

COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Today's Date: January 30, 2015

North West Douglas County Rural Water Project

Name of Water Activity/Project

Plum Valley Heights Sub-District of the Roxborough Water and Sanitation District

Name of Applicant

Metro Roundtable

Amount from Statewide Account:

950,000

Amount from Basin Account(s):

50,000

Total WSRA Funds Requested:

1,000,000

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

FEIN: 84-0623925

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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 October 2013

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCB). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCB staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCB website at: <http://cwcb.state.co.us> Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf>. In addition, the applicant should also refer to the [Supplemental Scoring Matrix](#) applied to Evaluation Criteria Tiers 1-3 for State wide Account requests .

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Craig Godbout - WSRA Application
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203
Craig.godbout@state.co.us

If you have questions or need additional assistance, please contact Craig Godbout at: 303-866-3441 x3210 or craig.godbout@state.co.us.

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

1. Applicant Name(s): Plum Valley Heights Sub-District of the Roxborough Water and Sanitation District
- Mailing address: 6222 N Roxborough Park Rd
Littleton, CO 80125
- FEIN #: 84-0623925
- Primary Contact: Larry Moore Position/Title: General Manager
- Email: Larry@roxwater.org
- Phone Numbers: Cell: 303-549-7148 Office: 303-979-7286
- Alternate Contact: Pat Mulhern Position/Title: Consultant
- Email: pat@mulhernmre.com
- Phone Numbers: Cell: 720-291-0968 Office: 303-649-9857

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.

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3. Provide a brief description of your organization

The Plum Valley Heights Sub-District of the Roxborough Water and Sanitation District (“PVHSD”) was established in August of 2013 as a Title 32 Special District to provide water service to its then, 29 residences. Through a recent election on November 4, 2014, the PVHSD expanded its boundary to include the rural communities of Chatfield East and Chatfield Acres and the Titan Road Industrial Park. These communities are along and west of Highway 85 (Santa Fe) and are served by individual private wells. This District will now serve 251 properties in 4 existing neighborhoods with 228 existing homes.

The Roxborough Water & Sanitation District (District), i.e., the parent district, was established in 1972 to provide water, sewer and fire protection service to the Roxborough Community. In 1999, fire protection services moved from the District’s jurisdiction to the West Metro Fire Protection District.

Through a long-time relationship with the City of Aurora, the Roxborough Water and Sanitation District provides high quality renewable water to customers within its boundaries as well as sewer collection and treatment services. Currently, the District’s customer base includes 3,400 residential and business accounts. The total build-out of the District’s service area is planned for 3,800 units.

The District provides for wastewater collection and treatment for all of its customers, and the neighboring Ravenna Metropolitan District.

In December 2010, the District was able to secure a water supply and delivery agreement with Aurora that provides for a permanent and renewable water supply for its existing customers. In October 2014, the District was able to add 150AF of water supply through a second agreement with Aurora for several neighboring rural communities that are in need of a renewable water supply.

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

The Plum Valley Heights Sub-District of the Roxborough Water and Sanitation District is the applicant and Contracting Entity.

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. *Please see below:*

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In the indemnification provision of the standard contract, the applicant would like to add the initial phrase “To the extent permitted by law” as shown in the following:

20.F. Indemnification-General

To the extent permitted by law, Grantee shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Grantee, or its employees, agents, Subgrantees, or assignees pursuant to the terms of this Grant; however, the provisions hereof shall not be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. 2671 et seq., as applicable, as now or hereafter amended.

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.**

Roxborough has formed the Plum Valley Heights Subdistrict to provide service to rural neighborhoods. These neighborhoods have voted to authorize general obligation debt to build the facilities included in this proposal. There would be no known Tabor issues associated with this grant request as proposed.

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:

This project will provide new domestic water supply to residential and business customers.

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

This project is unique in that these rural communities were developed utilizing wells from the Denver Basin Non-Tributary Ground Water (NTGW) Formation, an ideal use of water supply because of the low water use in rural neighborhoods and because individual wells can be constructed without costly distribution systems. With subsequent development of urban systems in the area using NTGW, the rural communities have been impacted even though the urban water providers are pumping in full compliance with state regulations. As a result, in this area, this water supply will no longer be viable in the near future. Therefore, replacing this water supply is critical.

Making renewable and reliable water supply available to Titan Road Industrial Park through a water transmission system will encourage property owners to upgrade development with the confidence that their water supply is long term. Currently, with an unreliable water supply, these property owners are not inclined to make additional investment in these properties which would attract better and more valuable uses. This new water source and delivery system will encourage this industrial park and potentially other nearby commercial property owners in the Highway 85 (Santa

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Fe) Corridor to upgrade their water and wastewater systems. While this grant does not result in any direct wastewater system improvements, the investment in this area may well be a first step toward diminishment of septic systems along Plum Creek, a substantial environmental benefit. These septic systems currently contribute to high nutrient loading that impacts both Chatfield Reservoir and Plum Creek.

The provision of water supply to this area will also discourage other solutions like the purchase of NTGW off of other properties remote to the site with transportation of this water down Plum Creek. When NTGW is exported, it endangers the long term viability of water supply of rural neighborhoods where this occurs, and the transport of this water in pipelines and in streams like Plum Creek often has negative environmental effects.

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:

251 property owners are in danger of losing much, if not all, of the value of their homes and/or property. This amounts to saving home and business owners a potential loss of approximately \$100 million.

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

Latitude:

Longitude:

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.

The primary source of water supply for the South Metro area is the Denver Basin Aquifers. In 2003, the South Metro Water Supply Study was completed through funding from the participants of the Douglas County Water Resources Authority, Douglas County, Denver Water, the Colorado Water Conservation Board and the Colorado River Water Conservation District. This regional effort was coordinated to evaluate whether this water supply source would meet the long-term demands of the current and future metro area population. In the past 30 years, there has been tremendous growth in the number of wells drawing from the supply as a result of the increase in urban development. Consequently, a large decline in the water levels was seen. With the population of the South Metro Area expected to double by the year 2050, urban water providers are being challenged to find alternative renewable sources to supplement or replace their supply.

Urban water providers are not the only ones affected by the decline in production from the wells. Rural communities on the edge of the Basin maintain private wells, which are shallower than those located further east in the densely populated urban areas. Because of the geology of the area where the aquifers tilt toward the surface, rural area home and business owners along the western fringe of the Denver Basin are the first to be effected by the decline in production, and a number of wells have already entirely lost production. In 2013, URS Corporation completed the Douglas County Regional Rural Water Supply and Distribution System Feasibility Study which reviewed the current rural water needs of Douglas County under a grant from the WSRA. Specifically, the report focused on the Northwest and Northeast areas of Douglas County which includes over 5,000 rural residences on private wells. That study details the plan to make renewable water available to all rural neighborhoods in northern Douglas County that have been impacted by heavy use of the Denver Basin Aquifers. This project would take an initial step in implementing the plan by taking on a “bite sized” chunk of the proposed water transmission and distribution system.

Douglas County, through this study, has recognized and acknowledged the challenges that face these rural areas and recently formed the Douglas County Water Alternatives Program to facilitate the relationship between urban water providers and these rural communities in securing a renewable water supply and end their dependence on non-tributary groundwater. Douglas County has also changed their zoning ordinance to require any new development to be based on renewable water sources.

The Roxborough Water and Sanitation District ("RWSD"), through its longtime relationship with the City of Aurora, has secured a permanent and renewable water supply for its existing customers through a contract with the City. Recently, the RWSD, with Douglas County, has been able to acquire an additional 150 AF of water supply through a second contract with the City specifically for several surrounding rural communities that are desperately in need of a renewable supply. The additional water supply that the City has made available for these communities is only available if secured during the next 5 year period. If this source is not used within that time, the water will be returned, and the opportunity will be lost.

The project proposed by the RWSD will construct the transmission and distribution lines, pumping and storage facilities and provide the water supply to serve the neighbors in the Northwest portion of Douglas County along and west of Hwy 85 (Santa Fe). These rural communities to be served include Plum Valley Heights, Chatfield East and Chatfield Acres Subdivisions and the Titan Road Industrial Park. These rural neighbors are currently served by individual non-tributary wells.

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The costs for infrastructure and storage facilities to serve these properties is substantial. The largest challenge in providing these services to low density rural areas is affordability. Urban areas benefit from economies of scale to distribute the costs among multiple users. In this case, the limited number of users/participants creates hardships for many home and business owners. Funds available through the Statewide Water Supply Reserve Account Grant will be used to alleviate a portion of the financial burden.

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.¹**

The water supply secured by the RWSD from the City of Aurora is decreed for municipal use and will be used to serve the rural communities of Plum Valley Heights, Chatfield East and Chatfield Acres Subdivisions and the Titan Road Industrial Park. The water supply is single use for Roxborough, and the City of Aurora maintains the dominion over any reuse rights. This project does not impact the home or business owners' existing property rights or wells and does not cause injury to any water rights.

- 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 BRT's 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 f r o m the roundtable chair simply reference that letter.**

This application was provided to the Metro Roundtable for consideration at their January 14, 2015 meeting. The action by the Metro Roundtable is described in the accompanying letter of January 20, 2015. The Action by the MRT was unanimous.

¹ 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.

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- c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.² 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.

In the Metro Basin Roundtable’s Needs Assessment (“MBRT Needs Assessment”), one of the Major Findings in 7.2.1 states that “the long-term use of the Denver Basin aquifers is not sustainable as a main water supply.” The recommendations go on to support the development of additional water supply to replace use of the Non-Tributary Ground Water (“NTGW”), such as the Water Infrastructure and Supply Efficiency (“WISE”) Project and other planned projects to reduce the reliance on NTGW and to preserve it as a drought reserve. This proposed project is to replace the use of Non-Tributary Ground Water (“NTGW”) in areas along the western edge of the Denver Basin where water supplies have already been impacted by excessive pumping of these aquifers. While projects like WISE will serve to slow and hopefully stabilize the NTGW levels in these aquifers, these areas already impacted must be provided with a replacement supply. The MBRT Needs Assessment encourages development of these types of cooperative water infrastructure projects through WSRA grants. Further, the South Platte and Metro Basin Implementation Plan (BIP) encourages the reduction in pumping of the Denver Basin Aquifers and reserving this supply for use during drought.

- d) **Matching Requirement:** For requests from the Statewide Fund, the applicants will be required to demonstrate a 25 percent (or greater) match of the total grant request from the other sources, including but not limited to Basin Funds. A minimum match of 5% of the total grant amount shall be from Basin funds. A minimum match of 5% of the total grant amount must come from the applicant or 3rd party sources. 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 contract or purchase order between the applicant and the State of Colorado is executed. 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 Northwest Douglas County Rural Water Project (“the Project”) is depicted on Exhibit B. This project which acquires water supply and distributes it to 251 properties in 4 existing rural neighborhoods is estimated to cost \$14,960,316 as shown in Table 1 below.

Table 1
Project Costs

Project Component	Cost
Water Transmission System/Storage	\$4,853,100
Water Distribution System	\$4,605,361
Financing Fees/Debt Reserve/Election	\$330,000
RWSD Infrastructure Fees (“Tap Fees”)	\$2,698,250
Water Supply	\$2,473,605
Total Project Costs:	\$14,960,316

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The funding sources for the total estimated project costs of \$14,960,316, are shown on Table 2. The total request for funding through the WSRA is \$1,000,000 (\$950,000 from the Statewide Account and \$50,000 from the Metro Basin Account). Basin funds represent 5% of the total grant request, and funding through WSRA represents only 6.7% of the total project cost. Hence, the match from other sources is 93.3% of the project costs, well beyond the 25% match requirement for the Statewide Grant Request.

Table 2
Funding Sources

Entity	Grant	% of Project Costs
District Customer Contribution	\$12,801,316	85.2
WSRA Grants	\$1,000,000	6.7
Douglas County Water Alternatives Program Assistance (engineering, legal, finance)	\$1,159,000	7.8
Total	\$14,960,316	100.0

² 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.

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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. The applicant should also refer to the Supplemental Scoring Matrix applied to Evaluation Criteria Tiers 1-3 for Statewide Account requests. 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.

This application is a part of a CWCB loan/WSRA grant package request. As part of this project financing, the applicant is requesting a loan from the CWCB for water supply acquisition in an amount of \$2,226,245. This grant request is for \$950,000 in addition to the \$50,000 already granted from the Metro Basin Roundtable. Therefore, considering all WSRA funds, the CWCB loan to WSRA grant ratio is 2.34.

The following provides a discussion of how this project meets the goals or needs of each tier. This is followed by a listing of how the project meets the requirements for scoring under the Supplemental Scoring Matrix.

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.

With the population of Colorado expected to double by the year 2050, the use of the non-tributary groundwater (“NTGW”) as a permanent resource is less reliable as the Denver Basin Aquifer levels are drawn down. The current volume of NTGW pumped each year by municipal and individual wells accessing the Denver Basin exceeds the amount recharging the aquifer. Even with identified projects and processes that local water providers are counting on to meet future water supply needs, current projections for the South Platte Basin area show there will still be approximately a 50% gap in supply versus demand for this finite resource by the year 2050 (SWSI 2010). The Arkansas, Metro, and South Platte Basins along the Front Range encompass the most populous areas of Colorado. While the population density is on the Eastern Slope, 80% of the state’s renewable water supply is located on the Western Slope. (SWSI 2010)

The SWSI 2010 identified the impacts of urban pumping from the NTGW on rural communities as a vital concern. Without a reliable water supply, home values drop, development of the area ceases, and thus begins the decline of the

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area's economy. The Water Infrastructure Supply Efficiency Project ("WISE Project"), is a recent example of a collaboration of 10 South Metro Area water providers that have pooled resources and committed capital funds and grant allocations to provide a renewable water supply to their customers with the help of Denver Water and the City of Aurora. While the WISE Project provides new water supply to urban/suburban residences, the rural area residences are still in need of assistance.

The Northwest Douglas County Rural Water Project is designed to provide a renewable permanent surface water supply to rural residences and businesses in the NW Douglas County region along and west of Hwy 85 (Santa Fe). This area has been identified by the Douglas County Regional Rural Water Supply and Distribution System Feasibility Study completed by URS in 2013 as a potential area to receive renewable water supply from Aurora either through the Aurora Prairie Water's Project or from other sources of supply made available to the Roxborough Water and Sanitation District ("Roxborough"). In this case, Roxborough, through agreement with the City of Aurora and Douglas County, is making renewable water available to four rural neighborhoods in this area if the water transmission and distribution systems can be developed and funded through a Roxborough Subdistrict, the Plum Valley Heights Subdistrict. This project would help those who have suffered unintended consequences of NTGW pumping and further reduce the reliance on the NTGW in areas of Douglas County.

This project is a cooperative effort of the Plum Valley Heights Subdistrict, Roxborough, the City of Aurora, Douglas County and the four rural neighborhoods. The project helps alleviate the unintended consequences of NTGW pumping by water providers in Douglas County who are utilizing NTGW in compliance with State Regulation. Local urban water providers, including those in proximity to these rural neighborhoods, are investing to reduce reliance on this NTGW pumping through WISE and other local water supply projects. This project will further reduce the reliance on NTGW and will serve to mitigate the issues related to past pumping.

In June, 2013, a report entitled "Douglas County Rural Water Supply System Feasibility Study" was published as a cooperative effort among the Douglas County Water Resource Authority, the South Metro Water Supply Authority, and Douglas County. The study was funded through a WSRA grant to these entities and identified the need, the economic basis for, and a plan to import renewable water supply to rural neighborhoods in Douglas County. The plan promoted a large regional effort which would make renewable water available through WISE or other sources to all the affected rural neighborhoods in northern Douglas County. This regional effort had a Northwest and Northeast System. The total cost of the proposed rural water supply and delivery for these two systems was estimated at \$720 million.

This project is consistent with the plan presented for the northern area of the Northwest System as presented in that report. This breaks the water supply and delivery project down into a component size that can reasonably be pursued and that can serve as a pilot project for building additional segments of the Northwest System. This project will provide the northern portion of the spine system from the previous study and the planning already includes the potential for additional connections and deliveries to entities south of this area.

This project represents a new era of collaboration and cooperation between rural users and water providers in Douglas County. Up until now, the water providers have been focused on solving their own water supply issues with the Denver Basin Aquifers. Roxborough, as one of these water providers, and Douglas County are now taking the lead and setting the example where rural water issues are solved through collaboration with adjacent water providers. This is a new paradigm shift, and sets the standard for broader base solutions across Douglas County.

Those using the Denver Basin Aquifers represent a large part of the water supply gap in the South Platte Basin as identified in Statewide Water Supply Initiative. Solving the water supply gap in this area needs to include solutions for the rural water providers who have been impacted by heavy ground water pumping, as well as the urban providers.

This project also has the potential to support the diminishment of septic systems in the Plum Creek Basin as described elsewhere in this application. This reduces nutrients in the water flowing to Chatfield Reservoir and would help protect

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reservoir water quality and recreational uses. Solving the water supply issues in this manner reduces the likelihood that NTGW will be exported from other rural areas in the County which protects the water supply of others and reduces impacts related to transport of that supply.

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.

Over the last 20 years, significant studies and investment in the water supply available now and into the future has resulted in increased collaboration between water providers and state and federal government funding sources leading to considerable development and importation of renewable supplies. While these projects have been significant, such as Centennial Water's South Platte Storage Reservoir, Parker Water's Reuter Hess Reservoir, Castle Rock's Plum Creek Treatment Facility, the expanded storage at Chatfield and the WISE Project, they have come at substantial cost for developed urban water districts. The affordability for most districts' customers is a result of economies of scale. The solution to water supply for rural communities impacted by the increased pumping and demand from urban development is far more difficult to attain. The first challenge is to find renewable water import opportunities. With the help of RWSD, that supply is available now for these rural communities along and west of Highway 85 for a period of 5 years.

The second and often most difficult hurdle, is affordability. These low density, rural communities face not only the capital costs of the project but the monthly fees for administration, maintenance, and operation of the treatment and distribution facilities as well. The challenge, therefore, is to make the project reasonably affordable for people to acquire service and maintain their property.

The capital cost of this water supply and distribution project is estimated at \$14,960,316 as shown earlier in Table 1. This investment is to serve an estimated 251 properties, so the total cost per residence is \$59,603.

In addition to the capital costs, rural residences also have the added costs of monthly service fees and annual property taxes associated with the Roxborough District. Until now, their annual costs were electrical costs of pumping and some pump maintenance. The challenge, then, is to make this solution reasonably affordable through grants and low interest loans. The following table shows the plan as concurrently conceived.

Table 3
Funding Plan

Source	Estimated Amount
Water Supply Resource Account	\$1,000,000
Colorado Water Resources and Power Development Authority Loan	\$5,200,000
Colorado Water Conservation Board Loan	\$2,226,245
Douglas County Loan (1)	\$2,676,822
Douglas County Grant	\$1,144,000
Roxborough Deferred Fees (2)	\$2,713,250
TOTAL:	\$14,960,316

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- (1) Douglas County agrees to loan funds to the district for internal infrastructure
 - (2) Roxborough will allow a majority of the inclusion fees to be repaid monthly over time.

A loan is being requested herein from the Colorado Water Conservation Board to pay for the water supply. A second loan will be requested from the Colorado Water Resources and Power Development Authority (CWRPDA) to pay for a portion of the infrastructure to be constructed. Both loans will be taken out by the Plum Valley Heights Sub-district of the Roxborough Water and Sanitation District. The CWRPDA loan will be repaid through property taxes. The CWCB loan will be repaid through a combination of property taxes and user fees. Douglas County will advance funds to pay for engineering and a portion of the construction costs. That portion of the County fees associated with engineering is a grant. The portion used for construction will be repaid through connection fees. Roxborough will initially defer the majority of its inclusion fees which would normally be due shortly after the vote to include, which has already occurred, and will allow those fees to be paid monthly over time. Roxborough will collect its System Development Charge at time of connection. The property owner is also responsible for the cost of the service line connection which is expected to be an average of \$2,000 per unit, and is not included in the above project costs.

Therefore, presuming the WSRA grant requested herein, and presuming loans from the CWRPDA and the CWCB at rates and terms similar to those offered today, the homeowner will have the following costs:

Table 4
Property Owner System Development Fees
(One-time Up-front Payment)

Item	Amount
Roxborough Inclusion Fee	\$500
Roxborough Tap Fee	\$7,550
Douglas County Connection Fee (loan repayment)	\$14,649
Service Line Connection to home	\$2,000
TOTAL:	\$24,699

In addition, the property owners will have estimated monthly fees and charges as shown in Table 5.

Table 5
Property Owner Monthly Service Charges
(Estimated for Average Value Home and Water Use)

Item	Amount
Roxborough Property Tax	\$36
Sub-district Property Tax for Debt Service	\$132
Sub-district Fees for Debt Service	\$68
Water Service Charges	\$72
Total:	\$308

Therefore, the economic impact on property owners, even with grants and low interest loans is an upfront cost of \$24,699, and an estimated \$308 per month in service charges related to water delivery and debt service.

The project as proposed will be funded largely by the residents and property owners. If this grant is approved, the

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burden of the project costs will be reduced by 6.7%. Even with other grants from Douglas County, the residents/property owners will still be paying over 85% of the project costs. This large match by the residents/property owners is well beyond the requirements of a WSRA Statewide Grant and will result in a significant leveraging of State Funds.

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.

In addition to providing water supply for these rural neighborhoods, this project helps to meet environmental and recreational needs in Plum Creek, a priority non-consumptive focus area for the Metro Roundtable. The project mitigates the unintended consequences of NTGW pumping by urban water entities. It also provides water transmission and distribution systems that will significantly upgrade water service to commercial properties along the Santa Fe Corridor. These residential and commercial properties along Plum Creek utilize septic systems for waste treatment and these systems have been identified as a source of nutrient loading to Plum Creek and Chatfield Reservoir. Upgrading the water supply and having reliable water infrastructure to these properties greatly increases the likelihood of investment in sewer systems for the area which would help to reduce this source of nutrients from the Plum Creek Basin. This is consistent with the planning of the Chatfield Watershed Authority to protect water quality in the reservoir under the Clean Water Act and helps meet environmental and recreational needs in Plum Creek and Chatfield Reservoir.

- 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.
Continued: Explanation of how the water activity/project meets all applicable Evaluation Criteria.
Please attach additional pages as necessary.

The primary benefit of the project is to resolve an unintended consequence of the pumping of NTGW under the current regulations, and to restore water supply to residences in one of the state's major gap areas that have seen substantial impacts to their water wells and the long term viability of their water supply. Without water supply for the future, the value of residential properties is minimal. With some 228 existing homes/businesses to be served, at an average value of \$440,000 per property, the ultimate value of the project is estimated to maintain some \$100 million in property value for an investment of \$14.9 million through the project and with an investment of \$1.00 million through the WSRA. The very important reality that property without water has minimal value resulted in a vote with over 90% approving to invest some \$60,000 per property to maintain their values.

This project is consistent with the planning of the Metro and South Platte Roundtables as identified in their Needs Assessments and in the South Platte Basin Implementation Plan. The expressed need is to reduce pumping of the Denver Basin Aquifers and to preserve this water resource for use during drought and to expand water supply availability through conjunctive use projects that take advantage of wet year water surpluses.

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This water activity meets the Evaluation Criteria per the following:

Tier 1 –

1. Environment –

- a. This project will provide a viable water supply for the Titan Road Industrial Park located along Santa Fe Corridor adjacent to Plum Creek. There will be opportunities to extend this water supply further to the south through additional commercial areas. With a viable water supply, this project will promote an upgrade in the type of development in this area, and redevelopment or enhanced development will promote the implementation of sanitary sewer collection systems to replace septic systems. Septic systems currently contribute significantly to the nutrient loading to Chatfield Reservoir. The reduction or elimination of these septic systems has long been advocated by the Chatfield Watershed Authority. While this project will not directly result in replacement of these systems, we believe it is a step necessary to put the area in a position to develop a sanitary sewer system.*

In addition, this project serves to reduce groundwater pumping in the Denver Basin Aquifers by some 228 individual wells. This will contribute to stabilizing water levels in these aquifers and toward prolonging the availability of this water source and reserving it for use during drought.

Furthermore, this project reduces the likelihood of replacing existing NTGW with NTGW from remote locations in the County. This will help protect the water supply in these other rural areas and will eliminate environmental impacts of transporting these supplies to impacted rural neighborhoods.

- b. –*
- c. –*
- d. Attached as Exhibit C is a letter of support from the Chatfield Watershed Authority.*

2. Municipal and Industrial –

- a. This project is directly related to the need to replace non-renewable NTGW in Douglas County with new renewable water supply. These property owners have seen unintended impacts to their water supply due to declines in the NTGW aquifers that have been the result of pumping water supply by others in compliance with State Regulations regarding the use of this supply. The urban water providers in this area are resolving this problem through the importation of renewable water supplies and these areas should not be left out.*
- b. This project serves to preserve NTGW for drought purposes which support development of conjunctive use projects which will increase yields of water supply to reduce the water supply gap.*
- c. The Metro Roundtable Needs Assessment study findings states “Continued use of the Denver Basin aquifer is no longer sustainable as a main water supply. Water from the Denver Basin aquifer can be used to help manage risks during times of drought.”*
- d. This project is supported by the Roxborough Water and Sanitation District, Douglas County, the City of Aurora, the Chatfield Watershed Authority, the South Metro Water Supply Authority, the Rural Water Authority of Douglas County and Denver Water. **Exhibit C.***

3. Agriculture –

4. Recreation –

- a. As described under (1) Environmental, this project helps to establish infrastructure that may result in the development of public sewer systems in the Santa Fe Corridor. This will reduce septic system discharges of nutrients which impact the water quality of Chatfield Reservoir, which is a highly regarded recreational facility.*
- b. –*
- c. –*
- d. The project is supported by the Chatfield Watershed Authority, the management agency who addresses*

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water quality in the Plum Creek Drainage and Chatfield Reservoir (see attached letter, Exhibit C)

5. *Interstate Compacts –*
6. *Multiple Basins –*
7. *Multi-Purpose and Cooperative Projects –*
 - a. *This project has collaboration and cooperation evidenced by participation by Roxborough, Douglas County, and the City of Aurora, and support by the South Metro Water Supply Authority, the Rural Water Authority of Douglas County, Denver Water and the Chatfield Watershed Authority.*
 - b. *The project includes entities with interest in M&I water supply (Roxborough, Douglas County, the City of Aurora, Denver Water, the Rural Water Authority of Douglas County and the South Metro Water Supply Authority) and an entity with Environmental interest (Chatfield Watershed Authority).*
8. *Intrabasin –*
 - a. *–*
 - b. *This activity addresses a defined concern in the Metro and South Platte Roundtable Needs Assessment and Implementation Studies. This is to reduce pumping of the Denver Basin Aquifers and to preserve the water resource for drought and conjunctive use projects.*

Tier 2: Facilities Water Activity Implementation:

1. *Matching Commitment – Basin Funds – Project has minimum required basin fund percentage of 5% of the requested grant (\$50,000 Basin Funds to \$950,000 Statewide Funds request).*
2. *Matching Commitment – Other Sources – The project has more than a 401% ratio of other sources to the Statewide Grant request (\$13,960,316 in sources other than the grant request and basin funds to \$950,000 Statewide Funds request = 1469%).*
3. *Grant Funding Critical to Success –*
 - a. *While the project will likely proceed without the grant request, the cost is very burdensome to many of these property owners, and indeed some of them may not be able to proceed without the grant and an accompanying loan from the CWCB. The property owners that cannot afford to put up the initial payment of some \$24,699, will still be subject to some \$236 per month in costs without service. This is all due to pumping of the Denver Basin Aquifers by others in compliance with State regulations.*
 - b. *The applicant has investigated all known sources of grants or low interest loans available. They are on the list for State Drinking Water Revolving Loan funds through the Colorado Water Resources and Power Development Authority, and have been informed of a grant from Douglas County for \$1.16 million, and have received commitments for a loan from Douglas County as well as deferred fees from Roxborough.*

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

1. *Addresses Issues of Statewide Value – The State’s Regulations for claiming water in and pumping water from the Denver Basin Aquifers were defined by the State Legislature in Senate Bill 5. The presumption in this legislation is that the Denver Basin Aquifers are non-tributary. The rules for use of this water supply were then developed to try and insure that each property owner would get its entitled share of the water underlying their property. While the rules work in most cases, there are always exceptions. As a result of their location at the edge of the basin where the aquifers tilt toward the surface, property owners in this area have seen water levels under their property decline by virtue of much heavier pumping of the aquifers in adjacent urban areas. Hence, they are suffering from unintended consequences that result even though pumping of the aquifers has been in compliance with state regulations. Therefore, we believe this is a matter of Statewide Value and interest, and that this plan is a solution that maximizes benefits by protecting home values.*

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2. *Threatened and Endangered Species –*

3. *Cost-Benefit is High for Colorado –*

- a. *This project builds on the study completed through a WSRA grant to evaluate solutions for water supply in rural areas of Douglas County. Specifically, the previous study was the “Douglas County Rural Water Supply System Feasibility Study.” This project would implement a portion of the system identified in that study.*
- b. *This project is being pursued by the Plum Valley Heights Subdistrict of the Roxborough Water and Sanitation District. The project will be implemented by Roxborough, a district that has been in place since 1972, and currently serves some 3,400 properties. Roxborough has completed water and sanitary sewer projects over that time totaling over 80 million dollars, and is capable and experienced in implementing this type of project.*
- c. *The Applicant will use its engineering consultant team that has been responsible for a large amount of infrastructure in the District. It will formally advertise the construction work for bid among qualified contractors with experience locally.*
- d. *–*
- e. *The Roxborough Water and Sanitation District has been a participant in the Douglas County Water Resource Authority (“DCWRA”) for some 20 years. This organization educates its citizens regarding water supply and the need to conserve and reuse water supplies. The Water Ambassador Program which has been in place through the DCWRA for many years has developed a school curriculum program and each year educates students and teachers at all levels in the importance of this scarce resource in Colorado.*

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.

The water supply is contracted from the City of Aurora via an IGA between Aurora Water and the Roxborough Water & Sanitation District (RWSD). The IGA is for 99 years with automatic extensions which translates to a permanent supply. The IGA provides 0.4737 acre feet of water per year for each connected residential unit or equivalent. The water supply comes from Aurora Water’s mountain water supply which is delivered down the South Platte River, diverted at Strontia Springs Reservoir, delivered to Aurora’s Rampart Range Reservoir and then delivered by an Aurora Water owned pipeline directly to RWSD’s Water Treatment Plant for treatment and delivery to RWSD customers. The IGA provides that any drought curtailment in delivery to RWSD would be no more or less than reductions Aurora Water extends to their own customers. Water supply available can serve an additional 65 taps and this pipeline will be designed for potential extensions to serve others. Additional water supply from WISE may also be available for further extensions.

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

Attached to the application, as part of Exhibit C, is a copy of the Preliminary Engineering Report for the Northwest Douglas County Water Project. This report presents the proposed project, costs and funding in greater depth. Also, the study referenced previously entitled the “Douglas County Rural Water Supply System Feasibility Study” was prepared under a WSRA grant, and presents information regarding the need for renewable water supplies to replace NTGW in rural neighborhoods of Douglas County. This report details the plan to make renewable water available to all rural neighborhoods in northern Douglas County that have been impacted by heavy use of the Denver Basin Aquifers. This

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project would take an initial step in implementing the plan by taking on a “bite sized” chunk of the proposed water transmission and distribution system. (This report is not attached but can be provided upon request).

Little is required in permitting for the project. The one area of permitting and environmental protection relates to the crossing of Plum Creek with the water transmission main. The final alignment for this crossing will be revised as appropriate to minimize any environmental concern.

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.

Currently, a Preliminary Engineering Report has been prepared for the project. The proposed project includes the purchase of water supply and the acquisition of taps from the Roxborough Water and Sanitation District, and the construction of water transmission and distribution systems and peak storage. This will require the preparation of design and construction drawings through a design engineering firm, and then a public bid of proposed improvements to contractors. The funds through the grant will be used for the construction of these water transmission and distribution facilities. The Statement of Work for the entire project is described in Exhibit A, attached. The WSRA grant funds will be used exclusively for Task 6. Detailed project costs associated with Task 6 are provided in Exhibit A and a more detailed Statement of Work for Task 6 can be provided as the project progresses.

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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.

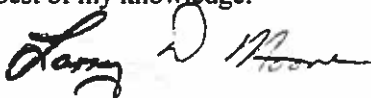
Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

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 10 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.

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

Signature of Applicant:



Print Applicant's Name: Plum Valley Heights Subdistrict of the Roxborough Water and Sanitation District

Project Title: Northwest Douglas County Rural Water Project

Date: January 30 , 2015

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

Craig Godbout – WSRA Application
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203
303-866-3441, ext. 3210 (office)
303-547-8061 (cell)
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