



Gitksan Watershed Authorities

PO Box 166 Hazelton BC V0J 1Y0

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Urgent Fisheries Drought Concerns – Anspawyawx (Kispiox River)

The Kispiox Watershed is experiencing a severe drought (Level 5) at the same time as all five species of Pacific salmon and Steelhead Trout, Rainbow Trout, and Bull Trout have been identified in these river systems.

As a result of this drought, water temperatures are warmer than what is good for these fish and likely causing changes in behaviour and even mortality. Flows are well below normal and (especially up higher in the system) may be limiting migration very soon or later in the summer. As seen in our previous updates there are already concerns about trends in numbers for Kispiox Watershed salmon and steelhead populations. With the additional drought stress, angling may lead to mortality or stress on non-target fish that may impact reproduction.

The Kispiox Water Survey of Canada real-time hydrometric stations is used to monitor water temperature and level. The Gitksan Watershed Authorities with support from Skeena Fisheries Commission has been conducting an ongoing Upper Skeena and Kispiox River Temperature monitoring project tracking water temperatures across multiple systems for the past three summers. The goal of this project has been to identify current and future areas of thermal refugia using stream temperature network observations and modeling techniques. We know from our temperature study work so far that this gauge basically reflects temperatures up to McCully, with a very small decrease in temperatures up to Sweetin River. This lower section of the river is where most of the angling occurs.

Below are the Kispiox flows since July 1 (green) compared to mean (middle dotted line) and upper 75% and lower 25% (top and bottom dotted lines). Flows are well below the lower 25% and will continue to drop over the weekend. It is likely by early next week sections of the river will be impassable to fish.

GWA is concerned for the fish in and returning to the Kispiox River and would recommend that restrictions be in place for the Kispiox River to Recreational Fishing. Before taking this action there needs to be discussion and support from the Huwiilp and Gitksan Community.

Sincerely,

Charlie Muldon
Coordinator
Gitksan Watershed Authorities



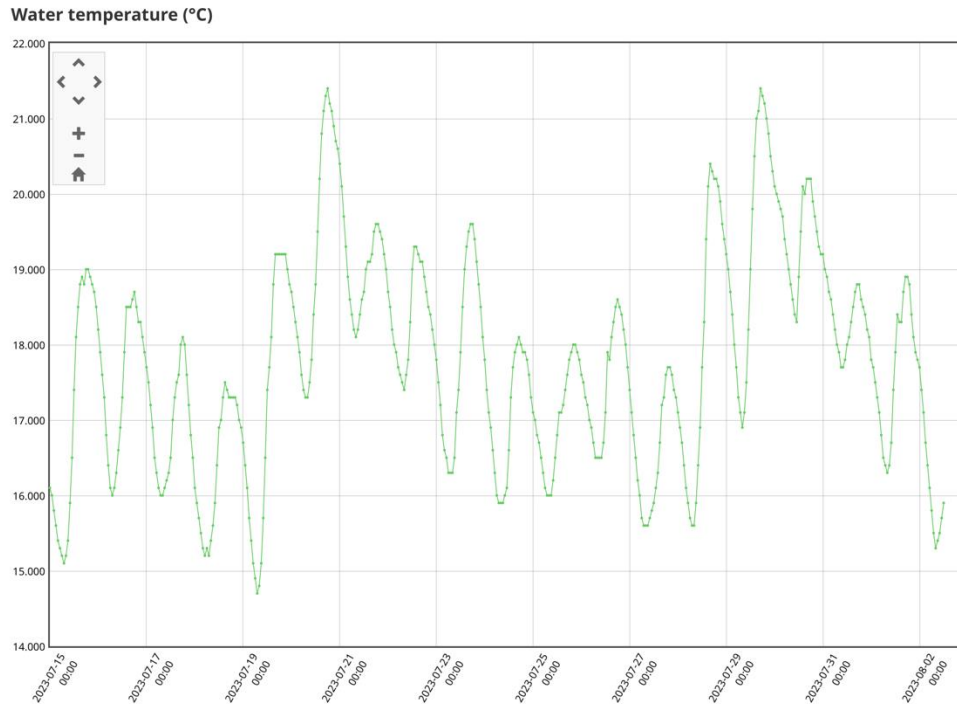
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Below are Kispiox water temperature for the past two weeks. This upcoming weekend air temperatures will be over 30 degrees celcius which will result in water temperatures that are detrimental to fish.



Below are healthy temperature limits referenced from British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife, and Agriculture. Summary Report. (Water Protection and Sustainability Branch, March 2018.)

For streams with Bull Trout and/or Dolly Varden, the guideline for maximum daily temperature is 15°C, and the maximum spawning temperature is 10°C. For streams with distribution of other fish species, the guideline is +/- 1°C beyond the optimum temperature range for each life history phase of the most sensitive salmonid species present (see table below), and the hourly rate of change is not to exceed 1°C.



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Water Quality Guidelines for Temperature (°C)				
Species	Incubation	Rearing	Migration	Spawning
Chinook	5.0 – 14.0	10.0 – 15.5	3.3 – 19.0	5.6 – 13.9
Chum	4.0 – 13.0	12.0 – 14.0	8.3 – 15.6	7.2 – 12.8
Coho	4.0 – 13.0	9.0 – 16.0	7.2 – 15.6	4.4 – 12.8
Pink	4.0 – 13.0	9.3 – 15.5	7.2 – 15.6	7.2 – 12.8
Sockeye	4.0 – 13.0	10.0 – 15.0	7.2 – 15.6	10.6 – 12.8
Rainbow Trout	10.0 – 12.0	16.0 – 18.0		10.0 – 15.5

The 2020 Ministry of Forests, Lands, Natural Resource Operations and Rural Development Skeena Fisheries Drought Plan was not ratified but regionally proposed management actions for systems like the Kispiox were:

Table 1. Skeena Drought Monitoring Thresholds and Regulatory Actions

Waters Represented	WSC Station	Species	Threshold MWMT °C	Regulatory Measures	
				Temp exceeded <2°C	Temp exceeded >2°C
	Skeena at Glen Vowell	ST/BT/DV/RB/CT	16	No fishing 12pm-6am	No fishing
Kispiox	Kispiox River	ST/BT/DV/RB/CT	16	No fishing 12pm-6am	No fishing

Provincial and federal fisheries drought management plans are not yet in place. Other Skeena Nations have implemented drought actions on their territories do to the urgent concerns.

The technical evidence supports an angling closure based on temperature thresholds on the Kispiox River. Please contact us for any questions or discussions that would support Gitksan management decisions and fisheries management dialogue.

Charlie Muldon, Gitksan Watershed Authorities Coordinator

Alicia Fernando, Gitksan Watershed Authorities Biologist

Allison Oliver, Skeena Fisheries Commission, Aquatic Ecologist