

The air temperatures continues to remain warm, with little precipitation over the past 2 weeks. Stream flows are low to very low for this time of year, and water temperatures remains higher than 19°C in most systems. Forecasts are reporting temperatures above normal for the next few months, with less than normal amounts of rain. Conditions are looking similar to those in 2015, a graphical comparison between 2015 and 2021 uploaded to [RDKB Drought update link](#).

Discharge information from the WSC real time stations was not available for a few days due to a satellite transfer problem. This has been fixed, with a few data gaps showing. Discharge measurement readings (blue dots in the graphs below) were completed by the WSC team this week, confirming the very low water levels that are being reported.

Surface and Groundwater levels (see below for graphs)

- All 9 monitored surface water systems are close, at, or below their minimum recorded level for this time of year.
- During very hot and dry conditions, the Boundary region has been known to drop from 10% MAD to 5% MAD in under 2 weeks.
- The Boundary Region has 3 [groundwater observation wells](#). All wells reading low for this time of year (below 25th percentile). The Grand Forks and Beaverdell wells information is based on 10 years of data; the Midway well is only 3 years worth of data.

Fisheries

- Water temperatures (spot measurements) were collected in Area D and E of the Boundary: Boundary Creek (15°C), Kettle at Midway (25.5°C), West Kettle at Carmi (21.1°C) and Wilkinson Creek (19-21°C), Kettle at Spragett Bridge (20.8-25.3°C) and Kettle River at Atwood Bridge (24°C).
- Real time water temperature is now available (installed this week) for the Granby River at the Water Survey of Canada site: [Real-Time Hydrometric Data](#). A big thank you to the WSC team for making that happen!
- [Provincial Fisheries Drought Management Plan](#) (2019) addresses high temp impacts for different fish species.

Provincial Information

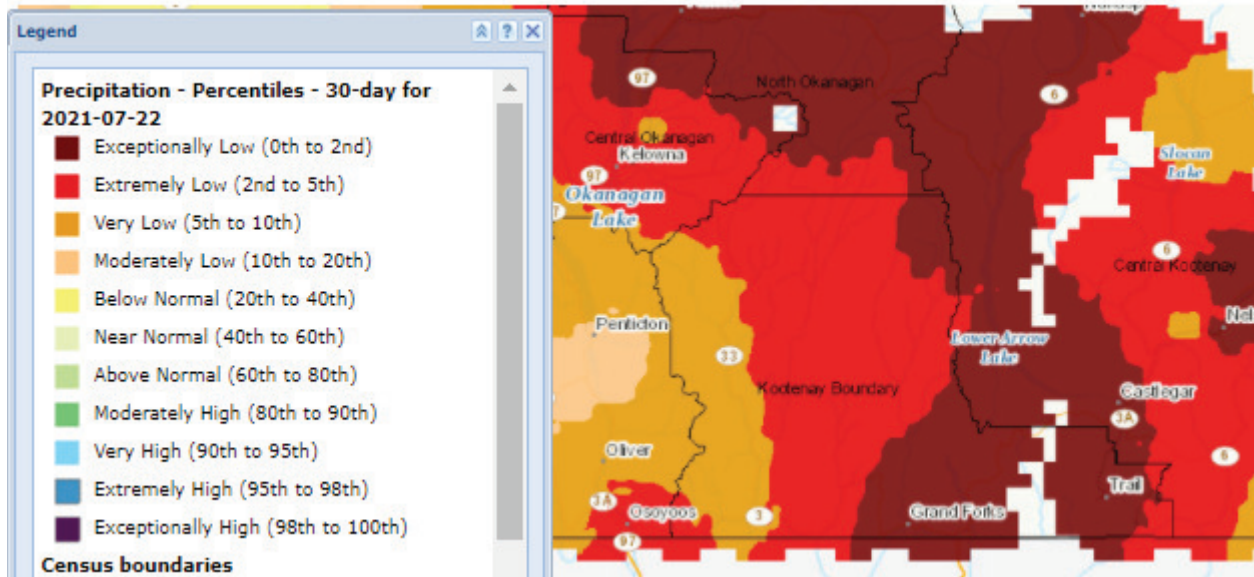
- The Provincial [Drought Classification](#) remains at a Level 4 (extremely dry). All water users will receive letters from the Province this week requesting voluntary water use reductions. See excerpts from the letter below.
- The Province wants to be kept aware of environmental and economic impacts associated with the low water conditions, and water use in the Boundary region. RDKB attends weekly meetings with the Province, you are welcome to email me the information, or contact the Province directly at FCBC: FrontCounterBC@gov.bc.ca.
- Note if voluntary reduction in water use is not sufficient to address stream specific water concerns, regulatory curtailment of water use may be required. Curtailment can include both surface and hydraulically connected ground water users. You can contact me for information as to whether your well is hydraulically connected.

RDKB water conservation recommendations for households

- Be WaterSmart. Use water wisely and consciously. Repair water leaks, fix dripping taps, using a soil water meter, water deeply and only when needed.
- Reduce all non-essential indoor and outdoor water use: avoid outdoor vehicle washing, don't use water to clean pavement. Water only in the evenings and early mornings to reduce evaporation.
- Think before you turn on the tap, does it need to happen, if so can you do something to reduce the evaporation potential and increase absorption into the ground?
- Some more great water conservation tips: https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-planning/water_conservation_tips_brochure.pdf

Precipitation Percentile (relative to normal for this time of year) over the past 30 days. 50th percentile is normal.

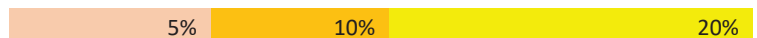
<https://agriculture.canada.ca/atlas/agclimate?lang=en>



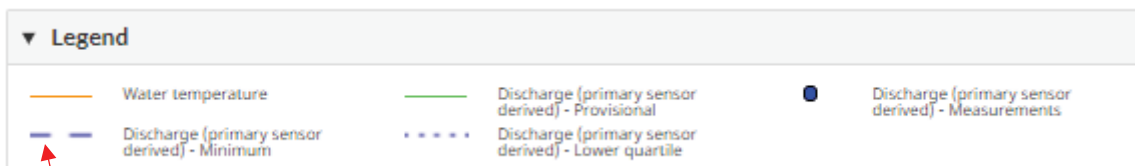
Discharge for monitored streams in the Boundary region relative to their Mean Annual Discharge (MAD). MAD is a value used to assess fisheries conditions in a stream (outside of temperature impacts). At minimum, 10% MAD is necessary to support spawning, with 5% MAD required for rearing and general fish survival.

Date	Stn No.	Stream	Current Discharge	% of MAD	Comments
23-Jul	08NN002	GRANBY RIVER AT GRAND FORKS	3.56	11.5%	almost minimum ever recorded
23-Jul	08NN003	WEST KETTLE RIVER AT WESTBRIDGE	1.05	8.2%	at minimum level
23-Jul	08NN026	KETTLE RIVER NEAR WESTBRIDGE	3.63	13.1%	at minimum level
23-Jul	08NN015	West Kettle River near McCulloch	0.20	5.7%	almost minimum ever recorded
21-Jul	08NN028	Lost Horse Near Christian Valley	0.006	3.1%	below minimum ever recorded
23-Jul	08NN023	Burrell Creek Above Gloucester Crk	0.293	6.8%	below minimum ever recorded
23-Jul	08NN019	Trapping Creek near the Mouth	0.0514	3.6%	below minimum ever recorded
23-Jul	FRYW1	Kettle River at Ferry (cms)	5.38	12.2%	below minimum ever recorded
23-Jul	LAUW1	Kettle River at Laurier (cms)	12.83	15.3%	below minimum ever recorded

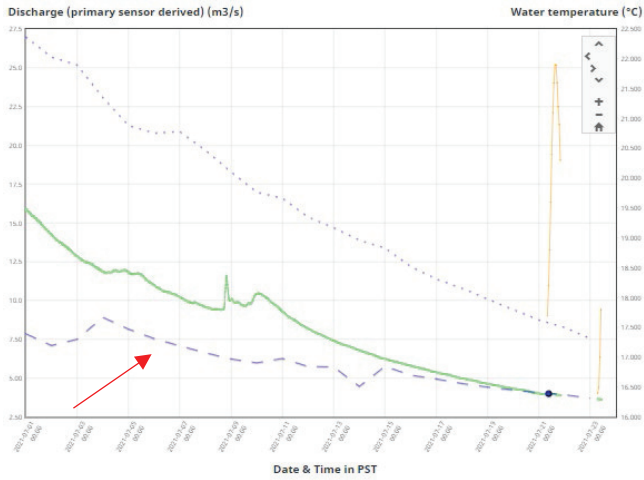
Colour coding for % of MAD



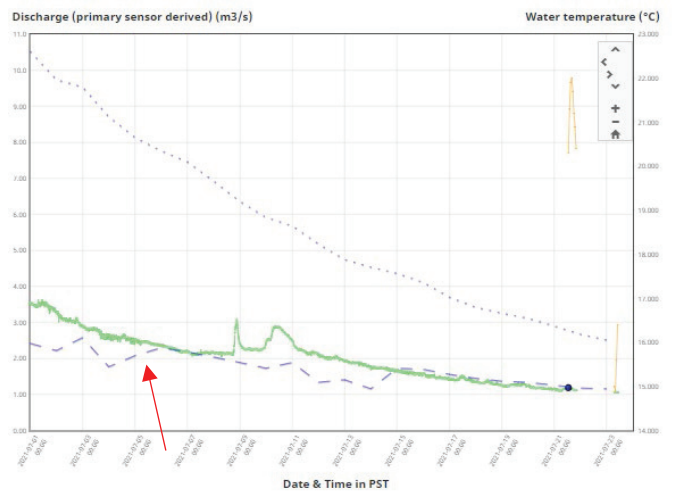
Discharge graphs from the [Water Survey of Canada](#) and [Northwest River Forecast centre](#) (USA) websites
Legend for the Water Survey of Canada stations. Minimum recorded level identified by red arrow.



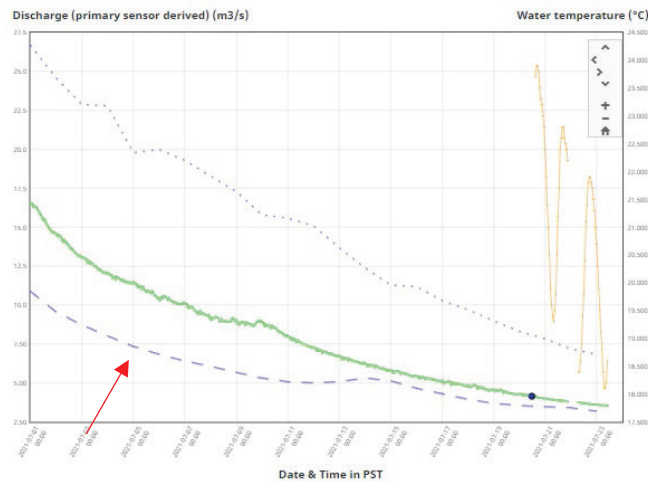
Kettle River at Westbridge (08NN026)



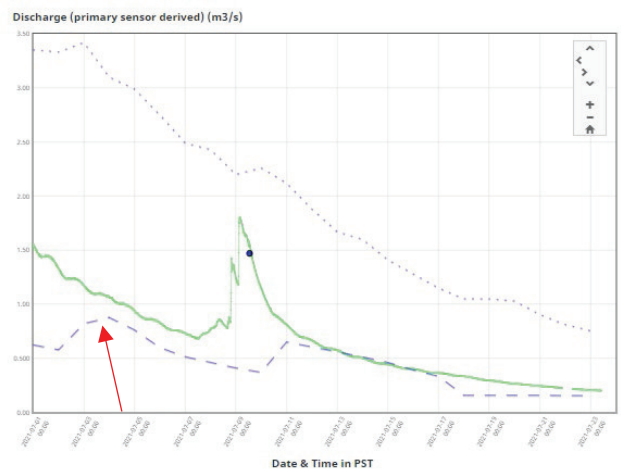
West Kettle at Westbridge (08NN003)



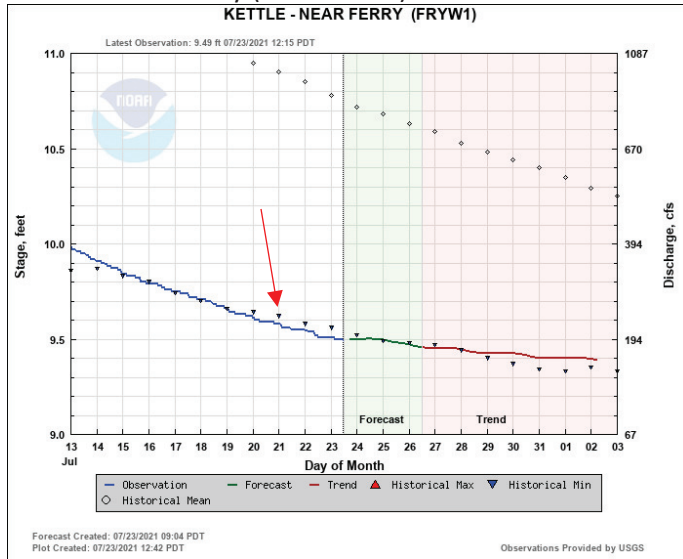
Granby River at Grand Forks (08NN002)



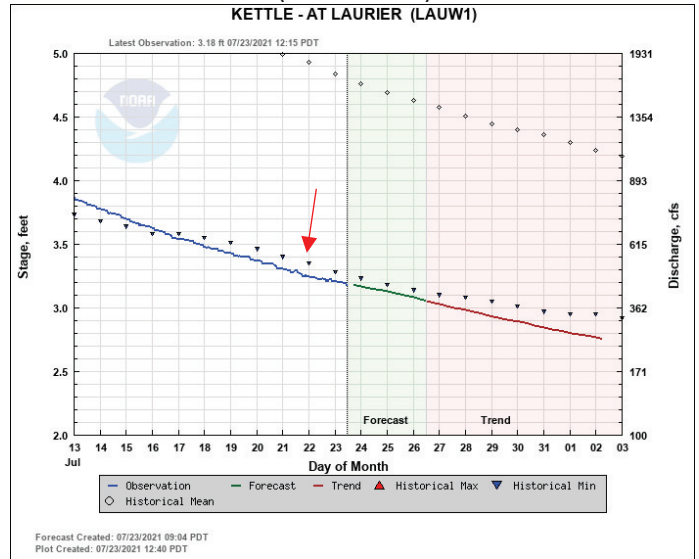
West Kettle near McCulloch (08NN015)



Kettle River at Ferry (USA station)



Kettle River at Laurier (USA station)



*Excerpts from the Provincial Letter mailed to water licence holders in the Kettle River Watershed following the Provincial designation of drought level 4 (extremely dry).
This "excerpts" document was produced on July 19, 2021 by the RDKB, Watershed Planner.*

To: Kettle Basin Water Licence Holders
Re: Low Water Advisory and Water Conservation Request

Many areas in Southeast BC are facing critical water shortages. The purpose of this letter is to request your participation in voluntary water usage reductions for the remainder of the drought season and to give you advance notification of the potential for mandatory restrictions on water licences should conditions worsen.

The Province currently uses a 6-level system to indicate drought severity in basins throughout the province, with Level 0 representing average or wet conditions and Level 5 representing the most severe low flow conditions. In response to a large precipitation deficit, low groundwater levels, and rapidly declining stream flows to record lows for this time of year, the Province has declared Level 4 drought for the Kettle Basin. You are receiving this letter because your water licence has been found to be in this basin.

Due to the Level 4 drought at the time of this letter's writing, the Ministry is **requesting voluntary water reductions of 50% by all water users in the Kettle Basin**. Stream levels rapidly declined to Level 4 conditions over the past week faster than a voluntary Level 3 30% reduction could be distributed, which is why this initial request is for a 50% reduction. Reducing all water use, including groundwater use, is important, especially where licenced water use is not supported by licenced storage. If your water licence includes a storage component, you are encouraged to consider not diverting water for the purpose of storage at this time.

If drought conditions worsen further, additional voluntary reductions may be requested, and specific sensitive streams and water licenses may be targeted for mandatory reductions under the *Water Sustainability Act*.

Users are being asked to maintain the 50% reduction until the basin returns to a Level 3, after which a 30% reduction is requested. Once the drought level returns to Level 2 or below, voluntary reductions requests will cease. Due to the rapidly changing nature of streamflow, please watch the Drought Portal for the most up to date information as follow up letters may not be possible. Local governments are also posting up to date information on their platforms.

If you have questions about drought or drought conditions, please contact Front Counter BC at 1-877-855-3222 or FrontCounterBC@gov.bc.ca. Conserving water is everyone's responsibility, even more so in times of water shortage. Thank you for your support.