ALBERTA WILDERNESS ASSOCIATION
"Defending Wild Alberta through Awareness and Action"

December 13, 2022

Director
Environmental Assessment Program, Regulatory Assurance
Alberta Environment and Protected Areas
environmental.assessment@gov.ab.ca

RE: St. Mary River Irrigation District – Chin Reservoir Expansion Project – Proposed Terms of Reference

Dear Environmental Assessment Program,

My name is Phillip Meintzer and I work as a Conservation Specialist for Alberta Wilderness Association (AWA). As you may know, AWA is an Alberta-based conservation group with more than 7,500 members and supporters in Alberta and around the world. AWA seeks the completion of a protected areas network and good stewardship of Alberta's public lands, waters, and biodiversity to ensure future generations enjoy the abundant benefits they provide.

We are writing to you on behalf of AWA as well as the Fish Creek Watershed Association – as concerned parties, regarding the proposed Terms of Reference (hereafter referred to as the PTOR) for the Chin Reservoir Expansion Project (hereafter referred to as the Project) dated November 3, 2022, which has been proposed by the St. Mary River Irrigation District (hereafter SMRID or the Proponent). We appreciate having the opportunity to review the PTOR and to provide our feedback, concerns, and recommendations as part of this public engagement period ending on January 3, 2023.

After reviewing the PTOR as well as the associated EIA Required Letter, Project Summary Table and Maps, and November 2022 Public Notice, we have concerns with some of the components included within the PTOR as well as with items that have been excluded which we feel need to be incorporated into the Environmental Assessment of this project. Our concerns are summarized at a high level in the list below and outlined in greater detail in the following sections of this letter.

Summary of Key Concerns:

1. Relative contribution to cumulative effects vs. total cumulative effects in the region;
2. Inability to meet existing Water Conservation Objectives in the basin;
3. The inclusion of flawed climate change assumptions; and
4. Insufficient socio-economic considerations.

We appreciate that the PTOR acknowledges the potential for the Project to contribute to cumulative effects of human development and other land uses in the project region. Recognition for cumulative effects is included in both Section 3 which outlines the Environmental Assessment requirements, as well as in Section 10 which specifically outlines how cumulative effects are to be considered. However, with regards to Sections 10.1 to 10.4, we are concerned that the PTOR only requires the proponent (SMRID) to "discuss the Project's **relative contribution** to cumulative effects" on regional air quality and noise, groundwater, surface water quality and quantity, and the aquatic environment.

While it is important to understand any project's relative contribution towards cumulative effects, we are concerned that by only requiring the proponent to discuss the Project's relative contribution, it fails to account for the broader picture of cumulative effects from other land uses in the region. For example, this Project's relative contribution could be assessed as negligible when viewed in isolation. However, to be meaningful, the total cumulative effects of human activities (both past and present) in the region should be assessed first before any future projects are given the approval to proceed. Looking solely at a project's relative contribution towards cumulative effects negates the intent of minimizing cumulative effects in the first place. Cumulative effects are not just the sum of all the individual relative contributions, but also the additive and/or synergistic effects that all these contributions make together. The cumulative effects requirement should be revised in such a way that accounts for the current state of the environment in the region (including the contributing watersheds) and whether the watershed, aquatic ecosystems, species at risk, and landscape can tolerate further disturbance that would result from this Project.

The more the scope and scale of cumulative effects (and indeed the EIA) are shrunk, the less likely it is that the results have any relevance. If cumulative effects have become just a perfunctory box to be checked off in this EIA, it will significantly limit any meaningful discussion (and decisions) about the project's impact on instream flow needs to meet aquatic health, species at risk protection (both aquatic and terrestrial), and other demands on water for broader societal benefits, like recreation.

Section 3.3 outlines the Environmental Assessment requirements for Surface Water Quality and Quantity, and Section 3.3.2 [E] says to "describe how water conservation objectives may be affected with the development of the Project". We appreciate that Water Conservation Objectives (WCOs) have been included within the PTOR, as WCOs outline both the quantity and quality of water that is supposed to remain within rivers for the protection of a watercourse and its aquatic environment. However, recent evidence shows that within the South Saskatchewan River Basin – including the St. Mary River, Oldman River, and Bow River – we are already failing to meet our WCOs for most of the year, and we meet them less than 50% of the time during the growing season which coincides with the driest, warmest months of the year (AEP Data, August 2021 – see Appendix for figures) when in-stream flows are most needed to protect aquatic ecosystems. It's important that the Environmental Assessment for this Project considers its impact on our ability to meet WCOs given that we are already failing to meet these objectives.

Furthermore, as you know, WCOs are a condition only on water allocations licensed after the South Saskatchewan River Basin (SSRB) Water Management Plan was approved in 2006. This means that senior licences, most notably large ones held by irrigation districts, do not have a WCO condition applied to them, and those irrigation districts do not feel it is their responsibility to maintain the health of rivers. Given this, the PTOR should be asking the proponent to discuss how this Project will help finally meet these Objectives, rather than further hindering our ability to do so.

We appreciate that climate change has been included for consideration within various sections of the PTOR, including Section(s) 3.8. 10.7, and 12. However, despite the PTOR outlining requirements for the proponent as it relates to climate change, we feel that there has been a flawed assumption with how the proponent has been asked to assess the impacts of climate change. In Section 3.8.2[A] the PTOR asks the Proponent to "Discuss **the benefits** of the Project on the affected area with regards to its ability to counteract climate change impacts and the associated risks." And in Section 10.7[A] the PTOR asks the Proponent to "Discuss **the benefits** of the Project at a regional scale with regards to its ability to counteract climate change impacts and the associated risks.". Both requirements assume that the Project will only result in benefits for the region as it relates to climate change, rather than asking the Proponent to identify how their Project will interact with future climate change scenarios and whether this will result in net benefits (or costs) to ecosystems and our ability to meet human needs. We recognize that increasing water storage has the potential to help make irrigation agriculture more resilient to climate change in the region, but we need to understand the implications of increased withdrawals and increasing storage on ecosystem health under predicted climate change scenarios.

The implications of climate change need to include the reality of diminished and diminishing river flows, modelling that clearly shows the implications of drought, and the effects of back-to-back droughts on the ability of storage, either existing or new, to mitigate the likelihood of greater drought frequency. This will help answer the question of whether additional reservoir storage can outpace the effects of climate change (even if we could afford it), or, if it is in the best interests of the irrigation sector, agricultural producers, and the Government of Alberta to seek other solutions, like capping irrigation at levels that do not introduce higher levels of risk socially, economically, or environmentally.

Our final concern is related to the Socio-Economic Assessment requirements outlined in Section 7. This section of the PTOR acknowledges that the Project may potentially have impacts on local populations and business operations, and it asks the Proponent to describe factors that may affect existing socio-economic conditions in the region. One item that we feel is missing from the list of socio-economic conditions (Section 7.1[A]) and impacts (Section 7.2[A]) is any consideration for the Project's ability to help meet the needs of the local population for sustenance. Agricultural productivity is mentioned as a potential socio-economic impact in Section 7.2[A], but if the argument for increasing water storage is to improve regional resilience to potential climate change impacts, then the crops being grown through irrigation should be crops that diversify production and provide a greater share for local consumption, rather than for solely growing crops that are exported for profitability alone. A robust socio-economic assessment for irrigation projects – such as this one – should include a discussion of the intent for the crops produced by irrigation (i.e., sustenance, value-added food processing etc.), and transparency around who benefits from irrigation? Are the economic benefits being passed along to local residents (and if so, how many?), or are they primarily going to external economic interests outside of southern Alberta?

Thank you for considering these comments and recommendations, and we hope to see these concerns addressed in the final EA requirements for the Chin Reservoir expansion project.

Sincerely,

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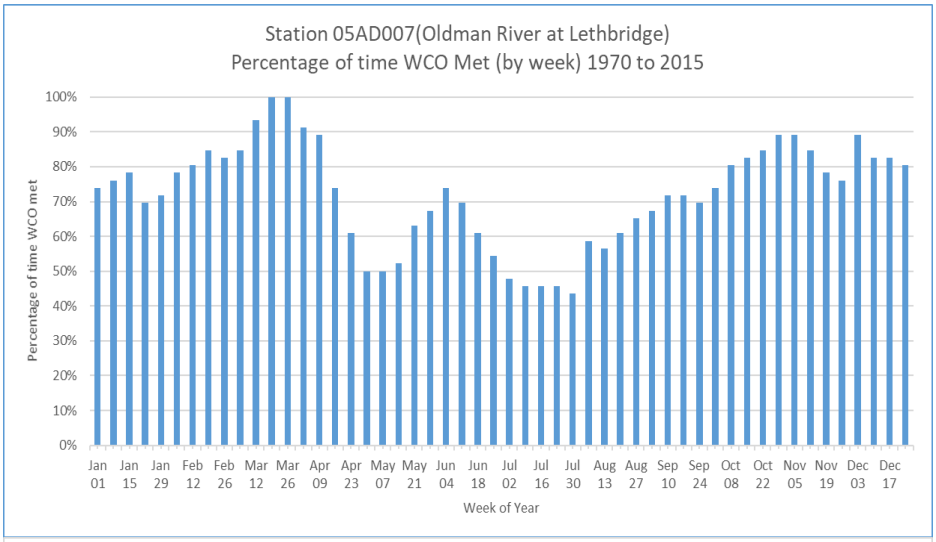
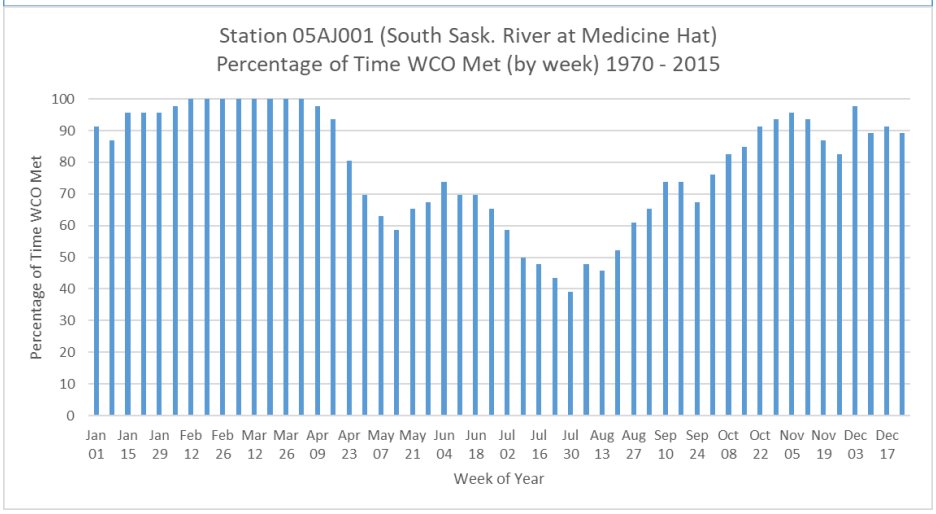
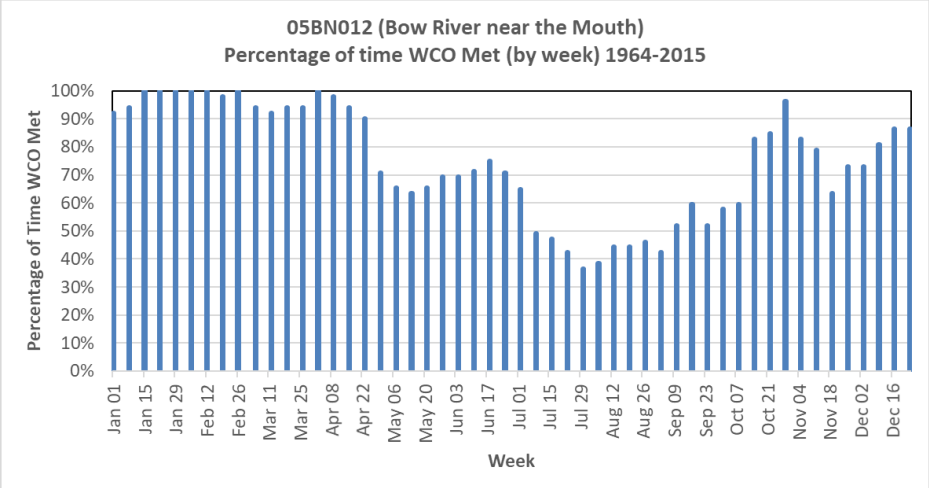
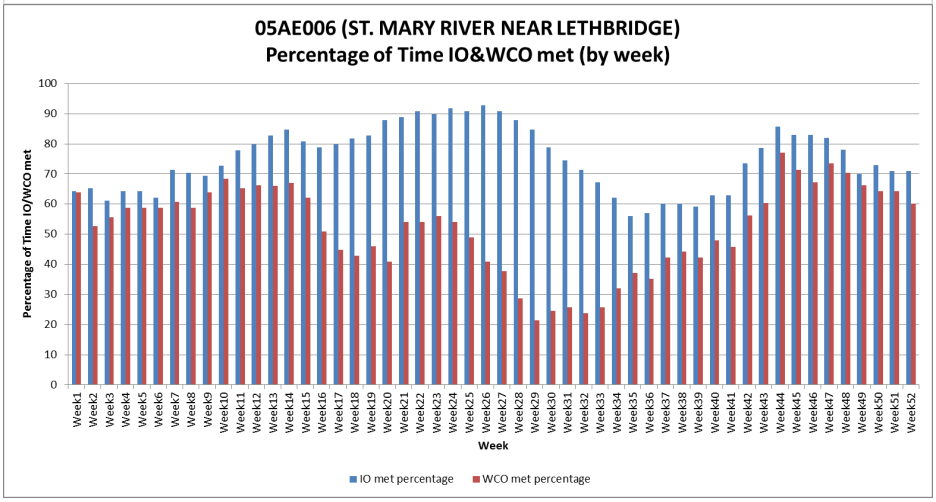
Appendix:

The four figures below (and associated data) were provided to Cheryl Bradley in July and August 2021 by Brian Hills, Resource Manager, Environmental Management and Modelling, South Saskatchewan Region, Alberta Environment and Parks. These figures illustrate that we are failing to meet our Water Conservation Objectives (WCOs) for most of the year, and we meet them less than 50% of the time during the growing season which coincides with the driest, warmest months of the year.









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