

**Water Supply Reserve Account – Grant and Loan Program**  
**Water Activity Summary Sheet**  
**September 24, 2013**  
**Agenda Item 18(d)**

**Applicant:** Town of Paonia

**Water Activity Name:** Paonia Water Treatment Plant Raw Water Line

**Water Activity Purpose:** Municipal and Industrial

**County:** Delta

**River Basin:** Gunnison

**Water Source:** Groundwater

**Amount Requested:** \$350,000 (Statewide Account), and \$35,000 (Gunnison Basin Account)

**Matching Funds:** \$35,910 cash match Town of Paonia

<b>Staff Recommendation:</b>
Staff recommends approval of up to \$7,000 from the Statewide Account, and \$35,000 from the Gunnison Account for the project titled: Paonia Water Treatment Plant Raw Water Line.

**Water Activity Summary:** WSRA funds will be expended to construct approximately 3,320 lineal feet of 6-inch raw water pipeline connecting existing sources of raw groundwater to an existing water treatment plant (Lamborn) that will be undergoing substantial improvements in order to come into compliance with the Colorado Department of Public Health and Environment requirements. The proposed pipeline is one component in a comprehensive effort (\$5.5 million total project costs) targeted at bringing the Town of Paonia's water system into compliance with CDPHE's directive. Constructing the proposed pipeline during the same time period as the other components (upgrade to existing upper water treatment plant consisting of installation of a new membrane filtration treatment technology, construction of an additional 2 million gallon treated water storage tank, and rehabilitation of an existing 500,000 gallon finished water storage tank) will realize a cost savings due to economies of scale and scope. More specifically, WSRA grant approval will provide funds for: administrative and legal, easement and right-of-way, engineering, construction, bidding, construction oversight, and contingency expenses.

The Town of Paonia's water system currently serves its 1,451 residents and approximately 1,849 residents of the surrounding rural area via 26 private water companies. Paonia's public water system can basically be described as two separate systems with only limited interfaces. Raw water is collected from multiple springs located above Town, and conveyed through a series of pipelines to one of two (2) water treatment plants. Treatment plants are separated by location and elevation, and are commonly referred to as the "upper plant" (Lamborn) and the "lower plant" by nature of relative elevations and their respective raw groundwater sources. As such, there is currently no interconnection between raw water supplies and transmission mains that convey water to one or the other treatment plant. Each plant's water supply is independent of the other, and provides treated water to their respective service area. The lack of redundancy and back-up, and the inability to divert raw water supplies to either treatment plant based on raw water quality or quantity can be problematic in flexible management and operation of the overall water system. Furthermore, the

proposed raw water pipeline satisfies CDPHE's *Design Criteria for Public Water Systems* technical and physical criteria for redundancy and back-up capacity for all critical components of a water system.

The lower treatment plant source water is classified as Ground Water Under Direct Influence of surface water, while historically the upper treatment plant source water was classified as Ground Water, prior to recent reclassification by the Colorado Department of Public Health and Environment to Ground Water Under Direct Influence of surface water. Now that all raw water supplies have the same classification and treatment requirements, it is no longer necessary to maintain separate water supplies to each plant.

The proposed raw waterline extension from the Reynolds Springs pipeline to the upper plant (in addition to the existing pipeline that provides raw water to the lower treatment plant) would have multiple benefits, since the Reynolds Spring pipeline provides a good supply of water to the lower treatment plant, and is within close proximity to the upper treatment plant.

The primary benefit would be improved flexibility and reliability in operation. It allows Operators to select the highest quality water supply or combination thereof, or to supplement the rate of flow from the springs supply(s) to match or exceed treatment capacity. This would help to satisfy seasonal water demands to maintain normal full water levels at both treatment plant storage tanks. The additional raw water supply would also optimize utilization of developed supplies to the extent possible. This additional source water at the upper plant will provide a more reliable system with additional water year round for improved flexibility in operations, system management, and fire protection capabilities. The proposed filtration upgrade at the upper plant will also include a wastewater recovery system for water conservation purposes.

#### *Threshold and Evaluation Criteria:*

The application meets all four Threshold Criteria.

The application articulates how the project meets the Evaluation Criteria as summarized below:

#### Tier 1: Promoting Collaboration/Cooperation & Meeting Water Management Goals & Identified Needs:

- a. The water activity proposed in this application addresses water supply and water quality needs of the 3,300 residents of Town of Paonia and the 26 dependent private water companies.
- b. The water activity proposed in this application represents a significant degree of cooperation and collaboration among traditional consumptive water interests, such as the Town of Paonia and its 26 dependent private water companies, and the Colorado Department of Public Health and Environment (CDPHE).
- c. The 2010 SWSI reported that "The West Slope of Colorado will grow at the fastest rate of any area in Colorado between now and 2050. Population on the West Slope is expected to more than double in the next 40 years, and growth rates in some areas on the West Slope could be as high as 240 percent." By addressing residential water needs, the Town of Paonia helps to close the gap between available water supplies and future needs.

#### Tier 2: Facilitating Water Activity Implementation:

- d. Funding from this account will reduce the uncertainty that the water activity will be implemented due to: time constraints imposed by the CDPHE; the exhaustion of available funding sources; and the Town of Paonia's classification as a disadvantaged community by the 2010 American Community Survey.
- e. Matching funds from all sources constitute \$6,630,910 (94.9%) of all monies available (\$6,980,910) to complete this comprehensive effort to bring the Town of Paonia's water system into compliance with CDPHE requirements. More specifically, the Town of Paonia's cash match of \$35,910 represents 8.5% of total costs (\$420,910) to construct the Raw Water Line.

**Tier 3: The Water Activity Addresses Issues of Statewide Value and Maximizes Benefits:**

- f. Improvements in water system efficiencies help sustain agriculture, environmental, and recreational needs by delaying, or eliminating the need to: divert additional new water supplies; or transfer agricultural water to municipal and industrial uses to serve an expanding population and subsequent water demands.
- g. Improvements in water system efficiencies helps the State of Colorado meet compact compliance by delaying, or eliminating the need to divert additional water supplies to serve an expanding population and subsequent water demands.
- h. n/a
- i. The amount of Statewide Account funds requested represents 5% of all monies available (\$6,980,910) to complete this comprehensive effort to bring the Town of Paonia's water system into compliance with CDPHE requirements, while providing the opportunity to: meet a portion of the statewide supply gap; sustain agriculture, environmental and recreational needs.
- j. The water activity is complimentary to CWCB Finance and Administration Section's Water Project Loan Program.

**Discussion:**

Subsequent to review, staff considers financing of total project costs (\$420,910) to be more consistent on a 90% CWCB Loan-Match/10% WSRA Grant combination, as opposed to the proposed 91% WSRA Grant/9% Match combination.

**Issues/Additional Needs:**

No additional issues or needs were identified.

**Staff Recommendation:**

Staff recommends approval of up to \$7,000 from the Statewide Account, and \$35,000 from the Gunnison Basin Account for project titled: Paonia Water Treatment Plant Raw Water Line.

All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform. In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

**Reporting and Final Deliverable:** The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the

completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues. At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

**Engineering:** All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.