

# COLORADO WATER CONSERVATION BOARD



## WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

ELBERT COUNTY GROUNDWATER-LEVEL MONITORING NETWORK

Name of Water Activity/Project

BOARD OF COUNTY COMMISSIONERS, ELBERT COUNTY, COLORADO

Name of Applicant

S. Platte BRT (\$6,000)  
Metro BRT (\$12,000)

Amount from Statewide Account:

\$96,500

Amount from Basin Account(s):

\$18,000

Total WSRA Funds Requested:

\$114,500

Approving Basin Roundtable(s)

*(If multiple basins specify amounts in parentheses.)*

### Application Content

Application Instructions	page 2
Part I – Description of the Applicant	page 3
Part II – Description of the Water Activity	page 5
Part III – Threshold and Evaluation Criteria	page 7
Part IV – Required Supporting Material	
Water Rights, Availability, and Sustainability	page 10
Related Studies	page 10
Signature Page	page 12

### Required Exhibits

- A. Statement of Work, Budget, and Schedule
- B. Project Map
- C. As Needed (i.e. letters of support, photos, maps, etc.)

### Appendices – Reference Material

- 1. Program Information
- 2. Insurance Requirements
- 3. WSRA Standard Contract Information (Required for Projects Over \$100,000)
- 4. W-9 Form (Required for All Projects Prior to Contracting)

## Water Supply Reserve Account – Application Form

Revised December 2011

### Part I. - Description of the Applicant (Project Sponsor or Owner);

1.	Applicant Name(s):	Board of Commissioners, Elbert County, Colorado		
	Mailing address:	215 Comanche St Kiowa, Co 80117		
	Taxpayer ID#:	08-033800		
	Primary Contact:	Will Koger	Position/Title:	Water Advisory Comm.
	Email:	WKoger@Forsgren.com		
	Phone Numbers:	Cell: 720 232 6644	Office:	
	Alternate Contact:	Bob Ware	Position/Title:	Water Advisory Chmn
	Email:	BobWare00@q.com		
	Phone Numbers:	Cell: 303 548 2326	Office:	

2. Eligible entities for WSRA funds include the following. What type of entity is the Applicant?

- ☒ Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
- ☐ Public (Districts) – authorities, Title 32/special districts, (conservancy, conservation, and irrigation districts), and water activity enterprises.
- ☐ Private Incorporated – mutual ditch companies, homeowners associations, corporations.
- ☐ Private individuals, partnerships, and sole proprietors are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
- ☐ Non-governmental organizations – broadly defined as any organization that is not part of the government.

## Water Supply Reserve Account – Application Form

Revised December 2011

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3. Provide a brief description of your organization

The Board of County Commissioners serves as the governing body for Elbert County. The County is near the center of Colorado, along the Front Range, extending from southeast of Denver toward Colorado Springs. Elbert County encompasses 1,850 square miles of foothills and plains, with a population of 24,000 distributed among 7,000 households. Approximately 68 percent of the county lies in the South Platte Basin, the basin with the State's largest projected water supply gap.

Most of the water needs of Elbert County are drawn from the Denver Basin aquifers. While remaining rural on the eastern side, the western side is becoming more urban where a majority of the population commutes to the metro Denver area to work. The towns of Elizabeth, Kiowa and Simla are incorporated, and the smaller towns of Agate, Elbert and Matheson remain unincorporated.

4. If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.

NOT APPLICABLE.

5. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract is included in Appendix 3. Please review this contract and check the appropriate box.

☒

The Applicant will be able to contract with the CWCB using the Standard Contract

☐

The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

6. The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

NONE.

## Water Supply Reserve Account – Application Form

Revised December 2011

### Part II. - Description of the Water Activity/Project

1. What is the primary purpose of this grant application? (Please check only one)

☐ Nonconsumptive (Environmental or Recreational)

☐ Agricultural

☐ Municipal/Industrial

☒ Needs Assessment

☐ Education

☐ Other

Explain:

2. If you feel this project addresses multiple purposes please explain.

The funding from this grant will be used to determine the extent to which aquifer water levels in Elbert County are declining. The water-level data will be used to evaluate long-term viability of the water supply for a needs assessment and to help county leaders determine the areas where renewable water supplies may be needed as well as the urgency with which they should engage in regional partnerships working on importing renewable water supplies. The South Metro Water Supply Authority in the South Platte Basin, and the Pikes Peak Regional Water Authority in the Arkansas River Basin would be considered for water-supply partnerships. Joining either authority will require a significant financial commitment, and the water-level data will educate and inform well owners, county residents, and county leaders as to their susceptibility to declining aquifer water levels.

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

☒ Study

☐ Implementation

4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

New Storage Created (acre-feet)

New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)

Existing Storage Preserved or Enhanced (acre-feet)

Length of Stream Restored or Protected (linear feet)

Length of Pipe/Canal Built or Improved (linear feet)

Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)

Area of Restored or Preserved Habitat (acres)

☒ Other -- Explain: **ANALYSIS OF EXISTING WATER SUPPLIES**

## Water Supply Reserve Account – Application Form

Revised December 2011

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4. To help us map WSRA projects please include a map (Exhibit B) and provide the general coordinates below:

Latitude:

39.346781 NORTH

Longitude:

104.467061 WEST

A MAP OF ELBERT COUNTY IS INCLUDED IN EXHIBIT B, AS NOTED ABOVE

5. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSRA funding will be used for. A full **Statement of Work** with a detailed budget and schedule is required as **Exhibit A** of this application.

Elbert County relies heavily on nonrenewable groundwater from the Denver Basin aquifers for water supply. Population growth in the county has placed increasing demands on groundwater resources, and future groundwater withdrawals are expected to increase as the population continues to grow. A detailed program to monitor groundwater levels in the Denver Basin aquifers throughout the county is needed to assist the Elbert County Board of Commissioners with making informed policy decisions about limited groundwater resources. The objectives of the study are to establish a well network for long-term monitoring of groundwater levels in the Denver Basin aquifers throughout Elbert County and to use the network to collect frequent groundwater-level data. The network will utilize about 30 existing wells and will include wells completed in each of the Denver Basin aquifer units--the Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers. These bedrock aquifers are expected to see the greatest demands in coming years.

Existing information about hydrogeologic conditions and areas of concern will be considered in the network design. The Colorado Division of Water Resources (CDWR) currently measures annual water levels in 27 bedrock aquifer wells in Elbert County, and the suitability of these wells for this study will be considered. Domestic wells or monitoring wells are preferred over municipal wells for this study because water levels in these wells are less affected by pumping than in large-capacity municipal wells. Groundwater levels will be measured bi-monthly in all wells, and a portion of the wells will be instrumented with pressure transducers and data logger to record more frequent water levels. These frequent water-level measurements will be used to describe seasonal and long-term water-level trends in the Denver Basin aquifers within Elbert County and to characterize groundwater-level changes across the county. Funds from this grant will be used in 2014 and 2015 to design the well network, establish the sites as monitoring locations, and initiate groundwater-level monitoring which will run through 2018. The CWCB approved additional grant support from the severance tax account to initiate this program at their March 19, 2014 meeting. The USGS has committed to providing matching funds for both the severance tax and proposed WSRA grants to fulfill the three-year funding requirements.

# Water Supply Reserve Account – Application Form

Revised December 2011

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## Part III. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)
  - a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.<sup>1</sup>

The project meets the water needs identification activities by the Statewide Water Supply Initiative (SWSI). Eligible Water Activities, as identified in Senate Bill 06-179, include the following:

    - Studies or analysis of structural, nonstructural, consumptive and nonconsumptive water needs, projects, or activities; and
    - Structural and nonstructural water projects or activities.

The applicant is an eligible grantee, being a political subdivision of the state, pursuant to 29-1-204(4), C.R.S.
  - b) The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRTs evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. Note- If this information is included in the letter from the roundtable chair simply reference that letter.

Please see BRT letters.

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<sup>1</sup> 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

## Water Supply Reserve Account – Application Form

Revised December 2011

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- c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.<sup>2</sup> The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

SWSI: Key recommendation #5 "Create a Common Understanding of Future Water Supplies. To more accurately assess the alternatives available to the state in meeting our future water needs, the analysis of supply availability for each basin will determine developable flows, taking into account factors such as ... hydrologic conditions."

SWSI: Key recommendation #6 "Develop Implementation Plans Towards Meeting Future Needs. The success of any current or future option, for meeting our water needs will; have some degree of uncertainty. To better facilitate successful implementation, the following should be addressed in more detail:

A. Addressing gaps in rural areas and smaller water providers.

The proposed project supports 37-75-10(2)(c).C.R.S. by contributing to a basin-wide water-supply needs assessment, by identifying the spatial and aquifer distribution of water availability and groundwater depletion. The study will provide the data necessary to analyze the areas and aquifers within the county that are experiencing groundwater depletion. This understanding will assist county water planners in identifying areas where surface-water resources may be needed or where aquifer storage and recovery could improve groundwater sustainability.

- d) Matching Requirement: For requests from the Statewide Fund, the applicants is required to demonstrate a **20 percent** (or greater) match of the request from the Statewide Account. Statewide requests must also include a minimum match of **5 percent** of the total grant amount from Basin Funds. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the application was submitted to the CWCB. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in **Exhibit A** of this application)

The request for \$96,500 from the WSRA Statewide Fund will have a 76.4 percent cash match or \$73,700; \$18,000 from Basin Funds and \$55,700 from U.S. Geological Survey (USGS) Cooperative Water Program Federal Matching Funds. If including a CWCB Severance Tax grant already awarded (\$49,900), along with the USGS match on those funds (\$26,900), the cash match totals \$150,500 or 146 percent of the request from the Statewide Fund. Additionally, Elbert County volunteers have donated \$15,000 in-kind services and expenses to coordinate planning/funding for this program to date. Including those in-kind services would total \$165,500 for a total 172 percent match. The \$18,000 Basin Funds match (\$12,000 from the Metro BRT and \$6,000 from the South Platte BRT) makes up 15.7 percent of the total request of \$114,500 in WSRA Funds. A detailed budget is provided in Exhibit A.

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<sup>2</sup> 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.



## Water Supply Reserve Account – Application Form

Revised December 2011

2. For Applications that include a request for funds from the **Statewide Account**, describe how the water activity/project meets all applicable **Evaluation Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines and repeated below.) Projects will be assessed on how well they meet the Evaluation Criteria. **Please attach additional pages as necessary.**

**Evaluation Criteria** – the following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three “tiers” or categories. Each “tier” is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. WSRA grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.

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

- a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).
- b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intrabasin or interbasin needs or issues.
- c. The water activity helps implement projects and processes identified as helping meet Colorado’s future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable’s basin-wide water needs assessment.

### Tier 2: Facilitating Water Activity Implementation

- d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).
- e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

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

- f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.
- g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.
- h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.
- i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.
- j. The water activity is complimentary to or assists in the implementation of other CWCB programs.



## Water Supply Reserve Account – Application Form

Revised December 2011

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Continued: Explanation of how the water activity/project meets all applicable Evaluation Criteria.

**Please attach additional pages as necessary.**

### **TIER 1: PROMOTING COLLABORATION/COOPERATION AND MEETING WATER MANAGEMENT GOALS AND IDENTIFIED WATER NEEDS:**

1. ENVIRONMENT. The water activity addresses multiple issues, including consumptive and non-consumptive needs, and the needs and issues of multiple interests or basins.
  - a. Helps Meet Identified Gap. The water activity is aimed at developing a better understanding of available deep groundwater resources in Elbert County, which helps protect and enhance environmental and recreational objectives, and helps determine an appropriate combination of strategies to promote sustainability of threatened and endangered species.
  - b. Restores Environmental Gap. Data collection in support of better policy development also contributes to more efficient use of water, and potentially preserves water for multi-purpose projects that benefit both water users and native species.
  - c. Meets Identified Need. Better policy development supports the SWSI 2010 finding to pursue projects that benefit consumptive water users and riparian environments, and helps capitalize on the environmental and recreational benefits derived from more efficient water management.
  - d. Active Participation Of Other Organizations. The water activity has committed support from the US Geological Survey (USGS), with its separate federal matching grant commitments totaling \$82,600. The Kiowa Conservation District has also provided a letter of support.
2. MUNICIPAL & INDUSTRIAL. This project will collect data to promote more efficient use of water and inform policy decisions regarding shared infrastructure, possibly leading to water savings, reuse, trade, exchanges, and better use of return flows.
  - a. Helps Meet Identified M&I Gap. The project will provide data to support local water supply planning, possibly leading to strategies for water providers, land management agencies, private landowners, environmental

and watershed groups, state and local governments, local fire authorities, and water users. Results will also support, encourage and incentivize water providers in planning for and implementing M&I active conservation best management practices and other demand management strategies.

b. Develops Conserved Water To Meet M&I Gap. Helps profile the existing water resources, and characterize water use. These steps are vital to the evaluation and selection of conservation measures and programs.

c. Meets Identified Need. The project fosters cooperation among water interests in quantifying the M&I gap, and will provide empirical data to support water users and policy makers in planning for future demands.

d. Active Participation of Other Organizations. The water activity has committed support from the USGS, with its separate federal matching grant commitments totaling \$82,600. The Town of Elizabeth, Elbert County's largest municipality, has also provided a letter of support.

3. AGRICULTURE. - Data collection in support of better policy development contributes to more efficient use of water, and potentially preserves water for agricultural users. Addressing water issues of Elbert County based upon the data collected will impact both the Arkansas and South Platte Basins, as well as the State of Colorado.

a. Helps Meet Identified Agricultural Gap: Incorporates data collection of agricultural water supply into the well-monitoring network to support the implementation of multi-purpose agricultural water supply projects. The data collection will also contribute towards statewide modeling of agricultural demand.

b. Develops New or Conserved Water to Meet Agricultural Gap: Helps profile the existing water resources, and characterize water use. These steps are vital to the evaluation and selection of conservation measures and programs. Results can help meet agricultural water supply needs by pointing toward the need for increased regional cooperation, storage, exchanges, and other creative opportunities supporting the implementation of multi-purpose agricultural water supply projects.

c. Meets Identified Need: Collection of data from agricultural wells will assist the assessment of the deep groundwater aquifers and the sustainability those wells in support of Elbert County agriculture, crop irrigation and livestock production.

d. Active Participation of Other Organizations. The water activity has committed support from the USGS, with its separate federal matching grant commitments

totaling \$82,600. The Kiowa Conservation District has also provided a letter of support.

4. RECREATION. Data collection aids in the assessment of non-consumptive water supplies needs, and will support implementing solutions to water supply challenges. This project will collect data to allow for more efficient use of water and policy decisions regarding shared infrastructure, possibly leading to water savings benefiting all water users, including recreational uses.

- a. Helps Meet Recreational Needs: Incorporates data collection of deep groundwater water supply which is vital to recreational values that benefit local economies.
- b. Develops Conserved Water To Meet Recreational Needs. Helps profile the existing water resources, and characterize water use. These steps are vital to the evaluation and selection of conservation measures and programs. Helps incorporate recreational needs into the implementation of multi-purpose water supply projects.
- c. Meets Identified Need: Collection of data will assist the assessment of the deep groundwater aquifers and their capacity to meet recreational needs.
- d. Active Participation of Other Organizations. The water activity has committed support from the USGS, with its separate federal matching grant commitments totaling \$82,600.

5. INTERSTATE COMPACTS. Data collection aids in the identification of constraints on our water resources, and will support implementing solutions to water supply challenges. The data collection effort supports the development of risk management strategies so that Colorado can fully use its compact decree entitlements.

- a. Helps Meet Identified Need. The assessment of the deep groundwater supply bears on the water management decisions affecting compact compliance.
- b. Actively Meets/Protects Identified Compact Issue. The assessment of future availability of deep groundwater supply is a factor in determining compact entitlements, water conservation strategies, and associated water supply development decisions.
- c. Is A Project or Method Identified in Needs Assessment. The data collected will support multiple purposes, including compact compliance needs as identified in the SWSI 2010 Report, and reflected in the needs assessments of all Front Range roundtables.

6. MULTIPLE BASIN. The project helps meet the needs of multiple basins, and has letters of support from the Metro Roundtable and the South Platte Roundtable.

a. Letters of Support from Metro Basin Roundtable and the South Platte Basin Roundtable indicate that:

The South Platte BRT has allocated \$6,000 from its Basin account to support this initiative, and also supports the allocation of Statewide funding in the amount of \$96,500.

The Metro BRT has allocated \$12,000 from its Basin account to support this initiative, and also supports the allocation of Statewide funding in the amount of \$96,500.

b. Matching Commitment. The project has matching commitment from two basin roundtables, South Platte and Metro.

7. MULTI-PURPOSE & COOPERATIVE PROJECTS - The water activity fosters cooperation between basins for the purpose of implementing solutions to water supply challenges.

a. Active Participation of 3 or More Partners. The project involves the participation of the State of Colorado, USGS, the Metro Basin Roundtable, the South Platte Basin Roundtable, and Elbert County.

b. Active Participation of More Than one Interest. Collection of data will assist the assessment of the deep groundwater aquifers and their capacity to meet the needs of multiple water uses, including Environment, M&I, Agriculture, Recreation, risk management, and Interstate Compact compliance needs. Representing this broad cross section of users, the USGS has committed \$82,600 of federal grant monies as a cost-share partner in this project, and will perform the work upon funding.

c. Project Has a Conservation Component. The water activity is aimed at developing a better understanding of available water resources, which helps protect and enhance environmental and recreational objectives, and helps determine an appropriate combination of strategies to preserve threatened and endangered species. By collecting data, the project also helps profile the existing water resources and characterize water use. These initial first steps are vital to the evaluation and selection of conservation measures and programs.

8. INTRABASIN. The project will address key issues of importance to more than one basin.

a. More than One Watershed in the Basin. The project will address issues within the Metro Basin, the South Platte Basin and the Arkansas Basin. All of the watersheds within Elbert County falling within each of those basins will be part of

the project.

b. Addresses Defined Concerns. The project supports the following defined concerns from the SWSI 2010 Findings:

- Encourages projects addressing multiple purposes
- Utilizes existing funding opportunities to meet consumptive & non-consumptive water supply needs
- Fosters cooperation among water interests within and between basins
- Addresses concerns in addressing the M&I gap
- Supports efforts to meet non-consumptive water needs
- Helps meet agricultural water needs by incorporating agricultural water needs and supporting the implementation of multi-purpose agricultural water supply projects

## **TIER 2: FACILITATING WATER ACTIVITY IMPLEMENTATION:**

### **1. MATCHING COMMITMENTS.**

a. Matching Commitment from Basin Roundtables. Matching funds from the basin roundtables is \$18,000. (SP BRT: \$6,000 + Metro BRT: \$12,000) This comprises 15.7 percent of the \$114,500 total WSRA grant request for the project.

b. Matching Commitment From Other Sources. Funding from Statewide Funds, as well as federal monies, allows this project to be as comprehensive as it must be to produce a significant impact on the region's water future. The amount of matching funds coordinated by the applicant and secured from federal agencies demonstrates a significant and appropriate commitment to the project. Additionally, in-kind contributions of time and effort by volunteers in Elbert County have totaled another \$15,000 on this project.

### **2. GRANT FUNDING CRITICAL TO SUCCESS.** Grant funding is critical to success.

a. Funding Critical to Success. Without the grant funding requested, the project cannot accomplish the comprehensive data collection effort across Elbert County necessary to meet the goals and objectives.

b. Explored All Available Avenues of Funding. Funding from Statewide Funds, as well as federal monies, allows this project to be as comprehensive as it must be to produce a significant impact on the region's water future. The amount of matching funds coordinated by the applicant and secured from federal agencies demonstrates a significant and appropriate commitment to the project.

Moreover, the dedicated involvement by private citizens committed to this effort speaks volumes as to the importance of this project to Elbert County's residents and future generations.

**TIER 3: THE WATER ACTIVITY ADDRESSES OTHER ISSUES OF STATEWIDE VALUE AND MAXIMIZES BENEFITS:**

1. **ISSUES OF STATEWIDE VALUE.** The water activity will provide data crucial to policy decisions and assist the assessment of the deep groundwater aquifers and their capacity to meet the needs of multiple water uses, including agriculture, open space, M&I needs, environmental and recreational uses, risk management requirements, compact compliance needs, as well as the future needs within Elbert County. This water project will provide a high level of benefit to Colorado by guiding policy decisions toward a sustainable water future for the region, and complements CWCB efforts to identify human, environmental and recreational water needs, and to evaluate the water supplies in each basin.
2. **THREATENED AND ENDANGERED SPECIES.** Elbert County provides significant relatively natural habitat for wildlife and plants, including relatively intact shortgrass prairie, midgrass and sand sage prairie, riparian woodland and shrubland areas on or adjacent to riparian areas for associated animal species, specifically native fish, ferruginous hawk, Swainson's Hawk, native leopard frogs, pronghorn, dragonflies, and swift fox. Habitats for the federally-listed Preble's Meadow Jumping Mouse are protected as a threatened species in some areas of Elbert County due to loss and modification of its habitat. The project is aimed at developing a better understanding of available water resources, which helps determine an appropriate combination of strategies to preserve threatened and endangered species.

### 3. COST/BENEFIT IS HIGH.

- a. Builds on Previous Studies. The project builds on previous studies in nearby counties and will use existing models and methodologies to complete the data collection in Elbert County. The project budget was prepared by USGS professionals, and upon funding, the data collection project will be run by the USGS.
- b. Applicant Successfully Completed Similar Projects. Upon funding, the data collection project will be overseen by the USGS, having extensive experience in completing similar projects in nearby Colorado counties.
- c. Active Participation of Professional Partners. Upon funding, the data collection project will be overseen by the USGS, having extensive experience in completing similar projects in nearby Colorado counties.
- d. Project Complimentary to other CWCB projects. The project is well-aligned with other CWCB-funded efforts in addressing multiple issues of local, basin and statewide interest.
- e. Project participation by landowners is all-voluntary, and the need for local volunteer participation is central to the data collection effort. In order to secure that all-volunteer participation, monthly public meetings are held to educate the public and invite the public's involvement in the data collection effort.



## Water Supply Reserve Account – Application Form

Revised December 2011

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### Part IV. – Required Supporting Material

1. **Water Rights, Availability, and Sustainability** – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights, and water rights issues, and the name/location of water bodies affected by the water activity.

Elbert County is very dependent on nonrenewable groundwater from the Denver Basin aquifers, and water providers and domestic users rely exclusively upon nonrenewable groundwater to supply the area's needs. The long-term sustainability of the Denver Basin aquifer's groundwater supply is not well understood. The Denver Basin bedrock aquifers in Elbert County become thinner and finer grained from west to east, and the amount of water available from bedrock aquifers decreases dramatically from west to east across Elbert County. The objectives of the study are to establish a well network for long-term monitoring of groundwater levels in the Denver Basin aquifers throughout Elbert County and to use the network to collect groundwater-level data for a minimum of 3 years, in support of decision-makers policy development.

2. Please provide a brief narrative of any related studies or permitting issues.

In a related effort, Elbert County intends to prepare a water supply study to project its water demands by sector through 2035 and 2050, and plan how such services could be provided. Elbert County representatives are coordinating support from the South Platte and Metro BRTs to obtain WSRA grants totaling \$120,000 to help fund the planned \$130,000 water supply master plan.

3. Statement of Work, Detailed Budget, and Project Schedule

The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. **Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.** All WSRA funds are disbursed on a reimbursement basis after review invoices and appropriate backup material.

**Please provide a detailed statement of work using the template in Exhibit A.** Additional sections or modifications may be included as necessary. Please define all acronyms and include page numbers.

See attached Exhibit A for Statement of Work, Detailed Budget and Project Schedule.

## Water Supply Reserve Account -Application Form

Revised December 2011

### **REPORTING AND FINAL DELIVERABLE**

**Reporting:** 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 statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

**Final Deliverable:** 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.

### **PAYMENT**

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. 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 help promote the development of a common technical platform.

## Water Supply Reserve Account – Application Form

Revised December 2011

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The above statements are true to the best of my knowledge:

Signature of Applicant:  ; CHA, 1

Print Applicant's Name: KURT C SCHLEGEL

Project Title:

Return an electronic version (hardcopy may also be submitted) of this application to:

Greg Johnson – WSRA Application  
Colorado Water Conservation Board  
1580 Logan Street, Suite 200  
Denver, CO 80203  
[gregory.johnson@state.co.us](mailto:gregory.johnson@state.co.us)

## **Exhibit A – Statement of Work, Detailed Budget, and Proposed Schedule**

**WATER ACTIVITY NAME - Rural Elbert County Well-Monitoring Network**

**GRANT RECIPIENT - Elbert County Board of County Commissioners**

**FUNDING SOURCE - Statewide, South Platte & Metro BRT accounts, plus 33% matching USGS funds**

### **INTRODUCTION AND BACKGROUND -**

Elbert County is near the center of Colorado, along the Front Range, extending from southeast of Denver toward Colorado Springs (Fig. 1). Elbert County encompasses 1,850 square miles of foothills and plains, with a population of 24,000 distributed among 7,000 households. A majority of the county lies in the South Platte Basin, the basin with the State's largest projected water supply gap. Most of the water needs of Elbert County are drawn from the Denver Basin aquifers (Fig. 2).

The long-term vitality of Elbert County depends on a reliable water supply. However, the main water supply is being depleted, water demand is increasing, and the long-term sustainability of the non-renewable groundwater supply of the Denver Basin groundwater aquifers is not well understood.

While remaining rural on the eastern side, the western side of Elbert County is becoming more urban where a majority of the population commutes to the metro Denver area to work. The towns of Elizabeth, Kiowa and Simla are incorporated, and the smaller towns of Agate, Elbert and Matheson remain unincorporated.

Elbert County government is committed to planning for an adequate water supply for Elbert County's future agricultural, municipal and industrial needs. This study focuses on the status of these deep groundwater aquifers in Elbert County, to better understand the implications of continued reliance on these deep groundwater aquifers and Elbert County's role in the State's water supply gap.

### **STUDY APPROACH**

The project will establish a well network for long-term monitoring of groundwater levels in the Denver Basin aquifers throughout Elbert County and use the network to collect frequent groundwater-level data for a minimum of 3 years. The network will utilize about 30 existing domestic and monitoring wells and will include wells completed in each of the Denver Basin aquifer units – the Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers. Existing information about hydrogeologic conditions and areas of concern will be considered in selecting the wells for monitoring and designing the network. The Colorado Division of Water Resources (CDWR) currently measures annual water levels in 27 bedrock wells within Elbert County. These wells will be considered for suitability in the long-term network. Domestic or monitoring wells are preferred over municipal wells because the water levels in large-capacity municipal wells are generally affected by pumping from the well. Groundwater levels will be measured bi-monthly in all wells, and a portion of the wells will be instrumented with pressure transducers and data loggers to record more frequent water-level measurements. This grant request will help fund the US Geological Survey (USGS) in setting up the program and performing three years of monitoring.

### **OBJECTIVES**

Elbert County relies heavily on non-renewable groundwater from the Denver Basin aquifers for water supply. Population growth in the county places increasing demands on groundwater resources, and future groundwater withdrawals are expected to increase as the population continues to grow. The objectives of this study are to:

1. Utilize water-level monitoring data to evaluate the long-term water-level trends in the Denver Basin aquifers in Elbert County, and identify the rate of change of groundwater water levels over time in various parts of the county.
2. Provide data to assist county decision makers in understanding which areas of the county are most susceptible to water-level decline.
3. Help in understanding the extent to which Elbert County can continue to rely on Denver Basin water.
4. Identify the urgency of other measures such as importing renewable water.
5. Better define Elbert County's share of the gap in the South Platte and Arkansas Basins.

#### **TASKS:**

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##### **TASK 1: SELECT WELLS FOR MONITORING**

Description of Task: Existing aquifer and well location maps will be overlain by simulated drawdown maps to assist in identifying areas of interest for future water-level monitoring. This task will utilize existing State, county, and USGS maps, and will involve site visits to wells identified as suitable for water-level monitoring.

Deliverable: After targeted monitoring areas are identified, available county and state resources will be used to identify potential water-level monitoring sites. Potential sites will be identified based on the location, perforated interval, full completion within individual formations, and completeness of the available record. To assist in record management and to aid in the field investigation, digital well records will be hyper-linked to the respective well sites in a GIS data set of wells for Elbert County.

##### **TASK 2: ESTABLISH NETWORK SITES**

Description of Task: Final selection will be based on well screened interval, well access, primary use, frequency of use, and well owner voluntary participation & cooperation. Wells are considered suitable for water-level monitoring if the screened-interval depth and well-construction materials are known from well-drilling records and if the well can be accessed.

Deliverable: Once sites are selected for monitoring, the surrounding area, well head, access port, and measuring point will be photographed for the well record, and the well location and elevation of the well head will be measured to within 1 foot using a high precision GPS unit.

##### **TASK 3: START MEASURING WATER LEVELS**

Description of Task: Measure water levels in selected wells on a frequent basis. Wells will be selected for transducer installation on the basis of well-completion interval and water use. If possible, inactive or abandoned wells will be used for pressure-transducer monitoring.

Deliverable: All site information and water-level data will be entered into the USGS NWIS database. This task includes reviewing the field data forms for accuracy, establishing the sites in the NWIS database, preparing site files, and entering the monthly water-level data into the NWIS database. After each round of water-level measurements, hydrographs will be produced and reviewed to ensure that the selected wells are providing reliable data.

**TASK 4: SEMI- ANNUAL STATUS REPORT**

Description of Task: Describe project progress, and compile & consolidate well monitoring data collected in a semi-annual report to CWCB & Elbert County in July and January of each year, including any GIS data sets and associated metadata generated during the project, in a standardized format, which will also be accessible to the public through the internet.

Deliverables: Semi-annual status reports to the CWCB and to Elbert County in July and January of each year, including consolidated data in a standardized format, together with any GIS data sets generated during the project, which will also be made publicly accessible through the internet.

**REPORTING AND FINAL DELIVERABLE:** The Final Report will be a standard USGS Scientific Investigation Report (SIR), including a summary of the project, and how the project was completed, methods of investigation, description of the study area, description of the monitoring network and groundwater levels measured, a comparison of the results to other existing data & studies, and an evaluation of any significant trends in observed or projected groundwater levels, and recommendations based on the well-monitoring project. The Final Report will be delivered to the CWCB and Elbert County, and made publicly accessible through the internet. Any GIS data sets and associated metadata generated during the project will also be provided as deliverables, and will also be accessible to the public through the internet. This report may contain photographs, summaries of meetings and engineering reports/designs.

**OUTCOME/PRODUCT**

All groundwater-level data collected for the study will be entered into the USGS National Water Information System (NWIS) and will be available through the internet. In addition, the USGS will publish a written report that documents methods, data, maps, and analysis from the study. They will also report on progress semi-annually in the form of written documents and oral presentations.

**RURAL ELBERT COUNTY WELL MONITORING NETWORK****BUDGET BY FUNDING SOURCE**

<sup>1</sup> Tasks 1 and 2 are already funded by a CWCB Severance Tax Grant and USGS Federal Matching Funds

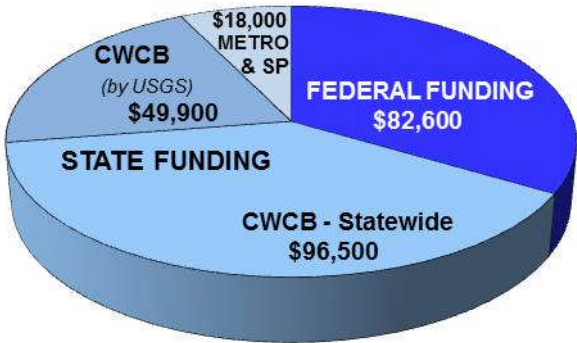
Task #	Task Description	Matching Funds	WSRA Grant Funds	Total Expense
<b>1</b>	SELECT WELLS FOR MONITORING <sup>1</sup>	\$ 0	\$ 0	\$ 0
<b>2</b>	ESTABLISH NETWORK MONITORING SITES <sup>1</sup>	\$ 0	\$ 0	\$ 0
<b>3</b>	MEASURE WATER LEVELS	\$ 39,800	\$ 79,200	\$ 119,000
<b>4</b>	SEMI-ANNUAL STATUS REPORTS	\$ 3,900	\$ 0	\$ 3,900
<b>5</b>	FINAL REPORT	\$ 12,000	\$ 24,300	\$ 36,300
	<b>GRANT ADMINISTRATION</b>		\$ 11,000	\$ 11,000
<b>Totals:</b>		<b>\$ 55,700</b>	<b>\$ 114,500</b>	<b>\$ 170,200</b>

The USGS has committed to working together as a cost-share partner in this project and will perform the work upon funding. The cost for the three-year program with transducers is \$236,000. With an additional cost of \$11,000 for project administration by the County, the total funding needed is \$247,000. The proposed allocation of State and Federal funding is summarized in the diagram below.

The USGS and Elbert County are being awarded a Severance Tax Grant from the Colorado Water Conservation Board (CWCB) for \$49,900, and the USGS provided \$26,900 in matching funds on that share. Elbert County respectfully requests a \$114,500 WSRA grant in Basin and Statewide funds. The USGS will match the WSRA funds with another \$55,700. The proposed project funding strategy is shown below.

# ELBERT COUNTY

## WELL MONITORING NETWORK



**PROJECT BUDGETS**

	FUNDING SOURCE				
	Total Cost	Federal	CWCB Statewide	BRT's	Severance Tax CWCB Grant
Well Monitoring Project	\$247,000	\$82,600	\$96,500*	\$ 18,000 (\$12,000 fm METRO \$6,000 fm SP)	\$49,900 (by USGS)

\* Statewide funding provides \$48,250 per year for Year 2 and Year 3 of Well Monitoring Network starting in 2015



## SCHEDULE

Task	Start Date	Finish Date
1 Select Wells for Monitoring	NTP (Assumed Nov. 1, 2014)	December 1, 2014
2 Establish Network Sites	December 1, 2014	January 31, 2015
3 Measure Water Levels	February 1, 2015	January 31, 2018
4 Semi-Annual Status Reports	July 31, 2014	January 31, 2018
5 Final Report		March 1, 2018

NTP = Notice to Proceed

Task	First 6 Months						Second 6 Months					
	11/14 – 1/15			2/15 – 4/15			5/15-7/15			8/15 - 10/15		
1 – SELECT MONITORING WELLS												
2 - ESTABLISH NETWORK SITES												
3 - MEASURE WATER LEVELS												
4. SEMI-ANNUAL STATUS REPORTS JANUARY & JULY EACH YEAR												
5. FINAL REPORT							FINAL REPORT - MARCH 1, 2018					