Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet

Applicant: Southeastern Colorado Water Conservancy District

Amount Requested: $50,000.00

Water Activity Name: Long term Management of Non-native Phreatophyte Trees and Mapping Project for the Arkansas Basin

Source of Funds: Statewide Account

Matching Funds: Yes, $17,000 cash and inkind – unclear $36,000 -$40,000

Water Activity Purpose:
Study/analysis of nonstructural water activity

County:
Multiple

Drainage Basin:
Upper Arkansas and tributaries

Water Source:
Arkansas basinwide study

Water Activity Summary:

The Southeastern Colorado Water Conservancy District (District) was formed under Colorado State Statutes on April 29, 1958 by the District Court in Pueblo, Colorado. The District's purpose is to develop and administer the Fryingpan-Arkansas Project. The District holds the water rights to the Project. The District has allocated an average of 55,600 acre-feet of water annually to cities, towns, municipalities, and ditch, canal, reservoir and irrigation companies within the District. In addition, the District provides water and return flows for well augmentation. The District encompasses portions of Bent, Chaffee, Crowley, El Paso, Fremont, Kiowa, Otero, Prowers, and, Pueblo counties within the Arkansas River Basin.

Southeastern Colorado Water Conservancy District is requesting $50,000 in grant funding to assist in funding the development of a Strategic Plan for the Long-Term Management of Non-Native Phreatophyte Trees and to finish mapping the Basin to inventory the infestation level of these invasive species.

The Tamarisk Coalition, with funding from the Colorado Water Conservation Board, the District and the Purgatoire River Water Conservancy District, recently mapped the lower portion of the main stem of the Arkansas River and several of the major tributaries. Unfortunately, the mapping project is incomplete because it does not include the upper basin from Pueblo Reservoir west to the headwaters, small reservoirs, lakes and ponds, nor the hundreds of miles of creeks, ephemeral streams, canals, ditches, and dry washes that

harbor these thirsty invaders. This type of information is invaluable in determining the total acres of infestation and average density, estimate of current and future water losses, as well as the costs associated with control, revegetation and long-term management.

Non-native phreatophytes trees (Tamarisk, Russian olive and Siberian elm), have infested much of the riparian lands and are moving into the upland areas within the Arkansas River Basin. The invasives are causing serious impacts to our limited water resources. The Tamarisk Coalition has estimated on the main stem of the Arkansas River the current water losses, above and beyond what native vegetation would use, is 46,600 acre feet per year. When the water loss from the major tributaries and reservoirs are added an additional 12,000 acre feet per year is being lost. If this problem is not addressed, future water losses from "infilling" only (no expansion from existing infested areas) are estimated to be 86,000 acre-feet per year on the river and 44,000 acre feet on the major tributaries and reservoirs. In addition, dense stands of the non-native trees have restricted recreational accessibility, negatively impacted wildlife habitat, and increased the risk for wildfires and flooding.

The planning and mapping project is designed to develop a comprehensive approach on a basin-wide scale, without which control efforts will be largely ineffective. A specific goal is to develop a strategic long-term management plan to efficiently and effectively implement control, riparian restoration, monitoring, and maintenance measures. To compliment the Plan a comprehensive data base will be developed that will assist property owners and land managers in determining proper control, restoration, monitoring, and long-term maintenance methods for a particular infestation level and land situation. This data base will be available on a website and it will enable the District and agencies to track the progress of the Plan as it is implemented.

Scope of Work

The District's goal is to serve in a leadership position overseeing a basin-wide approach to the Tamarisk problem. The six objectives necessary to fulfill this goal are:

1. Develop a plan that encompasses the entire Basin.
2. Perform an inventory of the extent of infestation within the Basin.
3. Implement various types of control measures to remove the invasive species.
4. Restore the native vegetation.
5. Perform monitoring projects to gauge success and increase knowledge.
6. Oversee the long-term management to ensure the problem doesn't rebound.

To assist in the Plan development a Technical Advisory Committee will be created that will consist of mapping and GIS specialists, federal, state and local agencies, weed managers, university staff, Tamarisk Coalition staff, etc. This Committee will assist with identifying the ecological setting of the Basin and gathering information that will be used in the development of the Plan. This information will include mapping and land uses, community input for water resource protection and development, wildlife enhancement, economic and cultural goals, and health and safety issues.

The Plan will need to define alternatives and select a course of action by defining short and long term goals. The alternatives and goals will be based on federal, state, and local community desires and the existing ecological setting. In addition, ways to provide short, intermediate, and long-term funding alternatives for implementation of the plan will have to be developed and secured. Funding needs to be consistent and may be available from federal, state, local sources, foundations, taxes, user fees, bonds, incentives, and grants.

The Arkansas River Basin Plan for Long-term Management of Nonnative Phreatophytes Trees will provide a broad framework for management of nonnative, phreatophyte trees throughout the Arkansas River watershed. The framework will include a plan and a data base that can be used as management tools. The

plan and data base will incorporate templates and protocols. The term *template* defines what actions that needs to be taken, and the term *protocol* defines how the actions will be performed. The templates and protocols will offer guidelines and criteria for decision making while carrying out the activities associated with various aspects of the nonnative phreatophyte tree control, revegetation and rehabilitation, monitoring, and long-term management. Thus, the intent is to ensure that selected approaches are consistent, effective, efficient, and decisions and actions are well documented. The plan will encourage public land managers and private landowners to undertake coordinated control and restoration measures. It will identify long-term objectives to address infestations and define measures of success. As the project matures, the templates and protocols will be continuously updated to improve the efficiency and effectiveness of the control, revegetation and rehabilitation, monitoring, and long-term management and maintenance.

The Plan development will cost approximately $200,000. Twenty thousand dollars will be used for District staff and a Technical Advisory Committee to develop the Strategic Basin Plan. Approximately $75,000 will be needed to develop the interactive data base, web site, and publication costs. The mapping and engineering cost will be approximately $100,000. This will include costs for mapping and GIS specialists, County Planning & Engineering Departments and Tamarisk Coalition consultations. An additional, $5,000 will be needed to meet travel, meeting and office expenses.

The District is also applying for funds from a Department of Local Affairs grant proposal to develop the Strategic Plan and complete the mapping. Bent County has graciously agreed to be the lead county on this proposal, because DOLA requires a government entity to be the applicant. The District will provide technical and managerial support for the grant and plan development. The grant request from DOLA will be for $50,000. The deadline for supporting entities to report is March 15, 2007 and the DOLA grant will be submitted before the April 1, 2007 deadline.

Discussion:

This request for funding meets needs identified in the Statewide Water Supply Initiative (SWSI) and meets several SWSI water management objectives and well as the needs identified by the Tamarisk Coalition and former Governor Owens Executive Order regarding non-native phreatophytes. Specifically if successful future management activities would help increase water availability to meet municipal, agricultural, environmental and recreational needs. Questions still remain regarding the overall water saving which may be realized by replacement of non-native with native plant species. The savings are likely to be site specific with greater savings being in areas where root systems can access large quantities of relatively shallow ground water.

The primary issue with this project is that it does not result in on the ground implementation. Actual implementation is premised on the hope that future funding will be available and that by having a comprehensive plan and management strategy the basin will be will positioned for funding.

Issues/Additional Needs:

The scope of work should be clarified to better describe the deliverables by task and activity. The major milestones associated with task deliverables should be clarified.

Additional detail is need on the budget.

- The in-kind match is unclear and the two values do not match. The inkind match is not provided at sufficient detail. However, since the inkind contributions were not a major factor it is not essential to provide the additional detail.

- Rates and level of effort and/or unit costs are needed for the following subtasks:
    - Public Education
    - Meetings
    - Mapping/Engineering contract expenses

Staff Recommendation:

Staff recommends approval of up to $50,000.00 for the Long term Management of Non-native Phreatophyte Trees and Mapping Project for the Arkansas Basin. This approval is contingent on the receipt of the information requested under issues/additional needs.

All products, data and information developed as a result of this grant must be provided to 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.