

PROJECT UNDERSTANDING AND APPROACH

APPROACH TO WATER EFFICIENCY PLANS

WWE will work with the City of Alamosa (City) to develop an updated Water Efficiency Plan (WEP) in accordance with the Scope of Work provided below. The Scope of Work is modeled after the five planning steps found in the *CWCB Municipal Water Efficiency Plan Guideline Document* prepared in July of 2012 (found below).

In addition to the five planning steps found in the CWCB document described above, WWE will also conduct a high-level water rights evaluation of the City's water right portfolio as part of the process. Through our many years of experience with WEP development, WWE has found that a water rights evaluation, though not explicitly listed in the CWCB guidelines, is a natural companion to and an integral part of the development of a WEP. Water conservation, efficiency, and supply planning for the future necessitate a holistic understanding of the City's water rights and water resources in order to maximize the benefits of a WEP for the City. WWE is including services to perform a water rights evaluation as part of this proposal.

TASK A: DEVELOP AN UPDATED WATER EFFICIENCY PLAN

WWE proposes to complete the following primary tasks and sub-tasks to develop an updated WEP for the City of Alamosa.

A.1 Profile of Existing Water Supply and Distribution System

The goal of this primary task is to develop an exhaustive understanding of the City's existing water supply and associated distribution system. This primary task will be accomplished through the completion of the following sub-tasks:

A.1.1 Overview of the Physical Characteristics of the Existing Water Supply and Distribution System

WWE has a basic understanding of the City's water supply system as described in the City's 2007 Water Efficiency Plan. As discussed previously, WWE understands the value in taking the time to evaluate the City's water rights portfolio, and will do so as part of this sub-task. For the updated WEP, WWE will focus on the how updates to the City's supply and distribution system will impact and reshape the existing WEP—most notably the addition of the water treatment plant.

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A.1.2 Overview of Existing Water Supply Reliability

WWE will further evaluate and gain insight on the City's water supplies, water rights, and the reliability of the system as a whole during historical dry years, average years, and historically wet years. Additionally, WWE will review the City's existing WEP in the context of the Statewide Water Supply Initiative (SWSI). Special considerations and approaches will also be provided to account for the declining aquifer source that currently supply's the City's wells.

A.1.3 Identify Supply-Side Limitations and Future Needs

WWE will identify any limitations in the City's water supply and distribution system as it pertains to expected future growth of Alamosa and its service area based on existing treated water allocations, storage capacity, and the existing system's capacity and efficiency. This will include quantifying any unaccounted for or unbilled water "lost" from the system.

A.2. Profile of Water Demands and Historical Demand Management

The goals of this primary task are to provide an overview of historical water demands in order to understand how historical water management and efficiency measures have affected demands, and to use appropriate methods to estimate future water demands and efficiency expectations based on historical trends. It is anticipated that historical use information, growth, and implementation of efficiency programs has occurred since the 2007 WEP, which will help inform and validate this important task. This task will be accomplished through completion of the following sub-tasks:

A.2.1 Demographics and Key Characteristics of the Service Area

WWE will build off of the previous WEP to better define and breakdown the water use of the service area in order to provide information on water use based on key service area characteristics such as water use type and key water using institutions, such as; the City of Alamosa Parks & Recreation Department, the Municipal Golf Course, Adams State College, the Alamosa School District, and any others identified by WWE during this process or recommended by City staff.

A.2.2 Identify Historical Water Demands

WWE will identify challenges associated with historical demand data. The team will analyze historical metering and storage releases in order to quantify annual water distribution and categorize them into their respective water use categories.

A.2.3 Identify Past and Current Demand Management Activities and Impact to Demands

WWE will work with the City to evaluate past water demand management activities in order to better understand which current practices are effective strategies and those

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practices that can potentially be phased out. WWE will assess and reasonably quantify the water savings from each management activity currently in place.

A.2.4 Develop Demand Forecasts

Based on a review of historical water use data and trends, the project team will use appropriate methods to estimate future water demands for a selected planning horizon. WWE will work with the City to establish an appropriate planning horizon, which will likely be derived from updated population estimates and use data acquired since the development of the previous WEP.

A.3. Integrated Planning and Water Efficiency Benefits and Goals

The goal of this primary task is to integrate water efficiency activities into potential future supply planning. This task will be accomplished through the completion of the following sub-tasks:

A.3.1 Water Efficiency and Water Supply Planning

WWE will define water supply and system challenges, water supply planning efforts, and the beneficial effects that water efficiency may have on planning efforts. WWE will work with the City to modify the forecasted water demands that will be developed based on projected future water savings resulting from water efficiency activities.

A.3.2 Develop Water Efficiency Goals

WWE will develop qualitative and quantitative water efficiency goals and will describe how each goal will be measured. WWE understands that the City already has goals to increase efficiency and decrease demand, and will work with the City to refine, update, amend, or replace these goals as appropriate.

A.4. Select Water Efficiency Activities

The goal of this primary task is to select water efficiency activities for implementation. The activities will be chosen based on a screening and evaluation process. This task will be accomplished through completion of the following sub-tasks:

A.4.1 Selection Process

WWE will work with the City to develop a screening and evaluation process in order to select the final water efficiency activities that are to be included in the WEP. WWE will provide estimated water savings, in either a percentage or in acre-feet increments, for each selected activity. This will include the nine specific water-saving measures identified in Section 37-60-126 of the C.R.S. In addition, WWE will describe all current and planned water metering programs for the City, evaluate the City's existing billing system in order to identify potential improvements, review the existing water rate structure, and review potential adjustments to encourage water efficiency and provide recommendations for a water loss detection and system rehabilitation program.

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A.4.2 Detail Targeted Technical Assistance and Incentives Activities

WWE will detail the Targeted Technical Assistance and Incentive activities selected for implementation. This section will discuss potential incentives to implement water efficiency techniques that will impact municipal facilities, the largest water users, and selected activities for the remaining customers or a specific customer category.

A.4.3 Ordinances and Regulations

WWE will identify and evaluate the potential savings associated with locally adopted ordinances and regulations to mitigate water wasting and encourage water savings. This may include regulations on existing customers, new construction, or points of sale. Adoption of any new or amended ordinances and regulations will be at the discretion of the City.

A.4.4 Detail Educational and Outreach Programs

WWE will identify and detail potential educational activities that could be selected for implementation in order to educate the public on water efficiency techniques and other ways to for the community and customers to become responsible water users. The key will be to build on existing educational and outreach programs and to show the CWCB what progress has been made since the previous WEP.

A.5. Develop Implementation Plan

WWE will detail the means to implement and monitor the updated WEP. This primary task will be accomplished through completion of the following sub-tasks:

A.5.1 Develop Implementation Plan

WWE will list and detail all selected water efficiency activities, the anticipated period of implementation, the actions necessary to implement each activity, and a detailed projected cost and avoided cost schedule for each activity with the means to help mitigate negative revenue impacts. WWE will work with the City to provide the CWCB with a realistic plan that the City can achieve in phases.

A.5.2 Develop Monitoring Plan

WWE will develop a plan to monitor the effectiveness of the WEP. The Monitoring Plan will include water demand data collection and its frequency of collection, adherence to goals and selected water efficiency activities, and processes to communicate and update decision makers on the plan's effectiveness. An active Monitoring Plan will be instrumental in helping the City to continue to refine and update future WEPs.

TASK B: PUBLIC REVIEW AND APPROVAL PROCESS

Once the initial draft of the updated WEP is developed, the document will go through a public review and approval process. It is anticipated that the City of Alamosa will make the document

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available to the public for comment and review. Upon completion of the public review process, WWE will review all comments with the City and evaluate them for incorporation into the final WEP. The project team will document the approval process in the final WEP document. Additionally, WWE will detail steps that will be used to review and revise the WEP, and help establish recommended intervals for analyzing monitoring data to keep the plan up to date.

TASK C: FUNDING SOURCES AND DELIVERABLES

The funding sources for the WEP for the City of Alamosa will be the City itself and the CWCB Water Efficiency Grant. The CWCB requires that entities submitting grants for these types of plans be prepared to shoulder 25% of the total project cost. WWE will work with the City to submit progress reports to the CWCB at 50 percent and 75 percent completion of the updated WEP.

