

## The 2024 Bow River Water Management Policy A Failure to Protect River Recreation Activities

The Calgary River Users Alliance (CRUA) and our affiliated organizations have followed the Government of Alberta water management policies for some time. CRUA has engaged with the Alberta Environment and Parks - Water Management Policy Group whenever a change in water management policy has compromised the Bow River water recreation activities. The discussion in this document relates to specific policy changes to water flows downstream of the Ghost Reservoir and Bearspaw Reservoir that directly impacted the world-class sports fishery.

The Bow River flows in and downstream of Calgary are governed by the TransAlta Hydro Ghost Reservoir hydropeaking power plant and the Bearspaw Reservoir afterbay hydro plant that cushions the flow variability from the upstream hydropeaking operations. These power plants are governed by federal and provincial agreements dating back decades. Flow regulation is not mandated in these historical agreements, but rather ongoing discussions between government agencies and the primary license holders downstream that assure adequate water supply to meet agricultural and municipal needs.

Following the 2013 Bow River flood an agreement was put in place between TransAlta and the Government of Alberta to regulate Ghost Reservoir storage capacity from May to early July that better protects the City of Calgary from flooding. Rapid changes in flows took place to meet the GoA directives. The downstream sports fishery was severely affected for several days after each event. After extensive discussions with AEP and the TransAlta Hydro Scheduling Department, the up-ramping and down-ramping of river flows was eased to where there has been limited impact on the sports fishery over the past 4 years.

Unfortunately, the drought concerns heading into 2024, have seen changes to TransAlta's water release directives that had unforeseen impacts on the Bow River sport fishery. The problems that arose over the spring and early summer were taken to the Alberta Environment and Protected Area's (AEPA) Regulations Compliance Division and TransAlta Corporation's External Relation Department.

**Alberta's Drought Protection Initiative:** Our concerns with the Bow River Water Sharing Memorandum of Understanding – Bow River Basin <sup>(1)</sup> between the Government of Alberta and Alberta's primary water license holders did not account for the potential impact on river recreation activities. A meeting with the Bow River sport fishery stakeholders was not convened by the AEPA Drought Response Team until July 30, 2024. CRUA did discuss our concerns with the Regulatory Compliance Group on July 25, 2024. The reality is that the GoA has limited capacity to intervene in the daily water delivery from TransAlta's Bow River reservoir system beyond setting the Ghost Reservoir water levels on the Bow Basin Modified Water Management Agreement <sup>(2)</sup> from May 16 to July 07 each year.

**TransAlta’s Stakeholder Engagement:** CRUA had received the Ghost and Bearspaw Reservoir Flow Forecasts daily from mid-April until the end of October for 8 years. In April 2024 TransAlta informed CRUA that we would no longer have access to this data due to TransAlta entering into a memorandum of understanding with License Holders and the Alberta Government to collaborate on flow management on the Bow River System. Although the flow forecasts did give to projected daily flow average for a 3 to 4-day period, they did not give the more frequent up-ramping and down-ramping of water discharge out of Ghost and Bearspaw Reservoirs that was needed to achieve the daily forecast average.

It is our understanding from conversations with the TransAlta hydro scheduling department that their guidelines for release or hold back of water from the Ghost Reservoir are to keep within a change in flow of less than 15 cms/hour. But there is no restriction to the period over which these changes in flows would take place. Over the past 4 years, there has rarely been a time when discharge flows exceeded 10cms/hour for an extended period.

In 2024 there have been extreme changes in flows outside of historical operating procedures, natural flow conditions, or a need for enhanced drought protection. Each of these events has been documented in the following text. None have been responded to by TransAlta.

**April 28-May 05, 2024**

Extreme changes in Bow River flows took place during this period. They appear to be a result of a hydropeaking ramp-up of water discharge out of the Ghost Power Plant that was not cushioned by the Bearspaw Afterbay operations. The two attached images scanned from the Rivers App show the flows through Cochrane (Figure 1), followed by the discharge out of the Bearspaw Reservoir (Figure 2). The Bearspaw Reservoir was close to 90% capacity when the Ghost hydropeaking took place which would explain why there was a flow-through of water downstream of the Bearspaw Reservoir

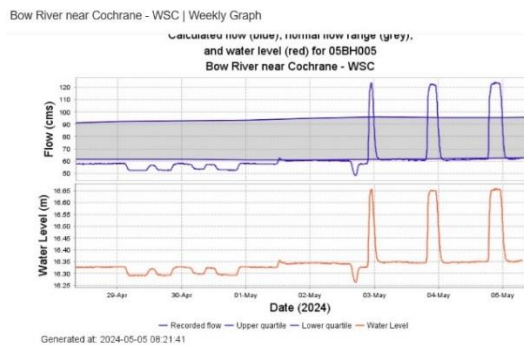


Figure 1

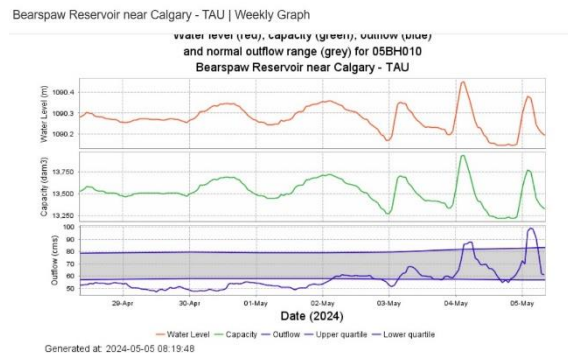


Figure 2

**May 06-13, 2024**

The continued up- and down-ramping of water discharge out of the Ghost Reservoir over the previous week is illustrated in the attached flow graph from Cochrane (Figure 3). Over the same period, the Bearspaw hydro-operations (Figure 4) had reduced the reservoir levels somewhat to accommodate the surge in flow from upstream resulting in reduced flow variants downstream. It is difficult for us to understand why these up-, and down-ramping operations took place at the time they did when the electrical power needs would appear to be at a daily low point.

Bow River near Cochrane - WSC | Weekly Graph

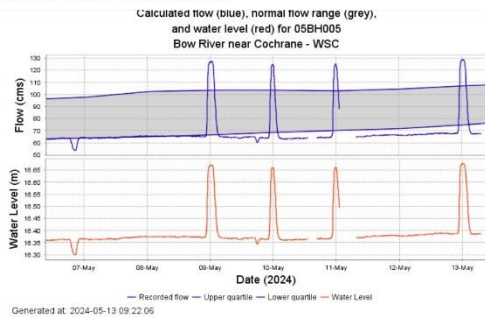


Figure 3

Bears paw Reservoir near Calgary - TAU | Weekly Graph

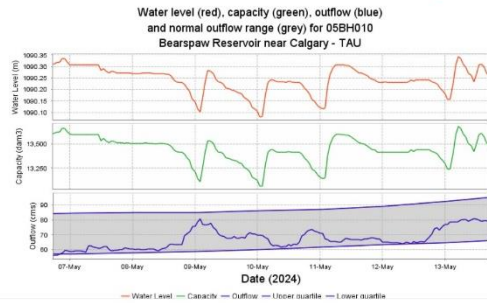


Figure 4

**July 05-12 2024**

From mid-May to early July the snowmelt and local rain raised river flows, and increased reservoir levels with the excess water passed on downstream. The ramping up, and down of flows were within normal operational constraints we have seen in the past. Unfortunately, what was seen during this week had a dramatic impact on the sports fishery. The Bow River flows at Cochrane (Figure 5) suggest that a water management directive was issued to drop discharge out of the Ghost Reservoir (Figure 6) which seems unlikely considering the reservoir was at 95% of capacity, or there was an operational need to lower the flows for systems maintenance. Unfortunately, the Bears paw Reservoir did not cushion the upstream flow change to any extent, and the impact was seen further downstream.

At this time of year, the Calgary Stampede brings many visitors to the city who also wish to fish the Bow River. On Thursday and Friday of this week, more than 100 outfitter and recreational fishing boats would have been on the river daily with the angler's expectation of experiencing one of the most recognized world-class fisheries. Unfortunately, the flow fluctuations dampened or possibly destroyed a day's fishing.

Bow River near Cochrane - WSC | Weekly Graph

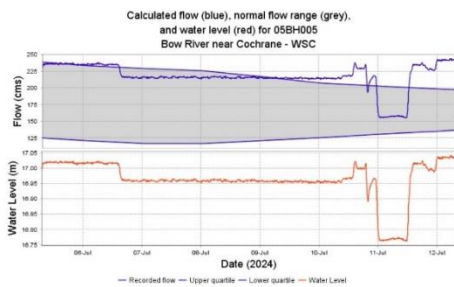


Figure 5

Bears paw Reservoir near Calgary - TAU | Weekly Graph

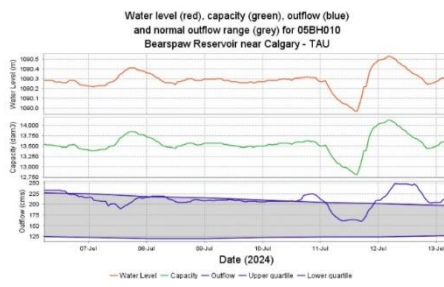


Figure 6

Unexpected flow changes have continued in July and August. The rapid changes that prompted the recent dialogue with TransAlta Hydro have not been answered.

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**References:**

1. The 2024 Water Sharing Memorandum of Understanding – Bow River Basin  
[epa-bow-river-basin-water-sharing-mou.pdf \(alberta.ca\)](#)
2. The 2021 Alberta Government – TransAlta Modified Operations Agreement  
[Bow River Basin – TransAlta operations | Alberta.ca](#)