



State of the Watershed Report Phase 3– Surface Water Quality and Quantity

REQUEST FOR PROPOSALS

Competition No. 02/2012

RFP Issue Date: July 20, 2012

RFP Closing Date: August 17, 2012 at 4:30 p.m.

Attention: Marilou B. Montemayor, Project Coordinator

Phone: (780) 865-8223

E-mail: admin@awc-wpac.ca



Section A – Proposal Guidelines

1. Purpose

Contractors are invited to submit Proposals for the production of the Athabasca State of the Watershed Report Phase 3: Surface Water Quality and Quantity, as specified in **Section B – Project Requirements** of this Request for Proposals.

This Request for Proposals will be conducted with the objective of maximizing the benefit to the Athabasca Watershed Council, while offering Contractors a fair and equitable opportunity to participate.

This Request for Proposals shall not be construed as an offer to contract, but as an invitation for proposals. The Athabasca Watershed Council (hereinafter referred to as “AWC-WPAC”) is sending out this Request for Proposals pending the formal approval of grant money for this project. The AWC-WPAC shall be under no obligation to accept any proposal, including without limitation, the lowest priced proposal.

2. Proposal Guidelines

Each respondent (hereinafter referred to as the “Contractor”) is asked to submit a detailed proposal to address the project outlined in **Section B** of this document. Proposals, including price, should be valid until April 30, 2013.

Proposals along with a letter of transmittal signed by a company executive officer are to be submitted electronically (e-mail) to admin@awc-wpac.ca with the subject line: Proposal: Athabasca State of the Watershed Report Phase 3, no later than 4:30 p.m. on August 17, 2012.

Proposals received after this time and date will be disqualified from this competition.

Acknowledgement of receipt of proposals by the Athabasca Watershed Council will be e-mailed by the next day after the receipt of proposals.

3. Bid Withdrawals and Amendments

Bids can be withdrawn at any time prior to bid closing. Requests for bid withdrawal must be signed by the contractor or contractor's agent and submitted electronically (e-mail) to admin@awc-wpac.ca with the subject line: Withdrawal of Bid: Athabasca State of the Watershed Report Phase 3.

Contractors can submit amendments to their bids at any time prior to bid closing. Upon receipt, amendments will be date and time stamped. Late amendments received after bid closing cannot be accepted. Amendments must be in writing and signed by the bidder or bidder's agent. All amendments must be submitted electronically (e-mail) to admin@awc-wpac.ca with the subject line: Amendments to Proposal: Athabasca State of the Watershed Report Phase 3.



4. Evaluation Criteria

4.1 Methodology for Evaluation

Proposals will be assessed independently, based on: the quality and value of the work proposed within the maximum budget of \$100,000.00; the methods and approaches to the project; past experience of the Contractor; past performance; and the qualifications of the personnel to be committed for the term of the project. The AWC-WPAC reserves the right to reject any or all proposals.

4.2 Required Qualifications

The Contractor must outline their qualifications in the following areas:

- Expertise in project management
- Ability to locate and obtain surface water quality and quantity data in various formats from various sources; compile and transform data if needed, and maximize the amount of data that can be compiled into the desired format for this project
- Expertise in the use of appropriate basic and advanced statistical methods to analyze and interpret data
- Expertise in method/s of displaying data in a spatial format wherever appropriate
- Knowledge of the relationships or associations of land uses, human population, climate and hydrology, topography, bedrock/geology/ soils, natural vegetation and wildlife, with surface water quality and quantity
- Knowledge of the physical geography of the Athabasca watershed and key environmental issues associated with surface water quality and quantity
- Ability to locate applicable water quality guidelines (provincial, federal, or other jurisdictions) and peer-reviewed scientific thresholds for surface water quality and quantity
- Excellent report writing skills for a lay reader audience

4.3 Guidelines for Proposal Submission

To facilitate the evaluation of proposals, and to ensure each proposal receives full consideration, proposals should be organized in the following format using the section titles and sequence listed below:

- Letter of Transmittal
- Table of Contents
- Work Plan

Include a description of the procedures, analytical tools, and approach to the project (See Section B of this document to determine what will most likely apply). Provide sufficient information to show that the project requirements are fully understood. If subcontractors or consortium members are used, then describe the arrangement of the group and the distribution of the work.



- Work Schedule

Contractors are required to include a proposed work schedule, which will provide for all aspects of the project to ensure completion within the defined time frame.

- Past Experience and Performance

The Contractor will identify personnel carrying out the work and supply details of their past and current experience. Resumes/qualifications outlining pertinent experience for all team members that will be involved in the project must be included. Time allocation and billing rates of each team member must be included in the proposal. The firm's ability to undertake the project should be described, including a description of experience with relevant projects. Please include the date that the project(s) were undertaken and the names of the key individuals for each project. The Contractor will also provide an outline of who will be responsible for the management and the supervision of the services and what their qualifications are. [Note: This project will be guided by a group that will act as the project steering committee composed of the following members: the Watershed Science Coordinator as the Project Coordinator, the Executive Director, and the AWC-WPAC Technical Committee. The Contractor will be required to attend 3-4 meetings with this group and communicate brief updates in between meetings by e-mail to the Project Coordinator].

- Price

The quoted price (+GST) will include all costs incurred by the Contractor for the project including: service and labour fees, his/her travel expenses, online/internet tools fees, and other related costs.

- Appendices

If the Contractor wishes to include any other material not specifically requested by this Request for Proposals, they may do so by including additional appendices in the Proposal.

5. Questions and Communications

All communication (clarifications/questions) between the Contractor and the Athabasca Watershed Council should be done by e-mail to the Project Coordinator:

marilou.montemayor@awc-wpac.ca and cc to the Executive Assistant: admin@awc-wpac.ca

or by phone: 780-865-8223.

6. Proposal Acceptance

This project will be guided by a group that will act as the project steering committee composed of the following members: the Watershed Science Coordinator as the Project Coordinator, the Executive Director, and the AWC-WPAC Technical Committee. This group will review the proposals and may



interview one or more of the Contractors. This group will make a decision as to whether an interview will be granted within two weeks after the final date for delivery of proposals to AWC-WPAC. This group will make the final selection of the Contractor for this project. The AWC-WPAC reserves the right to, without prior notice, extend the time for making decision.

The successful Contractor will be initially notified by telephone as to the outcome of the Request for Proposals. Confirmation of a successful proposal will be issued in writing (via e-mail). Unsuccessful Contractors will be notified via e-mail.

A contract will be developed between the AWC-WPAC and the successful Contractor as soon as possible after the successful Contractor has been notified. The formal start of the project will begin after the contract is signed. The AWC-WPAC will have no legal obligations in respect to any matter under a proposal unless and until the authorized AWC-WPAC officials have signed a contract respecting the project.

7. Schedule of Events

The following schedule of events is planned for the Request for Proposal and the process review of the proposals:

- Release of Request for Proposals: July 20, 2012
- Submission of proposals: August 17, 2012
- Evaluation of Proposals: August 21, 2012
- Award of Contract: August 23, 2012
- Initial Meeting with Contractor: August 27, 2012
- Close of project and debrief: March 15, 2013

8. Additional Requirements

The successful Contractor is required to attend a meeting after the award of the contract to discuss his/her proposal, AWC-WPAC suggested revisions to the proposal, final project schedules, and preparation of the formal contract between the Contractor and the AWC-WPAC. The meeting will be held on August 27, 2012.



Section B – Project Requirements

1. Project Background

The AWC-WPAC considered 5 criteria to assess the State of the Watershed (see Table below). The Athabasca watershed consists of 10 sub-watersheds which are further subdivided into 31 tertiary watersheds.

The original intent of the State of the Watershed Report Phase 2 (SoW P2) was to assess the health of the watershed based on a suite of indicators under each of the 5 criteria. This required that indicators have data for all the 31 tertiary watersheds to enable comparisons across tertiary watersheds. This approach narrowed the number of indicators (total of 32) that had ecological thresholds to 6 that subsequently allowed pressure ratings across all tertiary watersheds. Another 7 indicators had data across all tertiary watersheds but did not have ecological thresholds (see Table below). Indicators were further classified into two types: pressure and condition indicators. There were three indicators that were not rated, Alberta River Water Quality Index for the Athabasca River, River Flows, and Point Sources of Contamination.

Criteria	Indicator	Type of Indicator	Ecological Thresholds?
1. Conservation of Biological Diversity	1. Road Density	Pressure	Yes
	2. Seismic, Pipeline, Power Line, & Railroad Density	Pressure	Yes
	3. Large Patches of Natural Vegetation	Condition	Yes
	4. Stream Connectivity	Pressure	No
2. Maintenance of Surface Water Quality	5. Stream Crossing Density	Pressure	Yes
	6. Agriculture Non-Point Source	Pressure	No
3. Maintenance of Ecologically Significant Water Levels	7. River Water Flow	Pressure	No
	8. Potential Surface Water Use	Pressure	No
4. Maintenance of Groundwater Quality & Quantity	9. Potential Groundwater Use	Pressure	No
5. Maintenance of Watershed Integrity	10. Human Population Density (Growth)	Pressure	Yes
	11. Land Conversion – Agriculture	Pressure	No
	12. Land Conversion - Built-up Areas	Pressure	No
	13. Human Land Use – Built-up Areas	Pressure	Yes

Out of the 6 indicators with ecological thresholds, 5 were pressure indicators and 1 was a condition indicator. It was realized that these limited number of indicators would be insufficient for a robust watershed health assessment.

Most of the data for the SoW P2 were on Land Disturbance (criteria 5 – Maintenance of Watershed Integrity) and its associated ecological effects (criteria 1 – Conservation of Biological Diversity), the SoW P2 by default is therefore about *Land Disturbance and Biodiversity*.

Through the SoW P2 process it also emerged that this type of an assessment based on watershed-wide available data for each indicator may not be applicable to the Athabasca watershed given that a large



volume of data have been collected throughout the watershed based on different objectives and under different programs, and widely different parameters based on the dominant land use or industrial operation (i.e., forestry-pulp & paper, coal mining, and oil sands) and municipal wastewater discharge.

Surface water quality monitoring is among the predominant regulatory requirements for the approval of industrial operations. Impairment of surface water quality is a major aquatic and human health issue. In the SoW P2, the Surface Water Quality criterion had only one indicator (with data across all tertiary watersheds) that could be rated using thresholds derived from peer-reviewed literature, i.e., Stream Crossing Density, which is a surrogate indicator or pressure indicator. One condition indicator, Alberta River Water Quality Index for the Athabasca River was in the report but this index was a combination of a few water quality parameters – nutrients, metals, and bacteria.

Condition indicators provide the most reliable information about the state of surface water quality since they can be compared with provincial/federal guideline values and scientifically-determined ecological thresholds.

In the SoW P2, there were only a couple of pressure indicators (with data across all tertiary watersheds) for water quantity (Maintenance of Ecologically Significant Water Levels criterion): River Water Flow and Potential Surface Water Use (see Table above).

Therefore, there is a need to compile, analyze, and interpret data on additional surface water quality and surface water quantity indicators. This may require an analytical approach or approaches different from that used in the SoW P2. The SoW Phase 3 report will take into consideration that there are indicators that may have data on a watershed-wide scale (e.g., possibly total phosphorus), and that there are indicators that have data only at regional scales (e.g. oil sands contaminants in the Lower Athabasca region), or by sector.

The SoW Phase 3 will report on **Surface Water Quality** indicators and their associated **Surface Water Quantity** indicators.

The overall objectives of the main SoW P3 Report are:

- Inform and raise awareness of the current conditions on surface water quality and quantity in the Athabasca watershed
- Inform and raise awareness of current pressures and risks to surface water quality and quantity in the Athabasca watershed
- Identify gaps in knowledge and data and provide recommendations as to how to fill those gaps
- Provide the foundation for the development and implementation of a future Integrated Watershed Plan which is a multi-sector collaborative process to develop recommendations to address surface water quality and quantity issues identified in the SoW P3 Report.

2. The Project Scope

- The geographical area covered by the SoW P3 project will be the Athabasca watershed which is subdivided into 10 sub-watersheds (Figure 1) and further sub-divided into 31 tertiary watersheds which was the unit of analysis in the SoW P2 Report.



- The SoW P3 report will provide information on the condition (state) of water quality and quantity of and the Athabasca River and the pressures and risks on the mainstem, its major tributaries, and major lakes within the Athabasca watershed. The SoW P3 report will focus on obtaining data on indicators listed in the SoW P2 report: Criterion 2 – Maintenance of Surface Water Quality and Criterion 3 – Maintenance of Ecologically Significant Water Levels and Flows, State of the Watershed Report Phase 1 (SoW P1), and the review of SoW P1 by Bill Donahue. Long-term data trends on temperature and precipitation that relate to surface water quantity will be included in the SoW P3 report. Additional or new indicators may be suggested by the Contractor subject to approval by the AWC-WPAC Technical Committee.
- The SoW P3 Report will consider the most current data available for all indicators reported on. It will also provide data showing historical trends of selected indicators that do have long-term data (e.g. climate data – temperature and precipitation, river flows, lake levels, etc.).
- The SoW P3 will develop a methodology to assess the condition of surface water quality and quantity in the Athabasca watershed or its areas or regions.
- The SoW P3 Report will include identification of data and knowledge gaps on surface water quality and quantity.
- The entire project will be deemed complete in the presentation of information in the report including data compilation, analysis/methods, interpretation, conclusions, and recommendations.
- All data that are compiled and analyzed in a spatial format will be added to the online interactive atlas.

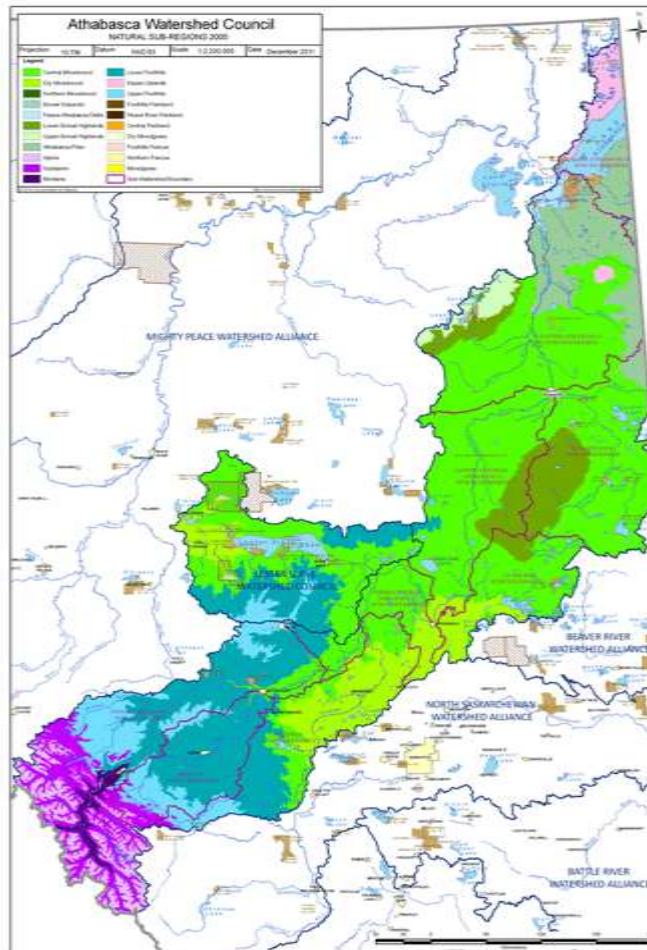


Figure 1. The Athabasca watershed with its 10 sub-watersheds

3. The Report

The SoW P3 Report will be a well-illustrated report that accurately summarizes all of the relevant information, analyses, conclusions and recommendations used and created for this project. The information should be presented in a manner that facilitates easy understanding of the state of surface water quality and quantity in the Athabasca watershed (SoW P3 Report).

All scientific information, data sources, and support on methods contained in the SoW P3 Report must be referenced, and the references listed under the Reference section.

The SoW P3 Report will contain, but not limited to, these sections:

- Title page
- Acknowledgment
- Executive Summary



- Table of Contents
- Introduction – Introduction on the SoW P3 project and should also include an overview and connectivity to findings in the SoW P1 and SoW P2 reports especially the framework of criteria and indicators
- Purpose and Scope of the Project
- Methods - Development and selection of methods and approach, explaining their appropriateness considering, data constraints, data characteristics such as amenability to statistical analysis or spatial display, comparability with guidelines and standards, etc.
 - Selection of Indicators and Parameters
 - Characteristics of data encountered (formats, sources, geographical or sectoral grouping, age, accessibility, etc.) – how these have influenced methods and approach
 - Analytical tools
- Results and Discussion
- Data and Knowledge Gaps
- Conclusions
- Recommendations
- References
- Appendices

4. Deliverables

Interim reports and drafts of (a) the SoW P3 Report will be submitted as the work progressed as specified in the project schedule. The following will be the deliverables:

- First Interim Report
- Second Interim Report
- First draft of complete Report
- Final draft of complete Report
- The Final Report
- Inclusion of all maps in the above report into the online Interactive Atlas.

The AWC-WPAC Technical Committee, the Science Advisory Team, and the Watershed Science Coordinator will provide input and feedback at meetings, and through e-mails via the Watershed Science Coordinator (Project Coordinator) in all stages of development of the whole project as listed above. Record of proceedings of meetings between the Contractor and the AWC-WPAC as well as input/feedback of the AWC-WPAC will be the responsibility of the AWC-WPAC. Venue for such meetings will be the responsibility of the AWC-WPAC.

The Final Reports must be professionally prepared and submitted electronically to the AWC-WPAC, admin@awc-wpac.ca and marilou.montemayor@awc-wpac.ca.



5. Workplan Plan and Schedule

The project will start September 1, 2012 and will be completed by March 14, 2013.

A full description of the anticipated schedule and workplan must be included detailing tasks, dates, and deliverables.

6. Project Budget

The maximum budget for the services of the Contractor is **\$100,000.00**.

7. References

The State of the Watershed Report Phase 2 and the online Interactive Atlas are available at www.awc-wpac.ca.

Electronic copies of The State of the Watershed Report Phase 1 and its review by Bill Donahue can be requested from admin@awc-wpac.ca.