STATE OF COLORADO

Colorado Water Conservation Board
Department of Natural Resources
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TO: Colorado Water Conservation Board Members

FROM: Greg Johnson,
Water Supply Planning Section

DATE: July 5, 2012

SUBJECT: **Agenda Item 22, July 17-18, 2012 Board Meeting**
Water Supply Reserve Account Program

Staff Recommendation

A summary of staff's recommendation for each WSRA application is provided in the table below. Favorable recommendations may be contingent on providing the CWCB with additional information, clarifications, or modifications in the scope of work. Please refer to the Water Activity Summary Sheets contained within this agenda item to find a summary of staff's review and any conditions associated with each recommendation.

	Basin	Project Name	Total Request	Recommendation
a.	Gunnison	Leon Park Reservoir Company - Leon Park Reservoir Dam Outlet Repair	$31,372	To fund up to $31,372 from the Gunnison Basin Account.
b.	North Platte	Loban, Hackleman and Olsen LLC - Seneca Ditch - Structure for Water Control	$57,539.70	To fund up to $57,539.70 from the North Platte Basin Account.
c.	Rio Grande	Rio Grande County - Rio Grande County Hydrogeologic Study	$99,564	To fund up to $99,564 from the Rio Grande Basin Account.

Background

For this agenda item the Board is provided with a brief overview of applications to the Water Supply Reserve Account (WSRA). Attachments to this memo include:

- Summary spreadsheet detailing funding requests for the basin and statewide accounts;
- Water Activity Summary Sheets which provide an overview, discussion, issues/additional needs, and staff recommendation regarding funding, partial funding, or not funding the applications; and
- Copies of the full applications, Basin Roundtable approval letters and any supporting documentation provided by the applicants.

Staff's review of the applications involves the following steps:

1) Applications are reviewed for completeness based on the information requirements, which are primarily outlined in Part 2 of the Criteria and Guidelines (C&G).
2) Applications are reviewed to verify that the water activity meets the **eligibility requirements** in Section 39-29-108 (III) C.R.S. (C&G, Part 2) and the **threshold criteria,** which are based on the requirements of Section 39-29-108 (III) C.R.S., and two sections of the Water for the 21st Century Act (House Bill 1177); Section 37-75-102 and Section 37-75-104(2)(c) (C&G, Part 3). Staff also verify that the applicant was an **eligible entity** to receive funding (C&G, Part 2).
3) Staff then prepares the Water Activity Summary Sheet which documents the outcome of the review process and contains staff's recommendations.

Water Supply Reserve Account Balance Summary and Project Status Report

To provide the Board updates on the status of specific Water Supply Reserve Account grant applications and projects, staff provides a status report in the CWCB Director's Report. The WSRA status report includes the following information:

- List of completed WSRA projects;
- List of WSRA projects in progress; and
- List of WSRA projects in the contracting and procurement process.

Water Supply Reserve Account Applications for Consideration at the CWCB July 2012 Board Meeting

Basin	Applicant	Name of Water Activity	Date Received	CWCB Meeting	Basin Account Request	Statewide Account Request	Total Request
Gunnison	Leon Park Reservoir Company	Leon Park Reservoir Dam Outlet Repair	5/9/2012	Jul-12	$31,372	$0	$31,372
Gunnison Basin Total Requests					**$31,372**	**$0**	**$31,372**
North Platte	Loban, Hackleman and Olsen LLC	Seneca Ditch - Structure for Water Control	5/22/2012	Jul-12	$57,539.70	$0	$57,540
North Platte Basin Total Requests					**$57,540**	**$0**	**$57,540**
Rio Grande	Rio Grande County	Rio Grande County Hydrogeologic Study	5/12/2012	Jul-12	$99,564	$0	$99,564
Rio Grande Basin Total Requests					**$99,564**	**$0**	**$99,564**
Water Supply Reserve Account Total July Requests					**$188,476**	**$0**	**$188,476**

COLORADO WATER CONSERVATION BOARD
Water Supply Reserve Account - Balance Summary
June 1, 2012

Fund Appropriation and Receipts

Fiscal Year	Legislative Appropriation	Funds Received	Statewide Account	Basin Account
2006/2007	$10,000,000	$10,000,000	$5,500,000	$4,500,000
2007/2008	$6,000,000	$6,000,000	$4,200,000	$1,800,000
2008/2009	$10,000,000	$7,000,000	$4,300,000	$2,700,000
2009/2010	$5,775,000	$5,775,000	$4,215,750	$1,559,250
2010/2011	$6,000,000	$6,000,000	$4,380,000	$1,620,000
2011/2012	$7,000,000	$7,000,000	$4,732,000	$2,268,000
Treasury Interest	N/A	$2,211,971	$2,211,971	$0
TOTAL	$44,775,000	$43,986,971	$29,539,721	$14,447,250

Note: The WSRA is a Severance Tax "Tier II" program with 40% of funds distributed on July 1, 30% on January 1, and the final 30% on April 1.
In FY 2008/2009 the final 30% installment of $3,000,000 was not received due to the State's budgetary shortfall.
In January 2012 interest for the program from its inception to date was credited directly to the Statewide Account.
Interest from January 2012 on will be regularly calculated by the Treasury and credited to the Statewide Account.

Fund Distribution

Basin	Approved Basin Grants	Total Basin Funds	Basin Account Balance	Approved State Grants	Statewide Account Balance
Arkansas	$1,315,767	$1,605,250	$289,483	$4,200,965	
Colorado	$1,132,250	$1,605,250	$473,000	$2,410,043	
Southwest	$1,314,946	$1,605,250	$290,304	$4,463,966	
Gunnison	$1,302,322	$1,605,250	$302,928	$1,691,913	
Metro	$1,089,929	$1,605,250	$515,321	$1,925,268	
North Platte	$1,092,538	$1,605,250	$512,712	$311,027	
Rio Grande	$1,342,365	$1,605,250	$262,885	$5,330,823	
South Platte	$1,175,857	$1,605,250	$429,393	$2,550,566	
Yampa/White	$1,181,374	$1,605,250	$423,876	$431,813	
TOTAL	$10,947,348	$14,447,250	$3,499,902	$23,316,383	$6,223,338

TOTAL APPROVED GRANTS	$34,263,731

Note: Only includes grants approved by CWCB

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 22.a

Applicant: Leon Park Reservoir Company

Water Activity Name: Leon Park Reservoir Dam Outlet Repair Project

Water Activity Purpose: Structural Water Project

County: Delta

Drainage Basin: Gunnison

Water Source: East Fork of Surface Creek

Amount Requested: $31,372 (Gunnison Basin Account)

Matching Funds: $12,723.36 (Applicant), $15,000 (Colorado River Water Conservation District Grant)

Staff Recommendation
Staff recommends approval of up to $31,372 from the Gunnison Basin Account to help complete the Leon Park Reservoir Dam Outlet Repair Project.

Water Activity Summary:
In the fall of 2009, a small sinkhole was found just behind the headgate structure on the Leon Park Dam that caused the conduit to be separated from the gate structure. A temporary patch was placed over the failed section and the dam was filled. The following year (2010) the same problem appeared and it was determined that the problem section of the conduit structure needed to be replaced. Temporary repairs on this section of conduit were completed in 2010 with plans made for final repairs on the dam as soon as possible.

A geotechnical study has determined that the main wooden conduit structure is sound and does not need replacement. However, the study found that the headgate and front section of the intake structure need to be replaced. In addition, the outflow section of conduit needs to be supported with a new precast outfall system to prevent erosion on the downstream face of the dam. The stilling pond also needs to be excavated to lower the water level to allow for inspection around the outflow pipe for any leaking through the dam structure. Finally, the deteriorated gate stem and pipe must be replaced.

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

Funding Overview
The applicant is contributing over 20% of the total costs of the project. In addition, a grant from the Colorado River Water Conservation District in the amount of $15,000 will cover over 25% of the project's costs.

Discussion:
As identified in the SWSI findings, small agricultural water users often lack the financial ability to adequately address infrastructure needs without financial aid. The Leon Park Reservoir Company does not possess the financial resources to make the required improvements to efficiently utilize its existing water rights. In addition, the SWSI Management Objectives, of the SWSI Phase II Report: Addressing the Water Supply Gap Technical Roundtable, include to "sustainably meet agricultural demands." That management objective is directly met through this activity. The project effectively meets the objectives of HB 1177 and the consumptive needs of the Gunnison Basin by rehabilitating existing infrastructure to preserve agricultural water use.

Issues/Additional Needs:
No issues or additional needs remain.

Staff Recommendation:
Staff recommends approval of up to $31,372 from the Gunnison Basin Account to help complete the Leon Park Reservoir Dam Outlet Repair Project.

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 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.

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.

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 22.b

Applicant: Loban, Hackleman and Olsen LLC.

Water Activity Name: Seneca Ditch - Structure for Water Control

Water Activity Purpose: Structural Water Project

County: Jackson

Drainage Basin: North Platte

Water Source: Michigan River

Amount Requested: $57,539.70 (North Platte Basin Account)

Matching Funds: $2,500 (NRCS in-kind), $6,393.30 (landowner contributions), for a total of $8,893.30 (15.4%)

Staff Recommendation
Staff recommends approval of up to $57,539.70 from the North Platte Basin Account to reconstruct the Seneca Ditch Headgate.

Water Activity Summary:
The Seneca Ditch water right owner's propose to replace an old, deteriorated headgate at the point of diversion on the Michigan River. The headgate structure plays an important role in regulating and controlling the flow of irrigation and livestock water entering the Seneca ditch. The existing structure is run down and no longer has the ability to effectively regulate and control water. A new structure will allow the user's to effectively and efficiently manage the amount water entering the Seneca ditch during seasonal irrigation flows, as well as provide a positive shutoff control, to the ditch, at the structure. This improved level of water control will improve irrigation water management and benefit all uses associated with the Seneca ditch water.

Installation of the Structure for Water Control addresses both consumptive and non-consumptive needs in a cost effective, collaborative way. The Seneca Ditch provides irrigation water to three different landowners in the northern part of the county, which irrigate approximately 1,100 acres of hay and pasture land. In addition to irrigating hayland, some water is also allocated for livestock use. The irrigation ditches below the structure create valuable irrigation induced wetlands and riparian areas that provide habitat for many species of big game, waterfowl and upland birds, including the Greater Sage Grouse. The area is indicated as having important wetlands and waterfowl hunting/viewing in the Roundtable's nonconsumptive needs assessment.

The water right holder's of the Seneca Ditch headgate have received technical and engineering assistance through the Natural Resources Conservation Service (NRCS) for the survey and design of the proposed structure. NRCS will continue to provide technical support throughout the construction, installation, revegetation, and maintenance phases of the project.

The entire amount of the WSRA funds requested will be used in the actual construction, installation and administration of the new structure.

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

Funding Overview
Total project cost is $66,433. The grant is for $57,539.70.

Discussion:
As identified in the SWSI findings, small agricultural water users often lack the financial ability to adequately address infrastructure needs without financial aid. The owners do not possess the financial resources to make the required improvements to efficiently utilize its existing water rights. In addition, the SWSI Management Objectives, of the SWSI Phase II Report: Addressing the Water Supply Gap Technical Roundtable, include to "sustainably meet agricultural demands." That management objective is directly met through this activity. The project effectively meets the objectives of HB 1177 and the consumptive needs of the North Platte Basin by rehabilitating existing infrastructure to preserve agricultural water use.

In addition, the area is identified as having significant wetland habitat due to irrigation management practices. Maintaining the headgate will also help maintain these wetland areas.

Issues/Additional Needs:
No issues or additional needs remain.

Staff Recommendation:
Staff recommends approval of up to $57,539.70 from the North Platte Basin Account to help reconstruct the Seneca Ditch headgate.

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 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.

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.

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 22.c

Applicant: Rio Grande County

Water Activity Name: Rio Grande County Hydrogeologic Study

Water Activity Purpose: Study

County: Rio Grande

Drainage Basin: Rio Grande

Water Source: Groundwater

Amount Requested: $99,564 (Rio Grande Basin Account)

Matching Funds: None

Staff Recommendation
Staff recommends approval of up to $99,564 from the Rio Grande Basin Account for the Rio Grande County Hydrogeologic Study.

Water Activity Summary:
Rio Grande County is experiencing a renewed interest in oil and gas exploration and the potential for multiple future applications for drilling permits. This study seeks to provide hydrogeological information in the vicinity of two currently proposed oil wells that will be useful to the Rio Grande County Commissioners and others. This information will assist the Commissioners and others in judging whether the health, safety and welfare of present and future residents of the County, in relationship to the water quality of groundwater aquifers, will be reasonably protected by proposed well construction plans for the oil wells. The results from this study will also be useful in the consideration of future proposed oil or gas wells and furthering the general understanding of subsurface water resources in the San Luis Valley and the eastern San Juan Mountains.

On February 29, 2012, Governor Hickenlooper created a special Task Force to clarify and better coordinate the regulatory jurisdiction between state and local governments with regard to oil and gas development. The purpose is to create a collaborative process through which issues of local concern can be resolved without requiring litigation or new legislation, encouraging local governments to designate a Local Government Designee (LGD) and to participate in the Colorado Oil and Gas Conservation Commission's (COGCC's) rules on substantive issues listed in the Executive Order. In 2009, Rio Grande County, ahead of the curve, appointed its Land Use Administrator, Rose Vanderpool, as LGD. The County is committed to maintaining an open and collaborative relationship with COGCC, BLM, private parties, and all entities involved as it considers granting drilling permits for exploratory and extractive activities.

WSRA funds would be used to:

1. Review, identify and consolidate information from past geological and hydrogeological work that is applicable to the Del Norte/South Fork area. This will begin the process of describing geologic structures and the existence of water within these structures that is tributary to groundwater aquifers and surface streams that are utilized for domestic, municipal, commercial and agricultural purposes;
2. Expand these findings to include data developed and collected by the oil & gas industry during previous exploration and drilling efforts;
3. Collect, compile and evaluate data on water wells near the two proposed oil and gas well drilling locations, collecting construc-tion information, water levels and existing water quality data;
4. Identify deep water wells in Rio Grande County and nearby areas that may be suitable for future study to better understand the regional hydro-geologic characteristics;

5. Interpret and make recommendations; and
6. Prepare and deliver a report to Rio Grande County, with data assembled in a GIS format, as appropriate, providing GIS Shapefiles.

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

Funding Overview
The applicant is seeking funds to cover the total project costs.

Discussion:
Although there have been many studies of ground water in the San Luis Valley (SLV), few have sought to determine the existence and characteristics of potential ground water pathways between the deep strata targeted by oil and gas exploration, and the shallower strata that provide water to domestic wells in western Rio Grande County, and that may provide ground water recharge to the confined aquifer layers of the western SLV. This study seeks to bring together and assess the adequacy of the existing studies, identify data gaps, and begin to develop new data to further understand the hydrogeologic relationships of this critical area.

The study will inform the staff and County Commissioners of Rio Grande County (County) for them to better assess permitting of proposed oil and gas wells and possible measures necessary to maintain the integrity of the aquifers. The County has de-TABORED, making it eligible to receive State Funds.

Issues/Additional Needs:
No issues or additional needs remain.

Staff Recommendation:
Staff recommends approval of up to $99,564 from the Rio Grande Basin Account for the Rio Grande County Hydrogeologic Study.

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 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.

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.

The Gunnison Basin Roundtable
P. O. Box 544
Lake City, CO 81235

May 9, 2012

Mr. Todd Doherty
Intrastate Water Management and Development Section
COLORADO WATER CONSERVATION BOARD
1580 Logan Street, Suite 600
Denver, CO 80203

Re: Grant Request from the Water Supply Reserve Account
Leon Park Reservoir Company
Leon Park Reservoir Dam Outlet Repair Project

Dear Mr. Doherty:

This letter is presented to advise you that the grant application submitted by the Leon Park Reservoir Company for $31,372 from Basin Account funds for the Leon Park Reservoir Dam Outlet Repair project was reviewed by the Gunnison Basin Roundtable and its Project Screening Committee, recommended for approval by that committee, and approved by a unanimous vote of the Gunnison Basin Roundtable during our meeting on May 7, 2012.

This water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes. The requirements/language from the statute is provided in Part 3 of the Criteria and Guidelines.

This activity furthers the Gunnison Basin Roundtable's ongoing basin-wide water needs assessment process in that it repairs aging infrastructure and protects agricultural water rights.

Sincerely,

Michelle Pierce
Chair

Cc: Tom Alvey (e-mail)

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Leon Park Reservoir Dam Outlet Repair Project

Name of Water Activity/Project

Leon Park Reservoir Company

Name of Applicant

Gunnison Basin Water Roundtable

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

Amount from Statewide Account: 0.00

Amount from Basin Account(s): $31,372.00

Total WSRA Funds Requested: $31,372.00

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

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:

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

If you have questions or need additional assistance, please contact Greg Johnson at: 303-866-3441 x3249 or gregory.johnson@state.co.us.

Water Supply Reserve Account – Application Form
Revised December 2011

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

1.	Applicant Name(s):	Leon Park Reservoir Company		
	Mailing address:	P.O. Box 399 Cedaredge, Co 81413		
	Taxpayer ID#:	Tax Exempt		
	Primary Contact:	Brian McPherson	Position/Title:	President
	Email:	gmua@tds.net		
	Phone Numbers:	Cell: (970) 216-4339	Office:	(970) 856-3165
	Alternate Contact:	Chuck Richards	Position/Title:	Secretary
	Email:	gmua@tds.net		
	Phone Numbers:	Cell: N/A	Office:	(970) 856-3165

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.
x	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 Leon Park Reservoir Company was organized and filed for Articles of Incorporation with the State of Colorado on August 22, 1910. The Company is comprised of 2,161 shares and currently has 14 shareholders. The Leon Park Reservoir Company is representative of a reservoir that holds approximately 219.61 acre-feet of water.
The reservoir is located on the South slopes of the Grand Mesa and is a agricultural use reservoir. The reservoir consists of a dam that is 24.66 feet high and has a length of 315.5 feet.

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.
   N/A

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.

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)
219.61	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:

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

Latitude: 107 49.000 W Longitude: 39 04.000N

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.

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]

   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.

[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.

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.

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

[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.

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

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

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

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

Tier 2: Facilitating Water Activity Implementation

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

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

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

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.

Leon Park reservoir is located on the southern slope of the Grand Mesa, located in Delta County. It is in the district 40, of the Sate of Colorado. It derives its supply of water from a drainage area of about 1,000 acres, lying tributary to the East Fork of surface Creek, and Drains naturally into Leon Park Reservoir. The water in this reservoir is used for agricultural use by the shareholders in the areas surrounding Cedaredge, Colorado, below the Grand Mesa. The water right is decreed from the 27th day of August 1894, and given the Priority Number 11 in filing. This decree is senior to any reservoir blow it in the drainage.

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

Currently there are no related studier or permitting issues.

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

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

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

See exhibit "A"

REPORTING AND FINAL DELIVERABLE

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

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

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

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

Signature of Applicant:

Print Applicant's Name:

Project Title:

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

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

Exhibit "A"
Description of task & Schedule
Leon Park Dam Outlet Repair

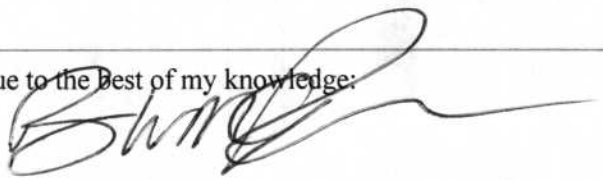
The first problem observed on the Leon Park Dam was in the fall of 2009. A small sinkhole was found just behind the headgate structure on the dam. Excavation of the area showed a small hole in the outlet conduit behind the headgate. A temporary patch was placed over the failed section and the dam was filled. The following year (2010) the same problem appeared and it was determined that the problem section of the conduit structure needed to be replaced. This was completed in 2010 but it was determined that these were temporary repairs and additional final repairs needed to be completed on the dam as soon as possible.

The study by Buckhorn Geortech found that the wooden conduit structure was sound and did not have to be replaced but the headgate and front section of the conduit structure did need to be replaced. In addition the out flow section needed to be supported so the down stream face of the dam did not erode and the stilling pond needed to be excavated to lower the water level. This was to allow for inspection around the outflow pipe for any leaking through the dam structure.

Schedule for repairs

Evaluation	Complete
Engineering and Permits	May-June 2012
Headgate Structure fabrication	July 2012
Gate stem structure Fabrication	July 2012
Install headgate and connect to Conduit structure	Aug.-Sept 2012
Install headgate block and stem	Aug.-Sept 2012
Improve out flow structure and pond	Aug- Sept 2012
Complete post construction reports	Oct.- Nov. 2012

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

Signature of Applicant: 

Print Applicant's Name: McPherson Brian W

Project Title: Leon Park Reservoir Company

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

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

Exhibit A

Statement of Work

WATER ACTIVITY NAME – Leon Park Reservoir Gate Structure Repair

GRANT RECIPIENT – Leon Park Reservoir

FUNDING SOURCE – Basin Account (Gunnison Roundtable)

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)

Original construction of Leon Park Reservoir Dam began in 1894. In 2009, a study revealed a sinkhole that caused the conduit to be separated from the gate structure. Investigations by Division Engineer, Jason Ward and an engineer from Buckhorn Geotech, Norm Austerheide revealed that the original conduit is in near perfect condition. After repairing the sinkhole, it was determined that the outlet needed to be repaired in order to accomplish the following: join the gate structure permanently to conduit to eliminate piping above the conduit behind the gate structure and replace worn and unusable existing gate and pipe stem structure.

OBJECTIVES

List the objectives of the project

It is the objectives of this project to permanently repair the intake structure in such a way that it is permanently attached to the existing conduit to prevent further piping of the dam, improve the outlet by adding a new precast outfall system and clean and lower the stilling basin. Also replace the worn gate stem and pipe.

TASKS

Provide a detailed description of each task using the following format

TASK 1 – [Intake Structure]

Description of Task

This task will repair and fix the intake structure.

Method/Procedure

First the intake structure will be excavated in order to repair the precast structure, and replace the slide gate, and pipe extension. When completed the intake structure will be backfilled again.

Deliverable

Buckhorn Geotech will be completing this task, under the guidance of Norm Austerheide.

TASK 2 – [Improve Outlet]

Description of Task

The water outlet of Leon Park Reservoir will be improved.

Method/Procedure

A new precast outfall structure will be constructed, and the stilling basin will be cleaned and lowered to help meet the demands of turning water from the reservoir.

Deliverable

Buckhorn Geotech will be completing this task under the guidance of Norm Austerheide.

TASK 2 – [Replace Gate Stem Control Structure]

Description of Task

The existing gate structure is worn and is unusable and will be replaced with a new structure.

Method/Procedure

The existing gate and control structure will be replaced by replacing the gate stem, stem supports and replacing the handwheel support structure.

Deliverable

Buckhorn Geotech will be completing this task under the guidance of Norm Austerheide.

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.

Exhibit "A"

Work, budget, and Schedule

Leon Park Reservoir Dam Outlet Repair

Work Description	Task	Provider	Cost
Evaluation	Excavation	Fritchman Excavation	$3,000.00
	Rental		$745.32
	Robot Camera		$700.00
	Buckhorn Geotech	Engineering	$3,462.50
	Misc cost		$315.50
		Total	$8,223.36
Engineering	Site review, design, Oversight, Reports	Buckhorn Geotech	$9,100.00
Intake Structure	Material & precasts	Buckhorn Gertech	$5,900.00
Gate Stem Structure	Headwheel, Gate Stem	Buchhorn Geotech	$12,500.00
Improve Outlet	Precast Structure	Buckhorn Gertech	$3,500.00
Mobilization		Buckhorn Geotech	$4,000.00
Construction	Excav/transport	Fritchman Excavation	$10,500.00
Contingency			$5,372.00
Grand Total			**$59,095.36**

Funding

Leon Park Reservoir	$12,723.36
Colorado River District(Grant)	$15,000.00
Gunnison Roundtable (Grant)	$31,372.00
Total	**$59,095.36**

Cwcb

BUCKHORN GEOTECH

Civil, Structural & Geotechnical Engineers

222 South Park Ave. • Montrose, CO 81401
Ph.: (970) 249-6828 • FAX: (970) 249-0945

ENGINEER'S ESTIMATE OF PROBABLE COST
LEON PARK RESERVOIR OUTLET REPAIR
August 24, 2011

CONSTRUCTION REPAIRS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL		
1	Intake Structure						
	Excavation & Backfill	LS	1	$ 2,000	$ 2,000		
	Precast Structure	LS	1	$ 1,500	$ 1,500		
	Slide Gate	Each	1	$ 1,000	$ 1,000		
	Pipe Extension	LF	4	$ 100	$ 400		
	Connection and Collar	LS	1	$ 1,000	$ 1,000		
						$	5,900
2	New Gate Stem Control Structure						
	Handwheel Support Structure	Each	1	$ 2,000	$ 2,000		
	Gate Stem	LF	90	$ 90	$ 8,100		
	Stem Supports	Each	8	$ 300	$ 2,400		
						$	12,500
3	Improve Outlet						
	New Precast Outfall Structure	LS	1	$ 2,000	$ 2,000		
	Clean and Lower Stilling Basin	LS	1	$ 1,500	$ 1,500		
						$	3,500
4	Mobilization	LS	1	$ 4,000	$ 4,000	$	4,000
			Subtotal Construction Costs			$	25,900
	Engineering						
	Initial Site Investigation				$ 1,500		
	Design and State Approval				$ 3,000		
	Construction Oversight				$ 1,500		
	Post Construction Report				$ 1,000		
			Subtotal Engineering Costs			$	7,000
	CDWR Permit Fee ($3 per each $1000 Project Cost)					$	100
	Contingency					$	2,000
			TOTAL ESTIMATED PROJECT COSTS			**$**	**35,000**

Assumptions:

Work performed by Owner (does not assume private contractor pricing)

State Engineer will allow existing wooden reservoir outlet conduit to remain

FRITCHMAN EXCAVATION

ERIK FRITCHMAN ■ OWNER
13373 2600 ROAD ■ ECKERT, CO 81418
OFFICE (970) 835.4039 ■ CELL (970) 640.2925

April 3, 2012

Bid For:
Leon Park Reservoir

Price List:

Supplies	Size	Description	Cost
		Price quote for the excavation and hauling a new head gate and wheel hub to the reservoir.	

Total Cost of Project **10,500**

Owner Agreement: _____

Date: _____

rondeb tds.net <rondeb@tds.net>

Leon Park Reservoir conceptual outlet repairs

1 message

Diane Castillo <dcastillo@buckhorngeo.com> Thu, Apr 5, 2012 at 11:12 AM
To: rondeb@tds.net
Cc: Norm Aufderheide <norm@buckhorngeo.com>

Ron,

I am sending you a conceptual outlet repairs drawing for Leon Park Reservoir, and Norm Aufderheide will be emailing you a letter to accompany this drawing.

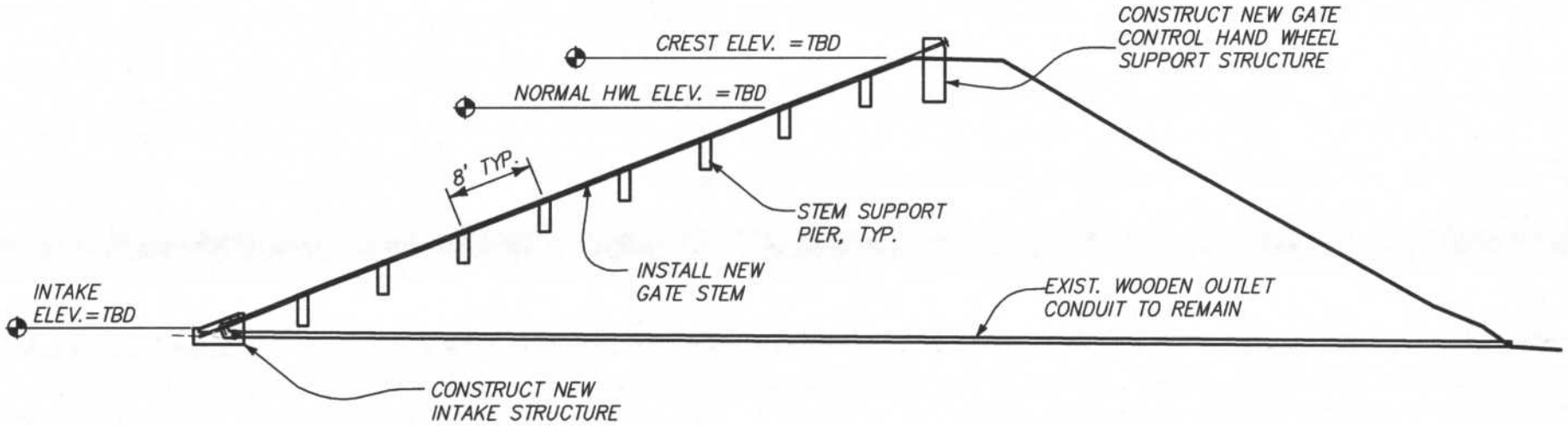
Diane Castillo
Civil Group
Direct: (970) 497-8855
www.buckhorngeo.com

BUCKHORN GEOTECH

Civil, Structural & Geotechnical Engineers

222 South Park Ave. • Montrose, CO 81401
Ph.: (970) 249-6828 • FAX: (970) 249-0945

Leon Park Reservoir Conceptual Plan.pdf
26K



DAM CROSS SECTION AT INTAKE STRUCTURE

NOT TO SCALE

DRAWING NUMBER 1 OF 1	DESIGNER NA DRAFTER DDC DATE 4/05/12 JOB NO. 11-018	LEON PARK RESERVOIR CONCEPTUAL OUTLET REPAIRS LEON PARK DAM (DAMID #400332)	BUCKHORN GEOTECH Civil, Structural & Geotechnical Engineers 222 So. Park Ave. Montrose, Colorado 81401 970-249-6828 Fax. No. 970-249-0945 www.buckhorngeo.com

BUCKHORN GEOTECH

Civil, Structural & Geotechnical Engineers

222 South Park Ave. • Montrose, CO 81401
Ph.: (970) 249-6828 • FAX: (970) 249-0945

April 5, 2012

Leon Park Reservoir Company
C/o Ron Shaver

Transmitted by email: ***rondeb@tds.net***

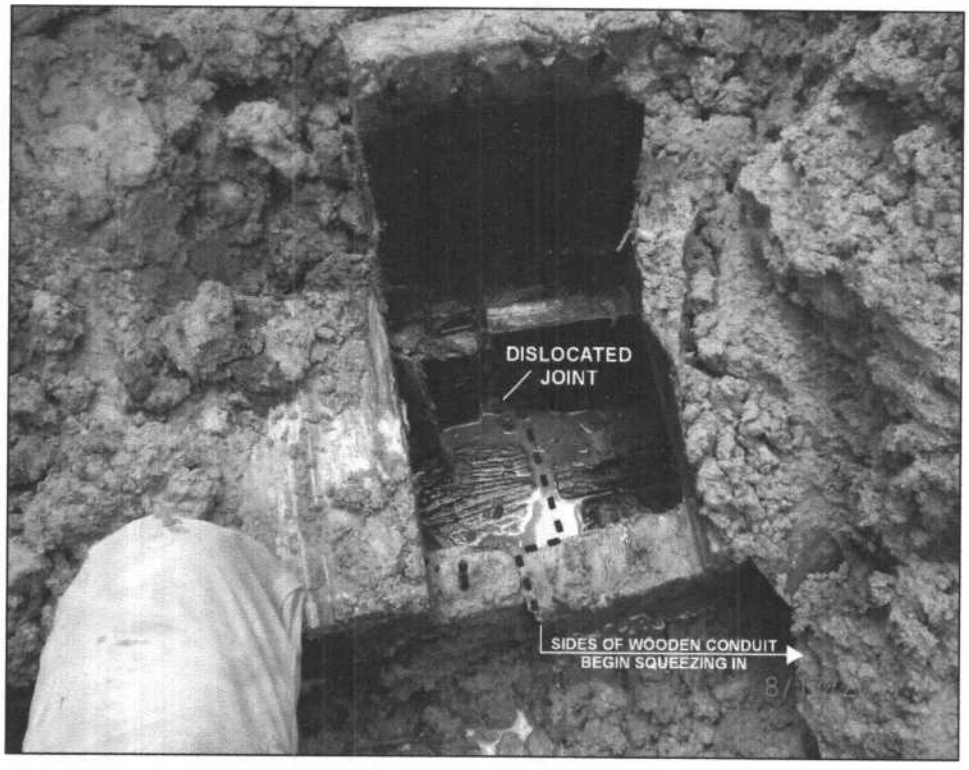
RE: Leon Park Dam (DAMID #400332) Wooden Reservoir Outlet Conduit Condition

Dear Sirs,

It is our understanding that the Reservoir Company is applying for grant funding from the Gunnison Basin Roundtable. Both the Roundtable and the Reservoir Company would like some confidence that the reservoir's exiting plus 100 year old wooden outlet conduit is in an acceptable condition to remain if the outlet intake structure is removed and replaced. We are providing this letter to document our findings concerning the existing wooden outlet conduit.

On August 3, 2010, a video inspection of the Leon Park Reservoir outlet structure revealed that the side walls of the wooden outlet conduit had squeezed in just downstream of the outlet gate, but that the remainder of the conduit was in good condition. On August 17, 2011, Buckhorn Geotech conducted an evaluation of the conduit, including excavation around the intake structure on the upstream side of the dam, to determine the condition of the conduit and the nature and extent of the squeezed in area. The wooden conduit was unearthed and the upper cover removed. The condition of the wood in the conduit was sound. The wood, although saturated, was firm, dense, and of good wood color. The only noticeable discoloration and slight wear was the inside conduit surface where the flowing water had formed a hard, dark, scale patina or surfacing. We noted a dislocated joint where the wooden sides of a short section (approximately 2 feet) of the conduit immediately downstream from the intake had squeezed in, blocking flow in the conduit (see photographs, below).

The photograph on the left shows the excavation of the wooden conduit behind the intake structure.
The photograph on the right shows the interior of the wooden conduit within the impacted area.



Detail of excavated conduit showing dislocated joint and the location of the squeezed in sides.

On October 25, 2012 a temporary repair was performed on the squeezed in section by replacing it with PVC piping. Please see photographs below.

The photographs on the left and right shows the PVC piping grouted into place.

Drawing upon this assessment of the condition of the wooden conduit from our two evaluations, Buckhorn Geotech is developing a design plan to replace the portion of the conduit that has collapsed, the intake structure, gate valve, and controls, as well as repairs to the outlet stilling basin.

The most cost efficient approach to mitigation of the outlet drain is replacement of the intake structure and collapsed section of the wooden conduit, as described above. We believe that the balance of the wooden conduit, beyond the inlet structure, is of a suitable condition to continue to function in its present capacity. We base this recommendation on the sound condition of the wood as observed in our assessment as well as on conversations with Jason Ward, Colorado Division of Water Resources Dam Safety Engineer. The wooden conduit should be monitored on a regular basis for determination of structural integrity. Any marked changes in the firmness, density, and coloration of the wooden conduit would be grounds for an additional assessment of the need to replace the wooden conduit.

We want to thank you for your consideration of our request for the reservoir company to perform the temporary mitigation measures before applying for permanent repair under Rule 6. If you have any questions, please contact me at *norm@buckhorngeo.com* or 497-8801.

Sincerely,

Norman J Aufderheide

Norm Aufderheide, P.E.
Principal

Cc: Brian McPherson, Leon Park Reservoir Company, 25272 McPherson Road, Cedaredge, CO 81413

Appendix 1
Reference Information

The following information is available via the internet. The reference information provides additional detail and background information.

- Water Supply Reserve Account main webpage:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/main.aspx
- Water Supply Reserve Account – Basin Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx
- Water Supply Reserve Account – Statewide Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/StatewideWaterSupplyReserveAccountGrants.aspx
- Colorado Water Conservation Board main website:
  - http://cwcb.state.co.us/
- Interbasin Compact Committee and Basin Roundtables:
  - http://cwcb.state.co.us/about-us/about-the-ibcc-brts/Pages/main.aspx/Templates/BasinHome.aspx
- House Bill 05-1177 – (Also known as the Water for the 21st Century Act):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318
- House Bill 06-1400 – (Adopted the Interbasin Compact Committee Charter):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911
- Senate Bill 06-179 – (Created the Water Supply Reserve Account):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911
- Statewide Water Supply Initiative 2010:
  - http://cwcb.state.co.us/water-management/water-supply-planning/Pages/SWSI2010.aspx

Appendix 2
Insurance Requirements

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed $25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

13. INSURANCE

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in **§13(B)** with respect to sub-Grantees that are not "public entities".

B. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: **(a)**$1,000,000 each occurrence; **(b)** $1,000,000 general aggregate; **(c)** $1,000,000 products and completed operations aggregate; and **(d)** $50,000 any one fire. If any aggregate limit is reduced below $1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of $1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§13**.

Appendix 3
Water Supply Reserve Account Standard Contract Information

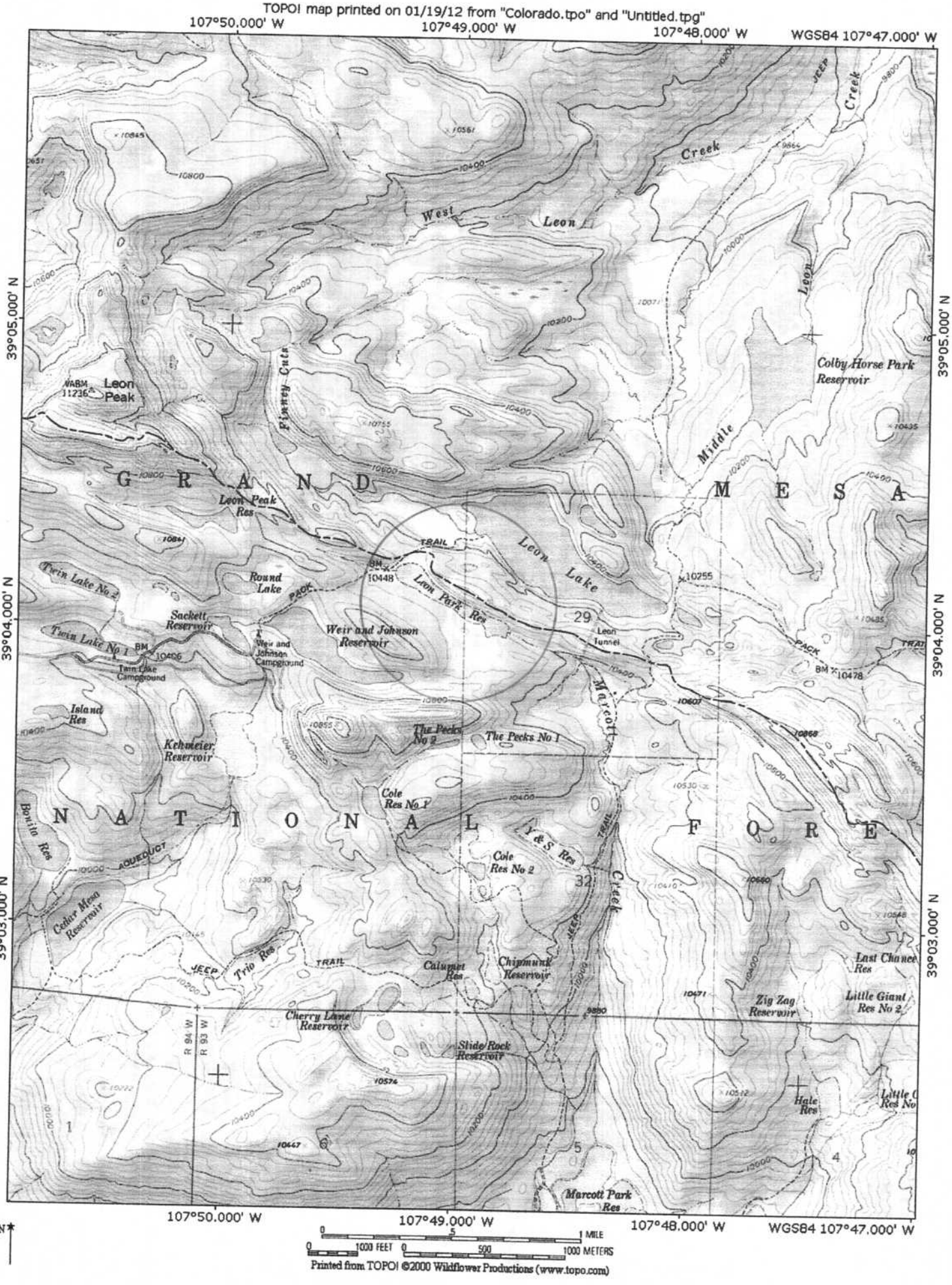
NOTE: The standard contract is required for WSRA projects that exceed $100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

The standard contract is available here under the header "Additional Resources" on the right side: http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx

Appendix 4
W-9 Form

NOTE: A completed W-9 form is required for all WSRA projects prior execution of a contract or purchase order. Please submit this form with the completed application.


TOPO! map printed on 01/19/12 from "Colorado.tpo" and "Untitled.tpg"
107°50.000' W
107°49.000' W
107°48.000' W
WGS84 107°47.000' W
39°05.000' N
39°04.000' N
39°03.000' N
GRAND MESA
NATIONAL FOREST
Leon Peak
Leon Peak Res
Pinney Cuts
West Leon Creek
Leon Creek
Middle Leon Creek
Jeep Creek
Colby Horse Park Reservoir
Leon Lake
Leon Park Res
Leon Tunnel
Trail
Pack
Twin Lake No 2
Twin Lake No 1
Twin Lake Campground
Round Lake
Sackett Reservoir
Weir and Johnson Reservoir
Weir and Johnson Campground
Island Res
Kehmeier Reservoir
The Pecks No 2
The Pecks No 1
Marcott
Cole Res No 1
Cole Res No 2
Y & S Res
Bonito Res
Aqueduct
Cedar Mesa Reservoir
Trio Res
Calumet Res
Chipmunk Reservoir
Cherry Lane Reservoir
Slide Rock Reservoir
Zig Zag Reservoir
Last Chance Res
Little Giant Res No 2
Hale Res
Marcott Park Res
R 94 W
R 93 W
29
32
5
4
1
TN
0 5 1 MILE
0 1000 FEET 0 500 1000 METERS
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134

Leon Park Reservoir

Division No. ~~5~~ 4

District No. ~~40~~ 40

Claimant

Emil Stolt et al

FILED IN THE STATE ENGINEER'S OFFICE
AT DENVER, COLO.
OCT 24 1894
R.C. Dentsworth Dpty
State Engineer

S30, T11S, R93W

Leon Park
Reservoir

LEON PARK RESERVOIR

DAM.

— Cross-Section —

Length of dam for a height of 15 ft. is 315,5 ft.

Top width and slopes as shown in cross-section above.

Material of construction, a mixture of yellow clay and black loam.

The foundation or ground on which dam is to be built, to be plowed and all sods and alluvial drift to be removed and thrown into back slope of dam and in construction material scraped on in homogeneous layers and no stone larger than 3" dia. to be in water slope.

Conduit for outlet made of 4" timber with 8 by 8 in. opening, made water tight, laid on mud sills firmly imbedded and the whole set in carefully puddled earth.

Gate at upper end of conduit to raise vertically and fit with the minimum of leakage.

Overflow at south end of dam, 16 ft. wide and 2 ft. deep, protected from cutting action of water by timber aprons.

Approved Oct 1st 1894
Geo P. Miles Chair Board County Comm
G. S. Coleman
Frank Curtiss

VI

The plat of said reservoir, hereto attached, is of reference to this statement and made a part of the same.

VII

The work of construction on said reservoir was begun on the 27th day of August A. D. 1894.

Witness our hands and seals this 13th day of October A.D. 1894.

Ernst Stalte
Fred Wetterich
John F. Leutter

State of Colorado)
) ss.
County of Delta)

John F. Leutter being duly sworn, deposes and says that he is acquainted with the matters set forth in the statement relative to the Leon Park Reservoir and that the same is true of his own knowledge and that the attached plat and plans and specifications for dam are correct.

John F. Leutter

Subscribed and sworn to before me this 13th day of October A.D. 1894.

Wm R Robertson
Notary Public

My commission expires Sept. 14th 1896

Know all men by these presents, that the undersigned, owners of LEON PARK RESERVOIR, in compliance with the law, hereby make the following statement for filing.

I

The name of said reservoir is LEON PARK RESERVOIR.

II

Said reservoir is situated in Delta County, Colorado and the initial point (I.P.) of survey at a point whence the 1/4 sec.cor. between sections 29 & 30, T.11 S., R.93 W. bears S.38°-20'E.594 ft. distant.

III

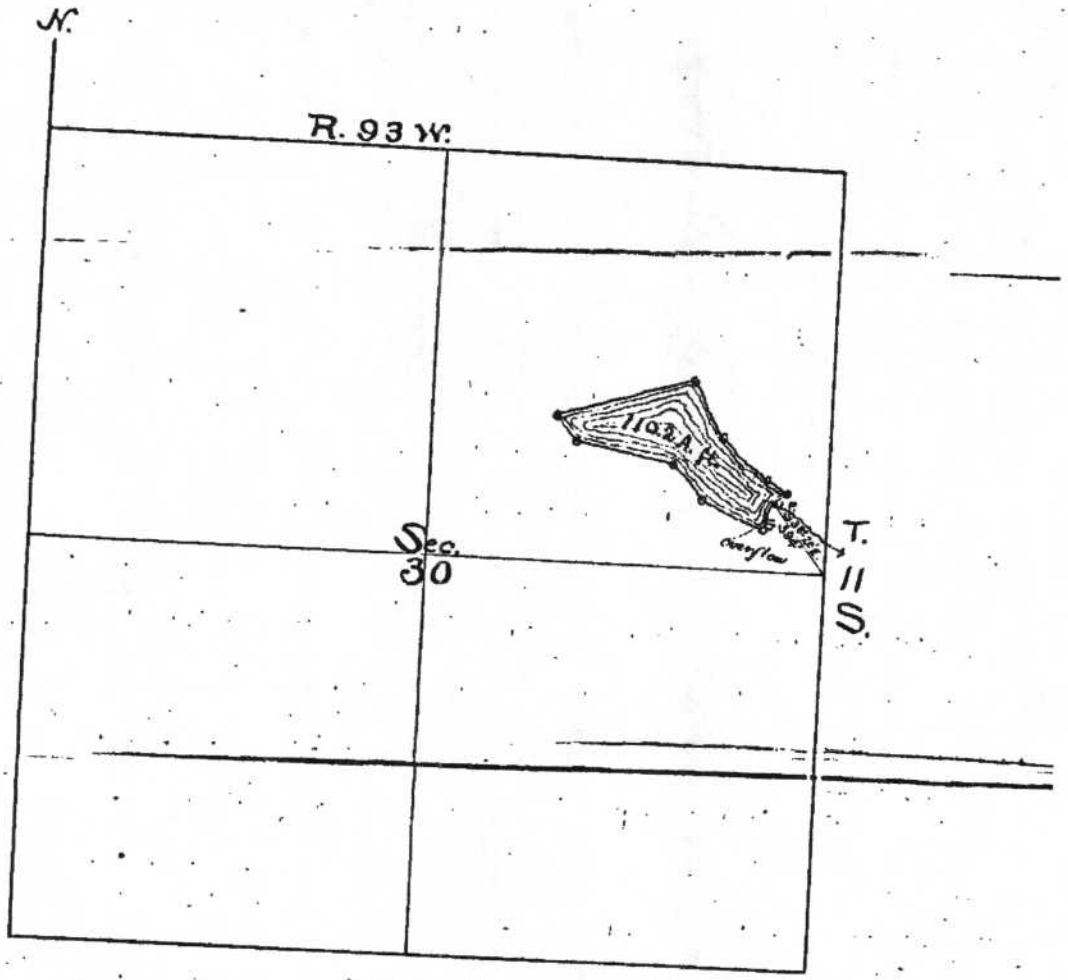
The boundary of said reservoir for a dam 15 ft. high is as indicated by the following traverse; Begin at I.P. thence, S.17°-20'W.219.1 ft.; N.65°-00'W.462 ft.; N.59°-30'W.291.7 ft.; N.79°-00'W.669.9 ft.; N.46°-30'W.220.4 ft.; N.74°-10'E.958.3 ft.; S.28°-28'E.402.6 ft.; S.51°-25'E.408.5 ft.; S.63°-20'E.155.1 ft.; S.13°-00'W.96.4 ft. to I.P. and place of beginning, containing 110.2 acre feet of water.

IV

Said reservoir has a drainage area of approximately 400 acres, and there is hereby claimed and appropriated of the surplus and unappropriated waters from said drainage area, 110.2 acre feet of water for storage in the said reservoir for use in irrigation purposes.

V

Right of way through the natural water courses is claimed from reservoir to head of owners ditches on Surface Creek, said reservoir being on head waters or drainage area of said creek.



Plat
of
Leon Park Reservoir
Scale
1" = 1000 ft.

STATEMENT OF CLAIM TO WATER RIGHT.

DIVISION No. 4.

WATER DISTRICT No. 40.

KNOW ALL MEN BY THESE PRESENTS, That the undersigned Albert H. Stolte, Ernest William Stolte, and William B. Smethurst have caused to be located an enlargement of The Leon Park Reservoir as hereafter mentioned, and have caused these sworn statements to be made relative thereto and filed in compliance with the laws of the State of Colorado, for such purposes provided. The attached map which shows the location of said reservoir and enlargement forms a part of these statements and is hereby made a part thereof.

STATEMENT.

The undersigned have caused to be located an enlargement of The Leon Park Reservoir the owners thereof being the said Albert H. Stolte, Ernest William Stolte and William B. Smethurst whose address is Cedaredge, Delta County, Colorado.

Said claim is for the purposes of irrigation.

Of the said reservoir:

As enlarged.

Extreme height of dam is 36 feet.
Height of dam from spillway to crest is 5 feet.
Length of dam is 340 feet,—spillway 10 feet
Depth of water that can be drawn off is 34 feet
Estimated area of water shed is 600 acres.
Cost of construction is estimated at $941.60
The total capacity for storage is 22666618 cubic feet, which amount of water is hereby claimed for the purposes of irrigation.

The area and total capacity for each foot in depth from high-water line down to low-water line being as follows:

Feet in depth	Area, acres	Total capacity, cubic feet
At 34	43.11,	22666618
" 33	40.67,	20849750
" 32	38.24,	19158732
" 31	35.81,	17563865
" 30	33.38,	16074249
" 29	30.95,	14690784
" 28	29.38,	13388845
" 27	27.81,	12158796
" 26	26.24,	10993436
" 25	24.68,	9896029
" 24	23.11,	8867012
" 23	21.47,	7905121
" 22	20.03,	7010312
" 21	18.50,	6182180
" 20	16.95,	5421506
" 19	15.42,	4727509
" 18	13.87,	4101899
" 17	12.33,	3542371
" 16	10.78,	3051361
" 15	9.23,	2626869
" 14	7.69,	2269460
" 13	7.03,	1953563
" 12	6.37,	1667516
" 11	5.70,	1409854
" 10	5.04,	1180342
" 9	4.35,	981186
" 8	4.00,	802198
" 7	3.69,	636714
" 6	3.36,	485605
" 5	3.04,	348435
" 4	2.71,	225640
" 3	2.05,	126799
" 2	1.40,	56192
" 1	0.75,	13939
" low-water line	0.10,	Zero.

Before enlargement.

Extreme height of dam is 16 feet.
Height of dam from spillway to crest is 3 feet.
Length of dam is 315.5 feet,—spillway 6 feet
Depth of water that can be drawn off is 15 feet.
Estimated area of water shed is 400 acres.
Cost of construction is estimated at $12.89.00
The total capacity for storage is 4,038,739 cubic feet, which amount of water is hereby claimed, as forming a part of the entire volume, for the purposes of irrigation.

The area and total capacity for each foot in depth from high-water line down to low-water line being as follows:

Feet in depth	Area, acres	Total capacity, cubic feet
At 15	11.00,	4038739
" 14	10.45,	3575566
" 13	9.90,	3136351
" 12	9.35,	2721094
" 11	8.80,	2329795
" 10	8.25,	1962444
" 9	7.66,	1620334
" 8	7.08,	1303479
" 7	6.40,	1011889
" 6	5.91,	745999
" 5	5.33,	505374
" 4	4.33,	302244
" 3	3.33,	231694
" 2	2.33,	115694
" 1	1.33,	43254
" low-water line	0.33,	Zero.

The increased capacity by virtue of said enlargement is 18627879 cubic feet.

The area of lands to be irrigated from said reservoir is 400 acres, being the S.W.¼ of N.E.¼ and N.W.¼ of S.E.¼ of section 27; the E.½ of N.E.¼ of section 33; W.½ of N.W.¼, the S.W.¼ of N.E.¼, the S.E.¼ of N.W.¼, and E.½ of S.W.¼ of section 34; all in township 13 south, of range 94 west of the 6th Principal Meridian.

Work was commenced on the original structure on the 27th day of August A.D. 1894.

Work was commenced on the said enlargement on the 22d day of July 1902.

The above maps and statements are true to the best of our knowledge and belief.

William B. Smethurst
Albert H. Stolte
Ernest William Stolte

Subscribed and sworn to before me this 27th day of July 1905
[signature]
Notary Public

My Commission Expires Nov. 28, 1905

The initial point (I.P.) of survey of the said reservoir as enlarged is at a point whence the ¼ section corner between sections 29 and 32 in township 11 south, of range 93 west of the 6th Principal Meridian bears S.36° 41'E. 2893 feet distant.

The initial point (I.P.) of survey of the said reservoir before enlargement was made at the head-gate in the old dam, being at a point whence the ¼ section corner between sections 29 and 30 in township 11 south, of range 93 west of the 6th Principal Meridian bears S.38° 20'E. 594 feet distant. The courses used in making the survey for the enlargement of said reservoir were deflected from the true meridian: Magnetic declination being 14° 27'E.

The location of the high-water line of said reservoir as enlarged being as follows:

A bench mark (B.M.) is made on a level with the high-water line at a point whence the initial point (I.P.) of survey bears west 4 feet distant.

Beginning at I.P. run N. 85° 15'W. 61 feet to Sta. 1,

	Course	Feet	To Sta.
thence	S. 74° 15'W.	51	2,
"	S. 6° 00'W.	84	3,
"	S. 26° 15'E.	109	4,
"	S. 17° 00'W.	66	5,
"	S. 10° 00'W.	93	6,
"	S. 34° 40'E.	145	7,
"	S. 41° 45'E.	149	8,
"	S. 84° 15'W.	206	9,
"	N. 66° 40'W.	124	10,
"	S. 71° 35'W.	208	11,
"	S. 88° 30'W.	143	12,
"	S. 76° 00'W.	98	13,
"	S. 64° 15'W.	92	14,
"	S. 71° 40'W.	168	15,
"	N. 62° 30'W.	185	16,
"	N. 5° 20'E.	431	17,
"	S. 79° 28'E.	233	18,
"	N. 27° 30'W.	272	19,
"	N. 85° 10'E.	335	20,
"	N. 9° 50'W.	117	21,
"	N. 32° 30'W.	53	22,
"	N. 72° 50'W.	115	23,
"	N. 78° 20'W.	97	24,
"	N. 49° 05'W.	112	25,
"	N. 11° 15'W.	62	26,
"	N. 56° 15'W.	132	27,
"	N. 72° 40'W.	121	28,
"	N. 28° 00'W.	58	29,

From Sta. 29 run N. 67° 35'W. 207 feet to Sta. 30,

	Course	Feet	To Sta.
thence	N. 50° 50'W.	89	31,
"	N. 61° 05'W.	103	32,
"	S. 88° 30'W.	158	33,
"	N. 49° 05'W.	126	34,
"	N. 23° 00'W.	106	35,
"	N. 33° 35'W.	79	36,
"	N. 85° 25'W.	205	37,
"	N. 87° 43'W.	39	38,
"	S. 87° 05'W.	233	39,
"	N. 69° 05'W.	134	40,
"	N. 28° 10'W.	340	41,
"	N. 77° 18'E.	298	42,
"	N. 78° 45'E.	600	43,
"	S. 78° 05'E.	363	44,
"	S. 19° 45'E.	199	45,
"	S. 26° 10'E.	99	46,
"	S. 36° 45'E.	118	47,
"	S. 49° 55'E.	247	48,
"	S. 53° 00'E.	202	49,
"	S. 64° 15'E.	99	50,
"	S. 65° 45'E.	92	51,
"	S. 70° 45'E.	300	52,
"	S. 71° 40'E.	286	53,
"	S. 67° 30'E.	148	54,
"	S. 80° 12'E.	121	55,
"	S. 60° 30'E.	75	56,
"	S. 22° 50'W.	340	I.P. place of beginning.

The area included within said high-water line is 43.11 acres.

The south end of the dam for said reservoir as enlarged (New Dam) being at the initial point (I.P.) of survey, the north end of said dam is at a point whence the ¼ section corner between sections 29 and 32 in township 11 south, of range 93 west of the 6th Principal Meridian bears S.31° 06'E. 3074.9 feet distant. The bottom of the upper end of the outlet tube is 34 feet below the bench mark (B.M.) at a point whence the initial point (I.P.) of survey bears S.19° 48'E. 212.5 feet distant.

The high-water line of said reservoir before enlargement being a part of contour No. 1 of said reservoir as enlarged, is 5 feet below the aforesaid bench mark (B.M.) and is located as follows: Beginning at the initial point (I.P.) of the old survey, (courses true, Magnetic declination being 14° 27'E.)

run N. 17° 20'E. 130 feet to Sta. 1,

	Course	Feet	To Sta.
thence	N. 39° 07'W.	489.7	2,
"	N. 80° 16'W.	345.1	3,
"	West	325	4,
"	S. 77° 42'W.	281.4	5,
"	S. 34° 31'W.	97	6,

From Station 6 run S. 41° 38'E. 293.3 feet to Sta. 7,

	Course	Feet	To Sta.
thence	East	460	8,
"	S. 41° 01'E.	304.8	9,
"	S. 78° 41'E.	192.9	10,
"	S. 60° 47'E.	247	11,
"	N. 17° 20'E.	184.5	I.P. place of beginning

The area included within said high-water line is 11 acres.

The north end of the dam for said reservoir before enlargement (old dam) is at a point whence the initial point (I.P.) of old survey bears S.17° 20'W. 130 feet distant.

The south end of said dam is at a point whence the said initial point (I.P.) of survey bears N.17° 20'E. 185.5 feet distant. Data for locating outlet tube not available.

STATE ENGINEER'S OFFICE. Denver, Colorado, ________

State of Colorado
City and County of Denver } SS.

I hereby certify that this map and statement has been examined and approved by me as agreeing with the statutes of the State of Colorado, and the regulations of this office, and was accepted for filing on the 29th day of July A.D. 1905 at ___ o'clock _ M.

T.W. Jaycox
State Engineer.
By C.W. Beach
Deputy.

State of Colorado,
County of Delta, } SS.

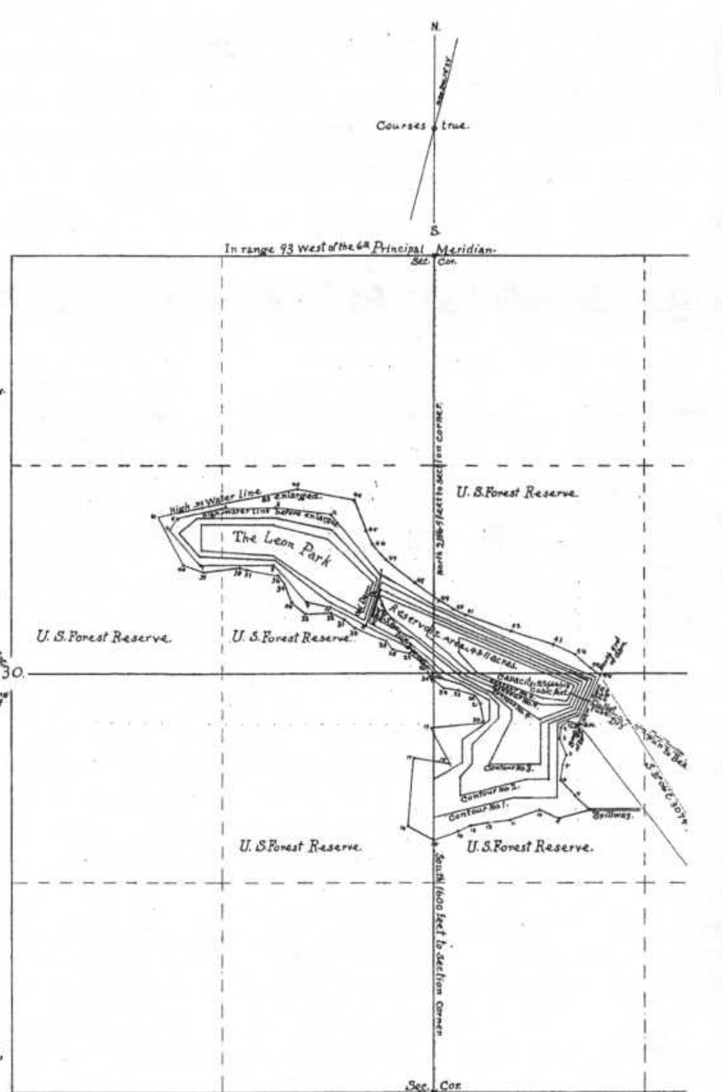
Isaac S. Rowell being duly sworn on his oath deposes and says that he is the person employed to make the survey of The Enlargement of The Leon Park Reservoir, that the survey of the same, and the map thereof were made by him, and that such survey is accurately represented upon this map, that he has read the statements thereon and that the matters therein set forth are true of his own knowledge.

Isaac S. Rowell Surveyor.

Subscribed and sworn to before me this 6th day of March 1905
Joseph Hoopes
My Commission Expires Nov. 28, 1905

MAP OF THE ENLARGEMENT OF THE LEON PARK RESERVOIR.

Divi.
Water Distr



Scale, 400 feet to one inch.

NUMBER ELEVEN.

THE LEON PARK RESERVOIR.

This reservoir is claimed by W.B.Smethurst, Albert H.Stolte and Ernest W.Stolte, whose P.O. addresses are Cedaredge, Delta County, Colorado.

Work was commenced on the said reservoir on the 27th day of August, A.D.,1894 and prosecuted with due diligence and in 1903 had a dam 14 feet high and a storage capacity of 4,790,312 cubic feet of water or 110 acre feet.

It is used inthe irrigation of the lands of the claimants, W.B.Smethurst, Albert H.Stolte and Ernest W.Stolte, and 75 acres of said lands have been irrigated and cultivated by means of water from this reservoir in connection with other waters.

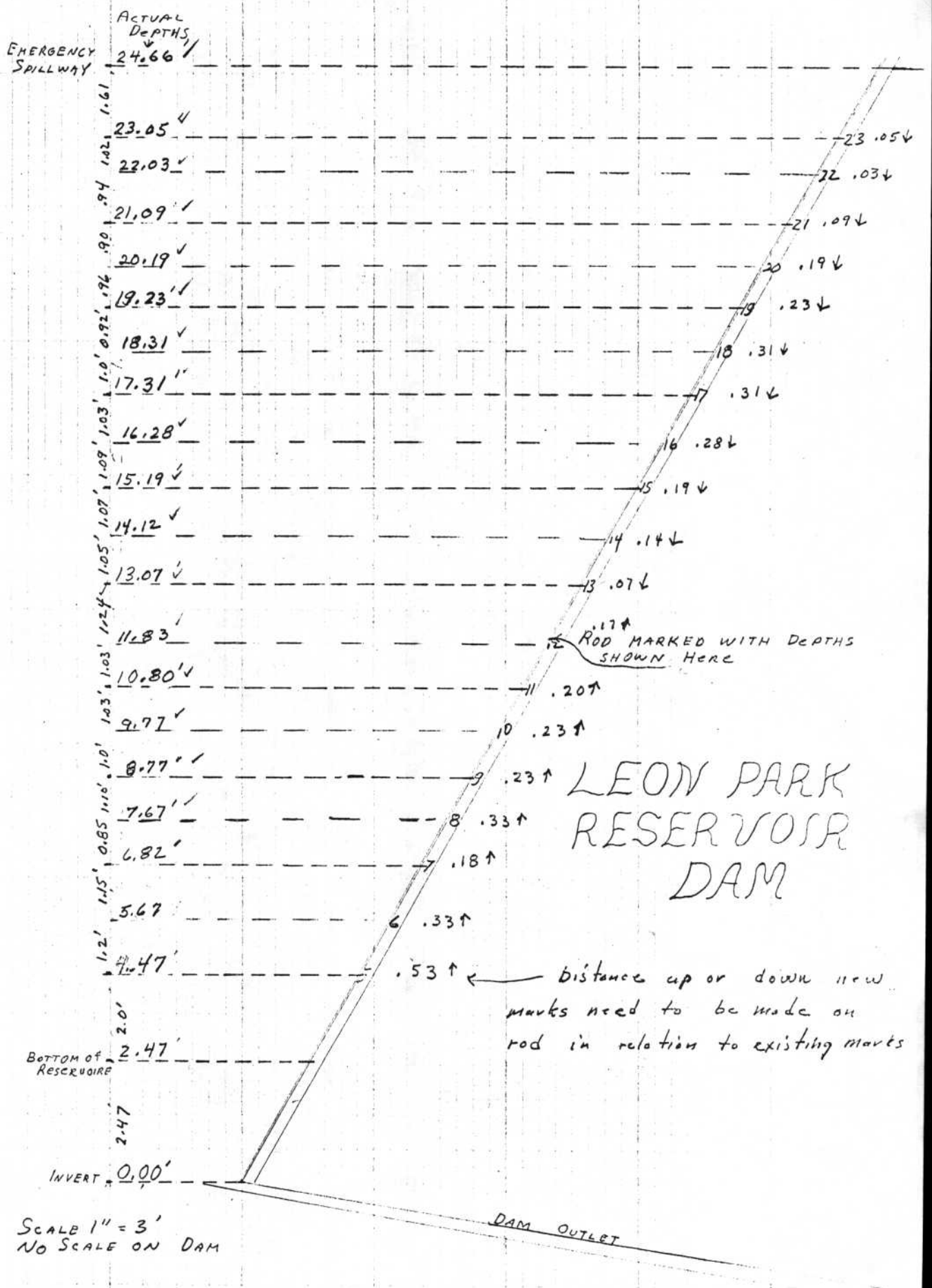
This reservoir is located on the southern slope of Grand Mesa in Delta County, Colorado in Water District No.40 of said state; and it derives its supply of water from a drainage area of about 1000 acres lying tributary to the East Fork of Surface Creek and draining naturally into said reservoir.

By reason of original construction this reservoir is entitled to priority number eleven on the Surface Creek drainage system.

It is therefore ORDERED, ADJUDGED and DECREED that there be allowed and permitted to flow into said reservoir and to be stored therein from the said drainage area of about 1000 acres, lying tributary to the East Fork of Surface Creek and draining naturally into said reservoir, for the use and benefit of the parties lawfully entitled thereto, under and by virtue of appropriation by original construction, 4,790,312 cubic feet of water or 110 acre feet; and the same is hereby designated as priority NUMBER ELEVEN, to date from the 27th day of August, A.D.,1894.

(150)

SKETCH SHOWING RELATION OF ROD MARKINGS TO ACTUAL DEPTHS



WD: 40
STRUCTURE NAME: LEON PARK RESERVOIR
STRUCTURE ID : 03385
STREAM: SURFACE CREEK

FROM:

HWL:

ACTIVE CAPACITY TABLE (ACRE FT)

G.H.	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
1	0.20	0.23	0.25	0.28	0.31	0.34	0.36	0.39	0.42	0.44
2	0.47	0.53	0.59	0.65	0.71	0.78	0.84	0.90	0.96	1.02
3	1.08	1.19	1.30	1.41	1.52	1.64	1.75	1.86	1.97	2.08
4	2.19	2.36	2.52	2.69	2.85	3.02	3.19	3.35	3.52	3.68
5	3.85	4.08	4.31	4.53	4.76	4.99	5.22	5.45	5.67	5.90
6	6.13	6.41	6.70	6.98	7.26	7.55	7.83	8.11	8.39	8.68
7	8.96	9.29	9.63	9.96	10.29	10.63	10.96	11.29	11.62	11.96
8	12.29	12.67	13.05	13.44	13.82	14.20	14.58	14.96	15.35	15.73
9	16.11	16.54	16.98	17.41	17.85	18.28	18.71	19.15	19.58	20.02
10	20.45	20.94	21.43	21.92	22.41	22.90	23.38	23.87	24.36	24.85
11	25.34	25.89	26.44	26.99	27.54	28.10	28.65	29.20	29.75	30.30
12	30.85	31.46	32.07	32.68	33.29	33.90	34.50	35.11	35.72	36.33
13	36.94	37.60	38.27	38.93	39.60	40.26	40.92	41.59	42.25	42.92
14	43.58	44.31	45.04	45.77	46.50	47.23	47.95	48.68	49.41	50.14
15	50.87	51.67	52.47	53.27	54.07	54.88	55.68	56.48	57.28	58.08
16	58.88	59.82	60.76	61.70	62.64	63.58	64.51	65.45	66.39	67.33
17	68.27	69.41	70.55	71.69	72.83	73.97	75.10	76.24	77.38	78.52
18	79.66	81.00	82.34	83.68	85.02	86.36	87.69	89.03	90.37	91.71
19	93.05	94.59	96.12	97.66	99.20	100.74	102.27	103.81	105.35	106.88
20	108.42	110.22	112.03	113.83	115.64	117.44	119.24	121.05	122.85	124.66
21	126.46	128.60	130.74	132.88	135.02	137.17	139.31	141.45	143.59	145.73
22	147.87	150.31	152.76	155.20	157.64	160.09	162.53	164.97	167.41	169.86
23	172.30	174.97	177.63	180.30	182.97	185.64	188.30	190.97	193.64	196.30
24	198.97	201.92	204.87	207.81	210.76	213.71	216.66	219.61		

NORTH PLATTE BASIN ROUNDTABLE

Wm. Kent Crowder, Chair
P.O. Box 1019
Walden, Colorado 80480

FAX (970) 723-4706
(970) 723-4660

June 13, 2012

Mr. Todd Doherty
Colorado Water Conservation Board
Water Supply Planning Section
WSRA Application
1580 Logan Street, Suite 200
Denver, CO 80203

Re: Water Supply Reserve Account Grant Application for the Seneca Ditch Project – Structure for Water Control - $57,539.70 Basin Account WSRA Funds

Dear Mr. Doherty:

This letter is to advise you that the grant application for $57,539.70 in Basin Account funds for the Seneca Ditch Project - Structure for Water Control was reviewed by the North Platte Basin Roundtable (NPBRT) during its May 22, 2012 meeting, and was later evaluated utilizing the NPBRT Water Supply Reserve Account Grant Evaluation Criteria. During the June 12, 2012 North Platte Basin Roundtable meeting, seven voting members of the NPBRT voted to approve the project and the requested WSRA funding and one voting member, Tom Hackleman, abstained from voting because he is the applicant and will be a direct beneficiary of the project. A minority report is not required because there were no dissenting votes.

The NPBRT has identified the development of the full allocation of irrigated acres in the North Platte Basin allowed under the equitable apportionment Supreme Court Decree and the Three States Agreement as a very high priority consumptive need. This project will provide funding to replace an old deteriorated headgate structure that no longer has the ability to effectively regulate and control water. A new structure will allow the landowners and users to effectively and efficiently manage the amount of water entering the Seneca ditch during irrigation season, as well as provide a positive shutoff control for the ditch. This improved level of water control will improve irrigation water management and benefit all uses associated with the Seneca ditch water. Improved water efficiency is a benefit to all consumptive and associated non-consumptive uses of irrigation water. The Seneca Ditch provides irrigation water to three different landowners in the northern part of the county, which irrigate approximately 1,100 acres of hay and pasture land. In addition to irrigating the highly valuable hayland, the irrigation ditches below the structure create extremely valuable irrigation induced wetlands and riparian areas that provide habitat for many species of big game, waterfowl and upland birds, including the Greater Sage Grouse.

The North Platte Basin Roundtable requests that this project be "fast tracked" and presented to the CWCB during the Board's July 2012 meeting. This will allow adequate time to get contracts developed and executed during the summer which should facilitate bidding and construction of the headgate by the fall of 2012. We would like to see the project on the ground this year if at all possible.

Please feel free to call me with any questions that you may have regarding the North Platte Basin Roundtable meeting or our level of support for this project.

Sincerely,

Wm. Kent Crowder

Wm. Kent Crowder, Chair
North Platte Basin Roundtable

cc: Tom Hackleman

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT
GRANT APPLICATION FORM

Seneca Ditch - Structure for Water Control

Name of Water Activity/Project

Approving Basin Roundtable

$57,539.70	**Amount from Statewide Account**	**N/A**
Total Amount of Funds Requested	**Amount from Basin Account**	**$57,539.70**

Application Content

Attachments

1. Reference Information
2. Insurance Requirements (Projects Over $25,000)
3. WSRA Standard Contract (Projects Over $100,000)
4. W-9 Form (Required for All Projects)

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/approval is outlined in Attachment 1.

Once approved by the local Basin Roundtable, the applicant should submit this application, a detailed statement of work, detailed project budget, and project schedule to the CWCB staff by the application deadline.

The application deadlines are:

* Basin Account – 60 calendar days prior to the bi-monthly Board meeting
* Statewide Account – 60 calendar days prior to the September Board meeting

Board Meeting Dates	Basin Account Deadlines	Statewide Account Deadlines
July 20-21, 2010	May 21, 2010	n/a
September 21-22	July 23, 2010	July 23, 2010
November 16-17	September 17, 2010	n/a
January 2011	60 days prior	n/a
March 2011	60 days prior	n/a
May 2011	60 days prior	n/a
July 2011	60 days prior	n/a
September 2011	60 days prior	60 days prior

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: http://cwcb.state.co.us/IWMD.

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:

Mr. Todd Doherty
Colorado Water Conservation Board
Water Supply Planning Section
WSRA Application
1580 Logan Street, Suite 200
Denver, CO 80203
Todd.Doherty@state.co.us

If you have questions or need additional assistance, please contact Todd Doherty of the Water Supply Planning Section at 303-866-3441 x3210 or todd.doherty@state.co.us.

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

1. Applicant Name(s): **Loban, Hackleman and Olsen LLC.**

Mailing address: **P.O. Box 35**
Cowdrey, CO 80434

ID#: **71-0876751** Email address: **tchackleman@centurylink.net**

Phone Numbers: Home: **970-723-4401**
Cell: **970-232-6502**
Fax: **N/A**

2. **Person to contact regarding this application if different from above:**

Name: **Tom Hackleman**

Position/Title **Representative for: Loban, Hackleman and Olsen LLC. (Seneca Ditch - Structure For Water Control)**

3. Eligible entities that may apply for grants from the WSRA 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) – special, water and sanitation, conservancy, conservation, irrigation, or water activity enterprises.

[ ] Private Incorporated – mutual ditch companies, homeowners associations, corporations.

[X] 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.

4. Provide a brief description of your organization

The Seneca Ditch is currently controlled by 3 water owners in the northern part of Jackson County and irrigates approximately 1,100 acres of hay and pasture lands in parts of sections: 30 T10N R79W, 19 T10N R79W, 24 T10N R80W, 13 T10N R80W and 14 T10N R80W.

The ditch was originally constructed in 1885 by Benton Miles to carry 1cubic feet per second (cfs) of water. The ditch was then enlarged in order to carry an additional 2 cfs in 1886. In 1887, D.L. Moore and Charles Cowdrey further enlarged the ditch enabling it to carry 23 cfs of water. Charles Cowdrey continued enlarging the ditch over the next couple of year until its carrying capacity was a total of 29 cfs.

Around the year of 1954, the Michigan River changed course and the point of diversion for the Seneca Ditch had to be relocated to its present location (SE 1/4 of the NE ¼ of section 31, Township 10 north, Range 79 west, 6th pm, on the left bank of the west channel of the Michigan River, at a point 650 feet from the east line and 1850 feet from the north line). At that same time the Gardner Ditch carrying 4 cfs (with an appropriation of 1889) was transferred into the Seneca Ditch.

Since then, the Seneca Ditch has been enlarged to carry an additional 40 cfs (appropriated in 1947). Four cfs of the appropriated water in 1947 was designated for livestock use, therefore, bringing the current carrying capacity of the Seneca Ditch to its present condition of 73 cfs.

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

N/A

6. 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 copy of this standard contract is included in Attachment 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.

7. 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.

N/A The Seneca Ditch –Structure For Water Control Structure Project applicant is an individual.

Part B. - Description of the Water Activity

1. Name of the Water Activity/Project:

Seneca Ditch - Structure for Water Control Project

2. What is the purpose of this grant application? (Please check all that apply.)

[ ] Environmental compliance and feasibility study

[ ] Technical Assistance regarding permitting, feasibility studies, and environmental compliance

[ ] Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs, projects

Study or Analysis of:

- [ ] Structural project or activity
- [ ] Nonstructural project or activity
- [ ] Consumptive project or activity
- [ ] Non-consumptive project or activity

[x] Structural and/ or nonstructural water project or activity

3. 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.

The Seneca Ditch water right owner's propose to replace an old, deteriorated headgate at the point of diversion on the Michigan River. The headgate structure plays an essential role in regulating and controlling the flow of irrigation and livestock water entering the Seneca ditch.

The existing structure is run down and no longer has the ability to effectively regulate and control water. A new structure will allow the user's to effectively and efficiently manage the amount water entering the Seneca ditch during seasonal irrigation flows, as well as provide a positive shutoff control, to the ditch, at the structure. This improved level of water control will improve irrigation water management and benefit all uses associated with the Seneca ditch water.

Installation of the Structure for Water Control addresses both consumptive and non-consumptive needs in a cost effective, collaborative way. The Seneca Ditch provides irrigation water to three different landowners in the northern part of the county, which irrigate approximately 1,100 acres of hay and pasture land. In addition to irrigating the highly valuable hayland, some water is also allocated for livestock use. The irrigation ditches below the structure create extremely valuable irrigation induced wetlands and riparian areas that provide habitat for many species of big game, waterfowl and upland birds, including the Greater Sage Grouse.

The water right holder's of the Seneca Ditch headgate have received technical and engineering assistance through the Natural Resources Conservation Service (NRCS) for the survey and design of the proposed structure. NRCS will continue to provide technical support throughout the construction, installation, revegetation, and maintenance phases of the project.

The entire amount of the WSRA funds requested will be used in the actual construction, installation and administration of the new structure.

Part C. – Threshold and Evaluation Criteria

1. <u>Describe how</u> the water activity meets these Threshold Criteria. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

a. The participant and the project are both eligible under the criteria outlined in "Threshold Criteria (a.)".
b. The water activity will be consistent with Section 37-75-102 Colorado Revised Statutes.[1] Implementation of this project will not harm, nor adversely affect any other appropriations, but will in fact improve the water holder's and commissioner's abilities to better manage the water rights and flows associated with the Home Ditch No. 2 and the Walden Reservoir.
c. This proposal will be evaluated by the North Park Basin Round Table (NPBRT) at their November 23rd, 2010 meeting. Results of their evaluation and decision will be submitted in the future.
d. M r. Kent Crowder, Chairman of NPBRT, has provided the attached letter of approval of this application.

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

This application is being submitted as an individual request and therefore, is not eligible for Statewide Account Funds.

[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.*

3. **For Applications that include a request for funds from the Statewide Account, describe how the water activity meets the Evaluation Criteria. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)**

N/A – Not eligible for statewide funds

Part D. – Required Supporting Material

1. Water Rights, Availability, and Sustainability

The Seneca Ditch water right holder's currently hold a total right of 73 cubic feet per second (cfs) of water in the Michigan River. The majority of the water is for irrigation purposes with a small right of 4 cubic feet per second for livestock use.

Water Rights are as follows:

1 cfs – 1885
2 cfs – 1886
20 cfs – 1887
4 cfs – 1887
1 cfs – 1888
4 cfs – 1889 (Gardner Ditch transferred to Seneca Ditch)
1 cfs – 1889
40 cfs – 1947 (4cfs designated as stock water use)

Only the Seneca Ditch and its water users will be affected by the installation of the new Structure for Water Control. Installation of the structures will improve the water users and commissioner's abilities to better manage the water rights and flows associated with the Seneca Ditch.

2. Please provide a brief narrative of any related or relevant previous studies.

N/A

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

Statement of Work

WATER ACTIVITY NAME – Seneca Ditch - Structure for Water Control Project

GRANT RECIPIENT – Loban, Hackleman and Olson LLC.

FUNDING SOURCE – WSRA: North Platte Basin Roundtable Allocation

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)

The Seneca Ditch water right owner's propose to replace an old, deteriorated headgate at the point of diversion on the Michigan River. The headgate structure plays an essential role in regulating and controlling the flow of irrigation and livestock water entering the Seneca ditch.

The existing structure is run down and no longer has the ability to effectively regulate and control water. A new structure will allow the user's to effectively and efficiently manage the amount water entering the Seneca ditch during seasonal irrigation flows, as well as provide a positive shutoff control, to the ditch, at the structure. This improved level of water control will improve irrigation water management and benefit all uses associated with the Seneca ditch water.

Installation of the Structure for Water Control addresses both consumptive and non-consumptive needs in a cost effective, collaborative way. The Seneca Ditch provides irrigation water to three different landowners in the northern part of the county, which irrigate approximately 1,100 acres of hay and pasture land. In addition to irrigating the highly valuable hayland, some water is also allocated for livestock use. The irrigation ditches below the structure create extremely valuable irrigation induced wetlands and riparian areas that provide habitat for many species of big game, waterfowl and upland birds, including the Greater Sage Grouse.

The water right holder's of the Seneca Ditch headgate have received technical and engineering assistance through the Natural Resources Conservation Service (NRCS) for the survey and design of the proposed

structure. NRCS will continue to provide technical support throughout the construction, installation, revegetation, and maintenance phases of the project.

The entire amount of the WSRA funds requested will be used in the actual construction, installation and administration of the new structure.

OBJECTIVES:

1. To install a Structure for Water Control (headgate) that will efficiently and effectively control the amount of water entering into the Seneca Ditch, provide a positive shutoff at the structure location.
2. To provide the water users and commissioner with a better means of controlling and administering the water rights and flows associated with the Seneca Ditch.

TASKS:

TASK 1 – Determination of Project Need and Feasibility (COMPLETED)

Description of Task – Determine the need and feasibility of installing a new Structure for Water Control in the Seneca Ditch

Method/Procedure – Site visit: Seneca Ditch representative and NRCS personnel

- ✓ Assess the current condition of the existing structure and consider the need, feasibility and cost of installing a new structure.

Deliverable – Project was determined to be needed and feasible

TASK 2 – Engineering Survey and Design (COMPLETED)

Description of Task - Perform the on-site engineering survey and design a Structure for Water Control.

Method/Procedure - Follow-up visit: NRCS staff

- ✓ an engineering survey will be performed

Deliverable – An engineering plan, draft structure design and copies of NRCS's Standards and

Specifications were provided to the company contact. Reference: the attached NRCS Structure for Water Control design

TASK 3 – Project Construction and Installation

Description of Task – The planned Structure for Water Control shall be installed

Method/Procedure – On site: Contractor (NRCS staff and contact person when needed)

- ✓ the structure shall be constructed/installed
- ✓ the site shall be smoothed and reseeded

Deliverable – A completed and functioning Structure for Water Control

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.

- ✓ ***A final report will be provided to the CWCB after the construction and installation of the project is completed.***

BUDGET

* Total Costs		
	* *Labor/Equipment/Materials*	*Cost*
Task 1 – Need and Feasibility	NRCS staff: In-Kind Contribution Project Contact Person: In-Kind Contribution	300.00
Task 2 – Survey and Design	NRCS staff: In-Kind Contribution	2,200.00
Task 3 – Construction and Installation	Contractor : Concrete Riprap Bar Grates (cat walk) Gates	63,300.00
Administration Costs	**Copies, Billing, Reports and Etc. (1% of monetary cost of structure)**	**633.00**
Total Costs:		**66,433.00**

Contributions	
NRCS (In- Kind Contribution):	**2,500.00**
Applicant / Water Owners Contribution (10% of monetary contribution):	**6,393.30**
WRSA Contribution:	**57,539.70**
Total Contributions:	**66,433.00**

* The Applicant/Landowner shall be responsible for any and all cost over-rides.
* If the final project completion cost is less than the requested WRSA funds, the remaining funds will be returned to the Basin Account.

SCHEDULE

Task	Estimated Start Date	Estimated Completion Date
1. Need and Feasibility	COMPLETED	
2. Survey and Design	COMPLETED	
3. Construction and Installation	07/01/2012	10/01/2013

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.

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

Signature of Applicant: Loban, Hackleman and Olsen LLC.

_____

Print Applicant's Name: Loban, Hackleman and Olsen LLC.

Project Title: Seneca Ditch – Structure For Water Control Project

Date:

Return this application to:

Mr. Todd Doherty
Intrastate Water Management and Development Section
COLORADO WATER CONSERVATION BOARD
1580 Logan Street, Suite 200
Denver, CO 80203

To submit applications by Email, send to: todd.doherty@state.co.us
To submit applications by Fax, send to: (303) 894-2578
For questions, call Telephone No.: (303) 866-3426

Attachment 1
Reference Information

The following information is available via the internet. The reference information provides additional detail and background information.

Colorado Water Conservation Board (http://cwcb.state.co.us/)

Loan and Grant policies and information are available at – http://cwcb.state.co.us/Finance/

Interbasin Compact Committee and Basin Roundtables (http://ibcc.state.co.us/)

Interbasin Compact Committee By-laws and Charter (under Helpful Links section) –

http://ibcc.state.co.us/Basins/IBCC/

Legislation

House Bill 05-1177 - Also known as the Water for the 21st Century Act –

http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318

House Bill 06-1400 – Adopted the Interbasin Compact Committee Charter –

http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911

Senate Bill 06-179 – Created the Water Supply Reserve Account –

http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911

Statewide Water Supply Initiative

General Information – http://cwcb.state.co.us/IWMD/

Phase 1 Report –

Attachment 2
Insurance Requirements

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed $25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

13. INSURANCE

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in **§13(B)** with respect to sub-Grantees that are not "public entities".

B. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: **(a)**$1,000,000 each occurrence; **(b)** $1,000,000 general aggregate; **(c)** $1,000,000 products and completed operations aggregate; and **(d)** $50,000 any one fire. If any aggregate limit is reduced below $1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of $1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§13**.

Attachment 3
Water Supply Reserve Account Standard Contract

NOTE: The following contract is required for WSRA projects that exceed $100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

Attachment 4
W-9 Form

NOTE: A completed W-9 form is required for all WSRA projects prior execution of a contract or purchase order. Please submit this form with the completed application.

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

Signature of Applicant: Loban, Hackleman and Olsen LLC.
Loban Hackleman Olson LLC By Thomas W Hackleman member

Print Applicant's Name: Loban, Hackleman and Olsen LLC.

Project Title: Seneca Ditch – Structure For Water Control Project

Date:

Return this application to:

Mr. Todd Doherty
Intrastate Water Management and Development Section
COLORADO WATER CONSERVATION BOARD
1580 Logan Street, Suite 200
Denver, CO 80203

To submit applications by Email, send to: todd.doherty@state.co.us
To submit applications by Fax, send to: (303) 894-2578
For questions, call Telephone No.: (303) 866-3426

Operation and Maintenance Plan
Structure For Water Control

Project: Seneca Headgate

Job Location: *Reference survey design map for location

Date: 6/5/12

OVERVIEW

A properly operated and maintained structure for water control is an asset to the owner/operator. This structure was designed and installed to control water discharge, distribution, delivery, and flow. Estimated life span of this installation is at least 10 years.

GENERAL RECOMMENDATIONS

An effective operation and maintenance program includes:

- ☐ Maintain the width, height, and side slopes of soil berms and embankments.
- ☐ Periodically inspect control gates for proper functioning and their ability to maintain the water level to design elevations.
- ☐ Inspect metal surfaces for rust and other damage. Especially inspect sections in contact with earthfill and/or other materials. Repair or replace damaged sections and apply a protective covering.
- ☐ Investigate settlement or cracks in earthen sections to determine the cause and make all necessary repairs.
- ☐ Check concrete surfaces for accelerated weathering, spalling, settlement, alignment or cracks. Repair damaged concrete.
- ☐ Check all rock riprap and erosion control matting sections for accelerated weathering and displacement of materials. Replace to original shape and grade if necessary.
- ☐ Remove accumulated soil and debris and any blockage that may restrict capacity.
- ☐ If livestock are present, prevent access to components subject to damage by livestock.
- ☐ Repair any vandalism, vehicular, or livestock damage.

I hereby agree with the terms and conditions of this operation and maintenance plan.

Owner/Representative: Thomas W Hoopbone — Signature

June 12, 2012 — Date

LOCATION MAP

0 1500 3000
SCALE – FEET

NOTES:

1. The benchmark is located top of rebar set along fence line approximately 160 feet southeast of existing headgate, Elevation 7922.42.
2. All materials and installation shall be in conformance with NRCS specification 587 – Structure For Water Control.
3. The concrete shall be reinforced with two rows of #5 bars on 10 inch centers each way, as shown on the reinforcement details. The reinforcing bars shall be continuous or spliced from floor and walls into adjacent floor and walls. Bar splices shall be lapped at least 18 inches. Bar cover is the clear distance between the bar surface and the face of the concrete, and shall be 2 inches for formed surfaces, and 3 inches for surfaces formed against earth.
4. The concrete shall have a minimum compressive strength of 4000 psi. All exposed concrete edges shall be chamfered ¾". Metal ties within the forms shall be equipped with cones that permit their removal to a depth of at least one inch without injury to the concrete. Ties designed to break off beneath the surface shall not be used without cones. All cone holes shall be grouted flush with the concrete prior to applying curing compound.
5. All spaces excavated and not occupied by the structure shall be backfilled up to the specified elevation or up to the ground surface. The structure backfill shall be minus 1 inch clay type material, with sufficient moisture to form a ball in the hand without crumbling. The backfill shall be firmly compacted with a minimum of 3 passes with a Jumping Jack, Vibrating Plate Compactor, or hand directed Sheepsfoot Roller, in lifts not greater than 6 inches. Porous material, such as gravel or screened rock, shall not be used as foundation material under the structure.
6. The rock riprap shall be sound, durable, and angular in shape with the greatest dimension not larger than 2.5 times the least dimension. The gradation of the rock shall be as follows:

Sieve Size of Rock	Percent Passing
18 Inches	100
12 Inches	75
8 Inches	0

Mirafi 180N (or equal), non–woven filter fabric shall be placed under the rock riprap.

7. The gates shall be two surface mounted, 48 inch wide by 60 inch high, galvanized steel rectangular slide gates, with 8 foot frames (Fresno mfg. or equal). See attached Fresno Specification and Installation Manual.
8. The structure shall be equipped with two bar grate walkways. Each grate shall be 3' wide X 5'–6" long, 19 W 4 grating (1 ¼" X 3/16" bars), and shall be coated with approved epoxy zinc paint.

I realize that as a landowner, I and/or the contractor I hire, may be liable for any damage to utilities during construction. NRCS makes no representation that utilities shown on plans are exactly located or that all utilities are shown

I will provide NRCS with the Utility Notification Center of Colorado (UNCC) ticket number my contractor has acquired prior to start of construction.

Loban Hackleman Olson LLC By Thomas W Hackleman member
Signature Date UNCC Ticket No.
5/22/12

CALL UNCC, 1–800–922–1987 TWO DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR MARKING OF UNDERGROUND UTILITIES

I agree, as Landowner and/or Group Representative, to construct this project according to these plans and specifications. Land and water rights, permits, easements and rights–of–way have been obtained from all landowners and properties involved. No changes will be made in the project design or location without prior approval of an NRCS Representative.

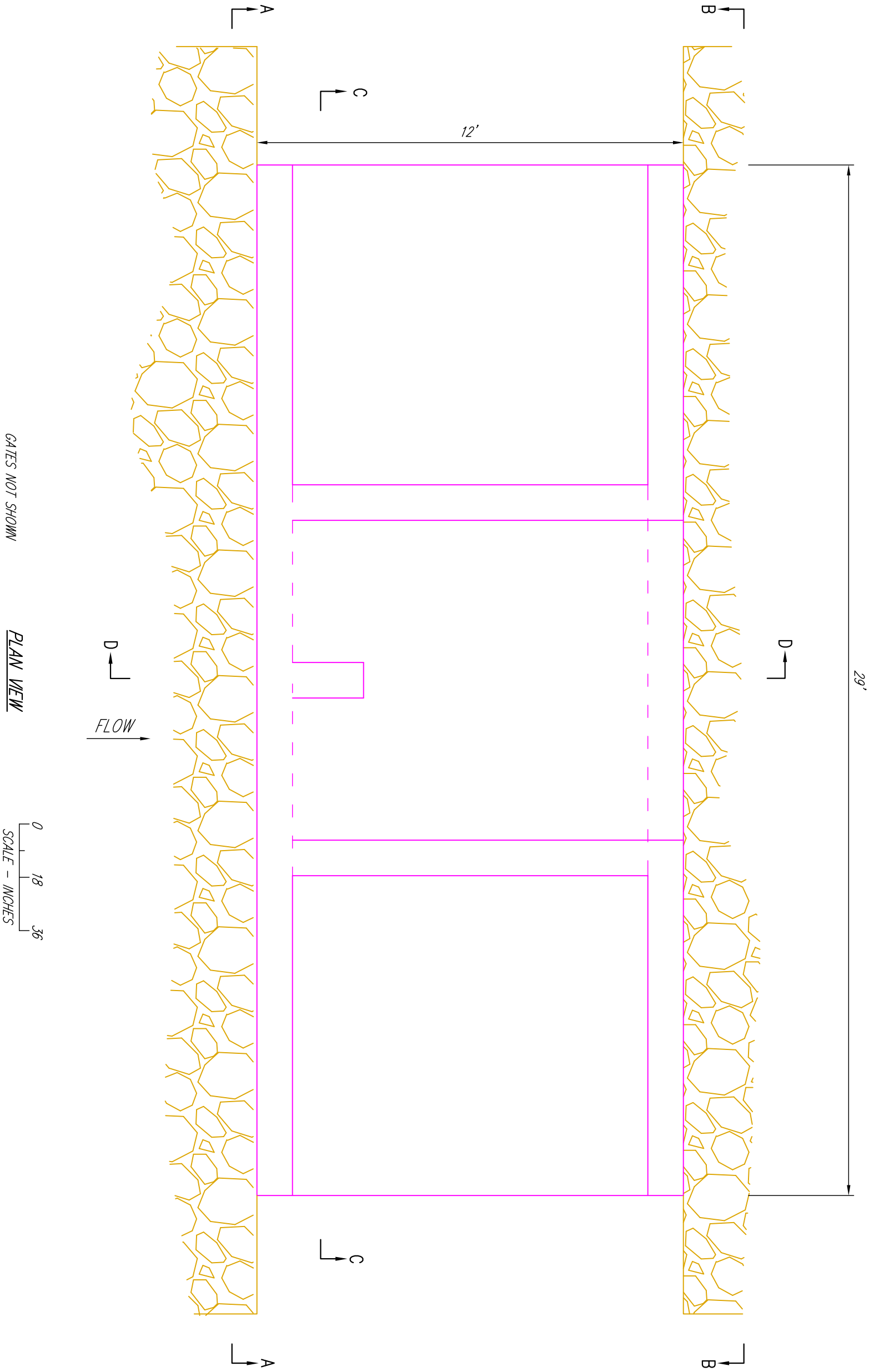
Loban Hackleman Olson LLC By Thomas W Hackleman member
Signature Date
5/22/12

Date: Designed VF 5/12 | Drawn VF 5/12 | Checked | Approved
EQIP Contract No. N/A | Contract Item No. N/A | Job Class 4

SENECA DITCH HEADGATE STRUCTURE
LOCATION MAP, SIGNATURE BLOCKS, NOTES
JACKSON COUNTY COLORADO, 2012

NRCS

File No.
Drawing No.
Sheet 1 of 4



GATES NOT SHOWN

PLAN VIEW

0 18 36
SCALE - INCHES

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

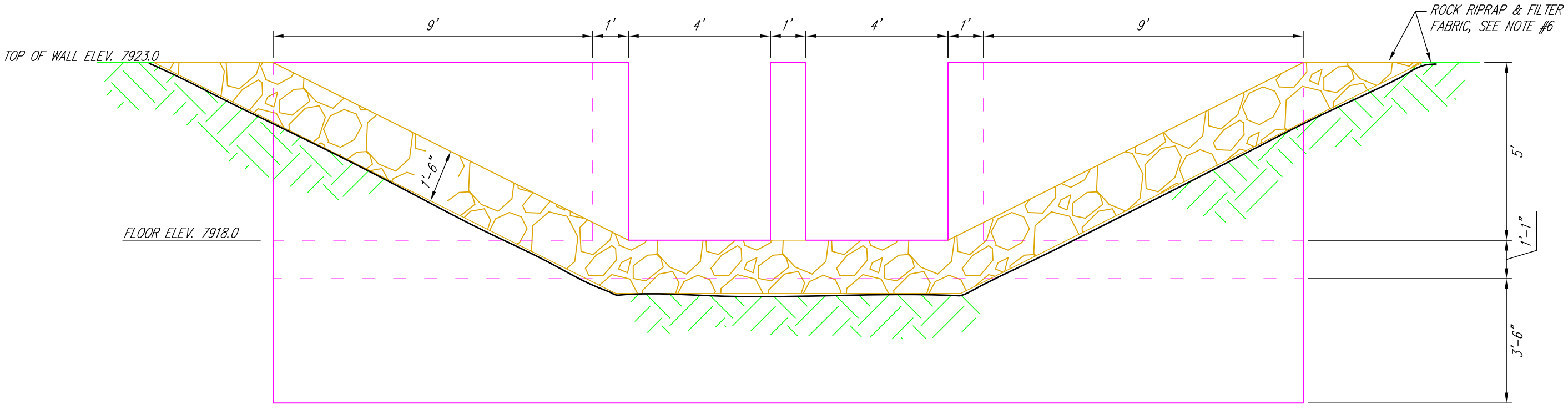
SENECA DITCH HEADGATE STRUCTURE

STRUCTURE PLAN VIEW

JACKSON COUNTY COLORADO, 2012

EQIP Contract No.	N/A		Date
Contract Item No.	N/A	Designed	VF 5/12
Job Class	4	Drawn	VF 5/12
		Checked	
		Approved	

Sheet 2 of 4 | Drawing No. | File No.



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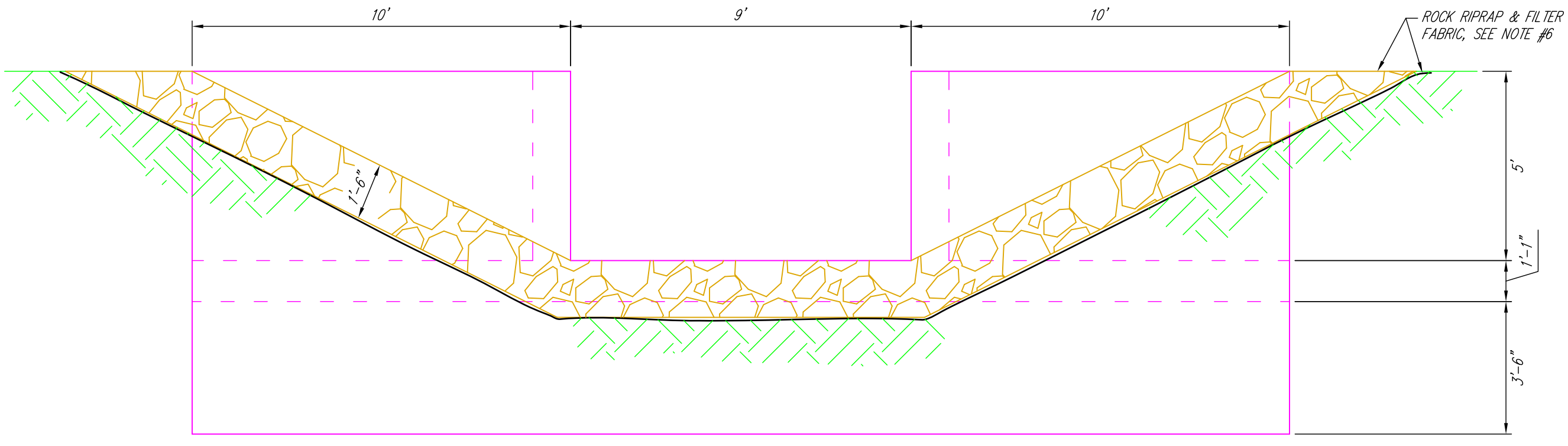
SECTION A – A

0 18 36

SCALE – INCHES



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SECTION B – B

0 18 36

SCALE – INCHES

Date

Designed VF 5/12

Drawn VF 5/12

Checked

Approved

EQIP Contract No. N/A

Contract Item No. N/A

Job Class 4

SENECA DITCH HEADGATE STRUCTURE

STRUCTURE SECTIONAL VIEW

JACKSON COUNTY COLORADO, 2012

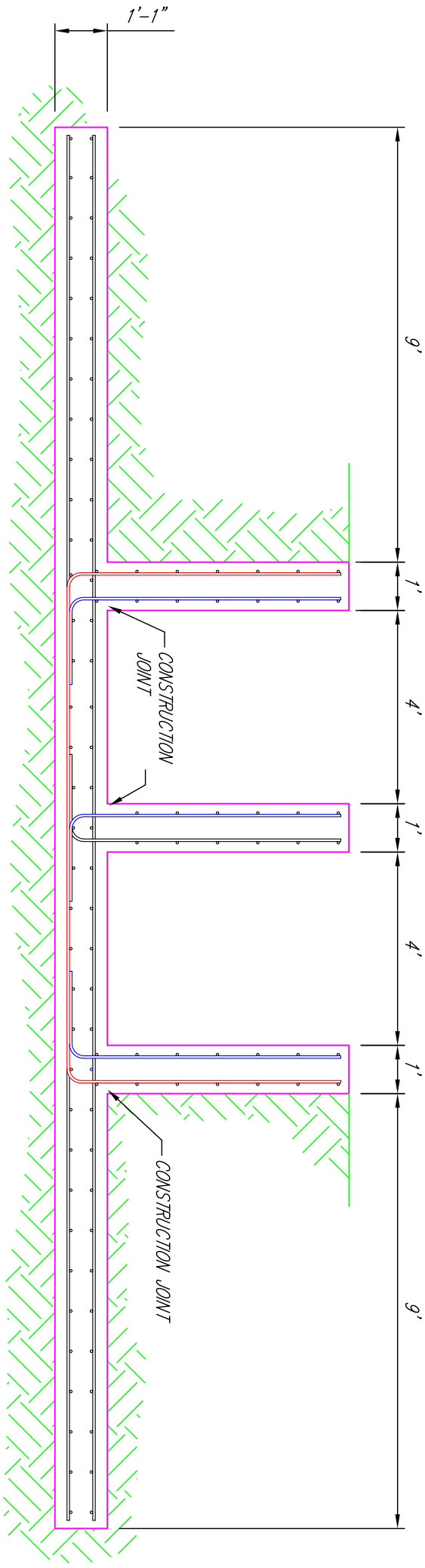
NRCS

Natural Resources Conservation Service
United States Department of Agriculture

File No.

Drawing No.

Sheet 3 of 4

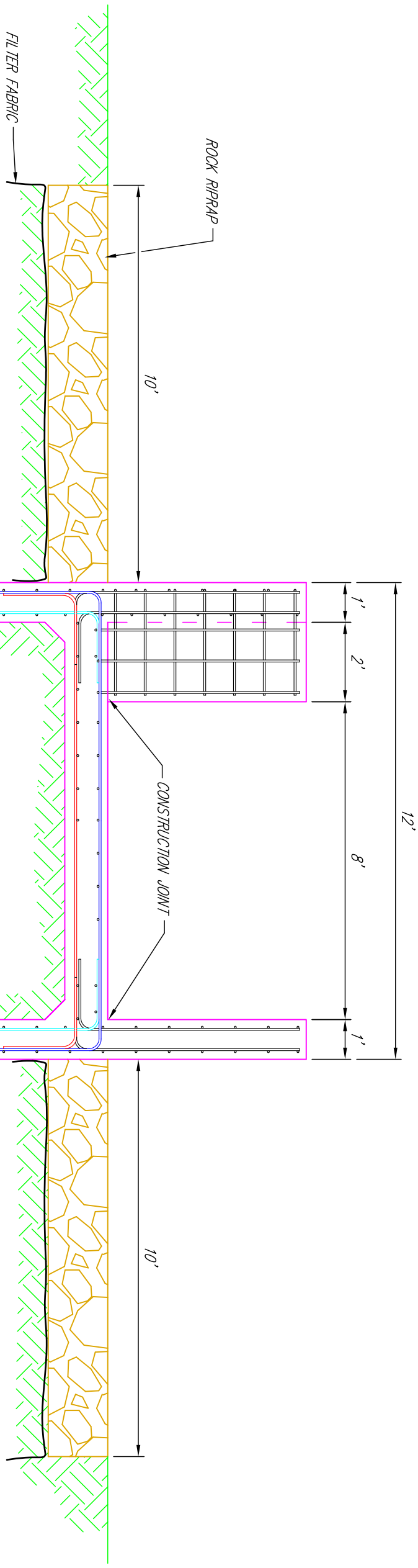


(WITH REINFORCEMENT DETAIL)

SECTION C – C

0 18 36

SCALE – INCHES



(WITH REINFORCEMENT DETAIL)

SECTION D – D

0 18 36

SCALE – INCHES

GATES NOT SHOWN

Sheet 4 of 4 | Drawing No. | File No.

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

SENECA DITCH HEADGATE STRUCTURE

SECTIONAL VIEWS, REIINFORCEMENT DETAIL

JACKSON COUNTY COLORADO, 2012

			Date
EQIP Contract No.	N/A	Designed	VF 5/12
Contract Item No.	N/A	Drawn	VF 5/12
Job Class	4	Checked	
		Approved	

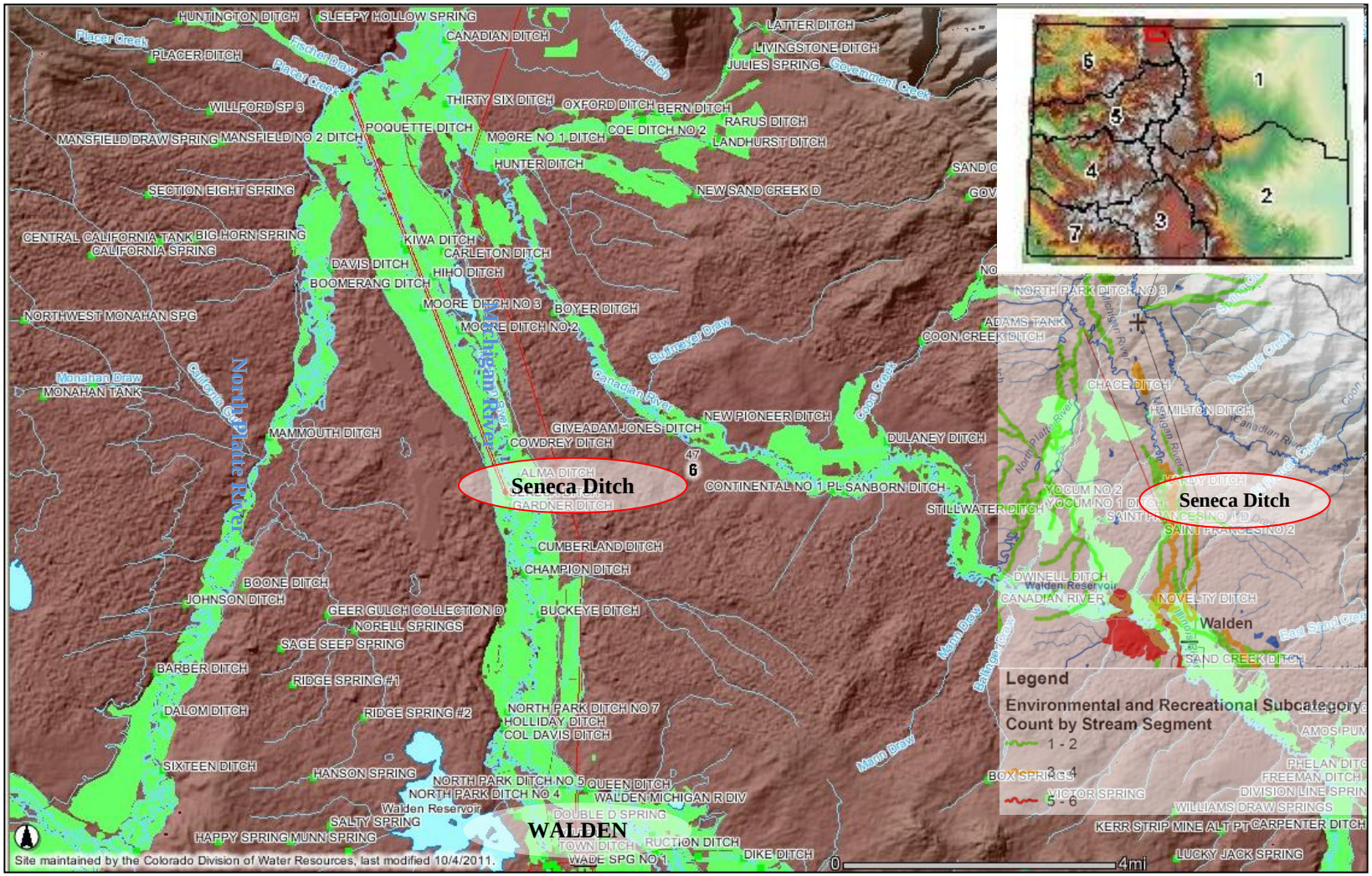


Figure 1. Seneca Ditch Location Map, including irrigated lands in green, and nonconsumptive map insert.

Rio Grande Inter-Basin Roundtable
c/o San Luis Valley Water Conservancy District
415 San Juan Avenue
Alamosa, CO 81101
Telephone: (719) 589 – 2230
Email: slvwcdco1@qwestoffice.net

May 17, 2012

Mr. Michael King, Executive Director
Colorado Department of Natural Resources

Mr. Todd Doherty, Intrastate Water Management & Development
Colorado Water Conservation Board

Reference: Rio Grande County (Colorado) Hydrologic Study

Gentlemen:

The Rio Grande Inter-Basin Roundtable (R.G.R.T) has determined that the single, most critical water issue confronting the Rio Grande Basin (Basin) is the current unsustainable management of surface and ground water. The R.G.R.T. has made the decision that water activities that address this issue be favorably considered for funding from the Water Supply Reserve Account, SB 2005 -179 (WSRA Funds), providing the proposed water activities meet the SWSI findings for the Basin and the CWCB & IBCC Criteria and Guidelines for funding.

The **Rio Grande County (Colorado) Hydrologic Study (Study)** will provide information to the staff and County Commissioners of Rio Grande County (County) for them to better assess the matter before them of granting permission for the drilling of oil and gas wells in the County and provide information as to the hydrogeology of the confined and unconfined aquifers, and possible measures necessary to maintain the integrity of the aquifers.

The Applicant is qualified as a Public Entity and is Rio Grande County, which has de-TABORED making it eligible to receive State Funds.

The County is located in South-Central Colorado in the west-central portion of the San Luis Valley. With a population of 11,982, the County is governed by three County Commissioners who serve for four year terms, with no term limits. Currently serving are Karla Shriver, Doug Davie, and Dennis Murphy. The County covers 913 square miles, or 584,382 acres.

Historically, the County's economy has been heavily dependent upon agriculture, relying on various systems of irrigation. Principal cash crops are potatoes, wheat, and barley, with 7,700 acres of spring wheat; 1,300 acres of oats; and 33,400 acres of alfalfa and native hay. Smaller acreages produce other vegetable crops including spinach, cabbage, carrots, and lettuce. Today's economy is somewhat diversified, with almost one in five jobs in the education sector and 12.7% in the retail sector.

The Vision Statement of The Rio Grande County Plan Framework is as follows:
"Rio Grande County will balance the protection of its agricultural, rural, residential, and outdoor recreational economy with the direction of new growth and development into appropriate areas".

The County has gone through a 2004 Joint Master Plan funded by an Energy Impact Assistance Grant in 2003 from the Department of Local Affairs. The County and the Towns of Monte Vista and Del Norte developed a broad public policy tool for guiding decisions concerning land use and future growth. The Plan divides the County into Stable areas, Opportunity Areas, Joint Consultation Areas, and Community Areas. Goals of the Plan Framework are:

1. To conserve natural resources and preserve the County's cultural heritage
2. To sustain the County's traditional agricultural economy
3. To support the tourism and outdoor recreation economy
4. To appropriately integrate new development into rural areas

45,168 acres or about 8% of the County are designated as Opportunity Area. This is where rural growth is anticipated within the next 5-10 years. Future development is identified as occurring in the following sectors: agriculture, rural commercial and industrial, recreation and tourism, RV parks, airports, and single family residences. Mineral, mining, drilling, and other extractive practices are recognized but are not specifically included in the Plan Framework's Opportunity Areas.

The County is facing the challenge of recent interest in oil and gas exploration and pending requests for drilling permits require due diligence. The proposed Study in this application will provide critical data on the hydrogeologic factors inherent in such activities, enabling the County to weigh potential economic benefits against possible negative effects upon its citizens. The granting of drilling permits requires a thorough understanding of the environmental, economic, and natural resource values which the people of Rio Grande County hold most dear.

The R.G.R.T. is now requesting authorization to distribute $99,564.00 of Rio Grande Basin Funds, as a total WSRA request. The cost estimate is based on figures provided by third party consultants for the necessary Scope of Work, and basically includes well testing, water testing and compensation to the third party consultants.

The principals of the study are, Robert Kirkham, Professional Geologist, Allen Davey,

P.E. and Eric Harmon, P.E., who have all previously worked on the geology and hydrogeology of the San Luis Valley.

At the regular R.G.R.T meeting on May 8, 2012, RGRT Members voted to request funding from SB 2005 – 179:

PROJECT AND AMOUNT REQUESTED	**SOURCE SB 179**
Rio Grande County Hydrologic Study	**BASIN $99,564.00**

There was one dissenting vote by Charles Spielman who made the argument that data needed to only be reviewed from two previously drilled O & G wells, and with communication with those seeking the new well permits, the staff of the Oil & Gas Commission, and local third parties, sufficient information could be gathered to allow the County to make a decision regarding the length of the casing necessary to protect the aquifers. Mr. Spielman made the argument that limited scope of work could be done for $5,000 to $6,000. There was discussion on this proposal that was subsequently put to a vote. The vote resulted in a majority of the Roundtable Members opposing Mr. Spielman's proposal and two votes for his proposal. Attached is a copy of the communication subsequently received from Mr. Spielman further discussing his position on these matters.

The proposed Study will include:

(1) Review, identify and consolidate information from past geological and hydrogeological work that is applicable to the Del Norte/South Fork area. This will begin the process of describing geologic structures and the existence of water within these structures that is tributary to groundwater aquifers and surface streams that are utilized for domestic, municipal, commercial and agricultural purposes;
(2) Expand these findings to include data developed and collected by the oil & gas industry during previous exploration and drilling efforts;
(3) Collect, compile and evaluate data on water wells near the two proposed oil and gas well drilling locations, collecting well construction information, water levels and existing water quality data;
(4) Identify deep water wells in Rio Grande County and nearby areas that may be suitable for future study to better understand the regional hydrogeologic characteristics;
5) Interpret and make recommendations; and
(6) Prepare and deliver a report to Rio Grande County, with data assembled in a GIS format, as appropriate.

On behalf of the R.G.R.T. members, we appreciate the Board's consideration of this request and urge your support to the fullest extent possible. Enclosed are the application

and supporting materials for the Project. If you require additional information, please notify me accordingly.

The R.G.R.T. appreciates the support of the Department of Natural Resources, the Colorado Water Conservation Board and the Interbasin Compact Commission in assisting in meeting the needs of all users of Colorado's water and in fostering intrabasin and interbasin communications and discussions. We believe that the above project will assist in this effort.

Sincerely,

Mike Gibson
Chair, Rio Grande Interbasin Roundtable

Enclosures (2)

cc: County Commissioners, Rio Grande County

May 12, 2012

To: Mike Gibson & RGBRT Members;
Copy to Karla Shriver, Rio Grande County Commissioner

From: Charles Spielman

Subject: My Alternate Proposal
For Geologic Data Gathering and Recommendations
Relative to Potential O/G Exploration Drilling
In the Western San Luis Valley

Mike:

As you know, I have been studying the geology, oil & gas potential, and possible environmental impacts of O/G production in the western San Luis Valley for over a year. Thanks to the information generously provided primarily by Robbie Gries, geological consultant, and Karen Spray, of the COGCC, as well as data from many other sources and in my own files, I've concluded that: (1) there is potential for substantial commercial production of natural gas from carbonaceous Cretaceous shales, as well as conventional oil from other Cretaceous and Jurassic sediments in the area; (2) it is likely that these resources can be produced profitably; and (3) using up-to-date production techniques and reasonable care, environmental impacts and concerns can be held to acceptable minimums. (See Attachment 1)

This information and my conclusions are not unique. I believe there is general consensus among knowledgeable members of the geologic community, oil and gas producers, and COGCC personnel that the Cretaceous formations in the area warrant exploration and possible development; and the associated environmental concerns will be satisfactorily dealt with.

I submit that the key unknown, the most important concern, and perhaps the most likely point of disagreement and contention is whether the several thousand feet of Tertiary volcanic flows, tuffs, breccias, and volcaniclastic sediments overlying the Cretaceous formations should be (and can be) sealed off in O/G wells, and whether and how the O/G producers plan to accomplish this by installing cemented production casing. (See Ref. B below.)

Which is why my alternate proposal is centered around the two areas presently proposed for exploration wells, and the geologic conditions and operating procedures expected at those locations, as follows:

1. Convene a knowledgeable, involved working group to gather and interpret the available data and make appropriate recommendations to Rio Grande County officials and citizens; (See Ref A below.)

2. Determine from existing nearby wells the probable geologic conditions at each site;
3. Obtain from the operators their intended drilling/casing/logging procedures at each site; obtain from COGCC the approved procedures;
4. Arrive at a workable consensus/compromise regarding operating procedures, if there is disagreement among the parties;
5. Obtain pre-drilling water quality samples in a few shallow water or monitoring wells near the proposed O/G wells as selected by the parties.

I have no doubt that the Rio Grande County Hydrogeologic Study, as proposed and approved by the RGBRT at last Tuesday's meeting, will add considerably to the County's knowledge and understanding of the geologic situation and possible drilling procedures and safeguards.

But I am greatly concerned that the County, by proceeding with the study on its own without sufficient input from the COGCC, the O/G operators, homeowners, and environmental interests, will not move the decision-making process significantly closer to the rational conclusions/compromises satisfactory to all the interested parties.

Moreover, I believe it quite likely that, even after the study is completed and reviewed by the County, many conflicts and serious disagreements will remain; and we will have to undertake steps 1-5 about as I've outlined above.

Which is one of the reasons I wanted to put my proposal into writing, along with my rationale for making the proposal, to be reviewed by the other members of the RGBRT. Having received the original proposal only about a day before being asked to consider it did not leave sufficient time for me to put my alternate proposal into writing, or for the members to adequately review and discuss either proposal. That has not been our practice in the past, and I hope it won't be in the future.

One further item: costs. I believe that my alternate proposal would achieve the critical key results, with an expenditure of only about $6,000-$10,000 for consultants' time and expenses. In addition, the extensive cost of the original proposed sampling program, about $37,000, should be considerably reduced, I believe, and the cost should be borne, in my opinion, by the operators.

Mike, I would appreciate your forwarding this to all of the members of the RGBRT for their information and consideration.

Thanks,

Charles Spiel

Reference A: In order to obtain the desired results efficiently, the group should include the following people:

a. Rio Grande County representatives: Rose Vanderpool and one other

b. Members of the geologic/engineering disciplines: Allen Davey, Robbie Gries, Bob Kirkham, and perhaps one or two others

c. Representatives of the COGCC: Karen Spray and one other

d. Representatives of the two operating companies

e. Representatives of local homeowner and environmental groups.

Reference B:There is adequate evidence, from which knowledgeable geologists have concluded that the Tertiary volcanics contain permeable intervals above the valley floor that dip generally easterly into the San Luis Basin, and therefore pollutants introduced into these intervals might eventually flow into and affect deep aquifers in the basin. Refer to: San Luis Valley Confined Aquifer Study (Phase I), by HRS Water Consultants, Inc., June, 1987.

The Cretaceous sediments, however, dip downward generally westerly, below and away from the San Luis Valley. Solutions introduced into these intervals, if they migrate at all, might reasonably be expected to move down and away from the deep aquifers of the valley.

Attachment 1 following: Memo, April 12, 2011: C. Spielman to Mike Gibson & RGBRT members: Oil & Gas Drilling in the Western Part of the SLV-Potential Impacts on Aquifer Water Quality

Attachment 2 following: Memo, November 3, 2011: C. Spielman to J.H. Kremers, Dan A Hughes LP

Virtually all of the potential O&G producing zones underlie at least 4,000-6,000 feet of Tertiary volcaniclastic sediments, volcanic breccias and flows, and tuffs. Generally speaking, this interval constitutes a zone of relatively low permeability separating the potential O&G producing zones from shallow ground water aquifers.

Neither of the two holes drilled in the San Francisco Creek drainage south of Del Norte exhibits much potential for commercial O&G production. They were drilled almost entirely in Tertiary volcanics; only the northernmost hole hit any interval of potential interest (possibly a 260-foot thick section of Dakota sandstone with a

noted possibility of containing uranium oxide; very doubtful, I believe, since it would be extremely unusual that an oxide of uranium would be found in the likely strong reducing environment at depth.).

Hydrofracking Concerns

Much has been said and written regarding fears that cancer or other serious health problems might possibly be caused by exposure (through ground water pollution) to some of the known or unknown constituents of hydrofracking fluids which are a key ingredient in the procedures used by the oil and gas industry to produce natural gas from thick organic shales.

While it can be argued that some of said constituents might be harmful to human health, it appears that these constituents comprise, at most, less than ½% of the total volumn of the hydrofracking fluid; moreover, it is likely that most of this material remains deep underground in the "fracked" formation; and what little might be carried to the surface along with the recovered gas is segregated, stored, and handled according to procedures carefully prescribed and monitored by the COGCC.

Fears have also been expressed about hydrofracking fluids migrating into surface streams or shallow aquifers and thereby exposing humans to the aforementioned cancer-causing compounds. In some areas of the country this may be a valid concern. In the western part of the SLV where the potential hydrofracked intervals are generally at least 4,000-6,000 feet below the surface, migration of hydrofracking fluids up into shallow aquifers seems extremely unlikely given the geologic conditions, and it is not a matter justifying any realistic concern.

I'm not an expert on hydrofracking, by any stretch, but common sense tells me that, based on the above reasoning, and given prudent practice and the geologic environment in the western SLV, there is no rational basis on which to be alarmed or even unduly concerned about cancer or other health effects resulting from exposure to hydrofracking fluids. In this regard it is pertinent to note that, to date, the COGCC has received no documented cases of aquifer pollution or health impacts caused by hydrofracking compounds.

Of course, O&G workers should exercise due diligence and all reasonable care in handling and using hydrofracking compounds in their work in order to avoid unnecessary or risky exposure and to avoid surface spills, which might seep into the ground water.

.

A further note with regard to the residential property owners in the San Francisco Creek drainage: in addition to my basic conclusion that there is probably little to fear from exposure to hydrofracking compounds in general, there is this added

"safety factor." The formations likely to be encountered in further drilling there appear to be most unlikely candidates for hydrofracking.

Pollution Concerns Regarding Shallow Domestic Water Wells

In Colorado, oil & gas producers have compiled an admirable record with regard to preventing significant pollution of shallow ground water aquifers used for domestic water supply. According to the COGCC, there are in excess of 45,000 active O&G wells in the state, and there have been less than a dozen documented cases of significant ground water pollution, all of which have been, or are being, successfully mitigated, except one in northwestern Colorado that resulted in serious health consequences and the COGCC is in the process of levying fines on the operator.

In addition, COGCC rules for O&G well drilling and completion procedures have become even more extensive than in past years. The overall effect of these regulations, as well as the industry's performance under them, is to render the possibility of shallow aquifer pollution extremely unlikely.

Still, continuous monitoring by the RGBRT is warranted to check on the casing installation and cementing procedures and depths used to seal off shallow aquifers and prevent their pollution. Undue degradation of agricultural water must be avoided; and protection of human health in homes near O&G wells is critical. Further, in my opinion, there is an observable tendency for O&G drillers too overlook shallow ground conditions as they concentrate on reaching targets many thousands of feet deep. I believe that, all told, shallow ground water pollution is the weakest link, with the most potential for harm, in the system of protections installed by the COGCC.

What Should Be the RGBRT Position Re O&G Drilling in the Western SLV?

In my opinion, the round table should be generally supportive of further O&G exploration and possible production in the western part of the SLV. We should strongly support regulations and procedures that fully protect our people and aquifers from pollution without creating unwarranted barriers to O&G development.

We should also, I believe, actively support the practice of obtaining a full suite of electric logs of each O&G well to assist in evaluating not only the stratigraphy encountered and the hydrocarbon production potential, but also the hydrologic conditions encountered in the hole.

CHARLES SPIELMAN **Consulting Geological Engineer**
200 Truman Ave., Monte Vista, CO 81144 **719-852-2546 cogspiel@msn.com**

November 3, 2011

J. Henry Kremers
Chief Operating Officer
Dan A. Hughes Company, LP
P O Drawer 669
Beeville, TX 78104

Subject: Hughes' Oil & Gas Exploration,
Western San Luis Valley, Colorado

Dear Sir:

I understand that, in 2012, your company intends to drill an oil & gas exploratory well on a lease in the San Francisco Creek drainage in the western part of the San Luis Valley, Rio Grande County, Colorado.

I'm a strong advocate of oil & gas exploration in the valley. I've worked for over 40 years in the mining business, most of it involved with the development and production of energy commodities – uranium, coal, and oil shale – and I fully understand the potential economic benefit that commercial oil/gas production could provide to the San Luis Valley.

But I'm a valley native and also a member of the Rio Grande Basin Round Table, and I am dedicated to the idea that oil & gas development must be done here using practices that protect our environment and way of life to the maximum extent reasonably practicable.

Neither of these objectives – commercial oil/gas production or minimal environmental concerns - appears to be the likely result of your presently planned exploratory well.

So what I suggest is this: locate your planned exploratory well about 10 miles west or northwest of San Francisco Creek on a site not in a residential development or in a perennial stream valley. Environmental concerns should be, therefore, greatly reduced compared to San Francisco Creek.

And more importantly, based on the logs of some 14 wells I've reviewed in the western San Luis Valley, the potential producing intervals increase northwesterly from practically nil at San Francisco Creek to upwards of 2000 feet or more of Cretaceous Mancos and Lewis shales, and significant thicknesses of Niobrara formation, in addition to the Dakota and Morrison potential. Overlying Tertiary volcanics would be roughly comparable to the presently planned location.

While I appreciate the effort and cost perhaps involved for a revised plan such as I've suggested, it may be that Dan A Hughes Company presently holds leases in the area that are well suited to such a plan. If not, I'd bet that somewhere on the thousands of acres of State, Federal, and private lands west-northwest of your planned San Francisco Creek location, there exists a lease, or sub-lease situation reasonably available…..

…..with a much greater potential for success than your planned San Francisco Creek location.

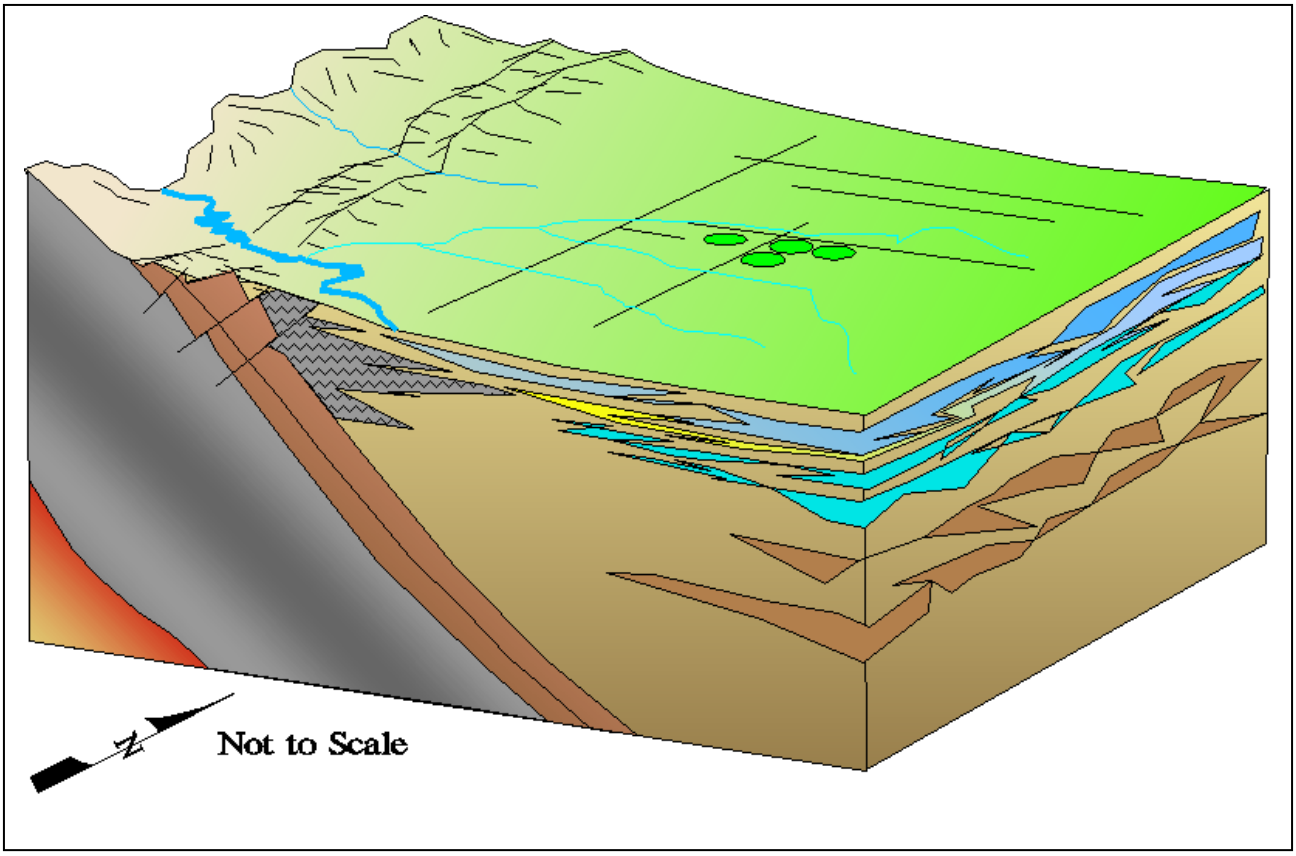
Sincerely,

Charles Spielman

Cc: Robert Holder, Dan A. Hughes Company, LP
Mike Gibson, Chairman, Rio Grande Basin Round Table

RIO GRANDE COUNTY
HYDROGEOLOGIC STUDY

Rio Grande Basin Roundtable



(COVER GRAPHIC: HRS WATER CONSULTANTS, INC.)

Water Supply Reserve Account

Grant Application

MAY 8, 2012

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

RIO GRANDE COUNTY HYDROGEOLOGIC STUDY

Name of Water Activity/Project

RIO GRANDE COUNTY

Name of Applicant

RIO GRANDE BASIN

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

Amount from Statewide Account:	0
Amount from Basin Account(s):	$99,564.00
Total WSRA Funds Requested:	$99,564.00

Application Content

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

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:

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

If you have questions or need additional assistance, please contact Greg Johnson at: 303-866-3441 x3249 or gregory.johnson@state.co.us.

Water Supply Reserve Account – Application Form
Revised December 2011

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

1.

Applicant Name(s):	Rio Grande County			
Mailing address:	Board of County Commissioners Rio Grande County Courthouse 925 6th Street Room 207 Del Norte, CO 81132			
Taxpayer ID#:	84-6000800			
Primary Contact:	Karla Shriver	Position/Title:	Commissioner	
Email:	Karla.shriver@gmail.com			
Phone Numbers:	Cell: 719-850-5808	Office:	(719) 657-2744	
Alternate Contact:	Suzanne Benton	Position/Title:	County Administrator	
Email:	sbenton@riograndecounty.org			
Phone Numbers:	Cell: 719-850-1459	Office:	719-657-2744	

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

X	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.

3. Provide a brief description of your organization

Governance: Rio Grande County (the County) is located in South-Central Colorado in the west-central portion of the San Luis Valley. With a population of 11,982, the County is governed by three County Commissioners who serve for four year terms, with no term limits. Currently serving are Karla Shriver, Doug Davie, and Dennis Murphy. The County covers 913 square miles, or 584,382 acres.

Economy: Historically, the County's economy has been heavily dependent upon agriculture, relying on various systems of irrigation. Principal cash crops are potatoes, wheat, and barley, with 7,700 acres of spring wheat; 1,300 acres of oats; and 33,400 acres of alfalfa and native hay. Smaller acreages produce other vegetable crops including spinach, cabbage, carrots, and lettuce. Today's economy is somewhat diversified, with almost one in five jobs in the education sector and 12.7% in the retail sector.

Vision: The Vision Statement of The Rio Grande County Plan Framework is as follows:
Rio Grande County will balance the protection of its agricultural, rural, residential, and outdoor recreational economy with the direction of new growth and development into appropriate areas.

Planning: Funded by an Energy Impact Assistance Grant in 2003 from the Department of Local Affairs, the County and the Towns of Monte Vista and Del Norte developed the 2004 Joint Master Plan, a broad public policy tool for guiding decisions concerning land use and future growth. The Plan divides the County into Stable areas, Opportunity Areas, Joint Consultation Areas, and Community Areas. Goals of the Plan Framework are:

1. To conserve natural resources and preserve the County's cultural heritage
2. To sustain the County's traditional agricultural economy
3. To support the tourism and outdoor recreation economy
4. To appropriately integrate new development into rural areas

Growth: 45,168 acres or about 8% of the County are designated as Opportunity Area. This is where rural growth is anticipated within the next 5-10 years. Future development is identified as occurring in the following sectors: agriculture, rural commercial and industrial, recreation and tourism, RV parks, airports, and single family residences and manufacture/mobile homes on a minimum of two acres. Mineral, mining, drilling, and other extractive practices are recognized but are not specifically included in the Plan Framework's Opportunity Areas.

The Challenge: Recent interest in oil and gas exploration and pending requests for drilling permits require due diligence. The studies proposed in this application will provide critical data on the hydrogeologic factors inherent in such activities, enabling the County to weigh potential economic benefits against possible negative effects upon its citizens. The granting of drilling permits requires a thorough understanding of the environmental, economic, and natural resource values which the people of Rio Grande County hold most dear.

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

   The same entity is both 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.

   [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.

The County completed a "De-Brucing" process in 1999, so there are no TABOR issues involved.

Water Supply Reserve Account – Application Form
Revised December 2011

Part II. - Description of the Water Activity/Project

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

XX	Nonconsumptive (Environmental or Recreational)
	Agricultural
	Municipal/Industrial
	Needs Assessment
	Education
	Other Explain:

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

Developing hydrogeologic data so that the County is better prepared to

- Protect water quality in the County and beyond
- Eliminate human-caused risk to the confined and unconfined aquifers
- Preserve surface and underground water sources for consumptive and nonconsumptive uses
- Reduce the risk of environmental damage and pollution
- Safeguard the County's irrigation-dependent agricultural economy

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

XX	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)
XX	Other -- Explain: Confined/unconfined aquifers of the San Luis Valley

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

Latitude: (various) Longitude: (various)

6. 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.

(next page)

The Project Goal: The goal of this study is to provide hydrogeological information in the vicinity of two currently proposed oil wells that will be useful to the Rio Grande County Commissioners and others. This information will assist the Commissioners and others in judging whether the health, safety and welfare of present and future residents of the County, in relationship to the water quality of ground-water aquifers, will be reasonably protected by proposed well construction plans for the proposed oil wells. The results from this study will also be useful in the consideration of possible future proposed oil or gas wells and furthering the general understanding of subsurface water resources in the San Luis Valley and the eastern San Juan Mountains.

Collaborative Context: On February 29, 2012, Governor Hickenlooper created a special Task Force to clarify and better coordinate the regulatory jurisdiction between state and local governments. The purpose is to create a collaborative process through which issues of local concern can be resolved without requiring litigation or new legislation, encouraging local governments to designate a Local Government Designee (LGD) and to participate in the Colorado Oil and Gas Conservation Commission's (COGCC's) rules on substantive issues listed in the Executive Order. In 2009, Rio Grande County, ahead of the curve, appointed its Land Use Administrator, Rose Vanderpool, as LGD. The County is committed to maintaining an open and collaborative relationship with COGCC, BLM, private parties, and all entities involved as it considers granting drilling permits for exploratory and extractive activities.

Current Challenge: Today the County is dealing with a renewed interest in oil and gas exploration and the potential for increased drilling activity within its boundaries. Three specific cases are of concern:

- Dan A. Hughes Company LP San Francisco Creek #1 proposed well location: Latitude 37.607890 Longitude -106.377440 -- The Dan A. Hughes application to drill permit (ADP) is pending approval at the state/federal level. This wildcat exploration is awaiting determination from the COGCC and the Bureau of Land Management (BLM). Rio Grande County will not accept a conditional use permit application until the operator has completed and complied with all state and federal requirements.
- First Liberty Energy Inc. Basin #1 proposed well location: Latitude 37.726122 Longitude -106.425207 -- The County has asked the COGCC to delay action/approval of The First Liberty Energy, Inc. Basin #1 well permit and any other pending permits, until a thorough hydrogeologic study is completed. (Exhibit C).
- The proposed location of the Basin #1 well is approximately 620 feet from the old Jynnifer well (there appears to be some discrepancy in the exact location of the Basin #1 proposed well). The County is concerned that the COGCC has not reclaimed this site in a timely manner and has not enforced its own regulations to protect the citizens of Rio Grande County. The old Jynnifer Well has never been reclaimed; the tanks need to be demobilized; and BTEX testing needs to be performed prior to the County considering any further drilling operations. The County is gravely concerned that for the past fifteen to twenty years there has been clearly visible seepage of some unknown substance onto the ground.

Use of Funds: This application requests $99,564.00 to (1) Review, identify and consolidate information from past geological and hydrogeological work that is applicable to the Del Norte/South Fork area. This will begin the process of describing geologic structures and the existence of water within these structures that is tributary to groundwater aquifers and surface streams that are utilized for domestic, municipal, commercial and agricultural purposes; (2) Expand these findings to include data developed and collected by the oil & gas industry during previous exploration and drilling efforts; (3) Collect, compile and evaluate data on water wells near the two proposed oil and gas well drilling locations, collecting construction information, water levels and existing water quality data; (4) Identify deep water wells in Rio Grande County and nearby areas that may be suitable for future study to better understand the regional hydrogeologic characteristics; 5) Interpret and make recommendations; and (6) Prepare and deliver a report to Rio Grande County, with data assembled in a GIS format, as appropriate, providing GIS Shapefiles.

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]

   By performing the hydrogeological tests proposed in this project, this water activity has no effect whatsoever on Colorado's current system of allocating water, nor does it in any manner affect the existing water rights adjudication system. The purpose of this study is rather to support those systems and those rights, providing valuable tools to the County which will enhance its ability to act impartially, fairly, and with full knowledge of available data as it determines whether to award drilling permits. Rather than causing any injury to vested water rights or decreed conditional water rights, this project provides a significant level of protection by increasing the County's oversight and vigilance in its efforts to protect water quality within the County and maintain the integrity of the San Luis Valley's confined and unconfined aquifers.

   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.

   This information is included in the letter from the Rio Grande Basin Roundtable Chair, which accompanies this proposal.

[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.

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.

This information is included in the letter from the Rio Grande Basin Roundtable Chair.

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

This request is for funds from **the Rio Grande Basin WSRA Account.**

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.**

This request is for funds from **the Rio Grande Basin Roundtable fund** of the Water Supply Reserve Account, so there is no requirement to meet these Evaluation Criteria.

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

[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.

This request is for funds from **the Rio Grande Basin Roundtable fund** of the Water Supply Reserve Account, so there is no requirement to demonstrate a match.

However, please note that the scientists who will perform this study submit the following "Project Justification," attesting to the regional urgency, statewide significance, and scientific impact this of proposed project:

> **Project Justification:** Although there have been many studies of ground water in the San Luis Valley (SLV), some of which are still ongoing, and some studies have been done relating to the geology and oil and gas potential of the eastern San Juan mountains, few scientific investigations have sought to determine the existence and characteristics of potential ground water pathways between the deep strata targeted by oil and gas exploration, and the shallower strata that provide water to domestic wells in western Rio Grande County and that may provide ground water recharge to the confined aquifer layers of the western SLV. This study seeks to bring together and assess the adequacy of the existing studies, identify data gaps, and begin to develop new data to further understand the hydrogeologic relationships of this critical area.

[Application requirements for this section of the application form have been deleted, as they do not apply.]

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.

This project will not involve acquisition or use of existing water rights. Information will be assembled and provided to local governments and state regulators that will improve resource management decisions, protect and enhance existing water rights, and ensure the continued availability of high quality water for existing and future domestic, municipal, and commercial uses.

The water bodies that may be most directly affected by the resource management decisions include San Francisco, Pinos and Old Woman Creeks, all of which are tributary to the Rio Grande in the vicinity of Del Norte, Colorado.

Further, and perhaps more directly, domestic, municipal, commercial and agriculture wells in these drainages and possibly extending easterly within the westerly portion of the San Luis Valley could be affected. Water in San Francisco and Pinos Creeks is diverted by very senior water rights that are used for irrigation. The Town of Del Norte residents obtain their water supply from municipal wells near the Rio Grande between the confluence of San Francisco Creek and Pinos Creek. Old Woman Creek is not commonly a live stream to its confluence with the Rio Grande, but the drainage does enter the Rio Grande in this vicinity.

Rio Grande Basin: Rio Grande County is within the Rio Grande Drainage Basin. The Rio Grande Drainage Basin drains approximately 8000 square miles in south central Colorado, and accounts for 7.2 percent of Colorado's surface area. A major tributary to the Rio Grande in Rio Grande County is the South Fork of the Rio Grande. The Alamosa River almost reaches the Rio Grande, but is not tributary.

Steams within the County: The County has the following streams with water rights within its boundaries: Alder Creek, Bear Creek, Beaver Creek, Bennett Creek, Burro Creek, Cross Creek, East Bellows Creek, East Fork Pinos Creek, Elk Creek, Embargo Creek, Kelly Creek, Lost Mine Creek, Middle Fork San Francisco Creek, Park Creek, Pinos Creek, Race Creek, Rock Creek, San Francisco Creek, Trout Creek, West Alder Creek, West Fork Pinos Creek, and West Fork San Francisco Creek.

Irrigation: Rio Grande County has been irrigated with a system of ditches and canals since 1866. The Rio Grande Canal was constructed in 1881 north of The Rio Grande, followed by the Monte Vista Canal south of the river. Additional irrigation is handled by the Empire, Farmers Union, Travelers, Centennial and San Luis Valley canals, and the Prairie Ditch. Groundwater is generally obtainable on the valley floor, but its availability varies in the mountain area. The San Luis Valley Water Conservancy District transports water through a ditch over the Continental Divide to a storage reservoir to cover deficiencies from well withdrawal in the Rio Grande drainage.

Water Quality: A portion of the Rio Grande and its tributaries above Del Norte are gold medal fisheries. The County intends to keep it that way. Water quality of the Alamosa River, however, has been significantly impacted by mining activities in the 1980's by Summitville Consolidated Mining Company, Inc., which ran a large-scale surface gold mining operation using the heap-leach process. The mining, milling, and recovery processes greatly increased the exposure of pyrite to oxygen and water, causing increased acidity, and the heap leach contributed to dissolved metals which eventually reached the headwaters of the Alamosa River. Much of the aquatic life and downstream irrigated farmlands were severely impacted, resulting in the EPA declaring Summitville Mine a Superfund site. Thanks to the EPA, CDPHE and persistent hard work of Alamosa Riverkeeper, water quality in the Alamosa now supports a fishery at Terrace Reservoir and CWCB funding has been secured to help create an Alamosa instream flow.

Floodplain: The Environmental Conditions map (Exhibit B) shows the areas of the County lying within Federal Emergency Management Agency floodplain areas. The areas located within the 100-year floodplain present development constraints, as flooding is likely in these areas.

Stream Buffer Ordinance: One of the planning tools of the Rio Grande Headwaters Restoration Project is a stream buffer ordinance for Rio Grande County. The draft ordinance proposes a setback and review process for uses and activities within a buffer area adjacent to the river.

Wetlands: As indicated by National Wetland Inventory mapping shown on the Environmental Conditions map, Rio Grande County has scattered areas of wetlands, predominantly along the Rio Grande corridor and south of Monte Vista. These wetlands are an important environmental resource for Rio Grande County. They act as a sponge to absorb floodwaters, as a filter to clean water, provide habitat for wildlife and attract a number of bird species. The annual Monte Vista Crane Festival and other bird watching activities contribute significantly to the tourism economy.

River Corridor Areas: The County is explicit in its policies to protect the natural character of the Rio Grande and the river corridors within its boundaries. The Framework Plan identifies 17,120 acres within the Rio Grande floodplain as "River Corridor Areas." The intent of this designation is "to preserve a valuable environmental resource, provide for appropriate residential development and recreational opportunities, and ensure public safety." This study is motivated not only by the letter of the County's Framework Plan policies, but also by the spirit of its citizens, who so carefully crafted them.

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

A primary focus of this water activity is to collect, compile, and evaluate the body of available hydrogeologic knowledge, and to develop new data which will help to inform and guide the County as it responds to requests for drilling permits.

Related Studies: Following is a preliminary bibliographical reference to related studies. Other sources may be added as investigations continue.

Brendle, D., 2002, Geophysical Logging to Determine Construction, Contributing Zones, and Appropriate Use of Water Levels Measured In Confined-Aquifer Network Wells, San Luis Valley, Colorado, 1998-2000. USGS WRI-02-4058. U.S. Geological Survey in cooperation with the CWCB and CDWR. 62p.

Brister, B.S., 1990, Tertiary sedimentation and tectonics: San Juan Sag-San Luis Basin region, Colorado and New Mexico: unpublished Ph.D. thesis, New Mexico Institute of Mining and Technology, Socorro, 267 p.

Brister, B.S., and Chapin, C.E., 1994, Sedimentation and tectonics of the Laramide San Juan Sag, southwestern Colorado: The Mountain Geologist, v. 31, p. 2-18.

Brister, B.S., and Gries, R.R., 1994, Tertiary stratigraphy and tectonic development of the Alamosa Basin (northern San Luis Basin), Rio Grande Rift, south-central Colorado, *in* Keller, G.R., and Cather, S.M., eds., Basins of the Rio Grande Rift; Structure, stratigraphy, and tectonic setting: Geological Society of America Special Paper 291, p. 39-58.

Burroughs, R.L., 1981, A summary of the geology of the San Luis Basin, Colorado-New Mexico, with emphasis on the geothermal potential for the Monte Vista Graben: Colorado Geological Survey, Special Paper 17, 30 p.

Gries, R.R., 1985, San Juan Sag: Cretaceous rocks in a volcanic-covered basin, south central Colorado: The Mountain Geologist, v. 22, no. 4, p. 167-179.

Gries, R.R., 1989, San Juan Sag; Oil and gas exploration in a newly discovered basin beneath the San Juan volcanic field, *in* Lorenz, J.C., and Lucas, S.G., eds., Energy frontiers in the Rockies: Albuquerque Geological Society, New Mexico, p. 69-78.

Gries, R.R., and Brister, B.S., 1989, New interpretations of seismic lines in the San Luis Valley, south-central Colorado, *in* Harmon, E.J., ed., Water in the valley: Colorado Ground-Water Association, 8th annual field trip, p. 241-254.

HRS Water Consultants, 1987, San Luis Valley confined aquifer study, phase one, final report: unpublished report prepared for the Colorado Water Resources & Power Development Authority, Denver, Colorado, by HRS Water Consultants, Lakewood, Colorado

HRS Water Consultants, Inc., 1999, Assessment of Ground Water Recharge from the San Juan Mountains to the San Luis Valley. Unpublished consultants' report prepared for Davis Engineering and the Rio Grande Water Conservation District.

HRS Water Consultants, 2002, RGDSS Task 32 Final Report: Hydrogeologic Mapping and Data Assessment of the San Luis Valley. Unpublished consultants' report prepared for the Colorado Water Conservation Board and the Colorado Division of Water Resources.

Huntley, D., 1976, Ground water recharge to the aquifers of northern San Luis Valley, Colorado—A remote sensing investigation: unpublished Ph.D. thesis, Colorado School of Mines, Golden, 240 p.

Powell, W.J., 1958, Ground-water resources of the San Luis Valley, Colorado: U.S. Geological Survey, Water-Supply Paper 1379, 284 p.

Siebenthal, C.E., 1910, Geology and water resources of the San Luis Valley, Colorado: U.S. Geological Survey, Water-Supply Paper 240, 128 p.

Permitting Issues -- Federal: The Obama administration recently issued a proposed rule governing hydraulic fracturing for oil and gas on public lands that will for the first time require disclosure of the chemicals used in the process. However, in a significant concession to the oil industry, companies will have to reveal the composition of fluids only **after they have completed drilling, not before.** In this County people do not need a long memory to recall the Summitville disaster, so it is disappointing to see that the previous requirement, which would have required disclosure of the chemicals 30 days before a well could be started, have been removed by this proposed new rule. (http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=293916.)

Permitting Issues – State: In 2004, the Rio Grande Water Conservation District (RGWCD) supported legislation (SB04-222) that granted the State Engineer wide discretion to permit the continued use of underground water consistent with preventing material injury to senior surface water rights and ensuring sustainability of the unique aquifer systems in the San Luis Valley. This effort, undertaken by RGWCD as well as other water interests in the San Luis Valley, was an attempt to reduce the negative economic impacts experienced by other basins as the result of strict priority administration of groundwater by the state.

Permitting Issues – San Luis Valley: The bill became law, as section 37-92-501. It prevents the State Engineer from curtailing groundwater withdrawals so long as those withdrawals are (1) included in a groundwater management subdistrict and (2) are made pursuant to the subdistricts' properly adopted and approved groundwater management plan.

Permitting Issues – Rio Grande County: Exhibit C contains important documentation, copies of COGCC forms, and communications between Rio Grande County's LGD and the COGCC. Frequent references are made to the Rio Grande County Oil and Gas Regulations, calling attention to numerous errors, omissions, and the apparent laxity or refusal of the COGCC to enforce its own regulations. Exhibit C includes the LGD's summary of recommendations to the COGCC. In addition, LGD Rose Vanderpool states that "A comprehensive study of the Conejos Formation/aquifer and all water conduits in the San Luis Valley should be done before any new drilling occurs in Rio Grande County. The San Luis Valley is unique, and should be acknowledged in setting high standard practices to protect the citizens who live here." She continues, "In a rural community the impact of this type of industry is very impeding to the ways of life here in the San Luis Valley. [For t]he wells that serve the residents near the proposed [drilling sites] THE WATER NEEDS TO BE PROTECTED!" She calls for the COGCC to support Rio Grande County Regulations and to enforce the strictest regulations to safeguard the health and safety of the County and the Rio Grande Basin as a whole. A careful review of the material in Exhibit C is encouraged.

The Development of Subdistricts: The County supports the development of subdistricts in the San Luis Valley, as they help to protect senior surface water rights and to ensure the viability of the Valley's aquifer systems – unique in the world as vast high-altitude underground reservoirs. They work to preserve the Valley's local economy, which is highly dependent upon sophisticated modern irrigating technologies, while at the same time protecting senior vested rights and sustaining the aquifer.

Sustainability: Section 37-92-501 allows the State Engineer to recognize this subdistrict approach and specifically requires three critical provisions. Any water management plan adopted by a subdistrict must ensure that: (1) unconfined and confined aquifers shall be regulated so as to maintain a sustainable water supply in each system; (2) injurious stream depletions must be replaced in accordance with the rules adopted by the State Engineer, and the state shall not permit the expanded use of groundwater; (3) the plans shall not unreasonably interfere with the state's ability to fulfill its obligation under the Rio Grande Compact.

Jurisdiction: The Water Court also retains jurisdiction over any approved groundwater management plan to ensure that the plan is operated in accordance with its decree and that injury is prevented. All of these criteria honor, maintain, support and sustain Colorado's prior appropriation doctrine.

Drought, Scarcity, and the Valley's Water Crisis: The San Luis Valley's unconfined aquifer this year sank to its lowest level since water officials began monitoring it in 1976. High commodity prices and a below-average snowpack prevented the normal recharge of the shallower of the Valley's two major groundwater bodies. They have not bounced back, as they usually do. The Valley is in a deep water crisis.

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.

(Exhibits A, B, and C follow the signature page)

REPORTING AND FINAL DELIVERABLE

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

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

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

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

Signature of Applicant:

Print Applicant's Name:

Project Title:

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

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

Exhibit A

Statement of Work

WATER ACTIVITY NAME – RIO GRANDE COUNTY HYDROGEOLOGIC STUDY

GRANT RECIPIENT – RIO GRANDE COUNTY

FUNDING SOURCE – RIO GRANDE BASIN ROUNDTABLE – WSRA ACCOUNT

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)

Rio Grande County is experiencing a renewed interest in oil and gas exploration and the potential for multiple future applications for drilling permits. The goal of this study is to provide hydrogeological information in the vicinity of two currently proposed oil wells that will be useful to the Rio Grande County Commissioners and others. This information will assist the Commissioners and others in judging whether the health, safety and welfare of present and future residents of the County, in relationship to the water quality of ground-water aquifers, will be reasonably protected by proposed well construction plans for the proposed oil wells. The results from this study will also be useful in the consideration of possible future proposed oil or gas wells and furthering the general understanding of subsurface water resources in the San Luis Valley and the eastern San Juan Mountains.

OBJECTIVES
List the objectives of the project

Although there have been many studies of ground water in the San Luis Valley (SLV), some of which are still ongoing, and some studies have been done relating to the geology and oil and gas potential of the eastern San Juan mountains, few scientific investigations have sought to determine the existence and characteristics of potential ground water pathways between the deep strata targeted by oil and gas exploration, and the shallower strata that provide water to domestic wells in western Rio Grande County and that may provide ground water recharge to the confined aquifer layers of the western SLV. This study seeks to bring together and assess the adequacy of the existing studies, identify data gaps, and begin to develop new data to further understand the hydrogeologic relationships of this critical area.

Task 1-Review of Past Work

The objective of this task is to review, identify and consolidate information from past geological and hydrogeological work that is applicable to the Del Norte/South Fork area. This will begin the process of describing geologic structures and the occurrence and movement of ground water within these structures that is tributary to groundwater aquifers and surface streams that are used for domestic, municipal, commercial and agricultural purposes in the eastern San Juan region and the confined aquifer layers of the San Luis Valley. Following is a list of past work that will be incorporated into this task:

1.1 1987 CWRPDA HRS Deep Aquifer Study, including a specific study of an oil and gas exploratory well in San Francisco Creek watershed (HRS, 1987).
1.2 David Huntley's Thesis on ground water recharge to the Closed Basin of the San Luis Valley.
1.3 Dr. Alan Mayo's Water Quality Report & Data on confined aquifer characteristics by environmental isotope studies.
1.4 Robbie Gries' Papers on the geology and petroleum potential, San Juan Sag / eastern San Juan region.
1.5 Brian Brister's Thesis and Papers on the geology of the San Juan Sag and San Luis Basin.
1.6 RGDSS Information, including Task 32 final report (aquifer layer tops, bases, thicknesses); confined aquifer piezometer installations and aquifer tests near Monte Vista and the MV NWR.
1.7 HRS study for Davis Engineering and RGWCD on eastern San Juan ground water recharge to the SLV (2000)
1.8 Past gain and loss studies of the flow in San Francisco Creek.

1.9 Existing water quality data of surface water in the stream.

1.10 USGS data regarding deep aquifer production depths (Brendle, D., 2002)

1.11 Recent (2011) USGS study on ground water recharge in eastern San Juan Mountains

1.12 Others.

Task 2 - Collect, compile and evaluate existing oil & gas data

This task is an expansion of the previous task to include data that has been developed and collected by the oil & gas industry during their previous exploration and drilling efforts. Approximately 15 oil or gas wells have been drilled in and near Rio Grande County in the past, and several seismic lines have been run across parts of the County. 15.

2.1 Collect and compile data from Colorado Oil and Gas Commission, and Denver Earth Resources Library if needed.

2.2 Interpret geophysical logs from oil and gas wells. Pick formation tops. Evaluate logs for aquifers in the Conejos Formation and perhaps underlying formations. Estimate TDS of water within the formations of interest. Identify potential zones of fracture permeability. If possible estimate porosity and permeability.

2.3 Collect and compile water quality data and formation permeability from drill stem tests conducted in the oil and gas wells.

2.4 Determine availability of seismic data and review interpretations.

Task 3 - Collect, compile and evaluate data on water wells near the two proposed oil & gas well drilling locations.

This task will focus on locating existing water wells that are near the currently proposed drilling sites and collecting construction information, water levels and existing water quality from the wells.

3.1 Location of wells.

3.2. Depth of wells.

3.3. Completion information, including cemented (grouted) depth intervals and slotted or screened intervals.

3.4. Static and final pumping water levels and pumping rates reported by driller.
Collect U.S. Geological Survey data and Colorado DWR / CWCB data on water quality
Note any quality-related characteristics of the water noted by driller or well owner, including elevated temperature, turbidity, color, odor, or taste

3.5. Sample approximately 40 selected wells for water quality parameters such as major and minor ions, alkalinity, SAR, BTEX, dissolved gases, and perhaps total organic carbon and total petroleum hydrocarbons.

3.6. Measure field parameters of selected wells, such as conductivity, total dissolved solids, pH, and temperature.

3.7. Measure water levels in sampled wells where feasible.

Task 4 - Collect, compile and evaluate data on deeper water wells in and near Rio Grande County.

This task will be an expansion of the previous task focusing on selected deeper water wells located beyond the proposed oil and gas exploratory drilling sites. The purpose of this task is to identify deep water wells in the eastern San Juan mountain / foothills region of Rio Grande County and nearby areas that may be suitable for future study to better understand the regional hydrogeologic characteristics.

4.1 Location of wells.

4.2 Depth of wells.

4.3 Completion information. Top & bottom of screened interval and cemented (grouted) depth intervals. Indicators of groundwater movement, including reported depth zones of water production and non-production; static and pumping water level, pumping rate, and the presence of cascading water in the well

4.4 Water levels reported by drillers, Make field measurements if budget and well conditions permit.

4.5 Compile existing water quality data from previously collected samples, and/or collect and analyze samples from these deeper wells if budget permits.

4.6 Evaluation of these wells for future sampling and water level measurements.

4.7 Change in head

Task 5 - Data Interpretation and Recommendations

5.1. Once the study review and data collection tasks are well under way and most of the studies and data are in hand, the investigation team will interpret the data to assess several characteristics:

- Potential subsurface pathways of ground water movement between the deeper strata targeted by oil and gas exploration, and the shallower strata (largely within the Conejos Formation) that comprise aquifers to domestic wells in the mountains and foothills areas of Rio Grande County.

- The existing water quality of a representative number of water wells in the potential oil and gas exploration areas.

- Estimates of the directions of movement, and (if the data allow) estimates of the rate of movement of ground water from the oil and gas exploration areas to the confined aquifer of the western San Luis Valley.

- Mapping, to the extent the data allow, will provide an estimate of likely future oil and gas exploration areas, and the potential vulnerability of shallower strata to ground water contamination.

5.2 From these interpretations, the study team will develop a set of recommendations to the Commissioners of Rio Grande County. The study teams' recommendations will become part of the final report document of this study. Based on our present knowledge, we envision the recommendations to include the following:

- Recommended oil and gas well drilling / completion /testing precautionary measures (if judged to be needed) to protect against contamination of surface water and near-surface (i.e. alluvial) ground water within the immediate watershed.
- Recommended longer-term water quality baseline studies to establish a fund of information against which to compare post-drilling water quality.
- Recommended longer-term hydrogeologic investigations designed to fill significant gaps in the knowledge base about ground water occurrence and movement of significance to Rio Grande County.
- Recommended measurements, water quality sampling, or other short-term activities to be undertaken by the County, by individual well owners, or by others, before, during, and after exploratory oil and gas drilling.
- Other recommendations may be included depending upon the findings of the previous study tasks and the severity of the data gaps that are encountered.

Task 6 – Final Product

This task will assemble and present collected data in a report format including charts, maps, geologic cross sections and tabulations. The final report will be produced in hard copy and in digital format, and data will be entered into a GIS.

6.1.1 Prepare and deliver report.
Prepare a report that includes data collected in each of the previous tasks and provides the reader with explanations, interpretations and significance of the information included.

6.1.2 Prepare at least one east-west geologic cross section extending across Rio Grande County and if sufficient information is available prepare one or more north-south cross sections. Hydrogeological information will be incorporated where appropriate.

6.1.3. Prepare structure contour maps showing the top of the relevant formations.

6.1.4. Prepare isopach (thickness) maps for the relevant geologic formations.

6.2.0 Prepare GIS shapefiles, spreadsheet and database formats as appropriate.

6.2.1. Prepare one or more maps that depict interpreted ground water travel paths relevant to protection of ground water resources.

6.2.2. Prepare one or more maps that depict any localities, watersheds, or aquifers that the study team concludes are particularly vulnerable to contamination due to oil and gas exploration or production. Include written recommendations (developed in Task 5) as part of the final report.

6.3.0. Provide printed and digital copies of all information to County.

6.4.0. Create a PowerPoint program and present to the County and the public the findings and recommendations of the study team, answering questions.

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.

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.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

(next page)

Rio Grande County Hydrogeologic Study Budget

TASK	Description	Labor												Expenses						TOTAL
		Bob Kirkham		Allen Davey		Eric Harmon		"tech"		GIS		petrophysics		sample analysis		Travel		equipment & misc		
		Rate =	$110	Rate =	$130	Rate =	$155	Rate =	$85	Rate =	$85	Rate =	$200	Rate =	$500	Rate =	$0.70	Rate is Lump Sum		
		Hrs.	Extension	Hrs.	Extension	Hrs.	Extension	Hrs.	Extension	Hrs.	Extension	Hrs.	Extension	Numbe	Extension	Miles	Extension	Type	Extension	
1	Review past work	16	$1,760	16	$2,080	8	$1,240		$0		$0		$0		$0		$0			
2.1	collect O&G data	16	$1,760		$0		$0		$0		$0		$0		$0		$0			
2.2	Interpret logs	24	$2,640		$0	4	$620		$0		$0	40	$8,000		$0		$0			
2.3	DSTs	12	$1,320		$0	4	$620		$0		$0		$0		$0		$0			
2.4	avail. of seismic	8	$880		$0		$0		$0		$0		$0		$0		$0			
3.1	H_2O well location	0	$0	4	$520		$0	2	$170		$0		$0		$0		$0			
3.2	depths	0	$0	2	$260		$0	2	$170		$0		$0		$0		$0			
3.3	completion info	0	$0	2	$260		$0	2	$170		$0		$0		$0		$0			
3.4	water levels	0	$0	2	$260		$0	2	$170		$0		$0		$0		$0			
3.5	sample wells	60	$6,600		$0		$0	60	$5,100		$0		$0	40	$20,000	1000	$700	misc equip	$150	
3.6	field parameters	20	$2,200		$0		$0	20	$1,700		$0		$0		$0		$0	multimeter	$500	
3.7	measure W.L.	0	$0		$0		$0		$0		$0		$0		$0		$0			
4.1	location deep wells	0	$0	4	$520	4	$620	4	$340		$0		$0		$0		$0			
4.2	depths	0	$0	2	$260		$0	2	$170		$0		$0		$0		$0			
4.3	completion info	0	$0	2	$260		$0	2	$170		$0		$0		$0		$0			
4.4	water levels	0	$0	2	$260		$0	2	$170		$0		$0		$0		$0			
4.5	H2O quality data	0	$0		$0		$0		$0		$0		$0		$0		$0			
4.6	evaluation	8	$880		$0	8	$1,240		$0		$0		$0		$0		$0			
4.7	change in head	12	$1,320		$0	4	$620		$0		$0		$0		$0		$0			
5.1	Interpret data		$0		$0	24	$3,720		$0		$0		$0		$0		$0			
5.2	Prepare recos.	12	$1,320	8	$1,040	8	$1,240		$0		$0		$0		$0		$0			
6.1	prepare report	60	$6,600	30	$3,900	32	$4,960		$0		$0		$0		$0		$0	Printing	$300	
6.2	GIS shapefiles	10	$1,100	2	$260		$0		$0	48	$4,080		$0		$0		$0			
6.3	printing/digital files	8	$880	2	$260		$0		$0	8	$680		$0		$0		$0			
6.4	PowerPoint	12	$1,320	4	$520	4	$620		$0		$0		$0		$0	120	$84			
subtotal		278	$30,580	82	$10,660	100	$15,500	98	$8,330	56	$4,760	40	$8,000	40	$20,000	1120	$784		$950	
																			Total =	$99,564

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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.

After NTP / TASK	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12
1 Review of Past Work	X	X										
2 Existing Oil/Gas Data		X	X	X								
3 Water Wells Near Sites		X	X	X	X	X	X					
4 Deeper Wells					X	X	X					
5 Interpret Data				X	X	X	X	X				
6 Final Product/Study									X	X	X	X
Final Report to CWCB											X	X

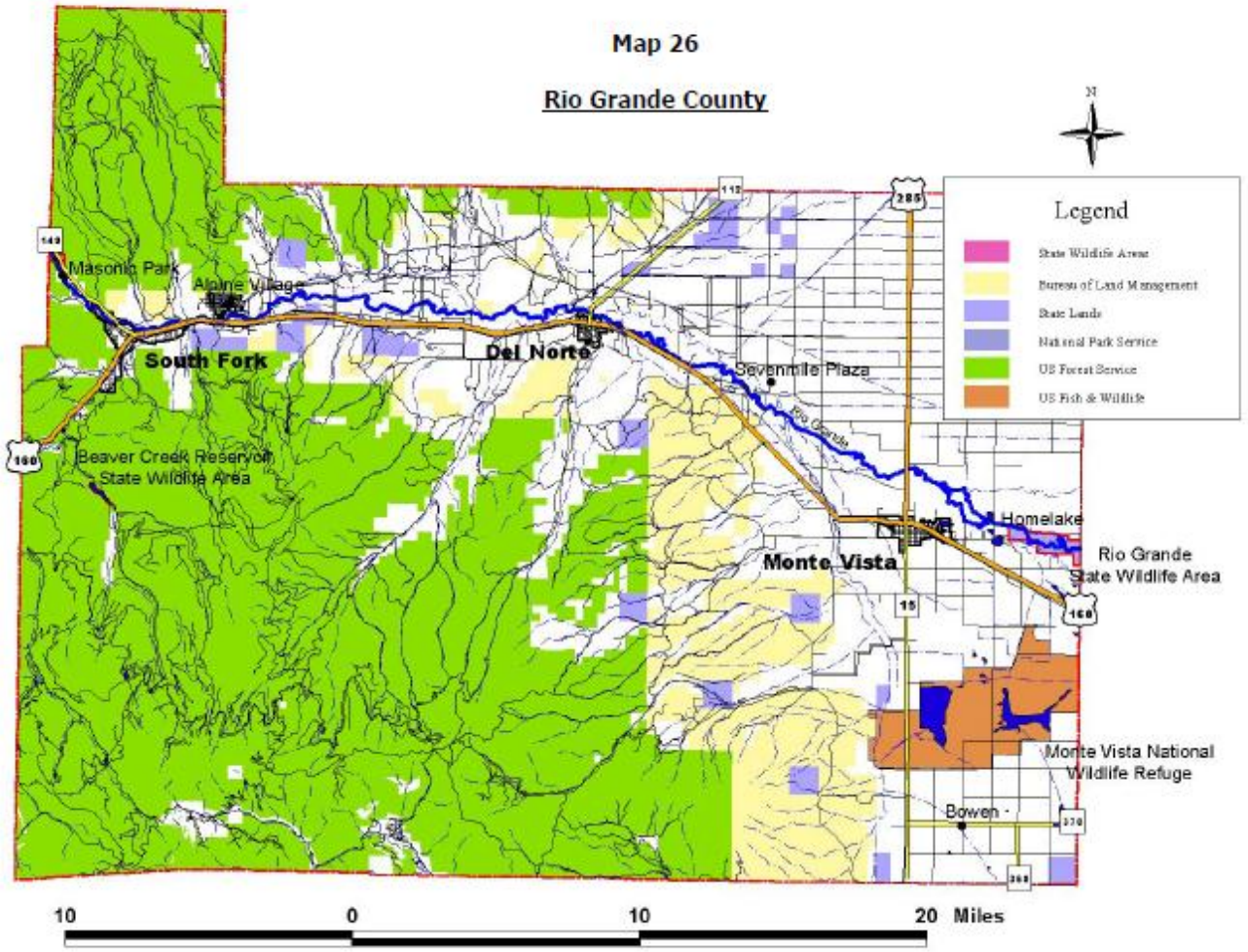
Exhibit B

PROJECT MAP and COUNTY MAPS

1. Project Map
2. Rio Grande County Environmental Conditions Map
3. Rio Grande County Existing Land Use Patterns
4. Rio Grande County Plan Framework
5. Del Norte Conejos Formation (excerpts from text & map HRS Water Consultants, 1987, San Luis Valley confined aquifer study, phase one, final report: unpublished report prepared for the Colorado Water Resources & Power Development Authority, Denver, Colorado, by HRS Water Consultants, Lakewood, Colorado

Map 26

Rio Grande County



Source: San Luis Valley GIS/GPS Authority.

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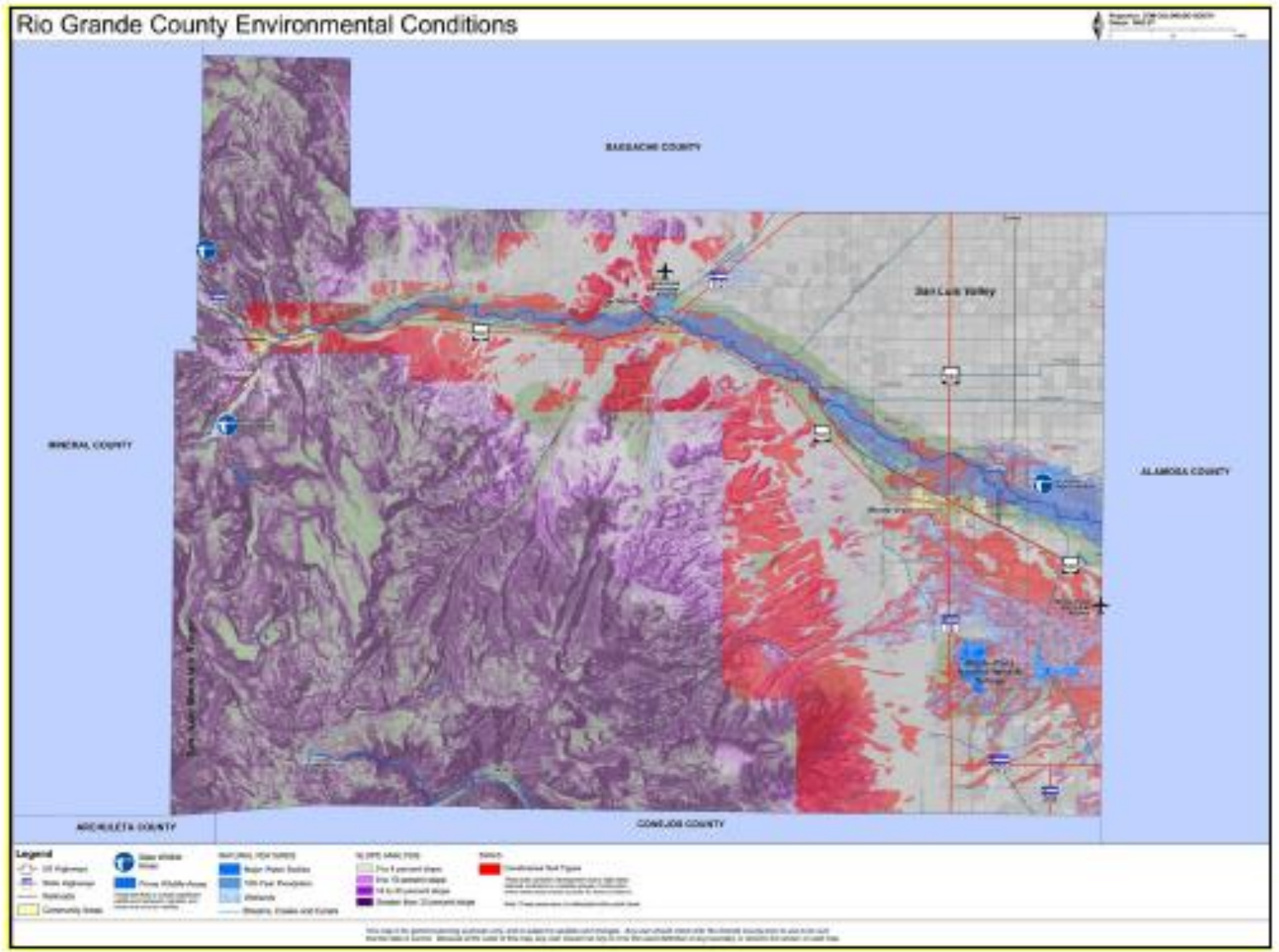

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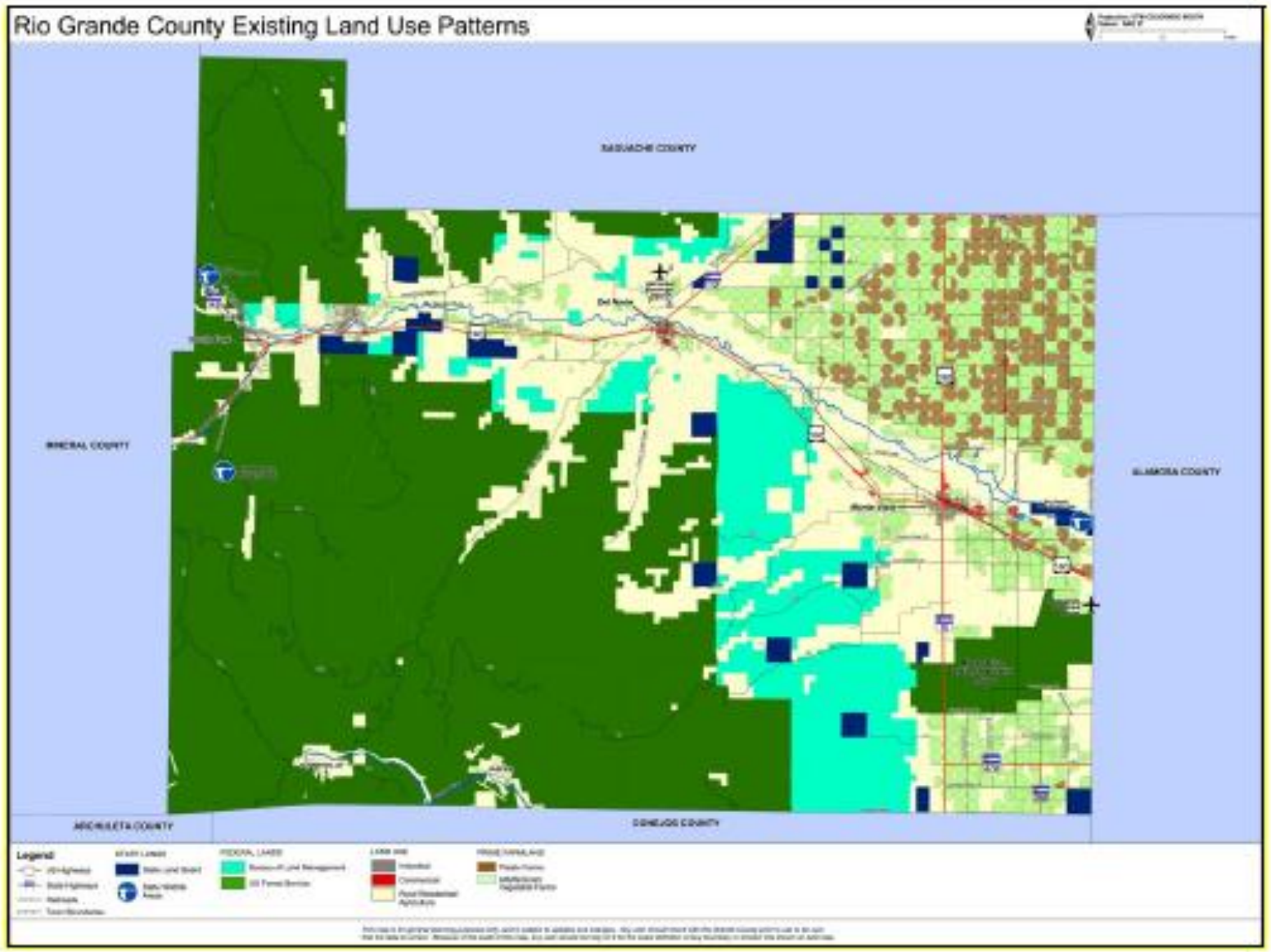

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In the Baca Graben area, which does not have the long basinward stratigraphic continuity to sources of recharge that the Monte Vista Graben has, the primary mechanism for vertical ground water movement in the deep confined aquifer is deep-seated faulting which has enhanced vertical hydraulic conductivity, both for recharge near the mountain front, and apparently also for discharge further away from the mountain front.

The driving force which allows these water-movement mechanisms to take place is the high piezometric head within the the major recharge areas located in the relatively high-elevation eastern San Juan mountains and Sangre de Cristo mountains, compared to the elevation of the deep confined aquifer hydrostratigraphic units beneath the Valley.

The same driving mechanism for ground water flow is thought to take place from the Sangre de Cristo mountains to the east into the Valley as occurs from the San Juans to the west, but to a much lesser extent due to a smaller recharge area and extensive discontinuities in the bedding planes through which ground water moves. As discussed above, most downward movement into HSU-3 from the Sangre de Cristos appears to occur within a relatively narrow fault zone, rather than through bedding planes as is more commonly the case in the San Juans (Huntley, 1976).

4.4 GROUND WATER RECHARGE TO THE DEEP CONFINED AQUIFERS

4.4.1 Areas of Recharge

In the most general volumetric sense, recharge to the deep confined aquifers of the San Luis Valley appears to occur almost exclusively outside of the Valley floor, near or at the mountain fronts of the ranges which border the Valley on three sides. Interpretation of geologic maps (Figures 2.1 and 3.11) and satellite imagery of the Valley (Figure 3.12) indicates a nearly-ideal combination for ground-water recharge existing in certain areas of the San Juan foothills and mountains: jointed and fractured volcanic rock, stratigraphic continuity downdip into the Valley, and heavy snowpack.

Landsat Thematic Mapper (TM) satellite images of the Valley and the

surrounding mountains were used to identify zones of extensive rock fracture in hard, structurally-competent volcanic rocks. Such areas have enhanced secondary permeability to the flow of ground water. If these areas lie in a zone of relatively heavy average precipitation (primarily snowpack), then there is a high probability of rapid and prolonged ground water recharge. Three such areas have been identified in the San Juan Mountains which are believed to be of primary importance to ground water recharge to the deep confined aquifers (particularly HSU-3) of the Valley.

The most easily apparent of these on the satellite imagery of the study area is identified as feature 7 on Figure 3.12. This area appears as a localized zone of nearly orthogonal-patterned stream downcutting into the fractures and jointing of the Conejos Formation volcanics, as well as the welded tuffs (particularly thick in this area) of the Carpenter Ridge and Fish Canyon Formations. The majority of this feature, which includes headwaters of Saguache Creek and Carnero Creek lies at an average elevation of 9000 to 10,500 feet, and receives substantial precipitation. Stratigraphic continuity of these formations downdip to the east into HSU-3 of the San Luis Valley is inferred from the satellite imagery, from geologic cross-sections, and from maps of the Valley. No direct evidence, such as seismic reflection lines or boreholes, is known to exist which could support or negate this inference of continuity.

The second of the areas of potentially enhanced recharge into HSU-3 of the Valley is indicated as Feature 34 on Figure 3.12, the structural interpretation of the TM imagery of the study area. The lineations mapped on Figure 3.12 are interpreted to be faults and/or fractured zones related to the anticlinal structure called the Del Norte High (Gries, 1985). Faults an fractures near the top of an anticlinal structure generally are tensional i nature, and hydraulic conductivity is expected to be enhanced. From the dat gathered for the Confined Aquifer Study in the San Francisco Creek oil and ga test well, the upper 1700 feet of the Conejos Formation in this area appear to consist primarily of lava flows and well-cemented breccias, both of whic are conducive to enhancement of hydraulic conductivity via fracturing. Thi set of features crosscuts elevations ranging from about 7500 feet in the De

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Engineer's Office (SEO) Master List of Wells, and the U.S. Geological Survey's Watstore database of wells, was used to identify and locate water wells deeper than 2000 feet for which there exist geologic logs, water-quality information, or other useful data. Following interviews with Valley well owners and officials, on-site checks of selected wells were made, to determine suitability for logging and testing.

4.1.3 New Data Developed

During August, 1986, three wells deeper than 2000 feet were logged and/or tested to determine aquifer characteristics, water chemistry, and lithologies of the deep confined aquifer units. All three wells were located in the Valley; one was near Hooper, and two were near Alamosa.

Satellite imagery of the Valley was processed specifically for the San Luis Valley Confined Aquifer Study by the Earth Satellite Corp. The imagery used was Landsat Thematic Mapper (TM) false-color digital imagery of the Valley and the surrounding mountain ranges, processed to enhance contrast and color tonal variation in rock types. The imagery was interpreted by the study team for geologic structure which could be of primary importance to recharge, movement, and discharge of ground water in the deep confined aquifers of the Valley.

In November, 1986, the Authority took the opportunity to acquire new and meaningful data on the Conejos Formation (a primary part of the deep confined aquifer of the Valley) in its recharge area near Del Norte. At the Authority's authorization and funding, geologic and geophysical well-log data were acquired from a new oil and gas exploration well approximately five miles south of Del Norte. Under a data-exchange agreement with the owner of the well, HRS Water Consultants, Inc., acquired and interpreted data which enhanced the study team's knowledge of the deep confined aquifer in its primary recharge area (Figure 4.1).

4.2 HYDROSTRATIGRAPHIC CHARACTERIZATION OF THE DEEP CONFINED AQUIFERS

The delineation of two major aquifer systems in the San Luis Valley, the confined and the unconfined, has long been accepted. The material types and

Exhibit C

Documentation and Communication

1. County communication to COGCCO re First Liberty Energy Inc.
2. COGCC Form 2 – First Liberty Energy Inc.
3. COGCC Form 2A – First Liberty Energy Inc.
4. Rio Grande County Well Location Certificate: Basin #1
5. Map showing Basin #1 – Note: "Several owners have artesian wells"
6. Detail showing Old Woman Creek and Rio Grande NF
7. County communication to COGCC re Dan A. Hughes – Objections

    a) Public Forum 1/26/11 - Allen Davie – Unique hydrology, Conejos Formation, San Francisco Creek being a significant recharge area and tributary to the Rio Grande.
    b) Location of natural year-round spring-fed ponds on lots 44 and 46
    c) Division 3 Engineer Craig Cotton re over appropriated water and therefore question re water supply
    d) Errors and omissions in COGCC data on their forms
    e) Riparian corridor along San Francisco Creek 1,750 yards from drill site
    f) Summer and winter range of pronghorn antelope and winter range for significant herds of deer and elk.
    g) Sensitivities re air quality monitoring; prevailing winds in San Francisco Creek Valley; potential downwind effects on Del Norte, residential areas, schools; potential threat to safety and health.
    h) Errors and omissions by COGCC on existing roads; details on conditions of county roads and potential effects of heavy industrial traffic.
    i) COGCC pad construction does not comply with Rio Grande County Oil and Gas Regulations especially relating to closed looped systems.
    j) Methods of handling waste disposal and waste water are inadequate or unclear
    k) <u>Summary of Recommendations</u>

8. Polite request from County to COGCC to take responsible action on above items
9. COGCC Form 2 – Dan A. Hughes Company LP – San Francisco Creek #1 Well
10. COGCC Form 2a – Dan A. Hughes Company LP – San Francisco Creek #1 Well
11. Map of well location and distances from San Francisco Creek & Spring Branch
12. Detail showing Wagon Wheel Road, creeks and topography
13. Pad Construction Drawing as staked 05-05-2010

14. E&P Waste Management Section 901 re Rules and Regulations to establish permitting, construction, operating and closure requirements for pits, methods of E&P waste management, procedures for spill/release response and reporting, and sampling and analysis for remediation activities. Reference to 34-60-103(4.5)

a) General
b) COGCC reporting forms
c) Additional Requirements
d) Alternative compliance methods
e) Sensitive Area Determination

*"When the operator or Director **has data** that indicate an impact or threat of impact to ground water or surface water, the Director may require the operator to make a sensitive area determination and that determination shall be subject to the Director's approval. The sensitive area determination shall be made using appropriate geologic and hydrogeologic data to evaluate the potential for impact to ground water and surface water, such as appropriate percolation tests that demonstrate that seepage will not reach underlying ground water or waters of the State and impact current or future uses of these waters. Operators shall submit data evaluated and analysis used in the determination to the Director."*

f) Sensitive area operations

(The Exhibit C documents are a huge file, so they are only in the hard-copy paper version, or by request from Rose Vanderpool, Rio Grande County Land Use Administrator.)

Appendix 1

Reference Information

The following information is available via the internet. The reference information provides additional detail and background information.

- Water Supply Reserve Account main webpage:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/main.aspx
- Water Supply Reserve Account – Basin Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx
- Water Supply Reserve Account – Statewide Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/StatewideWaterSupplyReserveAccountGrants.aspx
- Colorado Water Conservation Board main website:
  - http://cwcb.state.co.us/
- Interbasin Compact Committee and Basin Roundtables:
  - http://cwcb.state.co.us/about-us/about-the-ibcc-brts/Pages/main.aspx/Templates/BasinHome.aspx
- House Bill 05-1177 – (Also known as the Water for the 21st Century Act):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318
- House Bill 06-1400 – (Adopted the Interbasin Compact Committee Charter):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911
- Senate Bill 06-179 – (Created the Water Supply Reserve Account):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911
- Statewide Water Supply Initiative 2010:
  - http://cwcb.state.co.us/water-management/water-supply-planning/Pages/SWSI2010.aspx

Appendix 2
Insurance Requirements

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed $25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in **§13(B)** with respect to sub-Grantees that are not "public entities".

A. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: **(a)**$1,000,000 each occurrence; **(b)** $1,000,000 general aggregate; **(c)** $1,000,000 products and completed operations aggregate; and **(d)** $50,000 any one fire. If any aggregate limit is reduced below $1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of $1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

B. Certificates

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§13**.

Appendix 3
Water Supply Reserve Account Standard Contract Information

NOTE: The standard contract is required for WSRA projects that exceed $100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

The standard contract is available here under the header "Additional Resources" on the right side:
http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx

Appendix 4
W-9 Form

NOTE: A completed W-9 form is required for all WSRA projects prior execution of a contract or purchase order. Please submit this form with the completed application.