Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
March 16-17, 2016
Agenda Item 14(i)

Applicant & Fiscal Agent:	Purgatoire River Water Conservancy District
Water Activity Name:	Ditch Infrastructure Repair Project
Water Activity Purpose:	Agricultural
County:	Las Animas
Drainage Basin:	Arkansas
Water Source:	Purgatoire River
Amount Requested/Source of Funds:	$30,000 Arkansas Basin Account $60,000 Statewide Account $90,000 Total Grant Request
Matching Funds:	Basin Account Match ($30,000) = 33% of total grant request (meets 5% min); Applicant/3rd Party Match ($132,500) = 147% of total grant request (meets 25% min); Basin Account & Applicant Match ($162,500) = 180% of total grant amount (refer to *Funding Summary/Matching Funds* section)

Staff Recommendation:
Staff recommends approval of up to $30,000 from the Arkansas Basin Account; and $60,000 from the Statewide Account and to assist in funding the project titled: Ditch Infrastructure Repair Project.

Water Activity Summary: WSRA funds, if approved, will be expended to perform critical repairs needed throughout the irrigation system downstream from Trinidad Dam. Each of the individual ditch companies completed its own assessment of need, which the District compiled into a master project list, comprising eight components:

1. Picketwire Ditch - Headgate
   Debris carried down the Purgatoire River lodges against this headgate, interfering with and blocking its opening. There is currently no safe way for the superintendent to clean this out, other than to hang on the rail revetments and clear debris by hand.

   The solution at this location will include:
   - Improve safety by installing surface mount ladders down to the headgates
   - Reduce debris collection by installing a trash rack to divert large floatables coming down the Purgatoire River
   - Improve safety and maintenance access by building a catwalk on the trash rack
   - Control erosion and limit debris lodging by installing a concrete wall along the railroad rail and riprap revetment

- Control erosion and help stabilize the outlet works by installing a new concrete floor ahead of the gate structure
- Improve water control by installing new gate seals
- Improve safety and decrease public access by constructing fencing, two access gates, handrails, catwalks, and signage.

2. Chilili Ditch – Ditch Piping
   The Chilili Ditch is a senior ditch on the River, with a diversion right of 7 cfs. The ditch is seven miles long, approximately 60 percent running parallel to the BNSF Railroad tracks. There exists a reach, approximately 700-feet long, wherein the ditch is narrowly constrained between a bluff and the railroad tracks. The ditch receives highway runoff and runoff from the bluff, which causes it to overtop, resulting in damage to the ditch bank, and flooding and washing of debris onto the railroad tracks. The very limited accessibility exacerbates problems with repair and maintenance. Approximately 450-feet of the ditch was previously put into a metal pipe culvert, but has now deteriorated and failed at various locations.

   The Project will replace approximately 450 feet of existing metal culvert, extending it an additional 300 feet to provide protection for the full reach where a breach could damage the railroad embankment. This improvement would provide the added benefit of reduced maintenance costs, and reduced water losses. Included in the construction will be the installation of new debris screens.

3. Baca Ditch - Siphon Protection
   The section of concern is an inverted siphon which carries water for the Baca, El Moro, and Picketwire Ditches under the Powell Arroyo drainage. Measures in place to control head cutting in the arroyo, consisting of railroad rails and rock-filled wire baskets, are deteriorating and allowing fines to wash through, and threaten the long term viability of the structure.

   The planned approach for this repair is to buttress the existing revetment by constructing grouted rock riprap across the arroyo channel, providing energy dissipation as water flows over the top of the rocks.

4. Enlarged Southside Irrigation Ditch - Diversion Erosion Repair and Debris Removal
   At this location, the Purgatoire River has eroded the bank beyond the wing wall of the diversion structure, working its way back to the Southside Ditch and threatening the loss of the ditch embankment. Sediment continues to build up on the opposite side of the river, directing current toward the area, causing further erosion.

   The plan of work for this area includes the removal of the area of built up sediment, using the excavated/dredged material to backfill the eroded area, followed by armoring the eroded area with rock riprap.

5. Enlarged Southside Irrigation Ditch - Railroad Crossing
   At this location the ditch parallels the railroad tracks and then makes an abrupt turn to the right to cross under the railroad embankment via four 60-inch culverts. The abrupt change in direction is causing erosion and debris accumulation on the outside of the bend, eroding the bank, railroad grade, and the entrance to the culverts.

The proposed work at this location is to construct a concrete headwall and wing walls for the culverts, including a concrete floor at the entrance to the culvert entrance. This chosen option carries the added benefit of improved flow and culvert hydraulics.

6. El Moro - Hoehne Pipeline Association – Headgate Repair
   The headgate at this location no longer functions correctly, failing to completely close water flow. It is believed that replacement of the gate seals will solve the problem.

7. New John Flood Ditch – Headgate Replacement
   At the headgate where the diversions are made from the Picketwire Ditch, the headgate diversion cannot be completely shut off because the gate operator moves upward as the gate is screwed down. This means that water is lost from the shareholders of the Picketwire Ditch without providing benefit to the New John Flood Ditch. The concrete headwalls and slab to which the slide gate and operator are attached are in such poor condition that it is no longer possible to set new or additional anchors. Therefore, replacement is the only option to restore the operation of this headgate structure.

8. New John Flood Ditch - Lietzendorfer Arroyo Flume
   A significant amount of water is being lost from an open channel flume, which conveys water across the Lietzendorfer Arroyo, from areas where the flume's metal plates have rusted out or welds have broken. The ditch company has been maintaining this structure over time by welding patches over holes as they develop, but due to deterioration of the base metal to where it is very thin, this is no longer a viable plan of maintenance. Since the flume's support structure is in good condition, it is not necessary to replace the entire structure. The plan is to weld new metal plate lining in-place over the existing lining.

Discussion: This project aligns with Goals and Measurable Outcomes described in the Arkansas Basin Implementation Plan. Projects related to this WSRA Grant are included in the Appendix 5.2-A Arkansas Basin Implementation Plan per the following table:

Arkansas Basin ID (ARK-2015-)	Project Title	Project Proponent
0517	Trinidad Project Infrastructure Upgrade	Purgatoire River Water Conservancy District
0520	Baca-Picketwire Headgate Improvement	Purgatoire Watershed Partnership
0522	Chilili Ditch Diversion and Improvement	Chilili Ditch Co., Purgatoire Watershed Partnership
0521	Powell Arroyo Siphon Protection Structure	Baca Ditch Co.
0518	El Moro - Hoehne Pipeline Association Water Line Replacement	El Moro - Hoehne Pipeline Association

This project also aligns with Colorado's Water Plan, *Section 10.3 – Critical Goals and Actions*, item D. - Agriculture, serving to maintain agricultural viability, and supporting agricultural conservation and efficiency.

Issues/Additional Needs: No issues or additional needs have been identified.

Threshold and Evaluation Criteria: The application meets all four Threshold Criteria.

Tier 1-3 Evaluation Criteria: This activity has been reviewed and evaluated and has staff determined that it satisfies the Evaluation Criteria. Please refer to the WSRA Application for applicant's detailed response.

Funding Summary/Matching Funds:

Funding Source	Cash	In-kind	Total
Purgatoire River Water Conservancy District	$100,000	$0	$100,000
Picketwire Ditch Company	$4,640	$0	$4,640
Enlarged Southside Irrigation Ditch Co.	$13,420	$0	$13,420
Chilili Ditch Company	$7,870	$0	$7,870
Baca Ditch Company	$2,350	$0	$2,350
New John Flood Ditch Co.	$4,030	$0	$4,030
El Moro - Hoehne Pipeline Association	$190	$0	$190
Sub-total matching funds	**$132,500**	**$0**	**$132,500**
WSRA Arkansas Basin Account	$30,000	n/a	$30,000
WSRA Statewide Account	$60,000	n/a	$60,000
Total Project Costs	**$222,500**	**$0**	**$222,500**

The applicant has provided a Basin Roundtable Letter indicating recommendation of the Basin and Statewide grant amounts. It should be duly noted that the applicant's required cash matching should be $132,500, not $121,500 as stated in the Basin Roundtable Letter.

CWCB Project Manager: Derek Johnson

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

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred, any corrective action taken to address these issues, and copies of construction progress meeting minutes.

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 shall contain photographs, summaries of meetings, and engineering reports/designs.

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

Arkansas Basin Roundtable

January 29, 2016

Via Electronic Mail: craig.godbout@state.co.us

Mr. Craig Godbout
Colorado Water Conservation Board
1313 Sherman Street, Room 721
Denver, CO 80203

Re: Water Supply Reserve Account Grant/Loan Application: Purgatoire River Agricultural Ditch Infrastructure Repair Project

Dear Craig:

At its January 13, 2016 meeting, the Arkansas Roundtable approved the Purgatoire River Agricultural Ditch Infrastructure Repair Project for $30,000 in Basin Funds, $60,000 in Statewide Funds, with $121,500 cash matching funds from the applicant, the Purgatoire River Water Conservancy District and a consortium of six mutual irrigation companies. The applicant is also applying for a $50,000 loan from CWCB's Project Loan Fund. There were no dissenting opinions expressed in the consensus decision.

This project provides immediate relief and enhanced operational potential for an important agricultural node within the Arkansas Basin. It furthers the goals and objectives of the Arkansas Basin Implementation Plan and the Colorado Water Plan, particularly Objective D. Agriculture: "*Maintain Agricultural Viability*" and "*Support Agricultural Conservation and Efficiency*" (Section 10.3). Should you have any questions or concerns, please feel free to contact me either by telephone, 719-742-6164, or by email, sandy@white-jankowski.com.

With warm regards

Michael D. (Sandy) White
Chair

Copy via email:
Applicant
ABRT Executive Committee

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Today's Date: February 10, 2016

Ditch Infrastructure Repair Project

Name of Water Activity/Project

Purgatoire River Water Conservancy District

Name of Applicant

Arkansas Basin

Approving Basin Roundtable(s)
(If multiple basins specify amounts in parentheses.)

Amount from Statewide Account: $60,000.00

Amount from Basin Account(s): $30,000.00

Total WSRA Funds Requested: $90,000.00

FEIN: 84-0716341

Application Content

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)

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 Statewide 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.

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

1.	Applicant Name(s):	Purgatoire River Water Conservancy District		
	Mailing address:	314 West Main Street Trinidad, CO 81082		
	FEIN #:	84-0716341		
	Primary Contact:	Jeris Danielson	Position/Title:	Manager
	Email:	Jeris_danielson@hotmail.com		
	Phone Numbers:	Cell: 719-980-0075	Office:	719-383-2598
	Alternate Contact:		Position/Title:	
	Email:			
	Phone Numbers:	Cell:	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.
x	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.

3. Provide a brief description of your organization

The Purgatoire River Water Conservancy District was created on December 2, 1960, in order to provide a legal entity capable of contracting with the United States for repayment of the irrigation, municipal and industrial component assigned to the Trinidad Project and to provide a management entity to oversee the Project.

Other responsibilities include: surveying existing water resources and basin rivers, taking actions necessary to "secure and insure an adequate supply of water - present and future", constructing water reservoirs, entering into contracts with other water agencies, (such as the Bureau of Reclamation), organizing special assessment districts, providing for instream flows for fisheries and other legal responsibilities needed by the District to fulfill its purposes.

The main feature of the Trinidad Project is Trinidad Dam, located several miles west of the City of Trinidad, on the Purgatoire River in Las Animas County, Colorado. The Colorado Division of Parks and Outdoor Recreation operates Trinidad State Park at the Reservoir site and provides a wide array of recreational opportunities. The District has a history of initiating and participating in water conservation projects, including the rehabilitation of Central Park Lake in Trinidad and involvement in the Tamarisk Control Task Force.

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

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.

   [x] 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

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)
x	Agricultural
	Municipal/Industrial
	Needs Assessment
	Education
	Other Explain:

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

Water diverted through the various headgates is used for agricultural and municipal purposes. Proposed repairs will increase efficiency and result in water conserved; an estimated 5,000 acre-feet in an average year. Environmental benefits will also result, including river bank restoration and resulting habitat improvements, as well as flood mitigation and prevention measures that will be installed.

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

	Study	x	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)
1,000	Length of Stream Restored or Protected (linear feet)
	Length of Pipe/Canal Built or Improved (linear feet)
5,000avg	Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)
	Area of Restored or Preserved Habitat (acres)
	Other -- Explain:

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

Picketwire Ditch Headgate

Latitude:	North 37°10.3813'	Longitude:	West 104°30.3515'

Enlarged Southside Irrigation Ditch

Latitude:	North 38°14.4743'	Longitude:	West 104°22.4354'

Chilili Ditch Company

Latitude:	North 37°17.1235'	Longitude:	West 104°28.0424'

Baca Ditch Company

Latitude:	North 37°11.8183'	Longitude:	West 104°29.3922'

New John Flood Ditch Company

Latitude:	North 37°14.1247'	Longitude:	West 104°26.3726'

El Moro Headgate

Latitude:	North 37°13.2796'	Longitude:	West 104°28.3277'

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.

This application is for several ditch infrastructure projects located in the Purgatoire River Conservancy District. The projects address crumbling infrastructure and stream bank erosion. They are located in Las Animas County, one of the poorest counties in the State of Colorado. None of the small ditch companies represented by these projects have the funds available to complete the necessary repairs that will ensure compact compliance and prevent water losses that have gradually grown to a critical mass. Safety issues will be addressed as well. Water conservation and increased efficiency will result, and approximately 1,000 linear feet of Purgatoire River bank erosion will be restored.

Picketwire Ditch Headgate

The Picketwire Ditch headgate is the first headgate on the Purgatoire River east of the Trinidad dam. Debris from upstream is lodging against the headgate and in the opening. There is no safe way to clean out the debris. This project will resolve safety issues, improve maintenance access, reduce debris collection and erosion, and improve water control. The project includes installation of safety ladders, trash rack, catwalk, concrete wall and riprap, gate seals, fencing and gates, and signage.

Enlarged Southside Irrigation Ditch
The Purgatoire River has eroded the bank beyond the wing wall of the diversion structure. The erosion is working its way back to the Southside Ditch and threatens loss of the Ditch embankment. Sediment is building up on the opposite side of the River and increasing the current toward the area that is eroding. The proposed work at this site will remove built up sediment and use it to backfill the eroded area, then armor the eroded area with rock riprap. In addition, the ditch takes a sharp turn to cross under railroad tracks, causing erosion and debris to accumulate on the outside of the bend. A concrete headwall and wingwalls for culverts and a concrete floor will be installed to cure this problem.

Chilili Ditch Company
The Chilili Ditch is a small ditch, seven miles long, with a diversion right of 7.0 cfs. The ditch has degraded over the years, occasionally preventing the flow of water to reach its end destination. The ditch company proposes to install a 450-foot long culvert along the most deteriorated section of the ditch. There is a reach approximately 700-feet long where the ditch lies in a very narrow location between a bluff and highway on one side and train tracks on the other. Runoff and flooding problems are exacerbated by very limited accessibility. A previous project put approximately 450-feet of the Ditch into a culvert. That project has now deteriorated and failed at several locations. This project would replace the culvert and extend it approximately 300-feet.

Baca Ditch Company
The Powell Arroyo Ditch Siphon delivers water to the headgates of three ditch companies. Current erosion control measures have deteriorated and begun to fail. This project would provide erosion protection for the sluice/siphon in the form of rip rap and concrete.

New John Flood Ditch Company
The diversion flume will be re-lined with metal, and concrete and railing on the headgate will be replaced.

El Moro Headgate
The headgate does not completely close off the water. Gate seals will be replaced, correcting this problem.

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.)

   This is a structural water project, and the applicant, Purgatoire River Water Conservancy District, is an eligible entity.

   a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.[1]

[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

The project will not supersede, abrogate, or otherwise impair the State's current system of allocating water within Colorado nor does it in any manner repeal or amend the existing water rights adjudication system. The project does not affect the State Constitution's recognition of water rights as a private usufructuary property right nor is it 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.

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.

Grant request approved at the January, 2016 Arkansas Basin Roundtable, Chairman's approval letter provided under separate cover.

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.

From the Arkansas Basin Implementation Plan (Ark BIP)

- **ARK-2015-0517 Master Needs List: Trinidad Project Infrastructure Upgrade, description: Repair and replace deteriorating ditch diversion structures and canal embankments.**
- **ARK-2015-0520 IPP List: Baca-Picketwire Headgate Improvement.**
- **ARK-2015-0521 IPP List: Powell Arroyo Siphon Protection Structure.**

d) Matching Requirement: <u>For requests from the **Statewide Fund**</u>, the applicants will be required to demonstrate a **25 percent** (or greater) match of the total grant request from the other sources, including by not limited to Basin Funds. <u>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</u>. 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

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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.

[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.

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)

Purgatoire Ditch Infrastructure Repair Project	Cash (or Loan)	In-kind	Total
Purgatoire River Water Conservancy District	$50,000	-	$50,000
Picketwire Ditch Company	$4,640	-	$4,640
Enlarged Southside Irrigation Ditch Co.	$13,420	-	$13,420
Chilili Ditch Company	$7,870	-	$7,870
Baca Ditch Company	$2,350	-	$2,350
New John Flood Ditch Co.	$4,030	-	$4,030
El Moro Ditch	$190	-	$190
CWCB Loan	$50,000	-	$50,000
Sub-total matching funds	**$132,500**	**$0**	**$132,500**
Arkansas Basin Account	$30,000	-	$30,000
WSRA Statewide Account	$60,000	-	$60,000
Total*	**$222,500**	**$0**	**$222,500**

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.

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).

Projects address multiple issues, including:

- **Agricultural and municipal**
- **Conservation: Cures water losses averaging an estimated 5,000 acre-feet per year.**
- **Environmental: 1,000 linear feet of river bank restoration and resulting habitat improvement**
- **Watershed Health: Flood prevention**
- **Compact compliance: Accuracy of amount of water delivered**

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.

Project entities include the Purgatoire River Water Conservancy District, Picketwire Ditch Company, Enlarged Southside Irrigation Ditch Company, Chilili Ditch Company, Baca Ditch Company, New John Flood Ditch Company, El Moro Ditch Company. Projects result in an improved ability to collaborate effectively with Bureau of Reclamation.

The Trinidad Project is so water short that releases from project storage over the last 20 years have averaged only 40% of the full supply. The reclaiming of the ability to divert an additional average of 5,000 acre-feet of water per year will have a dramatic effect on intrabasin and interbasin needs.

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.

From the Arkansas Basin Implementation Plan (Ark BIP)

- **ARK-2015-0517 Master Needs List: Trinidad Project Infrastructure Upgrade, description: Repair and replace deteriorating ditch diversion structures and canal embankments.**
- **ARK-2015-0520 IPP List: Baca-Picketwire Headgate Improvement.**
- **ARK-2015-0521 IPP List: Powell Arroyo Siphon Protection Structure.**

Water reclaimed will assist in the efficient use of available water, preventing the need to purchase a like amount from other sources.

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).

The small ditch companies and the PRWCD do not have the funds to complete these projects, nor the cash-flow to borrow funds to complete the funds.

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.

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

Please attach additional pages as necessary.

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.

See Water Project Loan Program Loan Feasibility Study for detail.

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

See Water Project Loan Program Loan Feasibility Study for detail.

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.

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: Dr. Jeris Danielson

Project Title: General Manager

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)
craig.godbout@state.co.us

Exhibit A

Statement of Work
Updated: 2/10/2016 (with review by Arkansas Basin Roundtable)

WATER ACTIVITY NAME – Ditch Infrastructure Repair Project

GRANT RECIPIENT – Purgatoire River Water Conservancy District

FUNDING SOURCE - WSRA Basin and Statewide Grant Funds

INTRODUCTION AND BACKGROUND

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

This project encompasses several irrigation canal infrastructure repair projects located in the Purgatoire River Conservancy District (PRWCD). They are all located in Las Animas County, one of the poorest counties in the State of Colorado. None of the small ditch companies represented by these projects have the funds available to complete the necessary repairs that will ensure compact compliance and prevent water losses that have gradually grown to a critical mass. PRWCD pays the Bureau of Reclamation annual fees based on amount of water diverted. An estimated 10% of water that could be diverted may be lost each year; an average of 5,000 acre-feet per year. The projects address crumbling infrastructure and stream bank erosion. Safety and flooding issues are addressed as well. Water conservation and increased efficiency will result, and approximately 1,000 linear feet of Purgatoire River bank erosion will be restored.

OBJECTIVES

Multiple objectives are met by completing these projects, including:

- Aging Infrastructure Replaced – as listed in the Basin Implementation Plan IPPs
- Conservation/Efficiency - water savings averaging 5,000 acre-feet in an average year
- River Restoration - 1,000 linear feet of Purgatoire River bank restored
- Watershed Health - flood mitigation and prevention
- Compact Compliance – accuracy of measurement, water loss prevention
- Safety – degraded infrastructure has created dangerous operational issues

TASKS

Provide a detailed description of each task using the following format

TASK 1 – PICKETWIRE DITCH HEADGATE

Description of Task

Debris from upstream is lodging against the headgate and in the opening. There is no safe way to clean out the debris. This project will resolve safety issues, improve maintenance access, reduce debris collection and erosion, and improve water control.

Method/Procedure

- Surface mount ladders will be installed leading down to the headgates.
- A trash rack will be installed to divert and reduce debris collection.
- A catwalk will be installed on the trash rack to improve safety and maintenance access.
- A concrete wall will be installed along the railroad rail to control erosion and limit debris accumulation.
- A concrete floor will be installed ahead of the gate structure to control erosion and stabilize the outlet works.
- New gate seals will be installed to improve water control.
- Fencing, access gates, handrails, catwalks and signage will be constructed to improve safety and decrease public access.

Deliverable

The completed project will be documented with photographs and a written report.

TASK 2 – CHILILI DITCH

Description of Task

The Chilili Ditch is a small ditch, seven miles long, with a diversion right of 7.0 cfs. The ditch has degraded over the years, occasionally preventing the flow of water to reach its end destination. Obstacles include overgrowth of trees and willows, variation of ditch depth and width, leaky pipes and culverts. There is a reach approximately 700-feet long where the ditch lies in a very narrow location between a bluff and highway on one side and train tracks on the other. Runoff and flooding problems are exacerbated by very limited accessibility. This project will repair the ditch, and prevent flooding.

Method/Procedure

- A 450-foot length of piping will be replaced and extended another 300 feet.
- New debris screens will be installed on the culverts.
- Two miles of ditch will be excavated and reshaped.
- Four deteriorated weirs will be replaced.

Deliverable

The completed project will be documented with photographs and a written report.

TASK 3 – BACA DITCH SIPHON

Description of Task

The Powell Arroyo Ditch Siphon delivers water to the headgates of three ditch companies. Previous erosion control measures have deteriorated and begun to fail. This project will provide erosion protection for the sluice/siphon in the form of rip rap and concrete.

Method/Procedure

- Existing rip rap will be re-installed and grouted with concrete.

Deliverable

The completed project will be documented with photographs and a written report.

TASKS 4/5 – ENLARGED SOUTHSIDE IRRIGATION DITCH REPAIRS

Description of Task

The Purgatoire River has eroded the bank beyond the wing wall of the diversion structure. The erosion is working its way back to the Southside Ditch and threatens loss of the Ditch embankment. In addition, the ditch takes a sharp turn to cross under railroad tracks, causing erosion and debris to accumulate on the outside of the bend. This project will repair river bank erosion and erosion that threatens the railroad bank and culvert entrances.

Method/Procedure

- Sediment will be removed and used to backfill the eroded area.
- The eroded area will then be armored with rock riprap.
- A concrete floor, headwall and wingwalls will be installed at four culverts that pass under railroad tracks.

Deliverable

The completed project will be documented with photographs and a written report.

TASK 6 – EL MORO HEADGATE

Description of Task

The headgate does not completely shut off the water. This project will correct the issue.

Method/Procedure

- Gate seals will be replaced.

Deliverable

The completed project will be documented with photographs and a written report.

TASKS 7/8 – NEW JOHN FLOOD DITCH

Description of Task

A metal flume crosses the Lietzendorfer Arroyo. Supports are in good condition, but the flume has rusted and is leaking. At the headgate, the diversion cannot be shut off completely. This project will repair the flume and headgate operator.

Method/Procedure

- Flume will be relined with metal.
- Concrete wall and railing will be rebuilt at headgate, so that the gate can be screwed down to successfully shut off the diversion.

Deliverable

The completed project will be documented with photographs and a written report.

REPORTING AND FINAL DELIVERABLE

Reporting

The Applicants shall provide the CWCB a final progress report. The progress report shall describe the 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 those issues.

Final Deliverable

At completion of the Project, the applicant shall provide the CWCB an opportunity for a site visit and, if appropriate, a meeting with interested agencies. The final report will include "before and after" photographs and a summary of the construction and project management activities.

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, $/unit of material for construction, etc.).

Anticipated budget tables for the Project are provided below. These tasks correspond to those identified above.

Purgatoire Ditch Infrastructure Repair Project	Cash (or Loan)	In-kind	Total
Purgatoire River Water Conservancy District	$50,000	-	$50,000
Picketwire Ditch Company	$4,640	-	$4,640
Enlarged Southside Irrigation Ditch Co.	$13,420	-	$13,420
Chilili Ditch Company	$7,870	-	$7,870
Baca Ditch Company	$2,350	-	$2,350
New John Flood Ditch Co.	$4,030	-	$4,030
El Moro Ditch	$190	-	$190
CWCB Loan	$50,000	-	$50,000
Sub-total matching funds	**$132,500**	**$0**	**$132,500**
Arkansas Basin Account	$30,000	-	$30,000
WSRA Statewide Account	$60,000	-	$60,000
Total*	**$222,500**	**$0**	**$222,500**
*Project budget detail below			

PURGATOIRE RIVER WATER CONSERVANCY DISTRICT - DITCH INFRASTRUCTURE REPAIR PROJECT

ENGINEER'S ESTIMATE OF PROBABLE COSTS

TASK	USE OF FUNDS	UNITS	QUANTITY	UNIT COST	AMOUNT
1	**PICKETWIRE DITCH HEADGATE**				
	Water diversion and dewatering	LS	1.0	$ 1,500	$ 1,500.00
	Excavation and preparatory work	LS	1.0	$ 500	$ 500.00
	Railroad rail grid tie backs	EA	5.0	$ 150.00	$ 750.00
	Riprap/Grid infill grout	CY	8.0	$ 125.00	$ 1,000.00
	Concrete wall on north side upstream of gates	CY	6.2	$ 450.00	$ 2,790.00
	Ladder rungs	EA	8.0	$ 39.00	$ 312.00
	Inlet sill slab on grade	CY	7.4	$ 200.00	$ 1,480.00
	Catwalk and Trash Deflector framing	LB	1,266.2	$ 3.25	$ 4,115.15
	Catwalk deck	LB	306.0	$ 2.50	$ 765.00
	2-Rail handrails	LF	100.0	$ 66.30	$ 6,630.00
	3-Rail handrails	LF	20.0	$ 87.25	$ 1,745.00
	Timber lagging (4x12)	BF	240.0	$ 2.55	$ 612.00
	Miscellaneous-anchors, steel, fabrications, etc.	LS	1.0	$ 500.00	$ 500.00
	New gate seals	EA	2.0	$ 1,000.00	$ 2,000.00
	Surface mount metal ladder	EA	1.0	$ 300.00	$ 300.00
			SUB TOTAL		**$ 24,999.15**
2	**CHILILI DITCH**				
	Remove deteriorated culvert and prep trench	LF	450.0	$ 4.00	$ 1,800.00
	Haul off debris	CY	270.0	$ 7.00	$ 1,890.00
	Excavate and reshape existing ditch for new culvert	LF	300.0	$ 3.00	$ 900.00
	Furnish and install 24" diameter HDPE pipe	LF	750.0	$ 41.25	$ 30,937.50
	Furnish and deliver backfill material	CY	535.0	$ 6.00	$ 3,210.00
	Backfill and compact trench	CY	535.0	$ 6.25	$ 3,343.75
	Trash screen	EA	1.0	$ 300.00	$ 300.00
			SUB TOTAL		**$ 42,381.25**
3	**BACA DITCH SIPHON PROTECTION**				
	Preparatory work	LS	1.0	$ 1,000.00	$ 1,000.00
	Furnish and deliver rock riprap	T	167.0	$ 30.00	$ 5,010.00
	Place rock riprap	CY	93.0	$ 36.50	$ 3,394.50
	Furnish and pour concrete grout	CY	18.6	$ 175.00	$ 3,255.00
			SUB TOTAL		**$ 12,659.50**
4	**ENLARGED SOUTHSIDE IRRIGATION DITCH DIVERSION EROSION REPAIR AND DEBRIS REMOVAL**				
	Improve road in and re-route River flows	LS	1.0	$ 3,000.00	$ 3,000.00
	Excavate sediment deposit	CY	267.0	$ 3.00	$ 801.00
	Place and compact excavated material	CY	267.0	$ 4.00	$ 1,068.00
	Furnish and deliver rock riprap	T	500.0	$ 30.00	$ 15,000.00
	Place rock riprap	CY	280.0	$ 36.50	$ 10,220.00
	Site restoration	LS	1.0	$ 1,000.00	$ 1,000.00
			SUB TOTAL		**$ 31,089.00**
5	**ENLARGED SOUTHSIDE IRRIGATION DITCH RAILROAD CROSSING**				
	Improve road to site	SY	2,400.0	$ 1.70	$ 4,080.00
	Excavate, clean and prep around culverts	LS	1.0	$ 5,600.00	$ 5,600.00
	Reinforced concrete retaining wall headwall and wingwalls	CY	42.0	$ 650.00	$ 27,300.00
	Inlet sill slab on grade	CY	12.0	$ 275.00	$ 3,300.00
	Backfill and compaction	CY	76.0	$ 12.00	$ 912.00
			SUB TOTAL		**$ 41,192.00**
6	**EL MORO HEADGATE**				
	Remove division plate	LS	1.0	$ 100.00	$ 100.00
	Remove and repair gate and reset	LS	1.0	$ 750.00	$ 750.00
	Replace and reset division plate	LS	1.0	$ 150.00	$ 150.00
			SUB TOTAL		**$ 1,000.00**
7	**NEW JOHN FLOOD DITCH HEADGATE**				
	Demolition	LS	1.0	$ 300.00	$ 300.00
	Excavation and prepare site	LS	1.0	$ 500.00	$ 500.00
	Reinforced concrete retaining wall headwall	CY	5.1	$ 450.00	$ 2,295.00
	Canal invert concrete slab on grade	CY	0.9	$ 275.00	$ 247.50
	Ground surface/operator concrete slab on grade	CY	1.8	$ 275.00	$ 495.00
	Ladder rungs	EA	6.0	$ 39.00	$ 234.00
	2-Rail handrails	LF	8.0	$ 66.30	$ 530.40
	Repair and remount operator	LS	1.0	$ 1,200.00	$ 1,200.00
			SUB TOTAL		**$ 5,801.90**
8	**NEW JOHN FLOOD DITCH LIETZENDORFER ARROYO FLUME**				
	Furnish, shape and weld in 3/16-inch steel plating	SF	2,160.0	$ 7.35	$ 15,876.00
			SUB TOTAL		**$ 15,876.00**
SUB TOTAL OF ESTIMATED CONSTRUCTION COSTS					$ 174,998.80
Other Costs					
	Contingency @ 10%				$ 17,499.88
	Engineering	LS			$ 30,000.00
TOTAL ESTIMATE FOR DITCH INFRASTRUCTURE REPAIR PROJECT					**$ 222,498.68**

SCHEDULE **
Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

Task	Timeline	Start Date	Finish Date
1	Picketwire Ditch Headgate	Upon NTP	NTP + 365 Days
2	Chilili Ditch	Upon NTP	NTP + 365 Days
3	Baca Ditch Siphon Protection	Upon NTP	NTP + 365 Days
4	Enlarged Southside Irrigation Ditch Diversion Erosion Repair and Debris Removal	Upon NTP	NTP + 365 Days
5	Enlarged Southside Irrigation Ditch Railroad Crossing	Upon NTP	NTP + 365 Days
6	El Moro Headgate	Upon NTP	NTP + 365 Days
7	New John Flood Ditch Headgate	Upon NTP	NTP + 365 Days
8	New John Flood Ditch Lietzendorfer Arroyo Flume	Upon NTP	NTP + 365 Days

** Work will be performed after irrigation season has passed; Fall and Winter 2016/2017.

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.