



Request for Proposals

Colorado Basin Roundtable Integrated Water Management Planning Framework Geospatial Database Project

Introduction

The Hutchins Water Center at Colorado Mesa University, working in collaboration with the Colorado Basin Roundtable, seeks proposals for the development of a publicly-accessible geospatial database in GIS format to inform integrated water management planning in the main stem Colorado River Basin in Colorado (see attached map). The goal of integrated water management planning is to identify ways to meet environmental flow needs along with the needs of other water users.

The total budget for this task is \$45,000 for work to be completed between February and July of 2017.

Background

The Colorado Basin Roundtable (CBRT) identified a basin-wide stream management plan (SMP) as a top priority in its Basin Implementation Plan. The CBRT feels that such planning is vital to providing sufficient water for environmental needs among the many competing uses and demands for water, and thereby restoring and protecting ecological processes that connect land and water while ensuring that streams also serve the needs of human populations. In further discussions on this topic, the CBRT decided to replace the term “stream management plan” with “integrated water management plan” in order to more accurately capture the desire to optimize water management for agriculture, municipal and industrial uses as well as environmental and recreational uses.

In April of 2016, the CBRT initiated its Integrated Water Management Planning Framework Project with a pair of grants from the Colorado Water Conservation Board. The framework project, which is being managed by the Hutchins Water Center at Colorado Mesa University, seeks to lay the necessary groundwork for entities across the basin to develop detailed integrated water management plans that address local and/or regional needs while also providing information and output that can be used for basin-level planning and management purposes.

As set out in the grant proposals funding this project, the framework project includes the following tasks:

1. **Information Gathering:** An extensive review and compilation of existing information relevant to the development of integrated water management plans. The resulting compilation will be available in table form and linked to a map of the basin to show spatially which stream reaches have been studied in what ways.
2. **Information Synthesis:** A detailed GIS map will utilize the information collected in task #1 to depict what available data shows about stream health in each stream segment in the basin.
3. **Stakeholder Engagement and Education:** Consultation with stakeholders in order to refine the goals and objectives of the basin-wide planning effort; achieve consensus on the recommended tools and processes for developing integrated water management plans; and establish priorities for implementation. Once priorities are established, outreach will be conducted in the priority sub-basins to solicit interest in developing detailed plans.
4. **Develop Framework for Stream Management Planning:** Drawing on the work done in tasks two and three, develop and describe a framework for the creation of integrated water management plans at the sub-basin level that facilitates the integration of discrete plans into a comprehensive tool that can be applied basin-wide.

The Hutchins Water Center at CMU has largely completed Task 1 and has initiated Task 2; this RFP seeks proposals for the completion of Task 2.

Work done to date on this project, as well as the original scope of work document, can be reviewed at <http://www.coloradomesa.edu/water-center/colorado-basin-roundtable-integrated-water-management-planning-framework-project.html>.

Initial stakeholder consultations revealed the need to integrate additional information on agricultural and municipal water needs that were not identified in the original scope of work for Tasks 1 and 2. This additional information is incorporated into the project scope below.

Project Scope

Consultants are invited to submit proposals for the development of a publicly-accessible geospatial database in GIS format to inform integrated water management planning in the main stem Colorado River Basin in Colorado (see attached map). The goal of integrated water management planning is to identify ways to meet environmental flow needs along with the needs of agricultural, municipal, industrial and recreational users. The geospatial database generated by the consultant should inform the planning process by showing where flow issues and concerns exist for the different water uses, in order to demonstrate potential locations for both single and multi-benefit projects related to flows. In summary, the goal of this RFP is to obtain a publicly-accessible, interactive map for the project area that shows the locations and character of flow-related water challenges for the environment, agriculture and municipalities.

The geospatial database should draw on existing datasets and studies, as well as local expertise where appropriate, to develop an interactive map that shows:

- What existing studies and databases show about stream health in each segment of the basin, and where streamflows are potentially inadequate to support stream health. Indicators of stream health include

healthy macroinvertebrate populations, fish populations, and riparian conditions, as well as resilient channel forms. The geospatial database should depict the quantified streamflow needs for stream health where available studies and/or data provide that information, as well as locations where factors other than inadequate flows impede stream health.

- Where agricultural water users are experiencing shortages. Indicators of shortages can include call histories on streams and information from water commissioners or others with credible local knowledge.
- Where municipal and industrial water users may be vulnerable to supply problems or discharge permit violations due to low flows. The 303(d) List of Water-Quality-Limited Segments developed by the Colorado Department of Environment and Public Health, when assessed in relation to sewage treatment plans, can provide relevant insight for this task.
- How well streamflows match boater flow preferences, as indicated by surveys.

The geospatial database must be developed in a GIS format that is widely used (e.g., ArcGIS Online) and will be made publicly available in the “Colorado River Headwaters” section of the Upper Colorado River Basin Resource Guide hosted by Colorado Mesa University (www.uppercoloradoriver.org). Consultants are encouraged to build upon the interactive maps already displayed on the guide. CMU has a site license with ESRI to host the maps on ArcGIS online.

Proposal Guidelines and Requirements

Review Process - All proposals received will be subjected to review by the steering committee for the Integrated Water Management Planning Framework Project. Evaluation and ranking of proposals will consider:

- Technical merit of proposal
- Fit between the proposal and the tasks outlined in the “Project Scope” section of this RFP
- Experience and resources of project team with GIS and managing water resources information
- Budget
- Overall proposal quality
- Reasonableness of the proposed project to be completed in stated timeframe and budget

Eligibility - Applicants must have a demonstrated record of successful GIS projects.

Proposal Contents - Proposals are limited to five pages plus attachments and must include:

- A clear statement of goals and objectives of the project.
- A description of how the proposed project will achieve its goals and objectives, including referencing the data sources that will be used.
- An itemized budget that includes rates, materials, and any special equipment costs associated with the proposal. The Hutchins Water Center will not pay indirect or overhead cost in excess of 15 percent.
- A timeline for the project including deliverables.
- Curriculum vitae for all project participants (as an attachment).
- Examples of previous projects (as an attachment).

Project Activities and Deliverables – Funded research proposals are required to carry out the following activities and submit the following deliverables to the Hutchins Water Center:

- Meet with the project steering committee prior to commencing work to discuss the planned approach.
- Submit progress reports as requested by Water Center staff.
- Conduct mid-point and final presentations to project stakeholders, organized in collaboration with the Water Center.
- Submit the final deliverable: a geospatial database in GIS format to inform integrated water management planning in the main stem Colorado River Basin in Colorado, made publicly accessible on CMU's Upper Colorado River Basin Resource Guide.

Fifty percent of the funds will be disbursed after the mid-point presentation to project stakeholders, which will be organized by the Hutchins Water Center in coordination with the Consultant. Final disbursement of funds will occur upon receipt and approval of the final deliverable.

Proposal Deadlines and Submission - All proposals, budget and attachments should be submitted in PDF format and be in 12-point font, single spaced. Please reference the Documented Quote #CMU-16-2559 in the heading to your proposal. Proposals and any questions about the submission process should be submitted by e-mail to Hannah Holm at hholm@coloradomesa.edu.

- Proposal submissions must be received by January 9, 2017 at 5:00pm.
- Award notification will be by January 25, 2017.
- Final deliverable will be due by July 31, 2017.

Project area:

