



Request for Proposals:

Bow River Basin Council State of the Watershed, Water Quality Chapter

Submission deadline: Friday March 22, 2024

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1 RFP particulars

RFP Issue Date	March 8, 2024
Owner	Bow River Basin Council
Project	Bow River Basin Council State of the Watershed, Water Quality Chapter
Project Location	Bow River Basin, Alberta
Contact	Mike Murray - email: mmurray@brbc.ab.ca
Proposal Format	Electronic submission
Closing Time	March 22, 2024 at 12:00 PM MST
Closing Place	Submit to: mmurray@brbc.ab.ca

2 Project introduction

2.1 Organization background

The Bow River Basin Council (BRBC) is a collaborative, multi-stakeholder, charitable organization. We serve the collective interests of more than 1.3 million residents as a widely trusted voice of reason, respect, and balance within our watershed.

Comprised of over 450 active members and more than 700 participants, the Council welcomes a diverse and devoted membership including members from a broad range of sectors. We are dedicated to facilitating meaningful dialogue and mutual understanding, and work to provide unique opportunities that lead to tangible impacts. Together, through science and inclusion, we promote balanced solutions for a healthy watershed.

As the provincially designated Watershed Planning and Advisory Council (WPAC) for the Bow Basin under the Water for Life Strategy, the BRBC has four key roles: (1) serve as a convenor and collaborator across watershed stakeholders to advance overall watershed stewardship and management; (2) periodically assess and report on the state of the watershed; (3) develop an Integrated Watershed Management Plan (IWMP) and then lead, promote and coordinate the implementation of the IWMP across stakeholders; and (4) inform, educate, and involve watershed stakeholders, including the public, on water issues and watershed stewardship.

For more information, please visit: www.brbc.ab.ca

2.2 Project description

The BRBC is currently working on an update to the State of the Watershed report (SOW) for the Bow River Basin, with the last report developed in 2015. The SOW will engage multiple community groups within the basin and technical resources in the development and delivery of the SOW assessment that spans hydrology, water quality, water quantity, riparian health, wetlands and more, utilizing data from multiple sources (e.g., The City of Calgary, Government



of Alberta, Government of Canada, etc.). The update and expansion of the SOW report is important for taking stock of current conditions and informing watershed management processes in the future. The BRBC will be working with our partners and Watershed Stewardship Group collaborators to gather current information to update and/or fill in the gaps of previous reports. The target audience is 'key communities' who influence watershed conditions (e.g., watershed managers, decision-makers, policy writers, etc.). The information will be publicly available to all.

The current version of this report is being built on ArcGIS Online Experience Builder, allowing the BRBC to utilize GIS tools, as well as ensuring that the report can be updated when new information or data becomes available. The anticipated release date for the full report is late Fall 2024 (October 31 2024).

The BRBC is seeking proposals from qualified professionals to assist with the interpretation and writing of the Water Quality chapter of the SOW report. A team of highly qualified BRBC members has formed the Water Quality Technical Committee (WQTC), which has developed initial analysis methods and will inform the reporting approach for this chapter. There are 15 water chemistry parameters that are being reported on for a series of mainstem and tributary stations across the basin monitored by Alberta Environment and Protected Areas, the City of Calgary, Environment and Climate Change Canada, and the Irrigation Districts. The data spans multiple decades with an emphasis on recent (i.e. past 5 years) water quality data. The 15 water chemistry parameters, chosen from the [South Saskatchewan Region Surface Water Quality Management Framework](#), include: total ammonia, chloride, nitrate, total nitrogen, total dissolved phosphorous, total phosphorous, sulphate, sodium adsorption ratio, specific conductivity, total dissolved solids, total organic carbon, total suspended solids, turbidity, pH, and *Escherichia coli*.

The contractor will work with WQTC members to interpret analyses into a written form for use in the online SOW report, highlighting differences across defined sub-regions of the basin including the Upper Bow, Upper Foothills, Lower Foothills, Middle Bow, and Lower Bow.

3 Project goals/statement of work

3.1 Project goals

The contractor will be responsible for the following written deliverables, interpreting the analysis results. Note that the WQTC has decided not to use statistical analysis of the water quality data trends in favor of a more qualitative interpretation.

- Written summary/introduction on the state of water quality in the Bow Basin
- Written summary of key indicators/results for sub-regions within the Bow Basin
- Written summary of findings for each of the 15 parameters



The WQTC will provide the following information for the contractor:

- List of stations being reported on and the defined sub-regions of the basin
- For each station, annual boxplots for: concentration (15 parameters), flow (where available), and mass flux (where available)
- Summary of methods: how boxplots made and statistics
- Case study for flow and seasonality
- GIS mapping including station locations, infrastructure, basin/sub-basins/regions
- R scripts for development of all included charts/analyses

The contractor may need to provide the following additional support:

- Assistance with final online report development (working with BRBC staff)
- Assistance with some data analyses using R (working with WQTC)

3.2 Required qualifications

The following qualifications are required by the contractor for this project:

Scientific understanding:

- Demonstrated understanding of water quality/limnology
- Understanding of water quality monitoring program methods used in the Bow watershed
- Understanding of water quality statistics and detection limits
- Understanding of aquatic science
- Experience with water quality data analysis (experience with R is considered an asset)

Communication skills:

- Demonstrated experience in science communication for a range of audiences
- Experience developing key messages for science communication
- Experience working with scientists to explain research in terms the general public can understand



3.3 Timeline

The anticipated release date of the full report is Fall 2024. The following timeline is proposed for this project:

Date	Key Milestones
April 1, 2024	BRBC to secure contractor by this date. Contract work begins.
April 1 – April 30	Contractor to work with WQTC to interpret initial results First draft of written components complete for review by May 1, 2024
May 1 – May 31	Contractor to work with WQTC to review first draft of written components, incorporate feedback
June 1	Written components complete by June 1, 2024
June 1 – June 30	Contractor to work with BRBC Staff and WQTC to ensure that all information is uploaded to online SOW report
July 1 – September 31	Contractor available for final edits to the chapter after it has gone to BRBC membership for review

4 Proposal Format

To be considered for this project, potential contractors must submit the following in a pdf format:

- Execution Plan (maximum 3 pages):
 1. Organization and Key Personnel: Describe suitability of organization and provide names and experience for key personnel providing services
 2. Proposed Approach: Describe how you would accomplish the goals and deliverables outlined above
 3. Budget: Describe the cost breakdown for the project deliverables
- Appendices:
 1. Resume/CV for key personnel
 2. Examples of previous science communication work