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Project Title: Feasibility study to assess the potential of urban water conservation to meet Colorado's future water supply needs to 2050

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CWCB Project Manager: Kevin Reidy

Total Cost: 26,670

Purpose: The purpose of this project is to develop partnerships with Colorado water providers to assess the feasibility of future research into the permanency and penetration rates of water conservation savings and measures. Through this reconnaissance level study, the CWCB will be able to assess what barriers and opportunities exist at the provider level in order to carry out future conservation savings potential and penetration rates research. Working with a subset of the partner utilities, this project would also include a demonstration of the statistical analysis that can be done with existing information. This would include illustrating areas of need. Ultimately this future research will define what the water conservation potential is out to 2050.

Approach: Consultant and CWCB staff will identify conservation partners and initiate a series of planning meetings to study the feasibility of assessing the potential impacts of conservation. A small number of representative utilities across the state will be selected for this task. The following provides an overview of the tasks that will be conducted as part of this study.

Task 1.1-Select project partners

The partner providers will come from Front Range utilities such as, Aurora, Colorado Springs, Denver Water, Northern Water and Pueblo. These utilities have expressed interest in working with the CWCB, are implementing the most conservation measures in the state, are situated in the basins where the largest supply gaps will exist and have the largest concentrations of population in the state. 1-2 kick-off and progress meetings will be scheduled with the full group of provider partners.

Task 1.2-Conduct feasibility study with project partners

Consultant will organize one-on-one meetings with the technical water conservation staff from the partner providers to gain insight into their existing water conservation planning efforts, what their data needs are for determining water conservation potential, and what barriers exist for providers in assessing water conservation potential. This task will determine the feasibility

of which level of study approach that can and should be carried out in the future.

Task 1.21- Examine existing data and processes of providers

Review existing planning efforts, processes of data collection and monitoring

Task 1.22- Examine data needs and processes needs

Review with providers what they need to better inform their conservation planning and data collection.

Task 1.23- Examine constraints and barriers to assessing water conservation potential

Review with providers what constraints and barriers would not allow them to participate in future permanency and penetration rate research.

Task 1.24- Create Needs/Opportunities matrix

This sub-task will consist of developing a matrix of what are the conservation planning and data needs and opportunities at the local levels of these partner providers, what conservation planning and data needs and opportunities exist at the state level, and where do these two different scales of planning and data needs and opportunities intersect.

Task 1. 3- Demonstration Analysis

Utilizing data from a subset of the partner providers, consultant will conduct a preliminary analysis of the effectiveness, permanency, and potential for additional conservation amongst the sample utilities. This would include documentation of shortcomings of the analysis due to current data limitations and would highlight potential benefits of acquiring data identified in Task 1.2. (e.g. this is what we could do with this type of information and this is what benefits it would offer).

Task 1.4- Create study approach and timeline for future research

Develop a study approach with the partner providers detailing what aspects of future water conservation potential research efforts will be explored. Utilizing the matrix created in Task 1.2 and the analysis conducted in Task 1.3, develop strategies for fulfilling the identified conservation planning and data needs.

Table 1 provides a target timeline for work on each task. It also includes the approximate budget share for each task

Table 1

Task	Completion Date	Approximate Budget Share
1.1 Select Project Partners	April 2010	
1.2 Conduct Feasibility Study*	May- Aug. 2010	85%; includes funding for graduate student, faculty salary, and travel
1.2.1: Examine existing data	Mid May- July, 2010	
1.2.2 Review data needs/processes of water partner providers		
1.2.3 Examine constraints/barriers to assessing conservation potential	June-Aug. 2010	
1.2.4 Create Needs/Opportunities matrix		
1.3 Demonstration Analysis	July-Sept. 2010; Overlaps with data collection process in task 1.2	5%; faculty salary
1.4 Create study approach/timeline for future research	Sept.-Oct. 2010	10%; faculty salary

*Note: Tasks 1.2.1-1.2.4 will involve an iterative process of obtaining information from utilities, drafting a series of needs/opportunities matrices and soliciting feedback.

Note: Funding for the project will be supplemented by resources already obtained from the Colorado Water Institute. These funds provide additional resources needed to complete the statistical analysis described in Task 1.3.