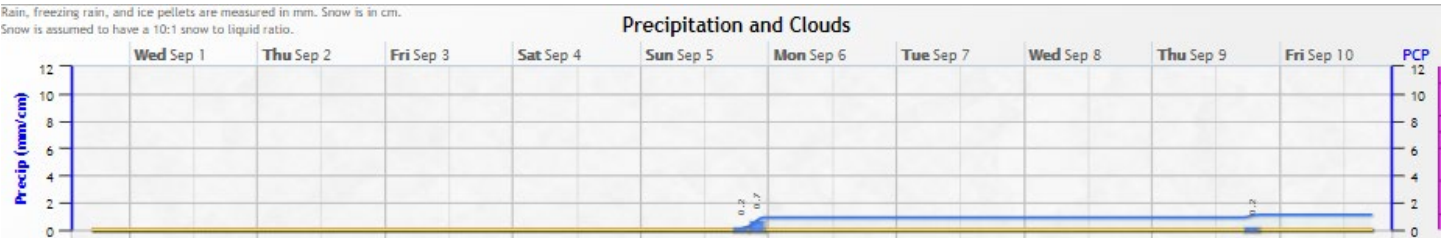
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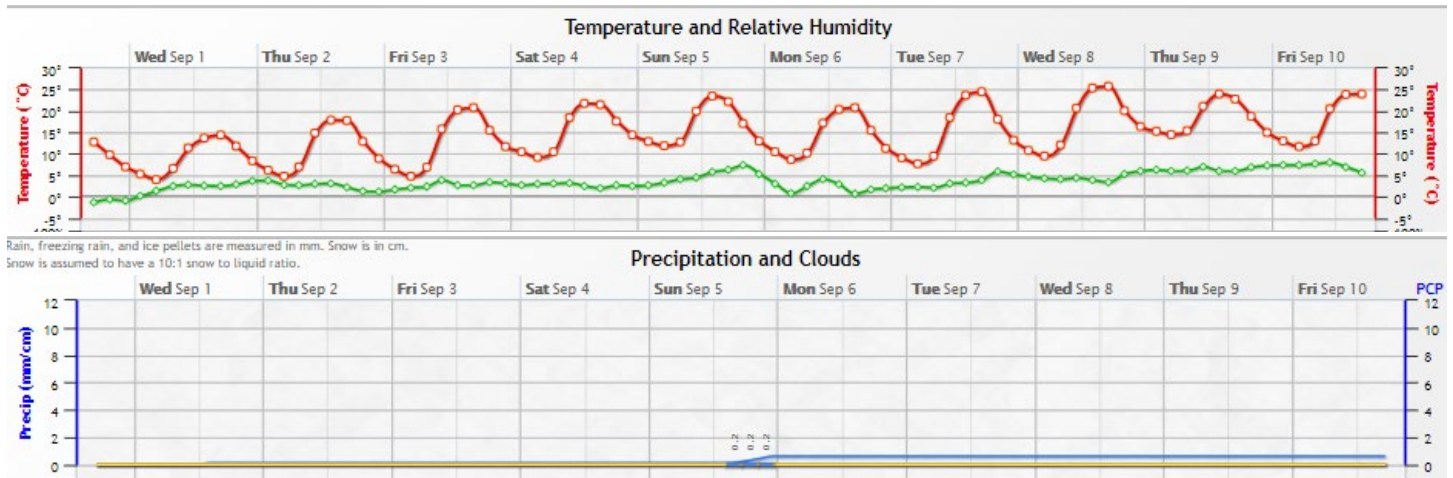
[SPOTWX](#) (Canadian modelling system GEM)

North of Grand Forks



Rain, freezing rain, and ice pellets are measured in mm. Snow is in cm.
Snow is assumed to have a 10:1 snow to liquid ratio.





3 Month Temperature and Precipitation Forecast.

Source: [Environment Canada](https://www.ec.gc.ca/environnement) September-October-November, 2021.

