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December 10, 2007

The Colorado Water Conservation Board
Water Supply Planning and Finance Section
Attn: Kirk Russell, P.E.
1580 Logan Street, Suite 750
Denver, CO 80203

Re: **Colorado Water Conservation Board, Construction Fund Loan Application**

Dear Mr. Russell:

Enclosed please find a Loan Application and Loan Feasibility Study for the Republican River Compact Compliance Pipeline. Please advise us if any further information is required.

Very truly yours,

Dennis M. Montgomery

cc: RRWCD Board of Directors
Stan Murphy, General Manager
Ken Knox, Deputy State Engineer
Kathryn Radke, Program Manager, Division of Water Resources
James E. Slattery, P.E.
Richard A. Westmore, P.E.
Steven R. Townsley, P.E.

COLORADO WATER CONSERVATION BOARD
CONSTRUCTION FUND LOAN APPLICATION

Instructions: This application should be typed or printed neatly with black ink. Attach additional sheets as necessary to fully answer any question or to provide additional information that would be helpful in the evaluation of this application. When finished, please return this application to:

THE COLORADO WATER CONSERVATION BOARD
Water Supply Planning and Finance Section
1580 Logan St., Suite 750
Denver, CO 80203
Attn: Kirk Russell, P.E. or Bruce Johnson, P.E.
Phone Number 303/866-3449 - Fax Number 303/894-2578
e-mail: kirk.russell@state.co.us or bruce.johnson@state.co.us

Part A. - Description of the Applicant (Generally, the applicant is also the prospective owner and sponsor of the proposed project. If this is not the case, please contact the CWCB staff before completing this application.)

1. Name of applicant: Republican River Water Conservation District and the Republican River Water Conservation District Water Activity Enterprise

   Mailing Address: 410 Main Street, Suite 8, Wray, Colorado 80758

   Business Phone Number: (970) 332-3552 Fax Phone Number: (970) 332-3553

   Federal ID Number 68-0596268 e-mail Address rrwcd@centurytel.net

2. Person to contact regarding this application:

   Name David W. Robbins

   Position/Title Legal counsel to the Republican River Water Conservation District

   Address 1441 18th Street, Suite 100, Denver, CO 80202

   Business Phone Number (303) 296-8100 Home Phone Number (____)

   e-mail Address davidrobbins@hillandrobbins.com

3. Type of organization (Ditch Co., Irrigation District, Municipality, etc.): Water Conservation District and its water activity enterprise

   Date of Annual Meeting: The RRWCD Board of Directors does not hold an annual meeting. By statute, the Board of Directors holds regular quarterly meetings on the second Thursday in the

months of January, April, July and October.

Is the organization incorporated in the State of Colorado? YES ____ NO_X_ (If YES, please include a copy of the articles of incorporation, and the bylaws with this application form.) (The RRWCD was created by state statute and is a body corporate pursuant to C.R.S. § 37-50-103. The RRWCD WAE is a water activity enterprise established by resolution of the RRWCD Board of Directors pursuant to C.R.S. § 37-45.1-103.)

4. Please provide a brief description of the owner's existing water supply facilities and describe any existing operational or maintenance problems. Attach separate sheets if needed, and a map of the service area. The RRWCD and the RRWCD WAE do not currently own water supply facilities

For existing facilities indicate: Not applicable.

Number of shareholders _____ or Number of customers served_____

Current Assessment per share $_____ Number of shares _____

Number of acres irrigated _____ Water Right: _____CFS.

Average water diverted per year: _____ acre-feet.

Part B. - Description of the Project

1. Name of the project or facility Republican River Compact Compliance Pipeline

2. Purpose of this loan application. Check one.

   _X_ New project

   _____ Rehabilitation or replacement of existing facility

   _____ Enlargement of existing facility

   _____ Emergency Repair

   _____ Other (describe) _____

3. If the project is for rehabilitation of an existing reservoir, is the reservoir currently under a storage restriction order from the State Engineer? YES ___ NO ___

4. General location of the project. (Please include county, and approximate distance and direction from nearest town, as well as legal description, if known. The Republican River Compact Compliance Pipeline will be located in Yuma County, Colorado, and will extend approximately

9. Estimated cost of the project. Please include estimated engineering costs, and estimated construction costs, if known.

Estimated Engineering Costs:	$ 1.88 million	
Estimated Construction Costs:	$ 18.83 million	
Estimated Other Costs:	$ 40-50 million	(water rights purchase)
Estimated Total Costs:	$ 60.71 to 70.71 million	

10. Loan amount and terms you are requesting.

Requested Loan Amount:	$ 40-45 million	(Usually 75-90 % of Est. Total Costs)
Term (length) of loan:	30 years	(Usually 10, 20, or 30 years)
Interest Rate:	2.25 %	(Please call for our current rates)

Part C. - Project Sponsor Financial Information

Because the CWCB Construction Fund is a revolving fund, it is important that the project sponsor have the financial capacity to repay any loans made by the CWCB. The following information is needed to assist the CWCB in a preliminary assessment of the applicant's financial capacity. It is also requested that the project sponsor submit with this application, copies of the three most recent annual reports, financial statements, corporate reports or other current documentation of financial condition and operations.

1. List any existing long-term liability (multi-year) or indebtedness that exceeds one thousand dollars. For example, bank loans, government agency loans, bond issues, accounts payable, etc. Include names and addresses of lenders, amounts, due dates and maturity dates. Attach a separate schedule, if needed.

Lender Name & Address	Remaining Amount	Annual Payment	Maturity Date
The RRWCD and the RRWCD WAE have no outstanding loans or bond issues.			
The RRWCD WAE has committed to provide local cost-sharing for the Republican River Conservation Reserve Enhancement Program (CREP) and the Environmental Quality Improvement Program (EQIP).			

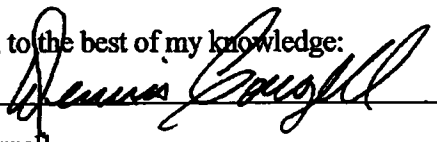
2. Are any of the above liabilities now in default, or been in default at any time in the past? YES____ NO __X__. If YES, please give detailed explanation. _____

3. Please provide a brief narrative description of sources of funding, in addition to the CWCB,

which have been explored for this project (Examples would be Banks, USDA Rural Development, NRCS, Colorado Water Resources and Power Development Authority, Colorado Division of Local Government, etc.). The RRWCD has explored sources of funding from Farm Credit of Southern Colorado, the Colorado Water Power Resources and Power Development Authority, and electric cooperatives in the Republican River Basin. The total cost of the project will exceed the amount available from the CWCB Construction Loan Fund, and Farm Credit and the electric cooperatives have indicated a willingness to provide additional funding because of the importance of this project to water users in the basin.

4. What collateral will you be offering for this loan? Possibilities include a pledge of revenues, the project itself, real estate, water rights. A pledge of revenues from use fees.

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

Signature of Applicant 

Printed Name Dennis Coryell

Title President, RRWCD Board of Directors

Date December 7, 2007

LOAN FEASIBILITY STUDY

FOR

THE REPUBLICAN RIVER COMPACT COMPLIANCE PIPELINE

PREPARED FOR

THE REPUBLICAN RIVER WATER CONSERVATION DISTRICT
WATER ACTIVITY ENTERPRISE
410 MAIN STREET, SUITE 8
WRAY, COLORADO
80758

FEASIBILITY STUDY APPROVAL
Pursuant to Colorado Revised Statutes 37-60-121 &122, and in accordance with policies adopted by the Board, the CWCB staff has determined this Feasibility Study meets all applicable requirements for approval.

Signed

4/14/08
Date

DECEMBER 2007

SLATTERY AQUA ENGINEERING LLC

LOAN FEASIBILITY STUDY

FOR

THE REPUBLICAN RIVER COMPACT COMPLIANCE PIPELINE

PREPARED FOR

THE REPUBLICAN RIVER WATER CONSERVATION DISTRICT
WATER ACTIVITY ENTERPRISE
410 MAIN STREET, SUITE 8
WRAY, COLORADO
80758

DECEMBER 2007

SLATTERY AQUA ENGINEERING LLC

LOAN FEASIBILITY STUDY

FOR

THE REPUBLICAN RIVER COMPACT COMPLIANCE PIPELINE

Sponsored by

The Republican River Water Conservation District and the Republican River Water Conservation District Water Activity Enterprise

December 2007

Executive Summary

The Republican River Compact Compliance Pipeline is critical if the State of Colorado is to comply with the Republican River Compact. The State of Colorado exceeded its compact allocations in 2003, 2004, 2005, and 2006, and Colorado is expected to exceed its compact allocations for decades into the future without the Compact Compliance Pipeline.

The Republican River Water Conservation District (RRWCD) was formed in 2004 to assist the State of Colorado to comply with the Compact, and the RRWCD, acting through its water activity enterprise, is seeking a loan of at least $60 million from the CWCB Water Project Construction Fund to purchase rights to designated ground water and to construct a Compact Compliance Pipeline capable of delivering 15,000 acre-feet of ground water to the North Fork of the Republican River to offset stream depletions in order to comply with the Compact. The Final Settlement Stipulation in the U.S. Supreme Court case of *Kansas v. Nebraska and Colorado* allows the acquisition or construction of wells for the purpose of offsetting stream depletions in order to comply with the State's compact allocations. The total cost of the project is estimated to be $61 to $71 million. The construction of a Compact Compliance Pipeline to deliver up to 15,000 acre-feet of water per year is feasible and will be paid for by an increase in use fees. The project will remove the threat of curtailment of diversions for more than 500,000 irrigated acres in the Republican River Basin.

The RRWCD will also seek a direct financial contribution from the State of Colorado for the Compact Compliance Pipeline because the project will allow the State of Colorado to avoid paying damages for exceeding the State's compact allocations due to ground water impacts that occurred decades ago.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT

410 MAIN STREET, SUITE 8
WRAY, COLORADO 80758
(970) 332-3552

BOARD MEMBERS

Dennis Coryell, President
Kim Killin, Vice President
Tim Pautler, Secretary
Rick Seedorf, Treasurer
Eugene Bauerle
Grant Bledsoe
Jack Dowell
Raymond Enderson
Jay Harris
Garry Kramer
Steve Kramer
Bruce Latoski
Stan Laybourn
Wayne Skold
Greg Terrell

MANAGEMENT AND STAFF

Stan Murphy, General Manager
Dana Barnett, Administrative Assistant

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(303) 792-2161

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1.0 INTRODUCTION

1.1. Purpose of the Republican River Compact Compliance Pipeline

In December 2002, the State of Colorado entered into a Final Settlement Stipulation with the States of Kansas and Nebraska to bring an end to the U.S. Supreme Court case of *Kansas v. Nebraska and Colorado*. In the Final Settlement Stipulation, the States agreed to the development of a ground water model (the RRCA Groundwater Model) to determine stream flow depletions caused by well pumping in the Republican River Basin and to a five-year running average to determine compliance with the Republican River Compact ("Compact"). The U.S. Supreme Court approved the Stipulation on May 19, 2003, and accepted the recommendations in the Final Report of the Special Master, including dismissal of the case with prejudice, which became effective when the Special Master certified the development of the RRCA Groundwater Model by the three States.

The Republican River Water Conservation District ("RRWCD") was established by Colorado statute in 2004 to assist the State of Colorado to comply with the Compact. The RRWCD Board of Directors established a water activity enterprise and imposed use fees on the diversion of water to provide revenues for programs to retire irrigated acreage in the basin to assist the State with compact compliance.

Since December 2002, the State of Colorado has exceeded its annual allocations of beneficial consumptive use under the Compact by an average of 11,350 acre-feet per year. This was not the situation expected when the State of Colorado entered into the Final Settlement Stipulation. In fact, it was expected that hydrologic conditions would return to average or above-average conditions after several years of drought in the basin and that limited retirement of irrigated acreage would bring Colorado into compact compliance. For that reason, the RRWCD Board of Directors focused its efforts until recently on providing local cost-sharing for federal programs to voluntarily retire irrigated acreage in the basin. When the State of Colorado continued to exceed its Compact allocations in 2005 and 2006, the focus shifted to construction of a Compact Compliance Pipeline.

While the stream depletions calculated by the RRCA Groundwater Model resulting from well pumping in Colorado are extremely small in comparison to the total well pumping in the basin, they are primarily the result of well pumping that occurred decades ago. As a result, shutting off well pumping in the basin in Colorado would not bring Colorado into compact compliance for decades under current conditions; indeed, curtailing <u>all</u> beneficial consumptive use of water in the basin in Colorado, including precompact surface water rights and draining Bonny Reservoir, would not bring Colorado into compact compliance for years under current conditions. Thus, the only feasible means to achieve compact compliance is to construct a pipeline to transport ground water from wells in the basin to one of the tributaries of the Republican River for credit to offset stream depletions. The Final Settlement Stipulation specifically allowed for wells that would be acquired or constructed for this purpose.

This Loan Feasibility Study addresses the need for and the feasibility of acquiring rights to ground water and the construction of a Compact Compliance Pipeline. The Colorado Water Conservation Board provided a $50,000 grant for a feasibility study, which has been used to evaluate alternatives for a Compact Compliance Pipeline.

1.2. Project Sponsor – The Republican River Water Conservation District (RRWCD) and its Water Activity Enterprise (WAE)

The Republican River Water Conservation District (RRWCD) was established by Senate Bill 04-235 in 2004 to assist the State of Colorado to comply with the Republican River Compact. A copy of §§ 37-50-101 through 142 is attached. The RRWCD is managed and controlled by a 15-member board of directors comprised of one member appointed by the county commissioners of each of the seven counties wholly or partially within the RRWCD, one member appointed by the boards of the seven ground water management districts within the RRWCD, and one member appointed by the Colorado Ground Water Commission. *See* § 37-50-104.

The RRWCD Board of Directors is authorized to establish a water activity enterprise pursuant to article 45.1 of title 37 of the Colorado Revised Statutes and established the RRWCD Water Activity Enterprise (WAE) in October 2004. The general powers of the board of directors are set forth in section 37-50-107. A copy of the resolution establishing the RRWCD WAE is attached.

The RRWCD Board of Directors is authorized to impose a use fee on the diversion of water within the district and has established a use fee of $5.50 per assessed irrigated acre on diversions of ground water for irrigation use by post-compact wells within the district. There are approximately 500,500 assessed irrigated acres in the basin irrigated by post-compact wells. Use fees on the diversion of ground water for irrigation currently generate nearly $2.75 million in revenues annually for the RRWCD WAE. The RRWCD Board of Directors also imposed a use fee of $4.40 per acre-foot on post-compact diversions of ground water for municipal and commercial use. Municipal and commercial diversions within the district are small, but generated an additional $43,388 in 2007.

The RRWCD WAE has used revenues from use fees primarily to provide local cost-sharing for federal programs designed to retire irrigated acreage in the basin, including the Republican River Conservation Reserve Enhancement Program (CREP) and the Environmental Quality Improvement Program (EQIP). To date, approximately 30,000 irrigated acres have been voluntarily retired in the basin under CREP and EQIP, or approximately five percent (5%) of the irrigated acreage in the basin. An amendment to the Republican River CREP designed to retire an additional 30,000 irrigated acres has been submitted to the U.S. Department of Agriculture for approval. The RRWCD WAE has committed to provide local cost-sharing for the Republican River CREP amendment.

1.3. Project Area

The RRWCD is located in northeastern Colorado and includes all of Yuma and Phillips Counties and those portions of Kit Carson, Lincoln, Logan, Sedgwick, and Washington Counties that overlie the Ogallala Aquifer. A map of the RRWCD is attached.

The RRWCD encompasses about 7,761 square miles or about 7.5% of Colorado's 104,247 square miles. There are approximately 545,000 irrigated acres within the RRWCD. With the exception of approximately 3,000 acres irrigated by surface water, virtually all the acreage in the basin is irrigated with ground water from the Ogallala Aquifer. In 2002, irrigated land in the Republican River Basin accounted for approximately twenty-two percent (22%) of the irrigated acres in Colorado.

1.4. Land Uses Within the Republican River Basin

The Republican River Basin overlies the Ogallala Aquifer, a regional underground aquifer system underlying portions of seven states from South Dakota to the Texas panhandle, including portions of the Republican River Basin in Colorado, Nebraska, and Kansas.

In 1965, the Colorado Ground Water Management Act was enacted, which created the Colorado Ground Water Commission and allowed the Commission to establish designated ground water basins. The Management Act applied a modified doctrine of prior appropriation to designated ground water to permit the full economic development of such ground water.

In 1966 the Ogallala Aquifer in the Republican River Basin in Colorado was included in the Northern High Plains Designated Ground Water Basin. At that time, there was limited well development in the basin. However, improvements in center pivot sprinkler irrigation systems allowed the development of land that was more difficult to irrigate with flood irrigation methods, and approximately 4,000 final permits have been issued within the Northern High Plains Basin. Issuance of permits in the basin slowed during the 1980s and essentially ceased by 1990. The Colorado Ground Water Commission recognized that there was limited recharge to the Ogallala Aquifer in the basin relative to the large amount of water in storage in the aquifer and authorized controlled mining of ground water in the basin based on a rate of depletion of 40% over 25 years. This was later amended to be 40% over 100 years.

In 1974, the Colorado Supreme Court ruled that ground water taking over a century to reach a surface stream was not part of the water subject to appropriation under the Colorado Constitution and could be managed separately as designated ground water. *Kuiper v. Lundvall*, 529 P.2d 1328 (Colo. 1974). At that time, no one thought that ground water in the Ogallala Aquifer had been apportioned by the Republican River Compact or that withdrawals from the aquifer were subject to the Compact.

2.0 WATER DEMANDS AND WATER RIGHTS

2.1. Water Supply Demands

In 1978, withdrawals of ground water in the Republican River Basin reached approximately 1,040,000 acre-feet per year. In 2005, ground water pumping was approximately 750,000 acre-feet per year. Ground water impacts from ground water diversions in Colorado included in the RRCA Compact Accounting averaged approximately 25,370 acre-feet per year over the period 2002-2006. These impacts are primarily due to ground water diversions that occurred decades ago.

Starting in 2003, Colorado has exceeded its compact allocations by an average of 11,350 acre-feet per year. Some reduction in the amount that Colorado has exceeded its compact allocations is expected in the future as the result of irrigated acreage retirement programs supported by the RRWCD. However, it is projected that the deficit will increase gradually to 15,000 acre-feet in 2039.

The expected yield of the Compact Compliance Pipeline is 15,000 acre-feet per year, which should be adequate to ensure compact compliance for the 30-year period of repayment of the CWCB loan. The Compact Compliance Pipeline will be designed to deliver 15,000 acre-feet of ground water over a nine-month period so that there will flexibility to reduce deliveries in years of higher water supply.

2.2. Water Rights

The RRWCD WAE does not currently own rights to ground water that could be used for the Compact Compliance Pipeline. The analysis of alternatives below discusses possible sources of ground water for the Compact Compliance Pipeline. The preferred alternative is to acquire existing rights to designated ground water and to transfer the historical consumptive use of those rights to new wells that will supply the Compact Compliance Pipeline. *See* Section 3.4 below.

3.0 PROJECT DESCRIPTION

3.1. Purpose and Background of the Compact Compliance Pipeline

The Final Settlement Stipulation entered into by the States of Kansas, Nebraska, and Colorado in the U.S. Supreme Court case of *Kansas v. Nebraska and Colorado* in 2002 provided for the dismissal of all claims for damages through December 2002, and all three States agreed that compact accounting would be done based on a five-year running average, beginning in 2003. The first five-year period ends at the end of 2007.

Colorado's beneficial consumptive use has exceeded its compact allocations in 2003, 2004, 2005, and 2006 by approximately 11,350 acre-feet per year. Due to drought conditions in 1999-2002, it was anticipated that Colorado would exceed its Compact allocations in 2003 and 2004; however, it was expected that hydrologic conditions would then return to average or above-average conditions, which would bring Colorado close to compliance with the Compact for a number of years. Eventually, because the RRCA

Groundwater Model has indicated that ground water impacts from well pumping that occurred decades ago will increase, it was expected that a Compact Compliance Pipeline project would be necessary to offset calculated ground water impacts; however, it was assumed that a pipeline project would not be needed for a number of years, especially if precipitation returned to normal and programs to retire irrigated acreage were implemented. The Compact Accounting for 2005 and 2006 therefore came as a surprise and prompted action by the State Engineer and the RRWCD.

The Colorado State Engineer has proposed rules and regulations to curtail diversions within a Curtailment Zone three miles from the North Fork of the Republican River, Chief Creek, the Arikaree River, the South Fork of the Republican River, and Landsman Creek beginning in 2009 if the State of Colorado is not in compliance with the Compact.

The Final Settlement Stipulation allows the acquisition or construction of wells for the purpose of offsetting stream depletions in order to comply with a State's compact allocations, provided that such wells do not cause any new net depletion to stream flow either annually or long-term. The Stipulation also provides that augmentation plans and related accounting procedures submitted under this provision of the Stipulation shall be approved by the Republican River Compact Administration (RRCA) prior to implementation. The Stipulation further provides that augmentation credit for wells acquired or constructed for the purpose of offsetting stream depletions shall be calculated in accordance with RRCA Accounting Procedures and by using the RRCA Groundwater Model.

3.2. Analysis of Alternatives

1. No action.

2. Purchase existing rights to designated ground water and transfer the historical consumptive use of those rights to a Compact Compliance Pipeline.

3. Construct new wells based on new appropriations and/or amendments to the Ground Water Commission rules and regulations to provide a water supply for a Compact Compliance Pipeline.

3.3. Alternative 1

No action would result in the State of Colorado exceeding its allocations under the Compact for decades into the future. The Colorado State Engineer's proposed rules and regulations will curtail diversions within a Curtailment Zone, but these Compact Rules will not achieve compact compliance without a Compact Compliance Pipeline. Because Nebraska and Colorado will undoubtedly exceed their Compact allocations in the first five-year running average (2003-2007), Kansas will likely bring an action to enforce compliance with the Compact. Thus, no action would likely lead to a demand that all well pumping in the Republican River Basin in Colorado be curtailed and that the State of Colorado pay damages for exceeding its compact allocations. Turning more than 500,000 irrigated acres in the basin into dryland farms or rangeland would have a

devastating impact on the local economy, not to mention the overall impact on the economy of the State of Colorado. It would also expose the State of Colorado to an award of damages for violations of the Compact for years into the future because the effects of pumping that occurred decades ago is only now beginning to show up as ground water impacts calculated by the RRCA Groundwater Model.

3.4. Alternative 2

Alternative 2 is to purchase existing rights to designated ground water used for irrigation in the Northern High Plains Designated Ground Water Basin and to change those rights so they can be delivered in a pipeline to the North Fork of the Republican River for credit to offset stream depletions pursuant to the Final Settlement Stipulation. Section III.B.1.k of the Stipulation specifically allows wells to be acquired or constructed for this purpose, subject to approval by the RRCA. A requirement of the Stipulation is that such wells shall not cause any new net depletion to stream flow either annually or long-term. The determination of net depletions from such wells will be computed by the RRCA Groundwater Model and included in the State's Computed Beneficial Consumptive Use.

Evaluation of practical locations where Colorado would receive credit for the delivery of water and locations where wells could be used as a water supply for the Compact Compliance Pipeline quickly focused on locations north of the North Fork of the Republican River. The South Fork of the Republican River was ruled out because the Compact gage is located at Benkelman, Nebraska, approximately 40 miles from the Colorado-Nebraska state line and stream losses on the South Fork would make a Compact Compliance Pipeline to the South Fork infeasible. The Arikaree River was also ruled out because the saturated thickness of the aquifer in the area was considerably less than on the north side of the North Fork of the Republican River. The saturated thickness of the aquifer north of the North Fork is approximately 200 feet and the aquifer is highly productive in the area. Thus, wells in that area would provide a long-term water supply for the Compact Compliance Pipeline and would require fewer wells, lowering well construction and pipeline costs. Discussions with landowners to acquire existing rights to designated ground water are being pursued at the present time. Because of the confidentiality of the discussions, the specific rights are not described in this Study, but could be provided separately if required.

3.5. Alternative 3

Alternative 3 is to construct new wells that would divert unappropriated ground water under the Ground Water Commission (GWC) rules and regulations. A variant of this alternative would be to amend the GWC rules and regulations to allow new Compact Compliance Wells to be constructed to withdraw ground water in areas that are over-appropriated if the well owners in the area waive any claim of injury or consent to the construction of new wells. Under the Final Settlement Stipulation, such new wells shall not cause any new net depletion to stream flow either annually or long-term. To offset the depletions to stream flow from the new wells, retirement of rights to designated ground water under the RRWCD's CREP and EQIP contracts would be used to offset such depletions.

Slattery Aqua Engineering has identified three well locations where unappropriated ground water is available in the basin at locations close enough to the North Fork to be considered for the Compact Compliance Pipeline ("satellite well field"). The net amount of unappropriated water that would be available for the Compact Compliance Pipeline is approximately 7,500 acre-feet, which is not sufficient for the entire project and would have to be combined with purchasing existing rights to designated ground water or new Compact Compliance Wells. In addition, the pipeline distance would be considerably greater than Alternative 2, and the willingness of the landowners to negotiate for well sites and pipeline easements is unknown.

The additional pipeline cost of this satellite well field if combined with existing wells would be less than the estimated cost to acquire existing rights to designated ground water; however, there is considerable oil and gas development in the area of the satellite well field, which creates uncertainty in the cost estimates for pipeline construction. In addition, landowner cooperation is not assured. Also, there is some concern that the RRCA would not approve such a plan, which would then require invoking the Dispute Resolution procedures under the Final Settlement Stipulation, which involve arbitration.

A variant of the satellite well field concept is to amend the GWC rules and regulations to allow new Compact Compliance Wells with the consent of well owners within three miles of the new wells. A large landowner has indicated a willingness to consider drilling such wells and diverting up to 12,000 acre-feet per year from such wells; however, the landowner expressed concern about the impact of such wells on existing wells and would want to be compensated for the impact on those existing wells. Again, it was unknown whether the RRCA would approve such a plan. In addition, the impacts of the withdrawals would eventually have to be offset by retiring irrigated acreage. Thus, this was viewed as a short-term solution rather than a permanent solution.

3.6. Preferred Alternative

Alternative 2 (purchasing existing rights to designated ground water and transferring the historical consumptive use of those rights to the Compact Compliance Pipeline) was selected as the preferred alternative for the Compact Compliance Pipeline because it is the most likely to obtain approval of the RRCA in a timeframe that would avoid curtailment of existing water rights and wells under the State Engineer's proposed Compact Rules.

The preferred alternative is to purchase existing ground water rights located north of the North Fork of the Republican River and to change the use of those rights so they can be delivered to the North Fork of the Republican River in the Compact Compliance Pipeline to a location a short distance upstream from the streamflow gage at the Colorado-Nebraska state line. This alternative has a higher initial cost to acquire existing rights to designated ground water, but is a long-term solution for compact compliance and has several advantages. First, it does not require amendment of GWC rules and regulations, and the procedures for changing the use of existing rights to designated ground water based on historical consumptive use are established in the current GWC

rules. Second, the new wells to be constructed for the Compact Compliance Pipeline would cause no new net depletions because pumping would be limited to the historical consumptive use of the existing rights. Third, RRCA approval of this alternative is considered likely, which means that construction could likely begin in late 2008, with the potential for delivery of water in mid-2009, which could prevent curtailment under the State Engineer's proposed Compact Rules. Fourth, this alternative would not place a new water demand on the Ogallala Aquifer, and wells in this area are located in one of the deepest parts of the aquifer in Colorado, thereby assuring a long-term water supply for the Compact Compliance Pipeline and not requiring future actions to offset new withdrawals from the aquifer.

4.0 ENGINEERING ANALYSIS FOR THE PREFERRED ALTERNATIVE

Approximately 11,000 acre-feet of water per year is needed at this time to comply with Colorado's compact obligation. Over the longer term, it is estimated that approximately 15,000 acre-feet of water per year will be needed. The Compact Compliance Pipeline will be sized to allow gravity delivery of water to meet the future requirements. The initial capacity will be 15,000 acre-feet per year, provided over a nine-month period, with the capability to expand the delivery rate by adding a pumping facility.

4.1. Source of Water for the Compact Compliance Pipeline

The preferred alternative is for the RRWCD WAE to acquire rights to designated ground water that are currently used to irrigate approximately 10,000 acres of land using center-pivot sprinklers within the property boundary shown on Figure 1. The historical consumptive use on these lands has been estimated to be approximately 15,000 acre-feet per year. These ground water rights will be transferred to six (or possibly eight) new well locations (Figure 2). New high-capacity wells will be constructed to pump the transferred consumptive use to supply the Compact Compliance Pipeline.

4.2. Hydrologic Evaluation

The quantity of water available from existing rights to designated ground water will be based on the historical consumptive use of water produced from the wells during the past 10 years, which is estimated to be 15 to 20 inches per year. The historical consumptive use will vary from well to well, depending on pumping rates and crops that were grown. The historical consumptive use will be determined for rights to designated ground water acquired by the RRWCD WAE for the Compact Compliance Pipeline using methods that have been accepted by the GWC.

4.3. Water Quality

Ground water underlying the lands being considered as a potential source of supply for the Compact Compliance Pipeline is considered to be of good quality and generally equal to or better than the surface water in the North Fork of the Republican River at the state line. The water source is designated as the Ogallala Formation - North. Stream classifications and water quality standards for the North Fork of the Republican River, as published by the Colorado Water Quality Control Commission, are identified in the

left column below and ground water quality properties are shown in the right column, for comparison. (Note that the reference source used to generate the table did not indicate ground water quality for all of the surface water standard categories; therefore, there are some blanks in the table).

Table 1: Comparison of stream water quality in the North Fork to the ground water quality in the Ogallala Formation.

Surface Water Classification and Associated In-Stream or Drinking Water Standards [(1)]	Reported Ground Water Quality Properties in Ogallala Formation - North [(2), (3)]
Classifications:	
Aquatic Life -- Cold Water 1	N/A
Recreation -- 1a	N/A
Water Supply -- Agriculture	N/A
Physical and Biological Standards:	
Dissolved Oxygen = 6.0 mg/l	0.2 to 8.6 mg/l; 50% > 5.4 mg/l
pH = 6.5-9.0	7.0 – 7.9
Fecal coliforms = 200/100 ml	
E Coli = 126/100 ml	
Inorganic Standards:	
Ammonia (acute) = Table Value Standard (TVS)	
Ammonia (chronic) = 0.02 mg/l	0.01 to 0.244 mg/l; 50% < 0.015 mg/l
Chlorine (acute) = 0.019 mg/l	
Chlorine (chronic) = 0.011 mg/l	
Cyanide = 0.005 mg/l	
Sulfide = 0.002 mg/l	
Boron = 0.75 mg/l	Dissolved boron: 20 – 130 µg/l
Nitrate NO_2 = 0.05 mg/l	< 0.01 mg/l
Nitrate NO_3 =10 mg/l	1.1 to 8.9 mg/l
Chloride = 250 mg/l	1.4 to 29.5 mg/l
Sulfate = 250 mg/l	5.5 to 95.7 mg/l
Total Dissolved Solids = 500 mg/l	219 to 461 mg/l
Metal Standards:	
Arsenic (acute) = 50 µg/l (total recoverable)	Dissolved arsenic: <5-12 µg/l
Cadmium (acute) = TVS (trout)	
Cadmium (chronic) = TVS	
Trivalent Chromium (acute) = 50 µg/l (total)	
Hexavalent Chromium (acute/chronic) = TVS	
Copper (acute/chronic) = 1.3 mg/l	Dissolved copper: <5-35 µg/l
Iron (chronic) = 300 µg/l	Dissolved iron: <3-60 µg/l
Iron (chronic) =1000 µg/l (total recoverable)	
Lead (acute/chronic) = TVS (dissolved 15µg/l)	Dissolved lead <5 µg/l
Manganese (acute/chronic) = TVS (dissolved 50µg/l)	Dissolved manganese <3-40 µg/l
Manganese (chronic) = WS (dissolved)	

Surface Water Classification and Associated In-Stream or Drinking Water Standards [1]	Reported Ground Water Quality Properties in Ogallala Formation - North [2], [3]
Mercury (chronic) = 0.01 µg/l (total)	
Nickel (acute/chronic) = TVS	
Selenium(acute/chronic) = TVS (dissolved 50 µg/l)	Dissolved selenium: <5 µg/l
Silver (acute) = TVS	
Zinc (acute/chronic) = TVS	Dissolved Zinc < 5-124 µg/l

Notes:

1. Stream classifications and water quality standards obtained from a report by David Litke, U.S. Geological Survey, and Historical Water-Quality Data for the High Plains Regional Ground-Water Study Area (1930 – 1998) or from CDPHE/WQCC – Colorado Primary Drinking Water Standards.

2. Blanks indicate data that were not reported in the reference.

3. Reported ground water quality data is from Litke, USGS (see Note 1).

Volatile organic compounds and pesticides in the ground water in the project area are below concentrations in Colorado's drinking water standards based on the references cited in the footnotes to the above table. Thus, the water quality of ground water being considered for the Compact Compliance Pipeline is appropriate for delivery to the North Fork of the Republican River to offset stream depletions.

4.4. Outlet Structure

The Compact Compliance Pipeline will deliver water to the North Fork of the Republican River as needed to meet Colorado's compact obligations.

Several locations for discharging water to the North Fork were considered. A discharge location in the Town of Wray would provide some aesthetic benefits to the town; however, stream channel losses and the presence of surface diversions between Wray and the state line would reduce the delivery credit for water for compact compliance. Therefore, it was decided that the point of discharge to the North Fork should be as close as possible to the state line and at a location that does not require crossing of the railroad and highway rights-of-way. The discharge location is shown on Figure 2. Because water delivered to the North Fork will be measured a short distance upstream from the stream gage on the North Fork near the state line, this alternative provides the most certainty that the RRCA will give full credit for water delivered by the Compact Compliance Pipeline.

Several types of discharge structures could be used; however, the most cost-effective discharge structure would be a USBR-type reinforced concrete impact basin, sized for the expected peak water delivery rate. This structure will effectively dissipate energy over a wide range of flows and allow for gravity operation of the main pipeline.

4.5. Pipeline Alignment

There are several potential alignments for the main north-to-south pipeline, depending on topographic, land use, land ownership, and access considerations. The final pipeline

alignment will be determined when negotiations for the acquisition of rights to designated ground water have been completed.

Two alignments for the north-to-south pipeline were developed to estimate costs, one that followed existing county roads wherever possible and one that was deemed best from the standpoint of gravity delivery. Local interests also identified an alignment that was viewed to be optimal from the perspective of land owner negotiation efforts. The north-to-south alignment for the preferred alternative shown on Figure 2 was selected as the basis for estimating costs.

A summary of the major facilities associated with the preferred alternative is provided below and the locations of facilities are shown on Figure 1.

Table 2: Summary of Major Facilities for the Preferred Alternative.

Preferred Alternative
North Well Field
6 new 2000 gpm wells
7920 feet of 18" pipe
5280 feet of 24" pipe
Conveyance Pipeline
67,060 feet of 36" pipe
Storage Tank – 1 MG
River Outlet Structure

The preferred alternative for the Compact Compliance Pipeline is shown schematically in plan and profile on Figure 2. Approximately 10,000 acres of land irrigated by rights to designated ground water will be retired and the historical consumptive use, estimated to be 15,000 acre-feet per year, will be transferred from existing wells to six or eight new wells. The proposed location of these new wells is shown on Figure 2. With a pumping capacity of 2,000 gpm per well, six new wells will be able to deliver 15,000 acre-feet in a nine-month period. The current schedule envisions completion of the wells and the pipeline in early July 2009, with the potential to deliver a major portion of Colorado's estimated 2009 compact obligation (11,000 acre-feet) before year-end 2009.

Water pumped from the individual wells will be collected in an interconnected system of pipelines and then conveyed to a storage tank located at elevation 3655. The storage tank will provide reserve capacity allowing the main pipeline to operate for 2 hours at two-thirds capacity with no inflow to the tank from the well field. The storage tank will also provide protection of the main pipeline from surge and negative pressures that could develop if the main pipeline were connected directly to the well field collection system.

The main pipeline will extend from a storage tank approximately 12.7 miles to the North Fork of the Republican River. The pipe will be buried throughout its length. The pipeline will be supplied from the tank through a gated outlet, which will regulate flows. The main pipeline will flow by gravity from the tank to the river discharge structure.

4.6. Preliminary Design

Key parameters and associated criteria for the preliminary design are provided in Table 3 below.

Table 3: Key parameters and associated criteria for the preliminary design.

Parameters	Selected Design Criteria
System Delivery Capacity	
Year 1	11,000 AF in 6 months
Year 2	15,000 AF in 9 months
Ultimate	Perhaps up to 25,000 AF in 9 months
Year 1	30.4 cfs
Year 2	27.6 cfs
Ultimate	Perhaps up to 46.0 cfs
Pipe Velocity	
Initial	< 5 fps
Ultimate	< 10 fps
Maximum Pipe Pressure	100 psi
Well Capacity	1,000 to 2,000 gpm

4.7. Well Field Development

Six to eight new high-capacity wells will be drilled at locations approved by the GWC.

4.8. Collector Pipelines

A system of pipelines will be constructed to interconnect the wells and to convey water to the storage tank. A general layout of the pipelines is presented on Figure 2, which indicates that the pipelines will be 18 to 24 inches in diameter.

4.9. Conveyance Pipeline

The main water conveyance pipeline will be a 36-inch diameter pipeline extending from a 1.0 MG storage tank approximately 12.7 miles to the North Fork of the Republican River following the general alignment shown on Figure 2. The tank will operate between a high water level at elevation 3690 and a low water level at elevation 3665. Releases from the tank will be regulated by a valve located near the tank, and an ultra-sonic flow meter will be provided approximately 30 feet downstream of the release valve.

The pipeline will be buried with minimum cover of three feet above the crown of the pipe. To assure integrity, the pipe will be properly bedded prior to filling the trench with well-compacted backfill. Sources of bedding material include off-site commercial sand and gravel pits and processing of locally available materials. Decisions on bedding material sources will be made during final design following geotechnical field investigations. Access manholes, air release valves, and drain valves will be provided at appropriate locations along the pipeline, as determined during the final design and confirmed during construction.

Pipe materials suitable for the project include polyvinyl chloride (PVC, C-900 and C-905), steel, ductile iron, asbestos cement, and reinforced concrete pressure pipe. The most likely type of pipe for the main conveyance alignment is PVC or steel. Further review of pipe materials and prices will be made during final design.

As discussed above, the pipeline will terminate at a river outlet structure. Upstream of that structure, there will be a control valve to maintain appropriate velocities in the pipeline. This valve will be locate just upstream of the outlet structure. An ultra-sonic flow meter will be provided approximately 30 feet upstream of the downstream control valve.

4.10. Special Crossings

Depending on findings during the design-level field reconnaissance, various types of special crossings may be needed to route the pipeline over or under existing utilities, under stream channels and wetlands, and under roads. No major stream, road, or railroad crossings have been identified, and special crossings are expected to be relatively few in number. Utility crossings may require special excavation methods and encasement of sections of the Compact Compliance Pipeline. If perennial streams or wetlands must be crossed, directional borings and casing conduits may be used.

4.11. River Outlet Structure

The outlet from the pipeline to the North Fork will be a conventional USBR-type impact basin constructed of reinforced concrete. Dimensions of the structure will be approximately 11 feet (W) by 14 feet (L) by 7 feet (H). The structure will be set back, and grading around the structure will be performed to minimize visual impacts. With discharge normally in the range of 20 to 30 cfs, the basin will discharge flow about equal to and sometimes greater than the normal flow of the river. To avoid issues with channel erosion, the basin discharge will be angled at approximately 30 degrees (or less) to the river channel.

The impact basin will be set back from the river at a location outside of the estimated 100-year flood plain, probably about 50 to 100 feet from the existing river bank. A channel will be excavated from the basin to the river. This channel could be engineered to replicate the natural North Fork channel, thereby providing an eventual net gain in riparian habitat to offset the effects of excavation of the new channel into the existing river bank.

4.12. Ancillary Facilities

The Compact Compliance Pipeline will require a number of ancillary facilities for proper operation and long-term maintenance. These include:

- Flow meters at each well, at key locations on the various pipelines, and near the river outlet.
- Valves to control flows in the system, provide isolation for inspection, and to allow draining the pipe at low points.
- Pipeline protection devices, including air release and vacuum valves and blow-off valves.
- Manholes and blind flanges to allow access for internal pipe inspection.
- A system control building and maintenance yard.

5.0 COST ESTIMATES

Estimates of probable construction costs have been developed for the preferred alternative. All costs include allowances for prime contractor overhead and profit. Estimated unit prices and costs for the listed major work items were derived from the following sources: published and non-published bid price data for similar work; R.S. Means Heavy Construction Cost data for 2006 and 2007; contacts with pipe suppliers and information from the project area; experience on similar construction projects; and price quotes from local and regional suppliers and contractors.

The estimated construction costs include an allowance for “unlisted items” equal to 10 percent of the listed items. This allowance is intended to cover costs for a variety of items, which will eventually be included in a final bid schedule, but which are not considered major construction items at this time. This allowance will decrease to zero as project development progresses towards final design and construction bidding.

The sum of the listed items plus the unlisted items allowance is defined as the “Base Construction Subtotal” (BCS). An allowance for the construction contractor’s costs for mobilization, bonds, and insurance is included as a percentage of the BCS. An allowance equal to 4 percent of the BCS has been assigned to these costs.

The cost estimates also include an allowance for construction contingencies:

- Unforeseen conditions at the site or unexpected project development issues.
- Approximations in estimating.
- Integration of new and/or more detailed project information or more detailed or rigorous evaluations.

- Other unforeseen or unexpected costs.

The total allowance for construction contingencies used in the feasibility cost estimates is 10 percent of the BCS plus mobilization, bonds, and insurance. The sum of the BCS, mobilization, bonds, and insurance, and construction contingencies is defined as the "Direct Construction Subtotal" (DCS).

A "Total Estimated Project Cost," which is equal to the DCS plus allowances for design engineering (5 percent), permitting (2 percent), owner legal and administrative costs (2 percent), and construction administration and engineering (5 percent), is provided for the preferred alternative. These costs include allowances for purchase of land or acquisition of easements required for project development or significant environmental mitigation.

The estimated project costs presented in this Loan Feasibility Study are based on professional opinion of the cost to develop and construct the project as described in this Study. The estimated costs are based on the sources of information described above, and knowledge of current construction cost conditions in the locality of the project. Actual project construction and development costs are affected by a number of factors beyond the control of the RRWCD WAE and its engineering consultants, such as supply and demand for the types of construction required at the time of bidding and in the project vicinity; changes in material supplier costs; changes in labor rates; the competitiveness of contractors and suppliers; changes in applicable regulatory requirements; changes in design standards; and environmental mitigation requirements and other conditions of project permitting. Therefore, conditions and factors that arise as project development proceeds through construction may result in project costs that differ from the estimates documented in this Loan Feasibility Study.

Table 4 contains summaries of the cost estimates developed for the preferred alternative for the Compact Compliance Pipeline.

Table 4: Cost Estimate for the Preferred Alternative

Alternative 1
REPUBLICAN RIVER COMPACT COMPLIANCE PIPELINE
OPINION OF PROBABLE PROJECT COST
(Excluding Acquisition of Water Rights)
Delivery Rate = 15,000 AF/yr; 9-month Delivery Period

Item No.	Description	Quantity	Unit	Unit Price	Amount
1	Rights-of-way and easements	180	Ac	$500	$90,000
2	Wells, pumps and motors	6	Ea	$150,000	$900,000
3	1 MG storage tank	1	Ea	$500,000	$500,000
4	Furnish and Install 36-in pipe [(1)]	67,060	Ft	$160	$10,730,000
5	Furnish and Install 24-in pipe [(1)]	5,280	Ft	$82	$433,000
6	Furnish and Install 18-in pipe [(1)]	7,920	Ft	$62	$491,000
7	Valves and appurtenances	1	LS	$608,000	$608,000
8	Road and utility crossings	4	Ea	$15,000	$60,000
9	Drainage crossings	4	Ea	$25,000	$100,000
10	Reclamation of disturbed areas	180	Ac	$1,000	$180,000
11	Outfall structure	1	LS	$150,000	$150,000
12	New access roads	15	Mi	$25,000	$380,000
13	Control building and yard	1	LS	$200,000	$200,000
14	Land for control building and yard	5	Ac	$8,000	$40,000
15	Montoring and SCADA system	1	LS	$100,000	$100,000
---	Unlisted Items (10% of subtotal of listed items)				$1,496,000
Base Construction Subtotal (BCS)					**$16,458,000**
	Mobilization, Bonds, Insurance (4.0% of BCS)				$660,000
	Contingencies (10% of BCS + Mobilization …)				$1,710,000
Direct Construction Subtotal (DCS)					**$18,828,000**
	Design Engineering (5% of DCS)				$940,000
	Permitting (2% of DCS)				$190,000
	Legal and Administrative Costs (2% 0f DCS)				$380,000
	Construction Administration and Engineering (5% of DCS)				$940,000
TOTAL ESTIMATED PROJECT COST					**$21,278,000**

[(1)] Includes trench excavation, pipe installation, bedding, and backfill

6.0 PERMITTING AND APPROVAL BY RRCA

The change of rights to designated ground water must be approved pursuant to Rule 7 of the GWC Rules and Regulations. Rule 7.2 requires publication of an application for a change of rights to designated ground water. A change in the type of use or an export out of a designated basin cannot result in an increase over the historical depletion of the aquifer by the well. An export of water from a well located within a ground water management district (GMD) requires approval by the GMD. As long as the change is limited to the historical use of the right and the water is used for the Compact Compliance Pipeline, approval by the GWC and the applicable GMDs is considered likely. Because of the importance of the Compact Compliance Pipeline, expedited consideration is expected.

The Final Settlement Stipulation requires submission to the RRCA of an augmentation plan and related accounting procedures for wells acquired for the purpose of offsetting stream depletions. The augmentation plan and related accounting procedures must be approved by the RRCA prior to implementation. It is expected that the Colorado State Engineer's Office will submit an augmentation plan and related accounting procedures to the RRCA as soon as a specific plan has been developed.

A full assessment of all permitting issues is beyond the scope this Study, but based on review of requirements under the Corps of Engineers' Nationwide 404 Permit (NWP) process, it is expected that construction of the river outlet structure will require a Nationwide 404 (dredge/fill) Permit (NWP No. 7). Any disturbance of wetlands along the pipeline route would also require a 404 permit (NWP No. 12). Recent pipeline planning and design by Aurora Water has been based on avoidance of wetlands and riparian zones by tunneling rather than trenching for pipeline installation, which may be a possibility in this case to expedite construction.

Assuming that a Nationwide 404 Permit will be the framework for the permitting process, the following activities are also expected to be required, as conditions for obtaining the Corps' permit:

- State of Colorado 401 Water Quality Certification;
- Compliance with requirements of the National Pollution Discharge Elimination System (NPDES Permit);
- Threatened and Endangered Species clearance through the U. S. Fish and Wildlife Service and the Colorado Division of Wildlife;
- Cultural and historic resources assessment;
- Yuma County 1041 Permit; and
- Various construction-related permits that the pipeline construction contractor will be required to obtain.

The Corps provides guidance on what is required in the Nationwide 404 Permit application. Local Corps' representatives in the Denver Regulatory Office have indicated that the 404 Permits (NWP Nos. 7 and 12) could be obtained in about 30 days, perhaps less, once the documentation is provided.

7.0 IMPLEMENTATION SCHEDULE

Key milestone dates in the preliminary project schedule for the Compact Compliance Pipeline are indicated in Table 5 below.

Table 5: Key dates in the Project Schedule.

Milestone	Date
Begin Final Design	01/07/08
Complete 50% Design	04/25/08
Complete 90% Design	07/11/08
Finalize Contract Documents	08/15/08
Issue Bid Documents	08/18/08
Receive Bids	10/17/08
Award Construction Contract	10/20/08
Complete Construction	06/26/09
Begin Full Water Delivery	07/14/09

Achieving this schedule will enable full delivery of water for compact compliance to begin in the latter part of June 2009. The project should be able to deliver close to 11,000 acre-feet of water in 6 to 7 months, allowing Colorado to be within its compact allocation for 2009 by year-end 2009.

8.0 INSTITUTIONAL CONSIDERATIONS

Commissioners for the States of Colorado, Kansas, and Nebraska signed the Republican River Compact on December 31, 1942. The Compact became effective when it was approved by the legislature of each state and consented to by the Congress of the United States in 1943, thereby becoming a law of the United States. The Compact apportioned beneficial consumptive use in each state derived from the computed average annual virgin water supply originating in designed drainage subbasins, subject to increase or decrease if the computed virgin water supply of any source varied more than ten percent from the virgin water supply.

In the late 1990s, the State of Kansas filed a motion for leave to file a complaint against the State of Nebraska with the United States Supreme Court, alleging that Nebraska had violated the Compact by exceeding the beneficial consumptive use allocated to Nebraska under the Compact, primarily by ground water pumping and consumptive use. The U.S. Supreme Court granted the motion. Nebraska filed an answer and a cross-

claim against Colorado, alleging that Colorado had also violated the Compact by exceeding its consumptive use.

Colorado and Nebraska argued that ground water was not apportioned by the Compact or, if it was considered, only ground water in the alluvium of stream channels was subject to the compact apportionment. The Special Master in *Kansas v. Nebraska and Colorado* ruled that depletions to surface streams due to ground water pumping in the basin, including ground water pumping from the Ogallala Aquifer, was part of the consumptive use allocated by the Compact.

On December 15, 2002, the States of Kansas, Nebraska, and Colorado entered into a Final Settlement Stipulation that provided for dismissal of the lawsuit and waived all claims for damages through December 15, 2002. In the Final Settlement Stipulation, Colorado and Kansas agreed to no new relaxation of their existing laws and regulations on well construction and agreed that in compact accounting, sub-basin allocations may be added together, to a certain extent, and that accounting will be done on a five-year running average. Other aspects of the Final Settlement Stipulation are discussed in the Introduction, and Sections 3.2 and 3.4. Approvals by the Colorado Ground Water Commission, local ground water management districts, and the RRCA to implement the Compact Compliance Pipeline are required (*see* Section 6.0), but are considered likely for the preferred alternative.

9.0 SOCIAL AND ENVIRONMENTAL IMPACTS OF THE PROJECT

The Compact Compliance Pipeline will assist the State of Colorado to comply with the Compact and remove the threat that water rights in the basin will be curtailed under proposed Compact Rules or an action to enforce the Compact by Kansas or Nebraska. According to Colorado Agricultural Statistics (2007), the four county region (Yuma, Phillips, Kit Carson, and Logan counties) produced 82,815,000 bushels of corn for grain in 2006, which was 65% of the statewide corn for grain production. Yuma County is the largest corn-producing county in the state, with production in 2006 of 46,500,000 bushels, or almost 37% of the statewide total. In some years, Yuma County produces more corn than any other county in the country, including counties in the corn-belt states of Iowa and Nebraska.

The purchase of existing rights to designated ground water and the use of those rights for the Compact Compliance Pipeline would have no impact on the regional aquifer, since pumping would be limited to the historical consumptive use of the existing rights. The conversion of 10,000 acres of irrigated land to nonirrigated rangeland would reduce tax revenues of Yuma County; however, the retirement of 10,000 irrigated acres for the Compact Compliance Pipeline would prevent the curtailment of even greater irrigated acreage in Yuma County in the proposed Curtailment Zone under the proposed Compact Rules and would prevent the curtailment of all well pumping in the basin if Colorado continues to exceed its compact allocations. In addition, there is a possibility that irrigated land retired for the Compact Compliance Pipeline could be enrolled in CREP. If that occurs, the land would continue to be taxed as irrigated land during the 15-year term of the CREP contracts.

Construction of new wells and the pipeline would disturb some land during construction; however, the engineering plans will provide for revegetation along the pipeline right-of-way. Thus, long-term impacts from pipeline construction would be minimal, if any. The Compact Compliance Pipeline will discharge water into the North Fork a short distance upstream from the Colorado-Nebraska state line and will enhance streamflow in the reach of the river downstream from the outfall structure. The river channel is adequate to carry additional water and the additional streamflow would benefit riparian habitat along the river.

10.0 FINANCIAL FEASIBILITY ANALYSIS

The total cost of the preferred alternative is expected to be $61 to 71 million, depending on the cost to acquire rights to designated ground water. The RRWCD WAE is seeking a loan from the Colorado Water Conservation Board Construction Fund for a minimum of $60 million to finance the project. The RRWCD WAE will finance the remaining amount through private loans or through a future request for a loan from the CWCB Construction Fund. The RRWCD WAE will repay the loans through an increase in use fees and possibly a mill levy on property within the district.

10.1. Financial Repayment

The RRWCD WAE is applying for a minimum loan amount of $60 million from the Colorado Water Conservation Board Construction Fund with a 30-year repayment period and an interest rate of not more than 2.25%. Because the Compact Compliance Pipeline will prevent the State of Colorado from paying future damages for stream depletions from well pumping that occurred decades prior to the Final Settlement Stipulation, the RRWCD WAE will seek additional financial assistance from the State of Colorado, either in the form of a direct grant for the project, a reduced interest rate, or a combination of all three. However, the financial feasibility analysis for this Study is based on a $60 million loan from the CWCB Construction Fund with a 30-year repayment period at an interest rate of 2.25%, with the remainder of the funding coming from cash reserves and private loans.

Based on its current financial statement, the RRWCD WAE has cash reserves of $2,547,594 in excess of commitments available for the project. To pay for the project the RRWCD Board of Directors will raise use fees for 2008 by approximately $8.41 to $9.86 per assessed irrigated acre (currently 500,500 acres). *See* Table 6 below. (Use fees currently generate revenues in excess of financial obligations so the projected use fee increases likely overstate the amount necessary to repay loans.)

Table 6 - Annual Payment for Compact Compliance Pipeline

	Water Right Acquistion Cost of $40,000,000			Water Right Acquistion Cost of $50,000,000		
	CWCB Loan	2nd Loan/Cash	Total	CWCB Loan	2nd Loan/Cash	Total
Amount to be Financed	$50,000,000	$11,278,000	$61,278,000	$60,000,000	$11,278,000	$71,278,000
Length of Loan (Years)	30	30		30	30	
Interest Rate	2.25%	6.00%		2.25%	6.00%	
Annual Loan Payment	$2,309,000	$819,000	$3,128,000	$2,771,000	$819,000	$3,590,000
Estimated O&M Cost	$1,000,000		$1,000,000	$1,000,000		$1,000,000
Total Annual Cost	$3,309,000	$819,000	$4,128,000	$3,771,000	$819,000	$4,590,000
Cost per acre (500,500 acres)	$6.61	$1.60	$8.25	$7.53	$1.60	$9.13

The exact amount of the use fee increase necessary will depend upon the interest rate and the terms of the CWCB and private loans and the costs to acquire existing rights to designated ground water. Because curtailment under the proposed Compact Rules would affect existing mortgage loans, Farm Credit of Southern Colorado has indicated a willingness to loan additional money to the RRWCD WAE for the project. Electric cooperatives in the region, which would suffer decreases in revenues from curtailment of well pumping, have also indicated a willingness to loan additional money to the RRWCD WAE for the project. Farm Credit and electric cooperatives have not committed to an interest rate for such loans, but have indicated that they would consider a favorable rate because of the importance of the project to the region. This financial feasibility analysis assumes that the remainder can be obtained at an interest rate of 6% with a 30-year repayment period. Banks within the region have indicated that use fees required to repay loans would be well within the ability of irrigators to pay.

An analysis of future ground water levels indicates that some irrigated land (approximately 10 percent) will go out of production over the 30-year repayment period of the CWCB loan; however, the vast majority of the irrigated land in the basin is expected to remain in production over the next 30 years; thus, the additional increase in use fees necessary to service loans for the Compact Compliance Pipeline over the 30-year repayment period would be modest and is well within the ability of irrigators to pay. In addition, the RRWCD is considering a mill levy on property within the District to finance a portion of the Compact Compliance Pipeline, since the entire community within the RRWCD would benefit by removing the threat to the economy from curtailment. However, because a mill levy would require an election, this source has not been considered in the financial feasibility analysis.

10.2. Credit Worthiness

Audit reports of financial statements for 2005 and 2006 and a financial report as of September 30, 2007 are attached.

The current schedule of use fees is $5.50 per assessed irrigated acre on diversions of ground water for irrigation use by post-compact wells within the RRWCD and $4.40 per acre-foot on post-compact diversions of ground water for municipal and commercial use.

11.0 CONCLUSIONS AND RECOMMENDATIONS

1. The Compact Compliance Pipeline is critical if Colorado is to comply with the Republican River Compact and is critical to maintain the viability of irrigated agriculture in the Republican River Basin.

2. The Compact Compliance Pipeline project is feasible from both engineering and financial perspectives.

3. The RRWCD Board of Directors will have to increase use fees by approximately $8.25-$9.13 per assessed irrigated acre to pay for the project.

ATTACHMENT A

ARTICLE 50
REPUBLICAN RIVER WATER CONSERVATION DISTRICT

37-50-101. Legislative declaration.

Statute text

The conservation of the water of the Republican river, its tributaries, and that portion of the Ogallala aquifer underlying the district for compliance with the Republican river compact are of vital importance to the growth and development of the entire area and the welfare of all its inhabitants. To promote the health and general welfare of this state, an appropriate agency should be established for the conservation, use, and development of the water resources of the Republican river, its tributaries, and that portion of the Ogallala aquifer underlying the district to cooperate with and assist this state to carry out the state's duty to comply with the limitations and duties imposed upon the state by the Republican river compact and given such powers as may be necessary to safeguard for Colorado all waters to which the state is equitably entitled.

History

Source: L. 2004: Entire article added, p. 1905, § 1, effective August 4.

37-50-102. Definitions.

Statute text

As used in this article, unless the context otherwise requires:

(1) "Board" means the board of directors of the Republican river water conservation district created pursuant to section 37-50-104.

(2) "District" means the Republican river water conservation district created pursuant to this article.

(3) "Person" means a person, firm, partnership, association, or corporation.

(4) "Property", as used in sections 37-50-109 and 37-50-111, includes both real and personal property. In other parts of this article relating to special assessments, unless otherwise specified, "property" means real estate as defined in section 2-4-401 (5), C.R.S., and includes all railroads; tram roads; electric railroads; state and interurban railroads; highways; telephone, telegraph, and transmission lines; water systems, water rights, pipelines, and rights-of-way of public service corporations; and all other real property, whether held for public or private use.

(5) "Republican river basin" means that area shown upon the map titled: "Boundaries of the Republican River Basin and Republican River Water Conservation District". The map shall be kept on file in the office of the state engineer, the Colorado ground water commission, and the district and shall be available for public inspection.

(6) "Republican river compact" means the compact entered into between the states of Colorado, Kansas, and Nebraska and approved by the United States congress as codified in article 67 of this title and as further defined by the final settlement stipulation dated December 15, 2002, and filed in Kansas v. Colorado and Nebraska, No. 126 Original.

History
Source: L. 2004: Entire article added, p. 1905, § 1, effective August 4.

37-50-103. Creation and name of district.
Statute text
(1) There is hereby created a water conservation district to be known and designated as the "Republican river water conservation district". The district is hereby declared to be a body corporate under the laws of Colorado. The district shall comprise the following area and territory of the state of Colorado: Phillips and Yuma counties and those portions of Kit Carson, Lincoln, Logan, Sedgwick, and Washington counties within the Republican river basin.

(2) The creation of the Republican river water conservation district shall not affect the existence or powers of public irrigation districts created pursuant to articles 41 to 43 of this title or ground water management districts created pursuant to article 90 of this title before August 4, 2004.

History
Source: L. 2004: Entire article added, p. 1906, § 1, effective August 4.

37-50-104. Board of directors.
Statute text
(1) The district shall be managed and controlled by a board of fifteen directors. The members of the board shall hold their offices for terms of three years and until their successors are appointed and qualified. A director may serve one or more terms. The boards of county commissioners of the counties of Yuma, Phillips, Kit Carson, Washington, Sedgwick, Lincoln, and Logan shall each appoint one director, who shall be a resident of the respective county. One member of the board shall be appointed by each of the boards of the Marks Butte, Frenchman, W-Y, Sand Hills, Central Yuma, Arikaree, and Plains ground water management districts. One member of the board shall be appointed by the Colorado ground water commission and shall be a member of the Colorado ground water commission. Each director shall be, at the time of the director's appointment, a resident and owner of real property within the county or ground water management district from which he or she is appointed or, if only a part of the county or ground water management district is included within the boundaries of the district, a resident and owner of real property within such included part. The director appointed by the Colorado ground water commission shall, at the time of appointment, reside within the district. Each director shall be appointed by either the board of county commissioners of the county in which the director resides or by the ground water management district in which the director resides. The director may be a member of the board of county commissioners of such county or the board of directors of such ground water management district. Such appointments shall be made at the first meeting of the board of county commissioners, ground water management district, or Colorado ground water commission after the establishment of the district. The members of the board shall annually select one of their number to act as president and one of their number to act as vice-president, each to hold office for one year or until a successor is duly selected.

(2) The office of a director shall become vacant when the director ceases to reside in the county or ground water management district from which he or she was appointed, or in the case of the director appointed by the Colorado ground water commission when the director ceases to reside

in the district or is no longer a member of the Colorado ground water commission, or when declared vacant by a majority vote of all of the members of the board when a director has failed to attend two consecutive regular meetings without having been excused from attendance by the president. If a vacancy occurs in the office by reason of death, resignation, removal, or otherwise, it shall be filled for the remainder of the unexpired term by the board of county commissioners of the county, or the ground water management district from which the director was originally appointed. Before entering upon the discharge of his or her duties, each director shall take an oath to support and defend the constitutions of the United States and of this state and to impartially, without fear or favor, discharge the duties of a director of the district.

(3) (a) Upon creation of the district, the directors shall be appointed by the respective boards of county commissioners or ground water management districts as provided in this section for the following terms of office:

(I) The directors from the counties of Phillips and Kit Carson and from the Marks Butte and Arikaree ground water management districts, whose terms of office shall expire on the date of the regular quarterly meeting of the board to be held in October 2005, or as soon thereafter as their respective successors are appointed and qualified;

(II) The directors from the counties of Washington, Sedgwick, and Lincoln and from the W-Y, Central Yuma, and Plains ground water management districts, whose terms of office shall expire on the date of the regular quarterly meeting to be held in October 2006, or as soon thereafter as their respective successors are appointed and qualified; and

(III) The directors from the counties of Yuma and Logan, the directors from the Frenchman and Sand Hills ground water management districts, and the director appointed by the ground water commission, whose terms of office shall expire on the date of the regular quarterly meeting to be held in October 2007, or as soon thereafter as their respective successors are appointed and qualified.

(b) Thereafter, each director shall be appointed for a term of three years, and the term shall expire on the date of the regular quarterly meeting to be held in October of the year that commences during the third year of the director's term, or as soon thereafter as a successor is duly appointed and qualified. For the purpose of determining such expiration date, the term of the director shall be taken as having begun on the date of the first regular October quarterly meeting at which the term of a predecessor would have expired had the director then been duly appointed and qualified.

History
Source: L. 2004: Entire article added, p. 1906, § 1, effective August 4.

37-50-105. Compensation of directors.
Statute text
The directors of the district shall receive as compensation a sum not to exceed one hundred dollars per day while actually engaged in the business of the district, and, in addition, the

directors shall be entitled to their actual traveling and transportation expenses when away from their respective places of residence on district business.

History
Source: L. 2004: Entire article added, p. 1908, § 1, effective August 4. L. 2007: Entire section amended, p. 358, § 4, effective April 2.

37-50-106. Employees.
Statute text
The board shall appoint a secretary and a treasurer. The same individual may, at the election of the board, hold both offices. The board shall likewise hire such other employees, including engineers and attorneys, as may be required to properly transact the business of the district, and is authorized to provide for the compensation of the secretary and treasurer and other appointees. The treasurer shall be required by the board to give bond with a corporate surety in such amount as the board may fix and that it deems sufficient to protect the funds in the hands of the treasurer or under the treasurer's control. Such bond is subject to the approval of the board.

History
Source: L. 2004: Entire article added, p. 1908, § 1, effective August 4.

37-50-107. General powers.
Statute text
(1) The district is formed for the purpose of cooperating with and assisting this state to carry out its duty to comply with the limitations and duties imposed upon the state by the Republican river compact, and, in furtherance of that purpose and in its corporate capacity, the district shall have power to:

(a) Sue and be sued in the name of the Republican river water conservation district and otherwise to participate in litigation;

(b) Acquire, operate, and hold in the name of the district such real and personal property as may be necessary to carry out the provisions of this article and sell and convey such property or its products as provided in this article or when the property is no longer needed for the purposes of the district;

(c) Borrow money and incur indebtedness and issue bonds or other evidence of such indebtedness;

(d) Accept gifts, grants, or donations of personal or real property or moneys;

(e) Make surveys and conduct investigations to determine the best manner of utilizing stream flows within the district and the amount of such stream flow or other water supply, including ground water; locate ditches, irrigation works, wells, pipelines, and reservoirs to store or utilize water for compact compliance purposes; make filings upon such water; initiate appropriations for compact compliance purposes; and do and perform all acts and things necessary or advisable to

protect existing beneficial uses of water within the district through compliance with the Republican river compact;

(f) Make contracts with respect to the relative rights of the district under its claims and filings and the rights of any other person seeking to divert water from any of the streams within the district;

(g) Contract with any agencies, officers, bureaus, and departments of this state and the United States, including the department of corrections, to obtain services or labor for the initiation or construction of irrigation works, canals, reservoirs, wells, pipelines, or retaining ponds within the district;

(h) Enter upon privately owned land or other real property for the purpose of making surveys or obtaining other information, without obtaining an order to do so, if the same can be done without damage to the lands, crops, or improvements thereon;

(i) Enter into contracts, agreements, or other arrangements with the United States government or any department thereof; with persons, railroads, or other entities; with public corporations; with the state government or a political subdivision of this or other states; with irrigation, drainage, conservation, conservancy, or other improvement districts in this or other states; with ground water management districts; or with the ground water commission for cooperation or assistance in constructing, maintaining, using, and operating the works of the district, for making surveys and investigations or related reports, or for any other purpose authorized by this article. The district may purchase, lease, or acquire land or other property in adjoining states in order to secure outlets or for other purposes of the district and may enter into contracts and spend money for securing such outlets or other works in adjoining states.

(j) Have and exercise the power of eminent domain to acquire ditches, reservoirs, or other works, lands, or rights-of-way therefor that the district may need to carry out the plans of the district and in general to exercise any and all rights and powers of eminent domain conferred upon other agencies, as provided in articles 1 to 7 of title 38, C.R.S.;

(k) Establish a water enterprise pursuant to article 45.1 of this title;

(l) Make loans or grants to any public entity, nonprofit corporation, not-for-profit corporation, carrier ditch company, mutual ditch or reservoir company, unincorporated ditch or reservoir company, or cooperative association within the boundaries of the district to carry out the purposes of the district;

(m) Impose a use fee on the diversion of water within the district or establish an annual levy for the use of water;

(n) Establish a nonprofit or charitable land trust;

(o) Purchase, rent, lease, and accept donations of, or cooperate in the creation of, conservation easements;

(p) Cooperate in the creation of conservation reserve programs and other similar programs;

(q) Exercise such implied powers and perform such other acts as may be necessary to carry out and effect any of the express powers hereby conferred upon such district as set forth in this article.

(2) The district, in its own name, may issue revenue bonds to finance, in whole or in part, the construction of works, reservoirs, wells, pipelines, or other improvements for the beneficial use of water for the purposes for which it has been or may be appropriated and to further the purposes of the district, whether or not the interest on such bonds may be subject to taxation. Such revenue bonds shall be issued in such denominations and with such maximum net effective interest rate as may be fixed by the board and shall bear interest such that the net effective interest rate of the bonds does not exceed the maximum net effective interest rate authorized. The board shall pledge only rental proceeds, service charges, and other income, or any combination thereof, from such works or other improvements, and the district shall not be otherwise obligated for the payment thereof. At the time such revenue bonds are issued, the board shall make and enter in the minutes of the proceeding a resolution in which are set forth the due dates of such revenue bonds, the rates of interest thereon, the general provisions of the bonds, and a statement that the same are payable only out of rental proceeds, service charges, and other income, or any combination thereof. In addition, the board shall require the payment of rental charges, service charges, or other charges by the political subdivisions or persons who are to use or derive benefits from the water or other services furnished by such works or improvements. Such charges shall be sufficient to pay operation and maintenance expenses thereof, to meet the bond payments, and to accumulate and maintain reserve and replacement accounts pertaining thereto as set forth in such resolution. Such resolution shall be irrepealable during the time that any of the revenue bonds are outstanding and unpaid. The revenue bonds shall be signed "Republican River Water Conservation District, By ....., president. Attest ....., secretary", and they shall be countersigned by the treasurer.

(3) The district is authorized and required to prepare and adopt as the official plan for the district a comprehensive, detailed plan showing the nature of the improvements or works, including all canals, reservoirs, ditches, wells, and pipelines, whether within or without the district, and the estimated cost of each principal part of such system or works.

(4) The board has full authority to devise, prepare for, execute, maintain, and operate all works or improvements necessary or desirable to complete, maintain, operate, and protect the works provided for by the official plan, and to that end may employ and secure persons and equipment under the supervision of the chief engineer or other agents or may enter into contracts for such works, either as a whole or in parts.

History
Source: L. 2004: Entire article added, p. 1908, § 1, effective August 4.

37-50-108. Principal office - meetings.
Statute text

The board shall designate a place within the district where the principal office is to be maintained and may change such place from time to time. Regular quarterly meetings of the board shall be held at the office on the second Thursday in the months of January, April, July, and October. The board may hold such special meetings as may be required for the proper transaction of business. All special meetings of the board shall be held at locations that are within the boundaries of the district or that are within the boundaries of any county in which the district is located, in whole or in part, or in any county if the meeting location is within Colorado and does not exceed twenty miles from the district boundaries. The provisions of this section governing the location of meetings may be waived only if the proposed change of location of a meeting of the board appears on the agenda of a regular or special meeting of the board and if a resolution is adopted by the board stating the reason for which a meeting of the board is to be held in a location other than under the provisions of this section and further stating the date, time, and place of such meeting. Special meetings may be called by the president of the board or by any four directors. Meetings of the board shall be public, and proper minutes of the proceedings of the board shall be preserved and shall be open to inspection by any elector of the district during business hours.

History
Source: L. 2004: Entire article added, p. 1911, § 1, effective August 4.

37-50-109. Authority of the board to levy taxes.
Statute text
(1) In addition to other means of providing revenue for the district, the board has the power to fix the amount of an assessment upon the property within the district, as a level or general levy to be used for the purpose of paying the expenses of organization, for surveys and plans, to pay the salary of officers for, the per diem allowed to directors and their expenses, for expenses that may be incurred in the administration of the affairs of the district, and for all other lawful purposes of the district including capital construction.

(2) The amount of assessment on each dollar of valuation for assessment shall, in accordance with the schedule prescribed by section 39-5-128, C.R.S., be certified to boards of county commissioners of the various counties in which the district is located and by them included in their next annual levy for state and county purposes. Such amount so certified shall be collected for the use of such district in the same manner as are taxes for county purposes, and the revenue laws of the state for the levy and collection of taxes on real estate for county purposes, except as modified in this article, shall be applicable to the levy and collection of the amount certified by the board as provided in this section, including the enforcement of penalties, forfeiture, and sale for delinquent taxes.

(3) All collections made by the county treasurer pursuant to such levy shall be paid to the treasurer of the district on or before the tenth day of the next succeeding calendar month. Items of expense that have already been paid in whole or in part from any other sources by the district may be repaid from receipts of such levy. Such levy may be made regardless of whether the work proposed, or any part thereof, may have been found impracticable or for other reasons abandoned. The collection of data and the payment of expenses therefor, including salaries of engineers, attorneys, and others, to assist this state to carry out its duty to comply with limitations and duties imposed upon the state by the Republican river compact, is hereby

declared to be a matter of general benefit to the public welfare, such that a tax for such purposes may be properly imposed.

History
Source: L. 2004: Entire article added, p. 1911, § 1, effective August 4.

37-50-110. Levy and collection of uniform sales and use tax.
Statute text
(1) (a) In addition to other means of providing revenue for the district, the board, in the name of the district, has the power to levy and collect a uniform sales and use tax throughout the entire geographical area of the district, notwithstanding any provision of article 2 of title 29, C.R.S., to the contrary, and upon the approval of the eligible electors in the district at an election held in accordance with section 20 of article X of the state constitution and articles 1 to 13 of title 1, C.R.S.

(b) Such uniform sales tax rate shall not exceed one percent upon every transaction or other incident with respect to which a sales and use tax is levied by the state pursuant to the provisions of article 26 of title 39, C.R.S.

(c) The sales and use tax imposed pursuant to paragraph (a) of this subsection (1) shall not be levied on:

(I) The sale of tangible personal property delivered by a retailer, by a retailer's agent, or to a common carrier for delivery to a destination outside the district; or

(II) The sale of tangible personal property on which a specific ownership tax has been paid or is payable when such sale meets the following conditions:

(A) The purchaser does not reside in the district or the purchaser's principal place of business is outside the district; and

(B) The personal property is registered or required to be registered outside the geographical boundaries of the district under the laws of this state.

(d) The sales and use tax imposed pursuant to paragraph (a) of this subsection (1) is in addition to any other sales and use tax imposed pursuant to law and is exempt from the limitation imposed by section 29-2-108 (1), C.R.S.

(2) (a) The collection, administration, and enforcement of the sales and use tax shall be performed by the executive director of the department of revenue in the same manner as that for the collection, administration, and enforcement of the state sales and use tax imposed pursuant to article 26 of title 39, C.R.S., including, without limitation, the retention by a vendor of the percentage of the amount remitted to cover the vendor's expense in the collection and remittance of the sales tax as provided in section 39-26-105, C.R.S. The executive director shall make monthly distributions of sales tax collections to the district. The district shall pay the net

incremental cost incurred by the department in the administration and collection of the sales and use tax.

(b) (I) A qualified purchaser may provide a direct payment permit number issued pursuant to section 39-26-103.5, C.R.S., to any vendor or retailer that is liable and responsible for collecting and remitting any sales tax levied on any sale made to the qualified purchaser pursuant to the provisions of this section. A vendor or retailer that has received a direct payment permit number in good faith from a qualified purchaser shall not be liable or responsible for collection and remittance of any sales tax imposed on the sale that is paid for directly from the qualified purchaser's funds and not the personal funds of any individual.

(II) A qualified purchaser that provides a direct payment permit number to a vendor or retailer shall be liable and responsible for the amount of sales tax levied on any sale made to the qualified purchaser pursuant to this section in the same manner as liability would be imposed on a qualified purchaser for state sales tax pursuant to section 39-26-105 (3), C.R.S.

(c) (I) The board shall designate a financial officer who shall coordinate with the department of revenue regarding the collection of a sales and use tax. This coordination shall include, but not be limited to, the financial officer identifying those businesses eligible to collect the sales and use tax and any other administrative details identified by the department.

(II) Any sales and use tax authorized pursuant to this article shall become effective on July 1 following the electors' approval of the tax.

(3) The district shall use the revenues generated from the sales and use tax imposed pursuant to this article to assure compliance with the Republican river compact.

History
Source: L. 2004: Entire article added, p. 1912, § 1, effective August 4.

37-50-111. Limitations on power to levy and contract.
Statute text
(1) The district has no power of taxation or right to levy or assess taxes pursuant to section 37-50-109, except an annual levy. The district has no power to contract or incur any obligation or indebtedness except as expressly provided in this article.

(2) All property taxes and assessments under this article shall be collected by the county treasurers of the respective counties in which real estate is situated at the same time and in the same manner as is provided by law for the collection of taxes for county and state purposes, and, if the assessments are not paid, the real estate shall be sold at regular tax sales for the payment of the assessments, interest, and penalties in the manner provided by the laws of this state for selling property for the payment of general taxes. If there are no bids at the tax sales for the property so offered, the tax certificates shall be issued in the name of the district; and the board has the same power with reference to the sale of the tax certificates as is now vested in county commissioners and county treasurers when a tax certificate is issued in the name of a county.

(3) Tax deeds may be issued, based upon the certificates of sale, in the same manner that deeds are executed on tax sales on general state and county taxes.

History
Source: L. 2004: Entire article added, p. 1914, § 1, effective August 4.

37-50-112. Investment of unexpended revenues.
Statute text
The board may invest any unexpended revenues of the district, including any amounts in the construction fund not needed for immediate use, to pay the cost of construction of any project, or to pay bonds or coupons or to meet current expenses, in securities meeting the investment requirements established in part 6 of article 75 of title 24, C.R.S. The board may require any revenues of the district to be deposited with such depository or bank as may be designated by the board and likewise has authority to require the treasurer of the district to take from such depository a bond with corporate surety to ensure payment of any such deposit, or to require such depository to ensure payment of any such deposit, or to require such depository to pledge securities of the same kind as those in which the district is authorized to invest its funds to ensure payment of any such deposit.

History
Source: L. 2004: Entire article added, p. 1914, § 1, effective August 4.

37-50-113. Appointment and compensation of appraisers.
Statute text
(1) As soon as the official plan has been prepared and adopted pursuant to section 37-50-107 (3) and is on file in the office of the district, upon petition of the district, the board may, if the official plan includes the utilization of special improvement bonds paid by special assessments upon the property benefitted within the district, appoint a board of appraisers consisting of three members. The qualifications of the appraisers and all proceedings before them shall be in accordance with the provisions of the law pertaining to the duties and qualifications of appraisers under the conservancy law of this state as set forth in article 4 of this title.

(2) Appraisers appointed under this section shall receive compensation set by the board for the performance of their duties.

History
Source: L. 2004: Entire article added, p. 1914, § 1, effective August 4.

37-50-114. Assessments - procedure in making.
Statute text
(1) If the board provides for the financing of the construction or acquisition of the works or other improvements proposed and of the other steps necessary to the development and implementation of the district's official plan by special assessments to be levied against the appraised benefits to property within the district, then the board may make assessments from time to time, as required, and, in making the assessments, the board shall be guided by the procedure for the levy of

similar assessments under the conservancy law of this state, articles 1 to 8 of this title, and particularly sections 37-5-104 to 37-5-106.

(2) From time to time, as the affairs of the district may demand, the board may levy on all property upon which benefits have been appraised an assessment of such portion of benefits as may be found necessary by the board to pay the cost of the appraisal, the preparation and execution of the official plan for the district, and the superintendence of construction and administration during the period of construction, plus ten percent of the total to be added for contingencies, but not to exceed in the total of principal the appraised benefits so adjudicated. The assessments, to be known as the "construction fund assessment", shall be apportioned to and levied on each tract of land or other property in the district in proportion to the benefits appraised and not in excess thereof, and in case bonds are issued, then the amount of interest that will accrue on such bonds as estimated by the board shall be included in and added to the assessment; except that the interest to accrue on account of the issuance of bonds shall not be construed as a part of the cost of construction in determining whether the expenses and cost of making the improvement are equal to or in excess of the benefits appraised.

(3) As soon as the assessment is levied, the secretary of the district, at the expense thereof, shall prepare in duplicate an assessment of the district. The assessment shall be in the form of a well-bound book endorsed and named "Construction Fund Assessment Record of the Republican River Water Conservation District". The record shall be in the form of similar records for conservancy districts under the laws of this state, particularly section 37-5-104. Assessments may be paid in the manner provided in section 37-5-105 relating to conservancy districts under the laws of this state. All proceedings provided in such sections with respect to conservancy districts shall apply to the assessments, the records thereof, and the manner of payment of assessments of the district.

History
Source: L. 2004: Entire article added, p. 1915, § 1, effective August 4.

37-50-115. Collection by civil action.

Statute text
In addition to all other remedies for collection of assessments provided by this article, the district may, at any time after three years after the issuance of any certificate of purchase held by the district, bring civil action to foreclose the lien for assessments represented by all certificates of purchase held by the district with respect to the same land and for other relief with respect to such land as provided by the Colorado rules of civil procedure then in effect for the foreclosure of liens on real property. No statute of limitations shall be applicable to the rights of the district arising from any assessment. No decree, or sale of lands thereunder, shall be made except one subject to the lien of future unpaid installments of assessments. The county treasurer shall be made a party to any action of the district authorized by this section.

History
Source: L. 2004: Entire article added, p. 1915, § 1, effective August 4.

37-50-116. Assessments perpetual lien.

Statute text

All assessments on account of special improvements against appraised benefits and interest thereon and penalties for default of payment thereof, together with the cost of collecting the same, from the date of the filing of the construction fund and the assessment record in the office of the treasurer of the county in which the lands and property are situated, shall constitute a perpetual lien in an amount not in excess of the benefits severally appraised upon the land and other property against which assessments have been levied and such benefits appraised. No sale of the property to enforce any general state, county, city, town, or school tax or other lien shall extinguish the perpetual lien of the assessment. At any time, a landowner may pay the full amount of the assessment, and thereafter the property of the landowner shall be clear and free from lien and shall not be subject to assessment for and on account of benefits appraised against any other land or default in the payment of assessments made against any other land.

History

Source: L. 2004: Entire article added, p. 1916, § 1, effective August 4.

37-50-117. Directors to remedy defects in assessments.

Statute text

If any assessment made under the provisions of this article proves invalid, the board, by subsequent or amended acts or proceedings, promptly and without delay, shall remedy all defects or irregularities, as the case may require, by making and providing for the collection of new assessments or otherwise.

History

Source: L. 2004: Entire article added, p. 1916, § 1, effective August 4.

37-50-118. Assessment record as evidence.

Statute text

The record of assessments contained in the respective assessment records of the district shall be prima facie evidence in all courts of all matters contained in the record.

History

Source: L. 2004: Entire article added, p. 1916, § 1, effective August 4.

37-50-119. Defects in notice perfected.

Statute text

Whenever in this article notice is provided for, if the court finds that due notice was not given, jurisdiction shall not be lost nor the proceedings abated or held void, but the court shall continue the hearing until proper notice has been given and then shall proceed as though proper notice had been given in the first instance. If any appraisal, assessment, levy, or other proceeding relating to the district is held defective, then the board may file a motion in the cause in which the district was organized to perfect any such defect, and the court shall set a time to hear the motion. If the original notice as a whole is held to be sufficient, but faulty only with reference to publication as to certain particular lands or as to service as to certain persons, publication of the defective notice may be ordered as to the particular lands or service may be made on the persons not

properly served, and the notice is thereby corrected without invalidating the original notice as to other lands or persons.

History
Source: L. 2004: Entire article added, p. 1916, § 1, effective August 4.

37-50-120. Issuance of general obligation bonds.
Statute text
(1) In the name of the district, the district may issue general obligations or bonds that shall constitute a lien against the real property in the district. Obligations shall bear interest at a rate such that the net effective interest rate of the issue does not exceed the maximum net effective interest rate authorized. Interest shall be payable semiannually, and obligations may be made payable in series becoming due not less than five years and not more than fifty years after the date of issue. The bonds may be sold in one or more series at par, or below or above par, at public or private sale, in such manner and for such price as the district, in its discretion, shall determine. As an incidental expense of the issuance, the district may employ financial and legal consultants in regard to the financing of the official plan. The district may exchange all or a part of its bonds for all or an equivalent part of property or services included in the official plan for which the bonds are issued, if the exchange is preceded by determination of the fair value of the property or services exchanged for the bonds. Such determination shall be by resolution of the board and shall be conclusive.

(2) Such bonds are to be paid from assessments levied from time to time, as the bonds and interest thereon become due, against the taxable property in the district and not otherwise. Such levies shall not be limited as to rate or amount; except that they shall not exceed a rate reasonably required to yield revenues needed to pay bonds and interest as they mature, plus any other amounts required for debt service, less the amount of any other revenues available to the district for payment of bonds and debt service. The board shall certify, to the boards of county commissioners of the several counties in which the district or any part thereof is located, the amount of the levy necessary to be made upon the taxable property in the district to yield the required revenues becoming due on all outstanding bonds at the same time that certifications of the district's mill levy assessment for general district purposes are made. The procedure for the assessment and collection of ad valorem taxes of the county is, except as may be otherwise provided in this article, made applicable and is to be followed in the levy of assessments for payment of taxes and collection of principal and debt service on such general obligations or bonds.

History
Source: L. 2004: Entire article added, p. 1917, § 1, effective August 4.

37-50-121. Costs - board of directors to concur.
Statute text
To the extent that the costs of the proceedings for the issuance of revenue bonds are not paid by the proceeds of the bonds, they shall be budgeted and paid out from district revenues or from the separate district mill levy.

History
Source: L. 2004: Entire article added, p. 1917, § 1, effective August 4.

37-50-122. Sinking fund.
Statute text
The district may provide for a sinking fund for the ultimate payment of any of the obligations of the district. The sinking fund may be invested as provided in section 37-50-112.

History
Source: L. 2004: Entire article added, p. 1917, § 1, effective August 4.

37-50-123. Court confirmation.
Statute text
(1) (a) The board, on behalf and in the name of the district, may file a petition at any time, in the district court in and for the county in which the district's principal office is maintained, for a judicial examination and determination of any power conferred or of any taxes or rates or other charges levied, or of any act, proceeding, or contract of the district, whether or not the contract has been executed, including, without limitation, proposed contracts for the acquisition, improvement, equipment, maintenance, operation, or disposal of any properties or facilities for the benefit of the district, and so including a proposed issue of revenue warrants, revenue bonds, special assessment bonds, or general obligation bonds, issued or to be issued on behalf of any such entity. The petition shall set forth the facts on which the validity of such power, tax, assessment, charge, act, proceeding, or contract is founded and shall be verified by the president of the board.

(b) An action taken pursuant to paragraph (a) of this subsection (1) shall be in the nature of a proceeding in rem, and jurisdiction of all parties interested may be had by publication, mail, and posting, as provided in this article. Notice of the filing of the petition shall be given by the clerk of the court, under the seal of the court, stating in brief outline the contents of the petition and also stating where a full copy of any contract mentioned in the petition may be examined. The notice shall be served by publication at least once a week for five consecutive weeks in a daily or a weekly newspaper of general circulation published in the county in which the principal office of the district is located by mailing copies of the notice by registered or certified mail, return receipt requested, to the boards of county commissioners of the several counties in which the parties in interest in such action are located, wholly or in part, and by posting the notice in the office of the district at least thirty days before the date fixed in the notice for the hearing on the petition. Jurisdiction shall be complete after such publication, mailing, and posting.

(c) Any owner of property in the district filing a petition pursuant to this subsection (1) or any person interested in the petition, contract, or proposed contract may appear and move to dismiss or answer the petition at any time before the date fixed for the hearing or within such further time as may be allowed by the court. All persons who fail to appear shall be deemed to have consented to the petition.

(2) The petition and notice shall be sufficient to give the court jurisdiction. Upon hearing the petition, the court shall examine and determine all matters and things affecting the question

submitted and shall make such findings and render such judgment and decree as the case warrants. Costs may be divided or apportioned among any contesting parties in the discretion of the trial court. Review of the judgment of the court may be had as in other similar cases; except that such review shall be applied for within thirty days after the time of the rendition of such judgment or within such additional time as may be allowed by the court within thirty days. The Colorado rules of civil procedure shall govern in matters of pleading and practice where not otherwise specified in this article. The court shall disregard any error, irregularity, or omission that does not affect the substantial rights of the parties.

History
Source: L. 2004: Entire article added, p. 1917, § 1, effective August 4.

37-50-124. Election to authorize debt.
Statute text
Except for the issuance of refunding bonds or other funding or refunding of obligations that does not increase the net indebtedness of the district, no indebtedness shall be incurred by the issuance of general obligation bonds of the district or by any contract by which the district agrees to repay as general obligations or other obligations constituting a "general obligation debt by loan in any form", as such term is used in section 6 of article XI of the state constitution, of the district to the federal government, the state, a political subdivision, or a person over a term not limited to the then current fiscal year any project costs advanced thereby under any contract for the acquisition or improvement of the facilities or any interest in the facilities, or for any project, advanced by the issuance of securities of such a political subdivision or person to defray any cost of the project or of the facilities or an interest in the project or facilities acquired and becoming a part of the facilities of the district, or otherwise advanced, unless a proposal for issuing the district's general obligation bonds or of incurring an indebtedness by the district by making such a contract is submitted to the electors of the district and is approved by a majority of such electors voting on the proposal at an election held for that purpose in accordance with this article.

History
Source: L. 2004: Entire article added, p. 1918, § 1, effective August 4.

ATTACHMENT B

RESOLUTION OF THE
REPUBLICAN RIVER WATER CONSERVATION DISTRICT
(Establishing A Water Activity Enterprise)

RECITALS

WHEREAS, the Republican River Water Conservation District ("District") was created pursuant to § 37-50-103(1), C.R.S., and pursuant to § 37-50-103(1), C.R.S., is a body corporate under the laws of Colorado; and

WHEREAS, the District was formed for the purpose of cooperating with and assisting the State of Colorado to carry out its duty to comply with the limitations and duties imposed upon the State by the Republican River Compact; and

WHEREAS, the District is authorized by § 37-50-107(1)(c), C.R.S., to issue bonds or other evidence of indebtedness for the purpose of cooperating and assisting the State to carry out its duty to comply with the limitations and duties imposed upon the State by the Republican River Compact, including but not limited to locating ditches, irrigation works, wells, pipelines, and reservoirs to store or utilize water for compact compliance purposes, making filings upon such water, to initiate appropriations for compact compliance purposes, and doing and performing all acts and things necessary or advisable to protect existing beneficial uses of water within the District through compliance with the Republican River Compact; and

WHEREAS, pursuant to § 37-50-107(1)(k), C.R.S., the District is authorized to establish a water enterprise pursuant to Article 45.1 of Title 37 of the Colorado Revised Statutes; and

WHEREAS, Colorado Constitution Art. X, Sec. 20 includes requirements with respect to financial activities of the District except, generally, insofar as said activities take place within enterprises owned and operated by the District; and

WHEREAS, pursuant to the provisions of Title 37, Article 45.1, Colorado Revised Statutes (the "Water Activity Law"), state and local governmental entities which have their own bonding capacity under applicable law are authorized: (i) to establish or continue to maintain water activity enterprises for the purpose of pursuing or continuing water activities, which includes the diversion, storage, carriage, delivery, distribution, collection, treatment, use, reuse, augmentation, exchange, or discharge of water and includes the acquisition of water or water rights; and (ii) to issue or reissue bonds, notes, or other obligations payable from the revenues derived or to be derived from the function, service, benefits, or facility or from any other available funds of the enterprise, the terms and conditions of such bonds or other obligations to be as set forth in the resolution authorizing the same and, as nearly as practicable, as provided in Part 4 of Article 35 of Title 31, C.R.S., relating to water revenue bonds; and

WHEREAS, in order to qualify as an activity enterprise under the Water Activity Law, the enterprise must consist of a government water activity business owned by a governmental entity (such as the District), which enterprise receives under 10% of its annual revenues in grants

from all Colorado state and local governments combined, and which is authorized to issue its own revenue bonds; and

WHEREAS, it is the intent of the District to formally establish the "Republican River Water Conservation District Water Activity Enterprise" (the "Enterprise") under the Water Activity Law; and

WHEREAS, the District desires that the Enterprise be qualified as an enterprise and a separate government-owned business as clarified by the Colorado Supreme Court decision in Nicholl v. E-470 Public Highway Authority, No. 94SC307 (Colo. May 15, 1995); and

WHEREAS, the Board finds that the provision of District services through an enterprise will contribute to the health, safety, welfare, and prosperity of the District, its residents, and landowners;

RESOLUTION

NOW, THEREFORE, be it resolved by the Board, as follows:

1. Establishment of Enterprise. The Republican River Water Conservation District Water Activity Enterprise is hereby established by the District pursuant to the Water Activity Law.

Pursuant to Section 37-45.1-103(1), C.R.S., the Enterprise is established by the District "for the purpose of pursuing . . . water activities, including water acquisition or water project or facility activities, including the construction, operation, repair, and replacement of water . . . facilities." The Enterprise shall operate as a business as the term is commonly used or judicially defined.

The Enterprise shall consist of the business of:

(a) Operations, Services, and Programs: all of the operations, services, and programs necessary or advisable to protect existing beneficial uses of water within the District through compliance with the Republican River Compact, including but not limited to locating ditches, irrigation works, wells, pipelines and reservoirs to store and utilize water for compact compliance purposes; and

(b) Facilities: all real and personal property acquired, operated, and held in the name of the District as may necessary to carry out the operations, services, and programs necessary or advisable to protect existing beneficial uses of water within the District through compliance with the Republican River Compact; and

(c) Administrative equipment: all billing equipment used in the billing and collection of fees, tolls, rates, charges and penalties for the provision of operations, services, and programs by the Enterprise.

2. Governing Body.

(a) Board. Pursuant to the Water Activity Law, Section 37-45.1-103(3), C.R.S., the governing body of the Enterprise ("Governing Body") shall be the Board of Directors of the District.

(b) Governance and By-Laws. The Governing Body shall be subject to all applicable laws, rules, and regulations pertaining to the Board. The Governing Body may adopt such lawful bylaws for its operations as deemed necessary or convenient by the Governing Body.

(c) Powers. The Governing Body is empowered to exercise all decision-making functions on behalf of the Enterprise.

The Governing Body, when acting on behalf of the Enterprise, may act in the name of the Enterprise or in the name of the District.

The Governing Body, in relation to Enterprise business, shall have all of the authority, powers, rights, obligations, and duties as may be provided or permitted to the District in relation to the purposes of the Enterprise by the Water Activity Law, the Republican River Water Conservation District Act, and the Colorado Constitution.

On behalf of the Enterprise, the Governing Body shall have the power and authority to:

(1) in the name of the Enterprise or the District, make, execute and perform contracts, take and give instruments of conveyance, and do everything necessary, pertaining or incidental to the powers herein granted, and in so doing may make such special designations in such instruments as will indicate the capacity in which the District is acting when such actions are taken by or on behalf of the Enterprise, such as "the Republican River Water Conservation District, acting by and through its Water Activity Enterprise;" provided that, notwithstanding the foregoing, no contract, conveyance, or other instrument shall be invalidated as a result of the failure to use any such special designation;

(2) purchase, acquire, construct, lease, condemn and purchase, extend and add to, maintain, conduct and operate services and programs necessary or advisable to protect existing beneficial uses of water within the District through compliance with the Republican River Compact;

(3) institute and defend all litigation affecting Enterprise powers and duties or in relation to the operations, services, and programs of the Enterprise and the property rights connected therewith or incidental thereto;

(4) designate, employ, retain, contract for, and discharge a manager and such other personnel and consultants as may be necessary or convenient to execute the policies of the Governing Body and to perform such other functions as the Governing Body may direct, and determine such compensation and conditions of employment or contract as the Governing Body may determine;

(5) adopt and enforce bylaws, rules and regulations of the Enterprise, including the ability to enforce such rules and regulations by the termination of service.

(6) fix and collect rents, rates, fees, tolls, and other charges, which rates, fees, tolls, charges, penalties of the District shall relate to the operations, services, and programs provided and shall apply until such time as the Governing Body acts to change the same.

(7) fix reasonable penalties for delinquencies;

(8) issue bonds, notes, or other obligations payable from the revenues derived or to be derived from the operations, services, and programs of the enterprise, in accordance with the Water Activity Law and other applicable law and subject to the acquisition of such elector approval as may be required by law; authorize the issuance of such bonds, notes, or other obligations in accordance with applicable law, acting as both the Governing Body and the Board, however, no such bonds, notes, or other obligations shall be secured by the general revenues or taxing power of the District.

(8) pursuant to Section 37-45.1-103(2)(b), C.R.S., contract with any other person or entity, including other districts or enterprises.

(d) Meetings. Whenever the Board is in session, the Governing Body shall also be deemed to be in session. It shall not be necessary for the Governing Body to meet separately from the regular and special meetings of the Board, nor shall it be necessary for the Governing Body to specifically announce or acknowledge that actions taken thereby are taken by the governing body of the Enterprise. The Governing Body may conduct its affairs in the same manner and subject to the same laws, which apply to the Board for the same or similar matters. Public notice of meetings of the Board shall constitute such notice for the Governing Body notwithstanding the existence or absence of a reference in such notice to the Governing Body.

3. Budgeting and Financial Management.

(a) Enterprise Budget Recommendations. The Enterprise shall provide budget recommendations to the Board in accordance with statutory requirements and timing. The budget of the Enterprise shall separately set forth recommended fiscal year spending, total revenue, reserve funds of the Enterprise in such detail as determined appropriate by the Board. The Enterprise budget shall include the estimated dollar amounts that the Enterprise intends to acquire from all sources.

As provided in Section 37-45.1-103(1), C.R.S., the Enterprise, as "[a]ny water activity enterprise established or maintained pursuant to this article [45.1 of Title 37, C.R.S.] is excluded from the provisions of section 20 or article X of the state constitution."

(b) Administration Budget. The Board shall produce a budget for District administration and District governmental services not readily attributable to an enterprise ("Administration").

(c) Final Budget. The Board shall combine the budget for Administration, the budget recommendations for the Enterprise, and such other information as may be available to the Board to draft the budget for the District.

(d) Mill Levies, Ad Valorem Taxes. In its sole discretion and subject to the limitations of law, the Board shall determine the mill levies to be certified for District operations and debt service. THE ENTERPRISE SHALL HAVE NO POWER WHATSOEVER TO IMPOSE OR LEVY ANY GENERAL TAX. No evidence of indebtedness, debt, contract subject to annual appropriation, contract, or other financial obligation of the Enterprise shall be secured by the revenues of the District where "revenues of the District" includes all of the sources of revenue authorized for the use of the District or includes any general taxes of the District, regardless of whether the District has exercised the general taxing powers available to it. The general revenue raising powers of the District shall not be deemed to be an integral part of any Enterprise financing agreement.

(e) Audit. The Governing Body may cause the Enterprise to be audited separately from the District or as an instrumentality of the District to be included as part of the audit of the District. An audit of the Enterprise or application for exemption from audit shall be completed as and when required by Colorado law.

(f) Excess Enterprise Funds. The net earnings of the Enterprise shall be appropriated for the necessary requirements of the Enterprise and any remaining surplus may be appropriated to the general revenues or other funds of the District by the Board in its annual budget and appropriations resolution or any amendment thereof.

(g) Reserves. The Governing Body may provide for such reserves for the replacement of obsolescent or depreciated property or improvements to the System as may be necessary.

(h) Reports. The Enterprise shall provide such reports to the Board as the Board may request from time to time.

4. Reimbursement of Administrative Services Provided to the Enterprise by the District, if any. The costs of Administration provided for the Enterprise from the general revenues of the District (i.e., such revenues as are not allocated to the Enterprise), if any, shall be allocated to, accounted for, and paid by the Enterprise in any reasonable manner as determined by the Board. In its discretion the Board may provide for the direct payment of such costs, in

which case the Enterprise shall in due course reimburse such costs to the District in any reasonable manner as determined by the Board. No direct payment of costs by the District shall be deemed a "grant" to the Enterprise insofar and so long as they are reimbursed by the Enterprise within the same fiscal year.

5. Debt Allocation. As determined by the Board, the Enterprise shall be responsible for its allocation of District debts, other financial obligations, revenue bonds, or other evidences of indebtedness as shown in bond or contract covenants, documentation of evidence of indebtedness, budget, or resolution of the District. Nothing herein shall permit the general taxing power of the District to secure obligations of the Enterprise.

6. Financial Records. To the extent practicable, the financial records of the Enterprise shall be maintained separately from the financial records of the District. Provided that accurate records are kept of the amount of funds allocable to the Enterprise and to the District, funds of the Enterprise and funds of the District may be commingled for purposes of investment.

7. Instrumentality, Immunity. The Enterprise shall be deemed to be an "instrumentality" of the District as such term is used in Section 24-10-103(5), C.R.S., and as such is a "public entity" entitled to such benefits, burdens, and immunities as may be available to it under the Colorado Governmental Immunity Act, Part 1 of Article 10, Title 24, C.R.S.

It is declared by the District that the existence of immunity under the Colorado Governmental Immunity Act is consistent with the nature of a government-owned business as the term is used in Colo. Const. Art. X, Sec. 20; that immunity from certain tort liabilities are common to businesses, such as the Colorado ski and equestrian industries; and that the mere existence of such immunity does not affect the status of the Enterprise.

8. Insurance.

The District may procure and maintain insurance against personal or property damage or injury arising out of its own operations and the operations of the Enterprise in the following amounts:

(a) Bodily injury and property damage liability insurance with liability limits in amounts not less than the statutory liability limits per person and per occurrence as provided in Part 1 of Title 24, Article 10 of the Colorado Revised Statutes, as the same may be amended;

(b) Replacement level property insurance for the facilities and equipment of the District and Enterprise.

In the event that the District procures such insurance, the District shall name the Enterprise as an additional insured on all such liability policies.

In the event that the District does not procure and maintain such insurance for the Enterprise, the Enterprise may do so in its own name and shall name the District as an additional insured on all such liability policies.

9. Maintenance of Enterprise Status. The Enterprise shall at all times conduct its affairs so as to continue to qualify as a "water activity enterprise" within the meaning of §37-45.1-102, C.R.S., and as an "enterprise" within the meaning of Article X, Section 20, Colorado Constitution. Specifically, but not by way of limitation, the Enterprise is not authorized to, and shall not, receive 10% or more of its annual revenue in grants from all Colorado state and local governments combined, including the District.

10. Disqualification, Cure. In the event that the Enterprise is disqualified as an enterprise by a court of competent jurisdiction, the Governing Body intends to cure the defects in the organization or operation of the Enterprise as soon as possible following the date of the final judgment of such court; but in no case shall such a disqualification of the Enterprise be construed as working a disqualification of any other enterprise that may have been organized by the District. Any disqualifying grant may, upon approval of the Board, be returned to the grantor, or, if appropriate, placed in escrow by the grantor for the benefit of the Enterprise or District to accomplish the intent of the grantor while maintaining the Enterprise status of the District's disputed Enterprise.

11. Severability. If any section, paragraph, clause, or provision of this Resolution shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such section, paragraph, clause, or provision shall not affect any of the remaining provisions of this Resolution, the intent being that the same are severable.

12. Additional Enterprises. The District may, in its discretion, designate additional enterprises or divide the Republican River Water Conservation District Water Activity Enterprise into smaller units, in the future as may be in the best interests of the District.

RESOLVED this 12th day of October, 2004.

ATTEST:

BOARD OF DIRECTORS
REPUBLICAN RIVER WATER
CONSERVATION DISTRICT

Secretary

President

ATTACHMENT C

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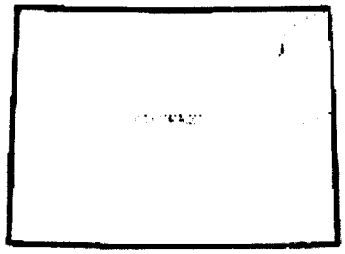
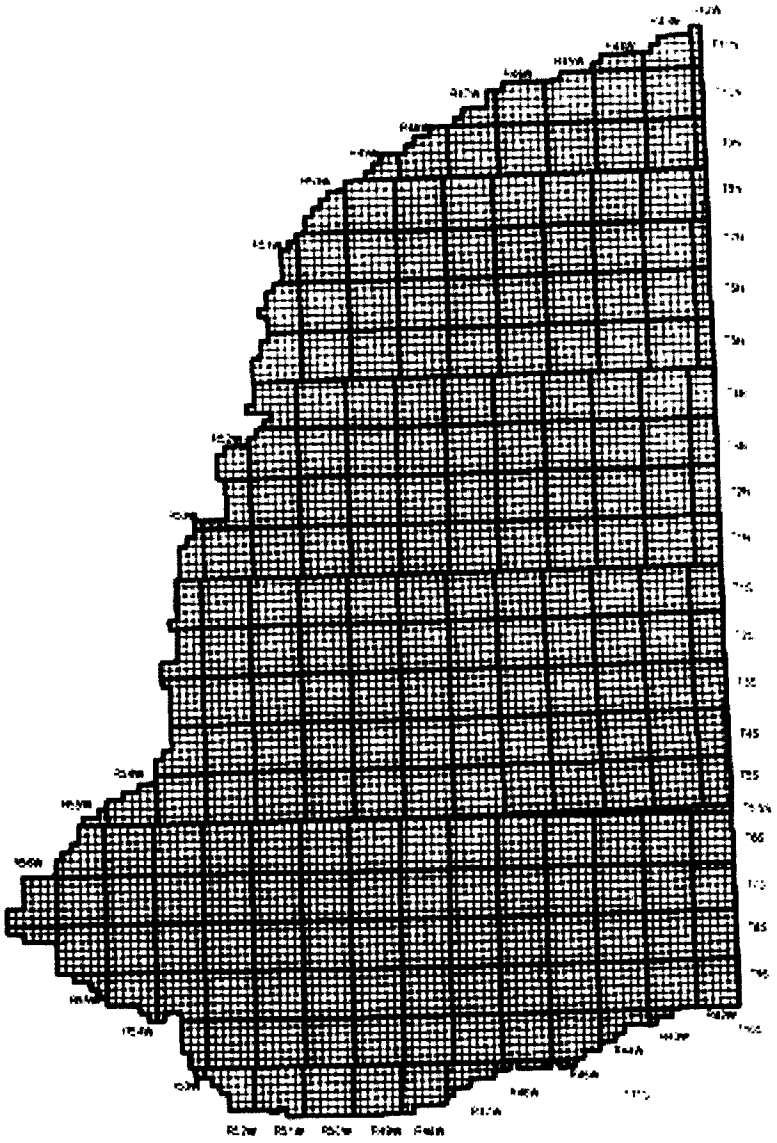
Republican River Water Conservation District





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DIVISION OF WATER RESOURCES
STATE OF COLORADO

FIGURE

1

Office of the State Engineer
Division of Water Resources
Department of Natural Resources

Republican River Water Conservation District
Township
Section

ATTACHMENT D

REPUBLICAN RIVER WATER CONSERVATION DISTRICT

FINANCIAL STATEMENTS

December 31, 2005

REPUBLICAN RIVER WATER CONSERVATION DISTRICT

STATEMENT OF NET ASSETS
December 31, 2005

ASSETS

CURRENT ASSETS		
Cash and Cash Equivalents (Note 2)	$	2,511,863
Accounts Receivable (Note 3)		18,540
Total Current Assets		2,530,403
CAPITAL ASSETS (Note 4)		
Depreciable:		
Vehicles		27,847
Less: Accumulated Depreciation		(2,785)
Net Capital Assets		25,062
Total Assets		2,555,465

LIABILITIES AND NET ASSETS

CURRENT LIABILITIES		
Accounts Payable		23,278
EQIP Contracts - Well Retirement (Note 5)		123,503
Payroll Liabilities		1,554
Total Current Liabilities		148,335
LONG-TERM LIABILITIES		
EQIP Contracts - Well Retirement (Note 5)		155,426
Total Long-Term Liabilities		155,426
Total Liabilities		303,761
NET ASSETS		
Investment in Capital Assets, Net of Related Debt		25,062
Restricted Net Assets (Note 8)		20,957
Unrestricted Net Assets		2,205,685
Total Net Assets	$	2,251,704

The accompanying notes are an integral part of the financial statements.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET ASSETS
For The Year Ended December 31, 2005

OPERATING REVENUES	
Irrigation Assessment Fees	$ 2,900,499
Commercial and Municipal Well Assessment	43,161
Surface Evaporative Loss Fees	16,142
Total Operating Revenues	2,959,802
OPERATING EXPENSES	
County Treasurers' Fees	87,756
Depreciation (Note 4)	2,785
EQIP Contracts	370,508
Telephone	3,503
Vehicle Expense	3,207
Total Operating Expenses	467,759
Income from Operations Before G&A Expenses	2,492,043
GENERAL AND ADMINISTRATIVE EXPENSES	
Salaries and Wages	54,417
Employee Benefits and Taxes	13,220
Office Lease	5,110
Engineering Fees	11,393
Legal Fees	71,247
Accounting and Audit Fees	11,136
Office Start-Up	15,128
Other Professional Fees	4,478
Dues and Subscriptions	580
Insurance	5,502
Directors' Compensation and Expense	31,456
Other	7,154
Total General and Administrative Expenses	230,821
OPERATING INCOME	2,261,222
NON-OPERATING REVENUES (EXPENSES)	
Interest Income	47,405
Other Income	4,000
Interest Expense	(2,203)
Total Non-Operating Revenues	49,202
CHANGE IN NET ASSETS	2,310,424
NET ASSETS, Beginning of Year	(58,720)
NET ASSETS, End of Year	$ 2,251,704

The accompanying notes are an integral part of the financial statements.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT

STATEMENT OF CASH FLOWS
For The Year Ended December 31, 2005

CASH FLOWS FROM OPERATING ACTIVITIES:	
Cash Received from Customers	$ 2,941,262
Cash Paid to Suppliers	(363,874)
Cash Paid to Employees	(71,031)
Net Cash Provided by Operating Activities	2,506,357
CASH FLOWS FROM NON-CAPITAL FINANCING ACTIVITIES	
Principal Paid on Loans	(201,000)
Interest Paid on Loans	(2,203)
Interest Income	47,405
Other Income	4,000
Net Cash Used by Non-Capital Financing Activities	(151,798)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:	
Acquisition of Capital Assets	(27,847)
Net Cash Used by Capital and Related Financing Activities	(27,847)
NET INCREASE IN CASH AND CASH EQUIVALENTS	2,326,712
CASH AND CASH EQUIVALENTS, Beginning of Year	185,151
CASH AND CASH EQUIVALENTS, End of Year	2,511,863
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:	
Operating Income	2,261,222
ADJUSTMENTS TO RECONCILE OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:	
Depreciation	2,785
Changes in Assets and Liabilities:	
Accounts Receivable	(18,540)
Accounts Payable	(14,643)
Accrued Payroll	(4,950)
EQIP Contracts Payable	278,929
Payroll Liabilities	1,554
Total Adjustments	245,135
Net Cash Provided by Operating Activities	$ 2,506,357

The accompanying notes are an integral part of the financial statements.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT

NOTES TO THE FINANCIAL STATEMENTS
December 31, 2005

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity
Republican River Water Conservation District (District) is a Colorado governmental unit operating with a sole enterprise fund while in accordance with Colorado Statute. The District was established to provide compliance with the Republican River Compact on behalf of the State of Colorado.

The District is not included in the financial statements of any other entity. The District has no component units.

Basis of Accounting
Enterprise fund accounting is utilized in accordance with generally accepted accounting principles. Enterprise funds recognize revenues and expenses on the accrual basis of accounting. Revenue is recognized when earned, and expenses are recognized when incurred.

Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the District's enterprise fund are special assessment fees charged to landowners for their well rights and water usage. Operating expenses for enterprise funds include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

The District applies all applicable Governmental Accounting Standards Board (GASB) pronouncements, as well as Financial Accounting Standards Board (FASB) Statements and Interpretations, Accounting Principles Board (APB) Opinions, and Accounting Research Bulletins (ARB) of the committee on accounting procedures issued on or before November 30, 1989, that do not conflict with or contradict GASB pronouncements.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Capital Assets
The District capitalizes assets valued over $5,000. Assets are stated at cost, developer's cost, or estimated fair market value at the time of donation. Depreciation is recognized using the straight-line method over the asset's estimated useful lives of one to forty years. Depreciation begins in the year following completion for assets under construction. Water rights, and the costs to obtain those rights, are capitalized but not depreciated.

Irrigation Assessment Fees
Irrigation Assessment Fees are the District's primary means of revenue. These fees are paid by the property owner, along with property taxes, to the County Treasurer. They are payable in full on April 30 or in two installments on February 28 and June 15. The Counties of which the District is comprised collects the taxes for the District and remits them by the 10th of the month following the month of collection.

Budgets
Each fall the Board of Directors adopts a budget and appropriates funds for the following calendar year. Unused appropriations lapse at year-end.

All budget hearings are open to the public. An amendment to the budget through supplemental appropriation is subject to approval of the Board of Directors at a public hearing and the filing of the approved supplemental appropriation with the State of Colorado.

The basis of these budgets is Non-GAAP, in that revenues and expenditures are budgeted on the modified accrual basis of accounting. This basis of accounting records transactions based upon the "flow of funds." Revenues are recognized when funds are available and measurable, and expenditures are recognized when incurred.

Cash Flows
For purposes of the statement of cash flows, cash and cash equivalents consist of cash on hand and demand, money market and savings accounts at financial institutions. Repurchase agreements, certificates of deposit, and U.S. Treasury Notes, including those with maturities of three months or less, are classified as investments and are not reflected as cash in the statement of cash flows.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Net Assets
Net assets represent the difference between assets and liabilities. Net assets invested in capital assets, net of related debt, consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any borrowing used for the acquisition, construction or improvement of those assets. This net asset amount also is adjusted by any bond issuance deferral amounts. Net assets are reported as restricted when there are limitations imposed on their use, either through the enabling legislation adopted by the District or through external restrictions imposed by creditors, grantors, or laws or regulations of other governments. All other net assts are reported as unrestricted.

The District applies restricted resources first when an expense is incurred for purposes for which both restricted and unrestricted net assets are available.

Use of Estimates in the Preparation of Financial Statements
The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses during the period. Actual results could differ from those estimates.

NOTE 2: CASH DEPOSITS AND CASH EQUIVALENTS

Cash Deposits
For purposes of these financial statements, cash and cash equivalents consist of cash on hand and demand, money market and savings accounts at financial institutions.

The Colorado Public Deposit Protection Act (PDPA), requires that all units of local government deposit cash in eligible public depositories. Eligibility is determined by state regulators. Amounts on deposit in excess of federal insurance levels must be collateralized. The eligible collateral is determined by the PDPA. PDPA allows the institution to create a single collateral pool for all public funds. The pool for all the uninsured public deposits as a group is to be maintained by another institution or held in trust. The market value of the collateral must be at least equal to 102% of the aggregate uninsured deposits. The State Regulatory Commissions for banks and financial services are required by Statute to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools.

NOTE 2: CASH DEPOSITS AND CASH EQUIVALENTS (Continued)

Custodial Credit Risk-Deposits

Custodial credit risk is the risk that, in the event of bank failure, the District's deposits may not be returned to it. The District does not have a deposit policy for custodial credit risk. As of December 31, 2005, the carrying amount of the District's cash and cash equivalents was $2,511,863, and the bank balance totaled $2,529,595. Of the bank balances, $757,780 represents deposits collateralized with securities held by the pledging financial institution's trust department or agent in the entity's name.

NOTE 3: ACCOUNTS RECEIVABLE

The accounts receivable balance includes amounts due from District customers. The District uses the allowance method to recognize bad debts. No allowance for bad debts was recorded at December 31, 2005.

NOTE 4: CAPITAL ASSETS

A summary of changes to capital assets for 2005 follows:

	Balance December 31, 2004	Additions	Deletions	Balance December 31, 2005
Depreciable:				
Automobile	$	$ 27,847	$	$ 27,847
Total Depreciable		27,847		27,847
Accumulated Depreciation		(2,785)		(2,785)
Total Capital Assets, Net	$	$ 25,062	$	$ 25,062

NOTE 5: LONG-TERM DEBT COMMITMENTS

Entering 2005, the District was carrying $201,000 in loans. The entire $201,000 was paid in full during 2005. Also during 2005, the District entered into Environmental Quality Incentive Program (EQIP) contracts with landowners. Payments for these contracts are disbursed over three years. The following information summarizes the debt activity and the outstanding EQIP contract obligations.

	Balance December 31, 2004	Additions	Deletions	Balance December 31, 2005	Due In One Year
Highline Electric Loan	$ 67,000	$	$ 67,000	$	$
KC Electric Loan	67,000		67,000		
YW Electric Loan	67,000		67,000		
EQIP Contracts		370,508	91,579	278,929	123,503
Total	$ 201,000	$ 370,508	$ 292,579	$ 278,929	$ 123,503

NOTE 6: RECONCILIATION OF PROPRIETARY (GAAP) REVENUES AND EXPENSES TO BUDGETARY REVENUES AND EXPENDITURES

The District prepares its budget annually. The budget comparison in this report is presented on a Non-GAAP budgetary basis. The following reconciliation is presented to reconcile to the GAAP basis financial statements.

Operating Revenues - GAAP Basis	$ 2,959,802
Non-Operating Revenues - GAAP Basis	51,405
Total Revenues - GAAP Basis	3,011,207
Adjustments	
Total Revenues, Budgetary Basis	3,011,207
Operating Expenses - GAAP Basis	698,580
Non-Operating Expenses - GAAP Basis	2,203
Total Expenses - GAAP Basis	700,783
Add: Capital Outlay	27,847
Less: Depreciation and Amortization	(2,785)
Total Expenses, Budgetary Basis	$ 725,845

NOTE 7: RISK MANAGEMENT

The District is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. In order to manage these risks, the District has purchased commercial insurance with various deductibles.

NOTE 8: TABOR REQUIREMENTS

In 1992, Colorado voters approved Amendment 1, commonly known as the Taxpayer's Bill of Rights (TABOR), which adds a new Section 20 to Article X of the Colorado Constitution. TABOR contains tax, spending, revenue and debt limitations which apply to the State of Colorado and all local governments.

Enterprises, defined as government owned businesses authorized to issue revenue bonds and receiving less than 10% of annual revenue in grants from all state and local governments combined, are excluded from the provisions of TABOR.

TABOR establishes 1992 as the initial base for spending and revenue limits. Future spending and revenue limits can be adjusted for inflation and local growth without voter approval. TABOR requires the establishment of Emergency Reserves that must be at least 3% of spending (excluding bonded debt service). Excess funds within the spending and revenue limits can be reserved for general use and, when spent in subsequent years, are not subject to the spending limits mentioned above.

The total amount of restricted net assets for emergency reserves at December 31, 2005 was $20,957.

TABOR requires, with certain exceptions, voter approval prior to imposing new taxes, increasing taxes or spending above the limits prescribed above, increasing a mill levy, or implementing a tax policy change directly causing a net tax revenue gain to any local government. Multiple-fiscal year debt requires voter approval except for bond refinancing at lower interest rates or adding employees to existing pension plans.

NOTE 8: TABOR REQUIREMENTS (Continued)

The District's management believes it is in compliance with the provisions of TABOR. However, TABOR is complex and many of the provisions, including the calculation of fiscal year spending limits, growth factors and qualifications as an Enterprise, will require judicial interpretation.

NOTE 9: BUDGETARY COMPLIANCE

For the year ended December 31, 2005, expenditures exceeded the appropriated budget for the District.

ATTACHMENT E

Accountant's Report

REPUBLICAN RIVER
WATER CONSERVATION DISTRICT

Financial Statements

For the Year Ended December 31, 2006

Winfrey & County, P. C.
Certified Public Accountants

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Statement of Net Assets
December 31, 2006

ASSETS		
Current Assets		
Cash and cash equivalents	938,755	
Certificates of deposit	3,523,036	
Accounts receivable	52,673	
Total Current Assets		4,514,464
Capital Assets		
Equipment	6,489	
Vehicle	27,847	
Less: Accumulated depreciation	(8,818)	
Net Capital Assets		25,517
TOTAL ASSETS		4,539,981
LIABILITIES AND NET ASSETS		
Current Liabilities		
Accounts payable	23,248	
Payroll liabilities	4,623	
Current portion of long-term	645,255	
Total Current Liabilities		673,125
Long-Term Liabilities		
CREP contracts	2,004,771	
EQIP contracts - well retirement	928,126	
Outright Leases	58,825	
Total Long-Term Liabilities		2,991,722
TOTAL LIABILITIES		3,664,847
Net Assets		
Investment in capital assets, net of related debt	25,517	
Restricted for TABOR	133,600	
Unrestricted	716,017	
TOTAL NET ASSETS		875,135

See auditor's report and notes to the financial statements.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Statement of Revenue, Expenses, and Changes in Net Assets
For the Year Ended December 31, 2006

OPERATING REVENUES		
Irrigation assessment fees	2,866,249	
Commercial & Municipal well assessment	42,372	
Surface evaporative water loss	17,493	
Total Operating Revenues		2,926,113
OPERATING EXPENSES		
County Treasurer fees	86,128	
EQIP & CREP contracts	4,041,259	
Telephone	4,450	
Training	725	
Travel expenses	12,969	
Vehicle expenses	51	
Depreciation	6,033	
CIG grants	14,508	
Total Operating Expenses		4,166,125
GENERAL & ADMINISTRATIVE EXPENSES		
Salaries & wagers	86,287	
Employee benefits	22,350	
Office expenses	20,357	
Accounting & audit fees	19,362	
Engineering fees	21,050	
Legal fees	54,406	
Lobbyist fees	11,232	
Other professional fees	10,962	
Insurance	7,194	
Directors expenses	31,896	
Promotion/advertising	2,071	
Total General & Administrative Expenses		287,167
TOTAL EXPENSES		4,453,292
OPERATING INCOME		(1,527,178)
OTHER INCOME		
Interest income	133,034	
Interest on fees	17,282	
Insurance claim proceeds	295	
Total Other Income		150,610
CHANGE IN NET ASSETS		(1,376,568)
NET ASSETS - Beginning		2,251,703
NET ASSETS - Ending		875,135

See auditor's report and notes to the financial statements.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Statement of Cash Flows
For the Year Ended December 31, 2006

CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from fees	2,805,852
Paid for salaries & benefits	(120,483)
Paid for Board compensation	(13,100)
Paid to well owners	(683,212)
Paid to suppliers	(183,250)
Net Cash Provided by Operating Activities	1,805,808
CASH FLOWS FROM CAPITAL FINANCING ACTIVITIES	
Acquisition of fixed assets	(6,489)
CASH FLOWS FROM NON-CAPITAL FINANCING ACTIVITIES	
Interest income	150,316
Other income	295
Cash Used by Non-Capital Financing Activities	150,610
CASH FLOWS FROM INVESTING ACTIVITIES	
Certificates of deposit	(3,523,036)
NET INCREASE (DECREASE) IN CASH	(1,573,107)
CASH - Beginning of year	2,511,863
CASH - End of year	938,755
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
Operating income	(1,527,178)
ADJUSTMENTS TO RECONCILE OPERTING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
Depreciation	6,033
Changes in Assets & Liabilities	
Accounts receivable	(34,133)
Accounts payable	(30)
Payroll liabilities	3,069
Contracts payable	3,358,047
Total Adjustments	3,332,986
Net Cash Provided by Operating Activities	1,805,808

See auditor's report and notes to the financial statements.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Notes to the Financial Statements
For the Year Ended December 31, 2006

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity - the District is a governmental unit operating with a sole enterprise fund while in accordance with Colorado Statute. The District was established to provide compliance with the Republican River Compact on behalf of the State of Colorado.

The District is considered to be a primary government because it has a separate governing body, it is legally separate, and it is fiscally independent of other state and local governments. It has no component units. Neither is it a component unit of any other entity.

Basis of Accounting - enterprise fund accounting is utilized in accordance with generally accepted accounting principles. Enterprise funds recognize revenues and expenses on the accrual basis of accounting. Revenue is recognized when earned, and expenses are recognized when incurred.

Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the District are special assessment fees charged to landowners for their water usage. Operating expenses for the fund include cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

The District applies all Governmental Accounting Standards Board (GASB) pronouncements, as well as Financial Accounting Standards Board (FASB) Statements and Interpretations, Accounting Principles Board (APB) Opinions, and Accounting Research Bulletins (ARB) of the committee on accounting procedures issued on or before November 30, 1989, that do not conflict with or contradict GASB pronouncements.

Capital Assets - the District capitalizes assets valued over $5,000. Assets are stated at cost, developer's cost, or estimated fair market value at the time of donation. Depreciation is recognized using the straight-line method over the assets estimated useful lives of one to forty years. Depreciation begins in the year following completion for assets under construction. Water rights, and the costs to obtain those rights, are capitalized but not depreciated.

Irrigation Assessment Fees - the District's primary means of revenue. These fees are paid by the property owner, along with property taxes, to the County Treasurer. They are payable in full on April 30 or in two installments on February 28 and June 15. The Counties of which the District is comprised collects the taxes and fees and remits them by the 10th of the month following the month of collection.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Notes to the Financial Statements
For the Year Ended December 31, 2006
(continued)

Budgets - each fall the Board of Directors adopt a budget and appropriates funds for the following calendar year. Unused appropriations lapse at year end.

All budget hearings are open to the public. An amendment of the budget through supplemental appropriation is subject to approval of the Board of Directors at a public hearing and the filing of the approved supplemental appropriation with the State of Colorado.

The basis of these budgets is Non-GAAP, in that revenues and expenditures are budgeted on the modified accrual basis of accounting. This basis of accounting records transactions based upon the "flow of funds". Revenues are recognized when funds are available and measurable, and expenditures are recognized when incurred.

Cash Flows - for purposes of the statement of cash flows, cash and cash equivalents consist of cash on hand and demand, money market and savings accounts at financial institutions. Repurchase agreements, certificates of deposit, and U.S. Treasury Notes, including those with maturities of three months or less, are classified as investments and are not reflected as cash in the statement of cash flows.

Net Assets - represent the difference between assets and liabilities. Net assets invested in capital assets, net of related debt, consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any borrowing used for the acquisition, construction or improvement of those assets. This net asset amount also is adjusted by any bond issuance deferral amounts. Net assets are reported as restricted when there limitations imposed on their use, either through the enabling legislation adopted by the District or through external restrictions imposed by creditors, grantors, or laws or regulations of other governments. All other net assets are reported as unrestricted.

The District applies restricted resources first when an expense is incurred for purposes for which both restricted and unrestricted net assets are available.

Use of Estimates - the preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses during the period. Actual results could differ from those estimates.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Notes to the Financial Statements
For the Year Ended December 31, 2006
(continued)

(2) CASH DEPOSITS AND CASH EQUIVALENTS

Cash Deposits - for purpose of these financial statements, cash and cash equivalents consists of cash on hand and demand, money market and savings accounts at financial institutions.

The Colorado Public Deposit Protection Act (PDPA), requires that all units of local government deposit cash in eligible public depositories. Eligibility is determined by state regulators. Amounts on deposit in excess of federal insurance levels must be collateralized. The eligible collateral is determined by the PDPA. PDPA allows the institution to create a single collateral pool for all public funds. The pool for all the uninsured public deposits as a group is to be maintained by another institution or held in trust. The market value of the collateral must be at least 102% of the aggregate uninsured deposits. The State Regulatory Commissions for banks and financial services are required by statute to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools.

Custodial Credit Risk - Deposits -- Custodial credit risk is the risk that, in the event of bank failure, the District's deposits may not be returned to it. The District does not have a deposit policy for custodial credit risk.

Deposits are in 18 financial institutions and listed by appropriate risk category as follows:

	Bank Balance	Carrying Balance
On hand		8
Insured (FDIC)	1,400,000	1,383,862
Uninsured: Collateral held by District's agent in agent's name	3,365,729	3,077,921
Total Cash	4,765,729	4,461,791
Shown as certificates of deposit		(3,523,036)
Shown as cash & cash equivalents		938,755

(3) ACCOUNTS RECEIVABLE

The accounts receivable balance includes amounts due from District customers. The District uses the allowance method to recognize bad debts. No allowance for bad debts was deemed necessary at December 31, 2006.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Notes to the Financial Statements
For the Year Ended December 31, 2006
(continued)

(4) CAPITAL ASSETS

A summary of changes to capital assets for 2006 follows:

	Balance January 1	Additions	Deletions	Balance December 31
Equipment	-0-	6,489	-0-	6,489
Automobile	27,847	-0-	-0-	27,847
Total	27,847	6,489	-0-	34,336
Accumulated Depreciation	2,785	6,033	-0-	8,818
Net Capital Assets	25,062	456	-0-	25,518

(5) LONG-TERM DEBT

Changes in Long-Term Debt

	Balance January 1	Additions	Reductions	Balance December 31
EQIP contracts	278,929	1,554,135	390,675	1,442,389
CREP contracts	-0-	2,181,117	132,412	2,048,705
Leases payable	-0-	306,008	160,125	145,883
Total	278,929	4,041,260	683,212	3,636,976

Beginning in 2005, the District began entering into Environmental Quality Inventive Program (EQIP) contracts with landowners. Payments for these contracts are disbursed over three to five years. The following information summarizes the annual payments due on the outstanding EQIP contract obligations:

Due in Year	Amount
2007	514,263
2008	359,577
2009	286,222
2010	275,015
2011	7,312
Total	1,442,389

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Notes to the Financial Statements
For the Year Ended December 31, 2006
(continued)

Beginning in 2006, the District began entering into Conservation Reserve Enhancement Program (CREP) contracts with landowners. Payments for these contracts are disbursed over 15 years. The following information summarizes the annual payments due on the outstanding CREP contract obligations:

Due in Year	Amount
2007	43,934
2008	42,059
2009	42,059
2010	42,059
2011	514,040
2012-2016	682,277
2017-2021	682,277
Total	2,048,705

Also in 2006, the District entered into leases with the landowners. These lease are from 2 to 4 years. The following information summarizes the annual amounts due for the leases.

Due in Year	Amount
2007	87,058
2008	29,412
2009	29,413
Total	145,883

Total long-term commitments

Due in Year	Amount
2007	645,255
2008	431,048
2009	357,694
2010	317,074
2011	521,352
2012-2016	682,277
2017-2021	682,277
Total	3,636,977

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Notes to the Financial Statements
For the Year Ended December 31, 2006
(continued)

(6) RECONCILIATION OF PROPRIETARY (GAAP) REVENUES AND EXPENSES TO BUDGETARY REVENUES AND EXPENDITURES

The District prepares its budget annually. The budget comparison in this report is presented on a Non-GAAP budgetary basis. The following reconciliation is presented to reconcile to the GAAP basis financial statements.

Operating Revenues - GAAP basis	2,926,113
Non-Operating Revenues - GAAP basis	150,610
Total Revenues - GAAP basis	3,076,723
Adjustments	0
Total Revenues - Budgetary basis	3,076,723
Operating Expenses - GAAP basis	4,453,291
Add Capital Outlay	6,489
Less Depreciation	(6,033)
Total Expenses - Budgetary Basis	4,453,747

(7) RISK MANAGEMENT

The District is exposed to various risks of loss to related torts; theft of, damage to, and destruction of assets, errors and omissions, injuries to employees; and natural disasters. In order to manage these risks, the District has purchased commercial insurance with various deductibles.

(8) TABOR REQUIREMENTS

In 1992, Colorado voters approved Amendment 1, commonly know as the Taxpayer's Bill of Rights (TABOR), which adds a new Section 20 to Article X of the Colorado Constitution. TABOR contains tax, spending, revenue and debt limitations which apply to State of Colorado and all local governments.

REPUBLICAN RIVER WATER CONSERVATION DISTRICT
Notes to the Financial Statements
For the Year Ended December 31, 2006
(continued)

Enterprise, defined as government owned businesses authorized to issue revenue bonds and receiving less than 10% of annual revenues in grants from all state and local governments combined, are excluded from the provision of TABOR.

TABOR establishes 1992 as the initial base for spending and revenue limits. Future spending and revenue limits can be adjusted for inflation and local growth without voter approval. TABOR requires the establishment of Emergency Reserves that must be at least 3% of spending (excluding bonded debt service). Excess funds within the spending and revenue limits can be reserved for general use and, when spent in subsequent years, are not subject to the spending limits mentioned above.

The total amount of restricted net assets for emergency reserves at December 31, 2006 is $133,600.

TABOR requires, with certain exceptions, voter approval prior to imposing new taxes, increasing taxes, or spending above the limits described above, increasing a mill levy, or implementing a tax policy change directly causing a net tax revenue gain to any local government. Multiple-fiscal year debt requires voter approval except for bond refinancing at lower interest rates or adding employees to existing pension plans.

The District's management believes it is in compliance with the provisions of TABOR. However, TABOR is complex and many of the provisions, including the calculation of fiscal year spending limits, growth factors and qualifications as an Enterprise, will require judicial interpretation.

(9) BUDGETARY COMPLIANCE

For the year ended December 31, 2006, expenditures exceeded the budgeted amount.

ATTACHMENT F

REPUBLICAN RIVER WATER CONSERVATION DISTRICT

WATER ACTIVITY ENTERPRISE

FINANCIAL REPORT
As of September 30, 2007

10/9/2007

RRWCD Water Activity Enterprise
Balance Sheet
As of September 30, 2007

	Sep 30, 07
ASSETS	
Current Assets	
Checking/Savings	
Bank of Colorado - Checking	244,533.19
Bank of Colorado - Savings	1,025,298.66
Bank of Burlington CD #014135	32,035.55
BOC- Holyoke CD #6340002824	54,403.99
BOC Yuma CD #1000000421	108,764.82
BOC Yuma CD #11000000756	278,802.75
BOC Yuma CD #1000001196	231,767.95
BOW- Burlington CD #864-853551	42,918.06
BOW- Burlington CD #864-854195	125,625.91
BOW- Holyoke CD #895-853851	69,816.17
CNB-Akron CD #1136332	181,040.62
CNB-Akron CD #1136492	52,705.47
FNB- Burlington CD #5323717	125,733.45
FNB- Burlington CD #5523475	54,411.17
FNB- Haxtun CD #400006510	109,606.80
FNB- Hugo CD #72771	10,633.92
FNB- Julesburg CD #33165	107,851.70
FNB- Kirk CD #6095190	108,675.91
FNB- Kirk CD #6095234	52,579.59
FNB- Stratton CD #008401	270,403.00
FNB- Fleming CD #6226	10,380.31
FNB-Fleming CD #6177	26,917.37
FNB- Kirk CD #6095189	272,485.61
FPNB- Holyoke CD #12035	109,865.17
FPNB- Holyoke CD #12250	157,926.80
FPNB- Wray CD #11856	107,143.27
FPNB- Wray CD #12430	73,699.18
FPNB - Wray CD #12883	200,000.00
HP Bank- Flagler CD #011303	109,728.75
KC State Bank CD #31972	108,774.79
Sunwest Banks CDARS#1002403079	1,002,456.03
WSB- CD #5480	273,468.10
WSB- CD #5481	163,239.24
WSB- CD #5838	210,604.56
Petty Cash	25.25
Total Checking/Savings	6,114,323.11
Accounts Receivable	
Accounts Receivable	49,127.80
Total Accounts Receivable	49,127.80
Total Current Assets	6,163,450.91
Fixed Assets	
Depreciable Assets	34,335.50
Accumulated Depreciation	-8,818.30
Total Fixed Assets	25,517.20
TOTAL ASSETS	**6,188,968.11**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
Accounts Payable	20,222.18
Total Accounts Payable	20,222.18
Other Current Liabilities	
CREP 08 - Current	43,934.00
EQIP Contracts - Current	514,262.88
Outright Leases - Current	87,057.70
Total Other Current Liabilities	645,254.58

RRWCD Water Activity Enterprise
Balance Sheet
As of September 30, 2007

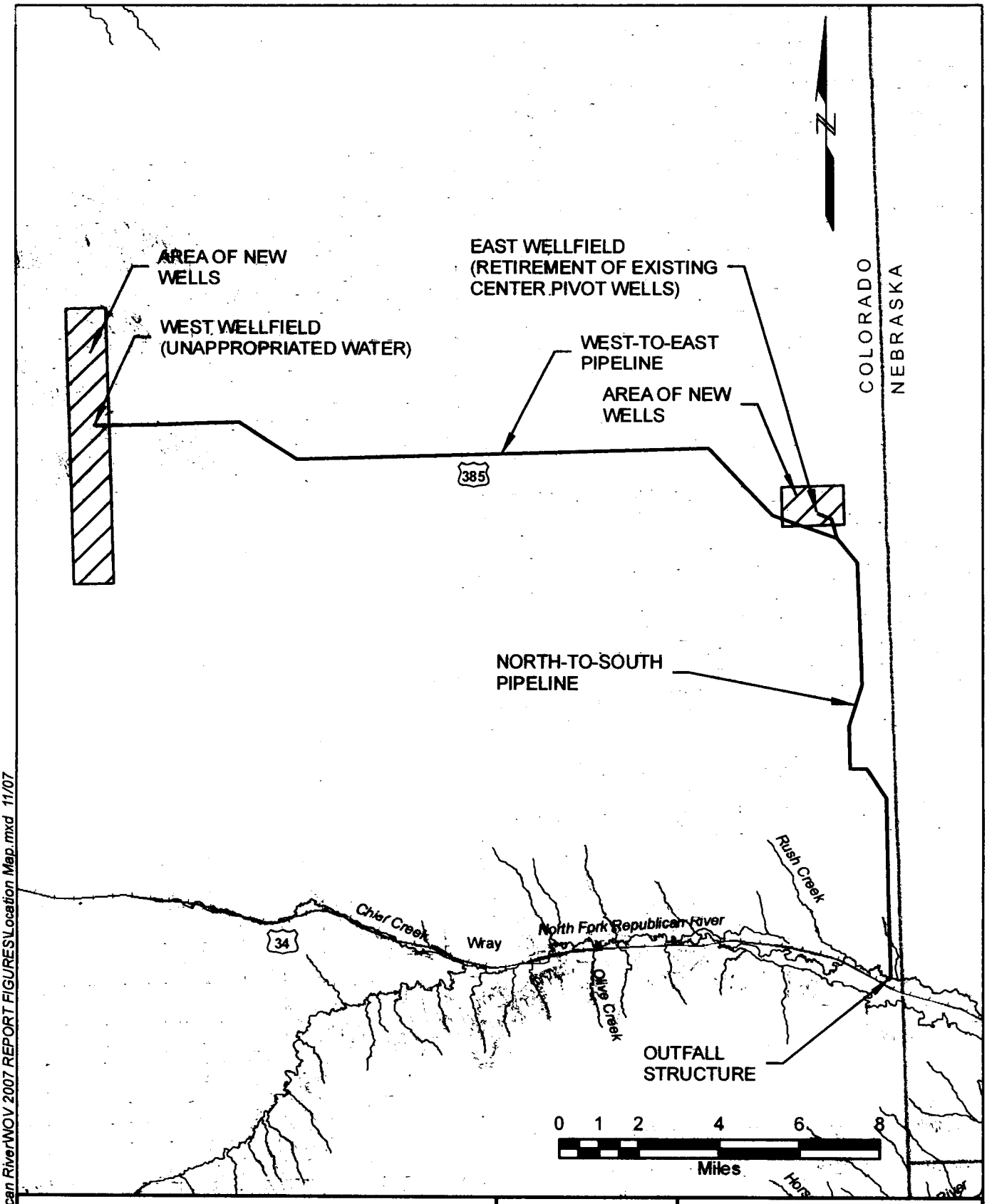
	Sep 30, 07
Total Current Liabilities	665,476.76
Long Term Liabilities	
CREP 06 - Long-Term	2,004,771.00
EQIP Contracts - Long-Term	928,125.79
Outright Leases - Long-Term	58,825.00
Total Long Term Liabilities	2,991,721.79
Total Liabilities	3,657,198.55
Equity	
Retained Earnings	875,134.55
Net Income	1,656,635.01
Total Equity	2,531,769.56
TOTAL LIABILITIES & EQUITY	**6,188,968.11**

RRWCD Water Activity Enterprise
Profit & Loss
January through September 2007

	Jan - Sep 07	
Ordinary Income/Expense		
Income		
Commercial Groundwater Wells		26,396.06
Groundwater Irrigated Lands		
Refunds and Accruals	-1,310.88	
Groundwater Irrigated Lands - Other	2,702,146.02	
Total Groundwater Irrigated Lands		2,700,835.14
Municipal Groundwater Wells		16,992.13
Interest Income		
Savings Interest	20,413.14	
CD Interest	121,430.14	
Checking Interest	9,512.93	
Treasurer's Interest	8,450.85	
Total Interest Income		159,807.06
Surface Evaporative Water Loss		15,458.10
Total Income		2,919,488.49
Expense		
CIG Grants		11,606.00
County Treasurer Fees		80,708.94
Fringe Benefits		
Health Insurance	7,734.21	
Medicare	1,109.07	
PERA	8,388.26	
Total Fringe Benefits		17,231.54
Insurance & Bonding		3,349.14
Meeting Expenses		6,046.08
Office Expense		
Rent	5,616.00	
Supplies	7,331.82	
Miscellaneous	1,045.24	
Total Office Expense		13,993.06
Payroll Expenses		
Admin Assistant	20,500.00	
Manager's Payroll	45,187.47	
Officer's Payroll	10,800.00	
Board Compensation	18,775.00	
Total Payroll Expenses		95,262.47
Professional Services		
Accounting	28,748.14	
Consulting	18,227.87	
Engineering	25,167.94	
Legal	75,753.72	
Lobbyist	5,861.23	
Website	830.50	
Total Professional Services		154,589.40
Telephone/Internet		2,714.92
Travel		
Lodging	4,470.23	
Meals	2,062.82	
Mileage	10,891.22	
Other	2,223.46	
Total Travel		19,647.73
Vehicle Expense		
Fuel	3,182.83	
Reimbursement	-4,500.00	
Repairs	409.12	
Total Vehicle Expense		-908.05

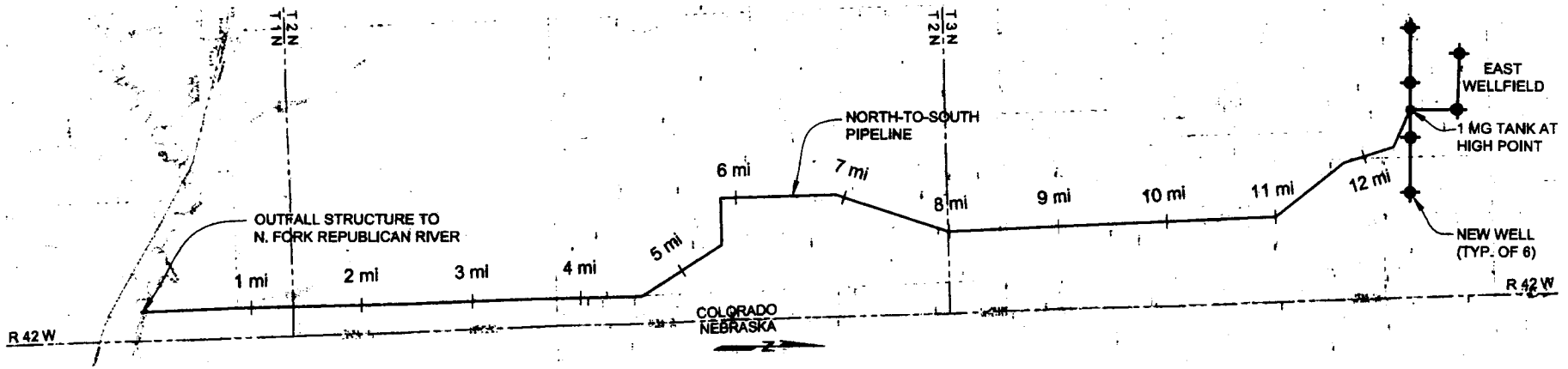
RRWCD Water Activity Enterprise
Profit & Loss
January through September 2007

	Jan - Sep 07		
Total Expense			404,241.23
Net Ordinary Income			2,515,247.26
Other Income/Expense			
Other Expense			
Permanent Retirement			
CREP 06			
CREP Cost Share	22,395.79		
CREP 06 - Other	186,945.90		
Total CREP 06		209,341.69	
EQIP 05		66,809.68	
EQIP 06		316,859.31	
EQIP 07		28,672.00	
Total Permanent Retirement			621,682.68
Temporary Retirement			
EQIP 05		49,694.23	
EQIP 06		72,429.98	
EQIP 07		27,747.66	
Outright Lease		87,057.70	
Total Temporary Retirement			236,929.57
Total Other Expense			858,612.25
Net Other Income			-858,612.25
Net Income			1,656,635.01



P:\072670 Republican River\NOV 2007 REPORT FIGURES\Location Map.mxd 11/07

Republican River Compact Compliance Pipeline Yuma County, Colorado	GEI Consultants	FACILITIES LOCATION MAP
Republican River Water Conservation District	072670	November 2007 Figure 1

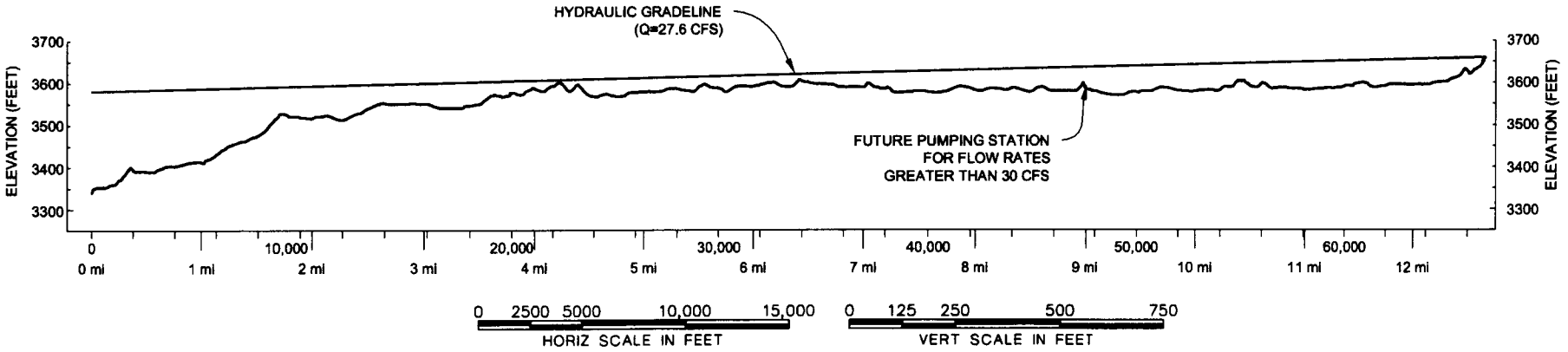


ALTERNATIVE 1: INCLUDES EAST WELLFIELD, 1MG TANK, 36-INCH DIAMETER PIPELINE, AND OUTFALL STRUCTURE.

ALTERNATIVE 2: BUILD SAME FEATURES AS OPTION 1, EXCEPT REDUCE NUMBER OF WELLS IN EAST WELLFIELD, REPLACE 1MG TANK WITH 0.5MG TANK, AND IMPLEMENT THE FACILITIES SHOWN ON FIGURE 3.

NOTES:

1. IF WEST WELLFIELD IS IMPLEMENTED, ONLY 3-4 NEW WELLS WILL BE NEEDED IN THE EAST WELLFIELD.



Republican River Compact Compliance Pipeline Yuma County, Colorado	GEI Consultants	PLAN AND PROFILE NORTH-TO-SOUTH PIPELINE	
Republican River Water Conservation District	Project 07267	November 2007	Figure 2

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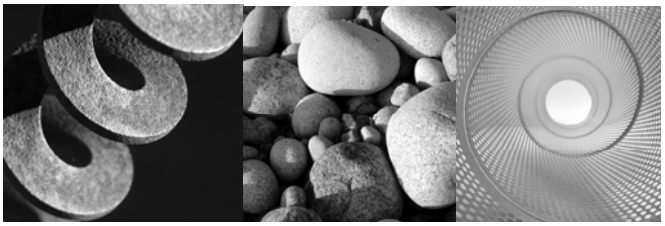

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering

Republican River Compact Compliance Pipeline

Preliminary Feasibility Study

Yuma County, Colorado

Submitted to:
Republican River Conservation District
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Wray, Colorado 80758

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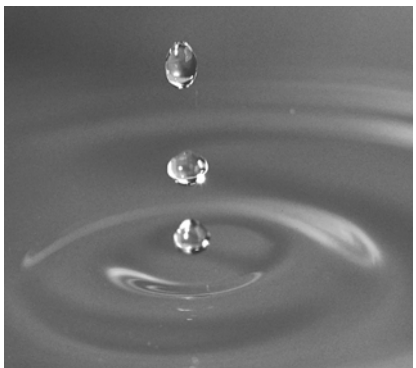
December 2007
Project 072670



Richard A. Westmore, P.E.
Project Manager

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Executive Summary

Extensive development of irrigated agriculture in the Republican River Basin in Colorado began in the 1960's. No new ground water appropriations to support irrigated agriculture have been made in many years and the number of center pivot irrigation wells has declined to approximately 4,000 and the irrigated acreage has stabilized at approximately 560,000 acres. Through well retirement and irrigation efficiency programs, the amount of ground water withdrawal in the Basin has decreased in recent years. In 1978, well pumping reached approximately 1,040,000 acre-feet per year. In 2005, pumping was on the order of 750,000 acre-feet. Despite decreased ground water pumping, the cumulative effects of consumptive ground water use have caused reductions in stream flows leaving the Basin from Colorado such that, absent further actions, Colorado will become increasingly out of compliance with terms of the Republican River Compact.

There are a number of non-structural options that have been, or could be, implemented to help Colorado achieve compliance with the Compact. However, the Compact Compliance Pipeline Project is considered to be the only effective long-term action that will allow irrigated agriculture to continue in the Basin, at or near current levels, while achieving compliance with the Compact.

The Project will consist of the following primary components:

- Construction of 6 to 8 high-capacity wells, which will pump the consumptive use of existing, permitted wells that will be retired and which currently serve approximately 12,000 acres of irrigated land north of Wray, close the Colorado-Nebraska State line and between 8 and 15 miles from the North fork of the Republican River.
- Interconnection of the wells and conveyance of water pumped from the wells to a 1 MG storage tank.
- Construction of a 12.7-mile-long, 36-inch-diamete pipeline from the tank to the North Fork Republican River, where water will be discharged to the river through a baffled outlet structure located approximately 1400 feet upstream from the State line.
- A flow measurement and data recording system that will obtain and record data on pumping from each well, releases from the storage tank, and discharge to the river.

The project has been sized to deliver 15,000 acre-feet per year, assuming that the water will need to be provided during a 9-month period. This assumption means that the delivery capacity of the wells and pipeline is 27.6 cfs (17.8 MGD).

An opinion of the probable cost to construct the Project was developed by GEI based on preliminary engineering studies, published unit cost information, and experience and judgment. A cost summary for the Project is provided in Table ES-1, which indicates a total cost, excluding water rights and related land acquisition and O&M, of $21.3 million. Annual O&M is estimated to be $0.45 million.

Table ES-1: Compact Compliance Pipeline Opinion of Probable Cost

Project Component	Cost (Nov. 2007)
Land and rights-of-way	$130,000
Wells, pumps and motors	$900,000
Well interconnection pipelines	$924,000
Storage tank	$500,000
Main conveyance pipeline	$10,730,000
Valves and appurtenances	$608,000
River outlet	$150,000
Special crossings	$160,000
Access roads and reclamation	$560,000
System monitoring	$100,000
Office and control building	$200,000
Unlisted and contingencies	$3,206,000
Mobilization, bonds, insurance	$660,000
Direct Construction Cost	**$18,828,000**
Design engineering	$940,000
Administrative and legal	$380,000
Permitting	$190,000
Construction engineering	$940,000
Total Project Cost	**$21,278,000**

The Project must be implemented in the very near future to avoid potential litigation with Kansas and Nebraska and to avoid a shut down of irrigation wells throughout the Basin in Colorado. The currently planned implementation schedule is:

Activity	Start	Finish
Design	01/07/2008	08/15/2008
Bidding	08/18/2008	10/17/2008
Construction	10/20/2008	06/26/2009
System Operation	07/14/2009	---

With an operational system completed by early July 2009, there will be about 6 months of operation during 2009. Assuming that the high-capacity wells can be pumped a harder during the initial 6 months of operation, it should be possible to deliver a substantial portion of Colorado's current Compact obligation of 11,000 acre-feet prior to year-end 2009.

1.0 Introduction

1.1 Study Purpose

The purpose of the study documented in this report is to assess the technical feasibility of a Compact Compliance Pipeline (the Pipeline) that would enable the State of Colorado to meet its obligations under the Republican River Compact (the Compact). The study was performed by GEI Consultants, Inc. under a contract with the Republican River Water Conservation District (RRWCD) Water Activity Enterprise.

1.2 Scope of Investigations

The scope of GEI's investigations included preliminary engineering evaluations of alternative configurations of the Pipeline from identified sources of water supply to points of discharge into the North Fork of the Republican River near the Colorado-Nebraska State Line. The following tasks were completed:

	Task	Description
1.	Review of Information	Review available data and analyses to facilitate identification of basic Project concepts and sizing of project features.
2.	Formulation of Alternatives	Formulate up to three alternative project configurations representing reasonable variations on the location of source wells, pipeline alignments to interconnect the source of wells and deliver water to the North Fork, and the location of the water delivery point on the North Fork.
3.	Confirmation of Alternatives	Confirm the suitability of up to three alternatives to meet Project objectives through discussions with the District's water rights and legal advisors and with DWR representatives. Make any needed adjustments to the three alternatives.
4.	Evaluation of Alternatives	Compare and evaluate the alternatives based on the following factors: • Total cost (construction and O&M). • Construction issues, if they should differ significantly among the alternatives. • Political and social acceptability. • Financial feasibility of the Project and impacts on the water user fees in the District.
5.	Implementation Plan	Prepare an achievable Project Implementation Plan ("road map") to guide future steps of planning, design, and construction of the Compact Compliance Pipeline.

Task	Description
6. Presentation of Findings	Present the findings to the District and gain general concurrence on the preferred Project configuration.
7. Documentation	Concurrent with Tasks 5 and 6, prepare a draft study report and obtain review inputs. Prepare the final report.

1.3 Study Team

GEI worked in close cooperation with Slattery Aqua Engineering LLC (SAE) to conduct the preliminary feasibility study. GEI was primarily responsible for establishing the size and alignment of the pipeline, the operational requirements, the associated cost estimates for the Project, and the implementation schedule. SAE was primarily responsible for assessing the number and location of irrigation wells to be included in the project and for estimating the beneficial impacts of the project on Compact compliance. GEI was assisted by the District's staff and by the District's Executive Committee and Engineering Committee during the course of work.

2.0 Project Purpose

2.1 Status of Colorado's Compliance with Republican River Compact

To settle issues related to the Republican River compact and avoid a lawsuit, the States of Colorado, Kansas, and Nebraska successfully negotiated and entered into a Final Settlement Stipulation. This Stipulation was presented to Special Master McKusick in December 15, 2002. The United States Supreme Court approved the Stipulation on May 19, 2003, and accepted the recommendation and Final Report of the Special Master, including final dismissal of the case with prejudice on October 20, 2003. To meet the terms of this Stipulation, the Colorado State Engineer must discharge the obligations of the State of Colorado imposed by Republican River Compact.

Under the Stipulation, Colorado may acquire or construct wells to offset stream depletions in order to comply with its Compact obligations. The original concept of the Project is a Compact Compliance Pipeline that would be supplied with water by the retirement of lands irrigated by ground water. The "retired" wells would need to be located 8 to 18 miles from the North Fork of the Republican River. The quantity of ground water historically pumped from those wells would be conveyed by the pipeline to a location upstream from the Compact gauging station near the Colorado-Nebraska State Line.

The Stipulation allows Colorado to receive credit for the ground water delivered under this plan to offset stream depletions. Determination of the net depletions from these wells will be computed by the Republican River Compact Administration (RRCA) Groundwater Model and included in the State's computed consumptive use. The amount of ground water that can be delivered through the Pipeline is expected to be considerably greater than the net depletions caused by pumping the wells supplying the pipeline. The purpose of the planning effort completed by GEI and SAE in 2007 is to study the feasibility of the Pipeline, as generally described above. During the study, the potential development of unappropriated ground water, consistent with the rules and regulations of the Colorado Ground Water Commission, was identified as a potential source of water supply for the pipeline.

2.2 Need for a Compact Compliance Pipeline

Studies have shown that the most viable option for meeting Colorado's Compact obligations is the Compact Compliance Pipeline. Without this Project, it is expected that Colorado would have to shut down all of the wells currently pumping in the Basin. Even with all of the wells shut down, Colorado will remain out of compliance with the Compact for many years into the future as the delayed effects of historic pumping reach the surface streams of the Basin. Other measures, such as draining Bonny Reservoir, shut down of surface diversions on the

North Fork, and curtailment of well-pumping within three miles of the North Fork, South Fork, and Arikaree Rivers, will not be sufficient to meet Compact obligations, but could impact the sizing of the Pipeline. With the Compact Compliance Pipeline, water users in the Republican River Basin would be able to continue irrigating approximately 560,000 acres of land under continued pumping from approximately 4,000 center-pivot wells.

The Compact Compliance Pipeline will be required to initially convey 11,000 acre-feet per year, with projections of 15,000 to acre-feet per year (or greater) over the longer term, depending on future hydrologic conditions. With a well pumping and delivery monitoring system in place, it will be possible to adjust pumping from the wells and the pipeline outflows to the north Fork to account for precipitation and Compact compliance demands. This flexibility will be important for minimizing any negative impacts on local irrigators and minimizing the costs for well pumping.

3.0 Project Sponsor

3.1 Republican River Water Conservation District

The District was created by the General Assembly of the State of Colorado under Senate Bill 04-235 for the purpose of cooperating with and assisting the State to carry out its duty to comply with the limitations and duties imposed upon the State by the Republican River Compact. The District uses various programs to provide monetary incentives for voluntarily retiring wells to decrease consumptive use. The Environment Quality Incentives Program (EQIP) is a federal program through the Natural Resource Conservation Service (NRCS). The Conservation Reserve Enhancement Program (CREP) is a federal program with the Farm Service Agency (FSA). Both programs provide federal dollars to help meet program objectives. The Lease Program - 2006 was funded entirely by RRWCD and was only a one-year program.

The District is managed and controlled by a 15-member board of directors who serve three-year terms. The county commissioners of Yuma, Phillips, Kit Carson, Washington, Sedgwick, Lincoln, and Logan Counties each appoint one director and one director is appointed by each of the boards of the Marks Butte, Frenchman, W-Y, Sand Hills, Central Yuma, Arikaree, and Plains Ground Water Management Districts. One member is appointed by the Colorado Ground Water Commission and must be a member of that commission.

On October 12, 2004, the Board created the Republican River Water Conservation District Water Activity Enterprise, as allowed by statute. Through this Enterprise, water use fees have been assessed on all irrigated acres within the district, on municipal and commercial uses, as well as for evaporative losses from Bonny Reservoir. Funds collected from these fees are used, along with money from various federal programs, to offer incentives to get water rights voluntarily retired in order to reduce consumptive use of water within the district.

3.2 District Service Area

The district includes all of Yuma and Phillips Counties and those portions of Sedgwick, Logan, Washington, Lincoln, and Kit Carson Counties in northeastern Colorado that make up the Republican River drainage basin. Surface streams with measurable live flow within the District include the Arikaree River and the North Fork and South Fork of the Republican River. The Ogallala Aquifer underlies most of the geographic area of the District. Water is pumped from this aquifer for irrigation, municipal, commercial, industrial, domestic, and livestock uses.

3.3 Authority to Implement the Project

As a municipal sub-district of the State, the District has the authority to implement the Compact Compliance Pipeline Project. District powers include:

- Participate in legal actions;
- Acquire, operate, or hold real or personal property;
- Borrow money, incur debt, and issue bonds;
- Accept gifts, grants, or donations;
- Conduct investigations, and studies to determine the best use of stream flows and wells within the District;
- Enter into contracts with other entities;
- Enter private property to obtain information or conduct studies; and
- Impose a use fee on the diversion of water within the District or establish an annual levy for the use of water.

Because of these powers and its history with water use and Compact compliance issues in the basin, the District is the appropriate and best entity to implement the Project.

3.4 Current Revenue Sources

The District's Water Activity Enterprise has imposed use fees on the diversion of water within the District to generate revenues that can be used for the purposes listed above. The Board has set water use fees at $5.50 per irrigated acre for post-compact ground water diversions, $4.40 per acre foot for post-compact municipal and commercial/industrial diversions, and $5.10 per acre foot of surface water loss for post-compact surface diversions (e.g., evaporative losses from Bonny Reservoir).

After paying all expenses and collecting the water use fees in 2006, the District's Water Activity Enterprise has maintained an annual budget of approximately $3 million available for programs to permanently or temporarily retire water rights and/or to undertake other measures. The Board has approved supplemental funding for the EQIP and has committed to provide supplemental funding for the CREP, which the State of Colorado has submitted to the U.S. Department of Agriculture for approval.

The District's Water Activity Enterprise has signed supplemental EQIP contracts for a total of 31 wells with a total of 3,347 acres retired, which helps Colorado with Compact compliance. The goal of CREP is to permanently convert up to 30,000 irrigated acres in the Republican River Basin to non-irrigated use. Eighty percent of the funding for CREP would come from federal sources, with twenty percent coming from State sources, including funding from the District's Water Activity Enterprise. The Board recently has been considering leasing or purchasing water rights to assist with Compact compliance as well as implementation of a Compact Compliance Pipeline.

4.0 Water Demands and Water Rights

4.1 Historic Water Use in the District

Historic water use within the District has been documented in prior reports and presentations by Jim Slattery of SAE and Ken Knox of the Colorado Division of Water Resources (DWR). From 1945 to 1965, annual well pumping increased from near zero to 200,000 acre-feet. From 1965 to the mid-1970s, pumping increased sharply from 200,000 to over 1,000,000 acre-feet. Since that time, annual pumping from irrigation wells has reduced to between 600,000 and 900,000 acre-feet. In 2005, pumping was about 750,000 acre-feet. The effect of pumping on surface flows in the Basin represents a Compact accounting consumptive use of about 25,000 acre-feet.

While ground water dominates the water supply picture, there are several surface irrigation diversions from the North Fork. Consumptive use from these surface diversions typically averages about 3,500 acre-feet per year.

4.2 Future Water Use

As indicated in Section 3.4, the CREP program is seeking to voluntarily eliminate irrigation on up to 30,000 acres in the Basin, within the near term. The amount of well pumping and consumptive use in the Basin is expected to decline proportionally. Surface water diversions for irrigation will hold steady or decline. Significant population and industrial growth is not forecast for the Basin; therefore, the growth in demands for M&I water is expected to grow modestly from a very small current base.

4.3 Sizing of the Compact Pipeline

The District's water resources consultant has determined that approximately 11,000 acre-feet of water is needed at this time to meet Colorado's Compact obligation. Over the longer term, approximately 15,000 acre-feet per year, or more, will be needed. The Compact Compliance Pipeline will be sized to allow gravity delivery of water to meet these future requirements. The initial capacity will be 15,000 acre-feet per year, provided over a 9-month period, with the capability to expand the delivery rate by adding a pumping facility.

4.4 Water Rights for Compact Compliance Pipeline

Water that will be conveyed in the pipeline will be obtained from one or both of two potential sources:

- Un-appropriated ground water available in an area located approximately 17 miles northwest of Wray.
- Retirement of existing wells located at least 8 miles north of the North Fork Republican River, and close to the State line, with the historic consumptive use of these wells transferred to the new wells.

Water from the unappropriated source cannot provide all of the water needed for Compact compliance. Therefore, this source of supply option would need to be supplemented with water obtained by retiring existing wells.

The quantity of water available from the unappropriated source is estimated to be 7,000 acre feet per year, based on application of the regulations of the Colorado Ground Water Commission (GWC) governing the development of ground water in designated basins.

The quantity of water from retirement of existing wells is based on the historic consumptive use of water produced from the wells during the past 10 years, which is estimated to be 15 inches per year. The consumptive use will vary from well to well, depending on pumping rates and crops that were grown. Historic consumptive use will be calculated for the wells using methods that have been accepted by the RRCA.

4.5 Water Quality

Water underlying the lands being considered as potential sources of supply for the Pipeline, is considered to be of good quality and generally of equal to better quality than the surface water in the North Fork of the Republican River at the State line. The water source is the Ogallala Formation - North. Stream classifications and water quality standards for the North Fork, as published by the Colorado Water Quality Control Commission, are identified in the left column below and ground water quality properties are shown in the right column, for comparison. (Note that the reference source used to generate the table did not indicate ground water quality for all of the surface water standard categories; therefore, some blanks remain in the table).

Table 1: Comparison of stream water quality in the North Fork to the ground water quality in the Ogallala Formation.

Surface Water Classification and Associated In-Stream or Drinking Water Standards (1)	Reported Ground Water Quality Properties in Ogallala Formation - North (2), (3)
Classifications:	
Aquatic Life -- Cold Water 1	N/A
Recreation -- 1a	N/A
Water Supply -- Agriculture	N/A
Physical and Biological Standards:	
Dissolved Oxygen = 6.0 mg/l	0.2 to 8.6 mg/l; 50% > 5.4 mg/l

Surface Water Classification and Associated In-Stream or Drinking Water Standards [1]	Reported Ground Water Quality Properties in Ogallala Formation - North [2], [3]
pH = 6.5-9.0	7.0 – 7.9
Fecal coliforms = 200/100 ml	
E Coli = 126/100 ml	
Inorganic Standards:	
Ammonia (acute) = Table Value Standard (TVS)	
Ammonia (chronic) = 0.02 mg/l	0.01 to 0.244 mg/l; 50% < 0.015 mg/l
Chlorine (acute) = 0.019 mg/l	
Chlorine (chronic) = 0.011 mg/l	
Cyanide = 0.005 mg/l	
Sulfide = 0.002 mg/l	
Boron = 0.75 mg/l	Dissolved boron: 20 – 130 µg/l
Nitrate NO_2 = 0.05 mg/l	< 0.01 mg/l
Nitrate NO_3 =10 mg/l	1.1 to 8.9 mg/l
Chloride = 250 mg/l	1.4 to 29.5 mg/l
Sulfate = 250 mg/l	5.5 to 95.7 mg/l
Total Dissolved Solids = 500 mg/l	219 to 461 mg/l
Metal Standards:	
Arsenic (acute) = 50 µg/l (total recoverable)	Dissolved arsenic: <5-12 µg/l
Cadmium (acute) = TVS (trout)	
Cadmium (chronic) = TVS	
Trivalent Chromium (acute) = 50 µg/l (total)	
Hexavalent Chromium (acute/chronic) = TVS	
Copper (acute/chronic) = 1.3 mg/l	Dissolved copper: <5-35 µg/l
Iron (chronic) = 300 µg/l	Dissolved iron: <3-60 µg/l
Iron (chronic) =1000 µg/l (total recoverable)	
Lead (acute/chronic) = TVS (dissolved 15µg/l)	Dissolved lead <5 µg/l
Manganese (acute/chronic) = TVS (dissolved 50µg/l)	Dissolved manganese <3-40 µg/l
Manganese (chronic) = WS (dissolved)	
Mercury (chronic) = 0.01 µg/l (total)	
Nickel (acute/chronic) = TVS	
Selenium(acute/chronic) = TVS (dissolved 50 µg/l)	Dissolved selenium: <5 µg/l
Silver (acute) = TVS	
Zinc (acute/chronic) = TVS	Dissolved Zinc < 5-124 µg/l

Notes:

1. Stream classifications and water quality standards obtained from a report by David Litke, U.S. Geological Survey, and Historical Water-Quality Data for the High Plains Regional Ground-Water Study Area (1930 – 1998) or from CDPHE/WQCC – Colorado Primary Drinking Water Standards.
2. Blanks indicate data that were not reported in the reference.
3. Reported ground water quality data is from Litke, USGS (see Note 1).

Volatile organic compounds and pesticides in the ground water in the project area are below concentrations in Colorado's drinking water standards based on the references cited in the footnotes to the above table.

A portion of the North Fork of the Republican River, primarily downstream from Chief Creek, is able to maintain the only trout habitat in eastern Colorado. Chief Creek is also capable of sustaining year round populations of many species of fish. The high quality perennial flow allows The Division of Wildlife to operate a fish hatchery on Chief Creek. The North Fork, however, is on the 1998 303(d) list for aquatic life impairment and it is being evaluated for potential sediment impacts. Bonny Reservoir is an important recreational and wildlife resource in the Basin; it supports over 250 species of birds.

5.0 Analysis of Alternatives

5.1 Compact Compliance Alternatives

The Compact Compliance Pipeline is one of several options that are available to help meet requirements of the Compact. The other options, which have been studied by the District's engineer (SAE), include: draining Bonny Reservoir; eliminating surface diversions for irrigation; continuing the 2006 and 2007 CREP programs; and complete curtailment of irrigation well pumping in the Basin. The beneficial impacts relative to the Compact of the first three are summarized below (Table 2). None of these alternatives, when used singly or in combination will be sufficient to achieve full Compact compliance.

Table 2: Beneficial impacts of other options.

Option	Improvement in Compliance			
	2007	2009	2012	2016
Drain Bonny Reservoir	4,548	4,588	4,648	4,762
Eliminate Surface Diversions	3,492	3,492	3,492	3,492
2007 CREP (30,000 acres)	228	2,108	2,830	3,383
2006 CREP (27,000 acres)	198	825	1,184	1,428
Total Improvement	**8,466**	**11,013**	**12,154**	**13,065**

By 2009, projections indicate that Colorado will be out of compliance with the Compact by 11,000 to 12,000 acre-feet if no actions are taken. By 2016, the compliance shortfall is projected to be 14,600 acre-feet.

The options listed in the above table, if implemented, could provide significant improvement. However, the options of draining Bonny Reservoir and eliminating surface diversions from the North Fork are not very appealing due to resource issues and legal issues, respectively. Bonny Reservoir is a federal facility which provides significant aquatic and bird habitat in a part of the State where such habitat is rare.

As shown above, voluntary well shut downs (CREP) are relatively slow to improve Colorado's position with respect to compliance with the Compact. Even if all 4,000 wells in the Basin were shut down today, it would take many years for full Compact compliance to be achieved. The Pipeline appears to be the only single option having the potential to fully meet Compact compliance objectives and thereby allow well pumping in the Basin to continue at close to current levels.

5.2 Role of the Compliance Pipeline

The proposed Compact Compliance Pipeline will deliver water to the North Fork Republican River as needed to meet Colorado's Compact obligations. Water will be delivered as direct stream flow, at a location very near the State line. Because water will be delivered as stream flow that can be measured, this alternative provides the most certainty for water users in Colorado that the RRCA and the States of Kansas and Nebraska will accept this approach for compliance. Continuing to retire wells may be a part of Colorado's longer-term efforts; however, such curtailments of pumping will not produce measurable results in terms of increased stream flows for many years.

5.3 Water Source Alternative

As discussed in Section 4.4, water for the Pipeline could come from two sources. Alternative 1 consists of the retirement of existing wells, as indicated on Figure 1, and Alternative 2 includes developing the unappropriated ground water underlying the area designated as the satellite well field on Figure 1. These sources would be developed as follows to provide 15,000 acre-feet per year:

Alternative 1 – Well Retirement

- Acquire approximately 12,000 acres of irrigated land.
- Transfer the historic consumptive use of water to a new use designated as "Compact Compliance" following a change of use process under the rules and regulations of the Colorado GWC and the Colorado DWR.
- Transfer the consumptive use from the center pivot wells serving the 12,000 acres acquired to 6 or 8 new wells following a change process under the rules and regulations of the Colorado GWC and the Colorado DWR.
- Drill and develop 6 to 8 new high-capacity wells, with estimated sustained delivery capacity of approximately 2000 gpm per well, with general locations and spacing as shown on Figure 2.
- Interconnect the wells into a "collection system", which includes a 1 MG storage tank that will supply water to the main north-to-south pipeline, This main pipeline will convey water to the North Fork Republican River near the State line.

Alternative 2 – Develop Unappropriated Ground Water

- Acquire the water underlying the satellite well field area shown on Figure 1. The estimated available water supply from this source is 7,000 acre-feet per year.

- Drill and develop 6 new high-capacity wells, with estimated sustained delivery capacity of approximately 1,000 gpm per well, with general location and spacing as shown on Figure 3.

- Interconnect the wells into a "collection system" that will include a 0.5 MG storage tank and a west-to-east pipeline connected to the main pipeline of Alternative 1 conveying water to the North Fork.

Alternative 2 will not provide all of the needed Compact Compliance flow required. Therefore, a downsized version of the Alternative 1 source of supply facilities will be required. The well and collection system, water acquisition, and related infrastructure would be downsized from 15,000 acre-feet per year to 8,000 acre-feet per year by reducing the number of wells from 6 (or 8) to 3 (or 4) and by downsizing the storage tank from 1 MG to 0.5 MG.

5.4 Pipeline Alignment Alternatives

There are several potential alignments for the main north-to-south pipeline that could be considered, depending on topographic, land use, land ownership, and access considerations. Generally pipelines are located, where possible, within existing rights-of-way or easements, often along existing road and utility corridors. This approach helps to minimize costs and challenges associated with negotiating easements with land owners. Alignment selection in open areas usually is driven by topographic considerations and the desire to minimize pumping requirements.

GEI initially examined two alignments for the north-to-south pipeline, one that followed existing county roads wherever possible and one alignment that was deemed best from the standpoint of a gravity delivery perspective. Local interests also identified an alignment that was viewed to be optimal from the perspective of land owner negotiation efforts. Based on discussions with the District's engineer, the north-to-south shown on Figure 2 was selected as the basis for estimating costs. The east-to-west alignment, shown on Figure 3 for Alternative 2, was selected based primarily on topographic considerations.

5.5 River Discharge Options

Several locations for discharging water to the North Fork were considered during GEI's study. A discharge location in the Town of Wray would provide some aesthetic benefits to the town; however, stream channel losses and the presence of surface diversions between Wray and the State line could impact the delivery of water for Compact compliance. After discussing that discharge option, and others closer to the State line, it was decided that the point of discharge to the North Fork should be as close as possible to the State line and at a location that does not require crossing of the railroad and highway rights-of-way. The discharge location is shown on Figure 2.

Several types of discharge structures could be used; however, the most cost-effective would be a USBR-type reinforced concrete impact basin, sized for the expected peak water delivery rate. This structure will effectively dissipate energy over a wide range of flows and allow for gravity operation of the main pipeline.

5.6 Description of Alternatives

A summary of the major facilities associated with the two alternatives is provided below and the locations of facilities are provided on Figure 1.

Table 3: Summary of Major Facilities for Alternatives 1 and 2.

Alternative 1	Alternative 2	
North Well Field	**Satellite Well Field**	**North Well Field**
6 new 2000 gpm wells	6 new 1000 gpm wells	3-4 new 2000 gpm wells
7920 feet of 18" pipe	34,320 feet of 12" pipe	2640 ft of 18" pipe
5280 feet of 24" pipe	5280 feet of 18" pipe	5280 feet of 24" pipe
Conveyance Pipeline	**Conveyance Pipeline**	**Conveyance Pipeline**
67,060 feet of 36" pipe	103,490 feet of 24" pipe	67,060 feet of 36" pipe
Storage Tank – 1 MG	**Storage Tank – 0.5 MG**	**Storage Tank – 0.5 MG**
River Outlet Structure		**River Outlet Structure**

5.6.1 Alternative 1

Compact Compliance Pipeline Alternative 1 is shown schematically in plan and profile on Figure 2. Approximately 12,000 acres of irrigated land will be retired and the historic consumptive use of irrigation water, estimated to be 15,000 acre-feet per year, will be transferred existing wells serving that area to 6 or 8 new wells. The general location of these new wells are shown on Figure 2. With pumping capacity of 2,000 gpm per well, 6 new wells will be able to deliver 15,000 acre-feet in a 9-month period. The current schedule envisions completion of the wells and pipeline in early July 2009 and the potential to deliver a major portion of Colorado's current Compact obligation (11,000 acre-feet) before year-end 2009. Unless the 6 wells can be pumped harder to yield more than 2,000 gpm per well, at least 2 additional wells (total of 8) will be needed to achieve the delivery of 11,000 acre feet before year-end 2009.

Water pumped from the individual wells will be collected in an interconnected system of pipelines and then conveyed to a storage tank located at El. 3655. The storage tank will provide reserve capacity allowing the main pipeline to operate for 2 hours at two-thirds

capacity with no inflow to the tank from the well field. The storage tank will also provide protection of the main pipeline from surge and negative pressures that could develop if the main pipeline were connected directly to the well field collection system.

The main pipeline will extend from the storage tank approximately 12.7 miles to the North Fork Republican River. The pipe will be buried throughout its length. The pipeline will be supplied from the tank through a gated outlet, which will regulate flows. The main pipeline will flow by gravity from the tank to the river discharge structure.

5.6.2 Alternative 2

The additional components required for Compact Compliance Pipeline Alternative 2 are shown schematically, in plan and profile, on Figure 3. Alternative 2 will add a satellite well field located approximately 20 miles west of the well field described above for Alternative 1. The satellite well field will produce 7,000 acre-feet of currently unappropriated water from 6 wells delivering 1000 gpm each. This water will be pumped to a 0.5 MG storage tank and then delivered by a west-to-east pipeline to the main north-to-south pipeline described for Alternative 1. With this additional source of ground water, the Alternative 1 well field can be downsized to 3 (or 4) 2000 gpm wells and a 0.5 MG tank.

5.7 Evaluation of Alternatives

The two Compact Compliance Pipeline alternatives can only be compared when the costs of water supply acquisition are included. This is because the cost to acquire water for Alternative 2 is expected to be lower than the cost of water rights for Alternative 1. Based on information provided to GEI, the total costs for the alternatives are estimated as shown in Table 4.

Table 4: Estimated total costs for Alternatives 1 and 2

Alternative	Infrastructure Cost ($Million)	Cost to Acquire Water ($Million)	Total Cost ($Million)
1 – Entire Water Source is Retired Irrigated Land North of Wray	$21.3	$60.0	$81.3
2 – Retire Irrigated Land North of Wray and Acquire New Water North and West of Wray	$39.1	$34.0	$73.1

While Alternative 1 is estimated to be more costly because of the costs to acquire water, it has several advantages, as noted below:

- Alternative 1 involves fewer miles of collection and conveyance pipeline to construct, operate, and maintain.

- Rights-of-way negotiations and acquisition will be less complex for Alternative 1 in comparison to Alternative 2, with its longer pipelines and greater numbers of land owners affected.

- Alternative 2 involves constructing wells that would develop currently unappropriated ground water. Obtaining permits for these new wells from the GWC may be time consuming and difficult. Also, new appropriations may raise added concerns with the RRCA that could delay the Project.

At the time of preparing this report, the District is reviewing options relative to the water source for the Project. Based on our current understanding, Alternative 1 is preferred by the District, and therefore, an expanded discussion of that option is provided in Section 6.0.

6.0 Description of Alternative 1

6.1 Source of Water for the Project

If Alternative 1 is implemented, the District will acquire at least 12,000 acres of irrigated land currently served center-pivot wells within the property boundary shown on Figure 1. The historic consumptive use on these lands has been estimated to be 15,000 acre-feet. These water rights will be transferred to 6 (or possibly 8) new well locations (Figure 2). New high-capacity wells will be constructed to pump the transferred consumptive use for supply to the Compact Compliance Pipeline.

6.2 Preliminary Design Criteria

Preliminary project design criteria were developed based on discussions with Slattery and the District's Engineering Committee, GEI experience on similar projects, and standard engineering practice for water system design. Key parameters and associated criteria for the preliminary feasibility study are provided in Table 5 below.

Table 5: Key parameters and associated criteria for the preliminary feasibility study.

Parameters	Selected Design Criteria
System Delivery Capacity	
Year 1	11,000 AF in 6 months
Year 2	15,000 AF in 9 months
Ultimate	Perhaps up to 25,000 AF in 9 months
Year 1	30.4 cfs
Year 2	27.6 cfs
Ultimate	Perhaps up to 46.0 cfs
Pipe Velocity	
Initial	< 5 fps
Ultimate	< 10 fps
Maximum Pipe Pressure	100 psi
Well Capacity	1,000 to 2,000 gpm

6.3 Well-Field Development

A preliminary design plan for the well field is shown on Figure 2. The plan assumes construction of 6 new 2,000 gpm wells. During the first 6 to 7 months of operation in 2009, these wells would be operated to produce as close as possible to 11,000 acre-feet. During the following years, the wells could be pumped from 9 to 12 months per year yielding 14,500 to

19,400 acre-feet per year, depending on Compact requirements. If Compact demands grow to beyond these capacities, two more wells would need to be added to the system.

In the north well field area, the aquifer has a saturated thickness of approximately 300 feet and depth to water table of approximately 100 feet. We assumed that the new wells will be drilled to depths of 350 feet and that draw downs would be on the order of 50 feet below the current static water level, as shown schematically on Figure 4. The well pumps would be capable of lifting water to El. 3685 in the 1 MG storage tank. The static lift from each well is estimated to be 240 feet, as indicated on Figure 4. At 2,000 gpm per well, well pump capacity is estimated to be approximately 175 horsepower (HP), assuming an overall system efficiency of 75 percent to the well head discharge, and an additional allowance for 23 feet of hydraulic losses in the collection system. The well pumps will be multi-stage, submerged, vertical turbine pumps.

6.4 Collector Pipelines

A system of pipelines will be constructed to interconnect the wells and to convey water to the storage tank. A general layout of the pipelines is presented on Figure 2, which indicates that the pipelines will be 18 to 24 inches in diameter. The pipelines will be installed as described in Section 6.5.

6.5 Conveyance Pipeline

The main water conveyance will be a 36-inch diameter pipeline extending from a 1.0 MG storage tank approximately 12.7 miles to the North Fork Republican River following the general alignment shown on Figure 2. The tank will operate between a high water level at El. 3690 and a low water level at El. 3665. Releases from the tank will be regulated by a valve located near the tank and an ultra-sonic flow meter will be provided approximately 30 feet downstream of the release valve.

The pipeline will be buried with minimum cover of 3 feet above the crown of the pipe. To assure integrity, the pipe will be properly bedded prior to filling the trench with well-compacted backfill. Sources of bedding material include off-site commercial sand and gravel pits and processing of locally available materials. Decisions on bedding material sources will be made during final design following geotechnical field investigations. Access manholes, air release valves, and drain valves will be provided at appropriate locations along the pipeline, as determined during the final design and confirmed during construction.

Pipe materials suitable for the Project include polyvinyl chloride (PVC, C-900 and C-905), steel, ductile iron, asbestos cement, and reinforced concrete pressure pipe. The most likely type of pipe for the main conveyance alignment is PVC or steel. Further review of pipe materials and prices will be made during final design.

As discussed in Section 5.5, the pipeline will terminate at a river outlet structure. Upstream of that structure, there will be a control valve to maintain appropriate velocities in the pipeline. This valve will be locate just upstream of the outlet structure. An ultra-sonic flow meter will be provided approximately 30 feet upstream of the downstream control valve.

6.6 Special Crossings

Depending on findings during the design-level field reconnaissance, various types of special crossings may be needed to route the pipeline over or under existing utilities, under stream channels and wetlands, and under roads. We have identified no major stream, road, or railroad crossings and we expect that special crossings will be relatively few in number. Utility crossings may require special excavation methods and encasement sections of the Compact Pipeline. If perennial streams or wetlands must be crossed, directional borings and casing conduits may be used.

6.7 River Outlet Structure

The outlet from the pipeline to the North Fork will be a conventional USBR-type impact basin constructed of reinforced concrete. Dimensions of the structure will be approximately 11 feet (W) by 14 feet (L) by 7 feet (H). The structure will be set back and grading around the structure will be performed to minimize visual impacts. With discharge normally in the range of 20 to 30 cfs, the basin will discharge flow about equal to and sometimes greater than the normal flow of the river. To avoid issues with channel erosion, the basin discharge will be angled at approximately 30 degrees (or less) to the river channel, as indicated on Figure 5.

The impact basin will be set back from the river at a location outside of the estimated 100-year flood plain, probably about 50 to 100 feet from the existing river bank. A channel will be excavated from the basin to the river. This channel could be engineered to replicate the natural North Fork channel, thereby providing an eventual net gain in riparian habitat to offset the effects of excavation of the new channel into the existing river bank.

6.8 Other Ancillary Facilities

The Compact Pipeline will require a number of ancillary facilities for proper operation and long-term maintenance. These include:

- Flow meters at each well, at key locations on the various pipelines, and near the river outlet.

- Valves to control flows in the system, provide isolation for inspection, and to allow draining the pipe at low points.

- Pipeline protection devices, including air release and vacuum valves and blow-off valves.

- Manholes and blind flanges to allow access for internal pipe inspection.

- A system control building and maintenance yard.

6.9 Cost Estimates

Estimates of probable construction cost have been developed for the two alternatives described in Section 5. Construction cost estimates are based on our evaluation of the major construction items appropriate to complete the work. For unit price items, quantity estimates were developed from the feasibility layouts. Lump sum prices are based on estimates of the work required and the corresponding cost.

All costs include allowances for prime contractor overhead and profit. Estimated unit prices and costs for the listed major work items were derived from the following sources: published and non-published bid price data for similar work; R.S. Means Heavy Construction Cost data for 2006 and 2007; contacts with pipe suppliers and information from the project area; GEI's experience on similar construction projects; and price quotes from local and regional suppliers and contractors. Our opinion of the estimated construction cost is referenced to November 2007, as of the date of preparation of this report.

The estimated construction costs include an allowance for "unlisted items" equal to 10 percent of the listed items. This allowance is intended to cover costs for a variety of items, which will eventually be included in a final bid schedule, but which are not considered major construction items at this time. This allowance will decrease to zero as project development progresses towards final design and construction bidding.

The sum of the listed items plus the unlisted items allowance is defined for this study as the "Base Construction Subtotal" (BCS).

An allowance for the construction contractor's costs for mobilization, bonds and insurance is included as a percentage of the BCS. An allowance equal to 4 percent of the BCS has been assigned to these costs.

The cost estimates also include an allowance for construction contingencies. This allowance is essentially the owner's tool for managing the financial risk of a project and, to some degree, is based on the individual owner's risk management approach. At the feasibility level of project development, construction contingencies are typically included to allow for project construction cost increases that could result from a variety of factors including:

- Unforeseen conditions at the site or unexpected project development issues.
- Approximations in estimating.
- Integration of new and/or more detailed project information or more detailed or rigorous evaluations.
- Other unforeseen or unexpected costs.

The total allowance for construction contingencies used in the feasibility cost estimates is 10 percent of the BCS plus mobilization, bonds and insurance.

The sum of the BCS, mobilization, bonds and insurance, and construction contingencies is defined as the "Direct Construction Subtotal" (DCS).

A "Total Estimated Project Cost", which is equal to the DCS plus allowances for design engineering (5 percent), permitting (2 percent), owner legal and administrative costs (2 percent), and construction engineering and administration (5 percent), is provided for each project alternative. These costs include allowances for purchase of land, acquisition of easements required for project development, or significant environmental mitigation. The District should include some allowance for these costs in their overall planning-level estimates.

The estimated project costs presented in this report are based on our professional opinion of the cost to develop and construct the project as described in this report. The estimated costs are based on the sources of information described above, and our knowledge of current construction cost conditions in the locality of the project. Actual project construction and development costs are affected by a number of factors beyond our control such as supply and demand for the types of construction required at the time of bidding and in the project vicinity; changes in material supplier costs; changes in labor rates; the competitiveness of contractors and suppliers; changes in applicable regulatory requirements; changes in design standards; and environmental mitigation requirements and other conditions of project permitting. Therefore, conditions and factors that arise as project development proceeds through construction may result in project costs that differ from the estimates documented in this report.

Tables 6 and 7 contain summaries of the cost estimates developed for the Compact Compliance Pipeline alternatives.

Table 6: Cost Estimate for Alternative 1

Alternative 1
REPUBLICAN RIVER COMPACT COMPLIANCE PIPELINE
OPINION OF PROBABLE PROJECT COST
(Excluding Acquisition of Water Rights)
Delivery Rate = 15,000 AF/yr; 9-month Delivery Period

Item No.	Description	Quantity	Unit	Unit Price	Amount
1	Rights-of-way and easements	180	Ac	$500	$90,000
2	Wells, pumps and motors	6	Ea	$150,000	$900,000
3	1 MG storage tank	1	Ea	$500,000	$500,000
4	Furnish and Install 36-in pipe (1)	67,060	Ft	$160	$10,730,000
5	Furnish and Install 24-in pipe (1)	5,280	Ft	$82	$433,000
6	Furnish and Install 18-in pipe (1)	7,920	Ft	$62	$491,000
7	Valves and appurtenances	1	LS	$608,000	$608,000
8	Road and utility crossings	4	Ea	$15,000	$60,000
9	Drainage crossings	4	Ea	$25,000	$100,000
10	Reclamation of disturbed areas	180	Ac	$1,000	$180,000
11	Outfall structure	1	LS	$150,000	$150,000
12	New access roads	15	Mi	$25,000	$380,000
13	Control building and yard	1	LS	$200,000	$200,000
14	Land for control building and yard	5	Ac	$8,000	$40,000
15	Montoring and SCADA system	1	LS	$100,000	$100,000
---	Unlisted Items (10% of subtotal of listed items)				$1,496,000
Base Construction Subtotal (BCS)					**$16,458,000**
	Mobilization, Bonds, Insurance (4.0% of BCS)				$660,000
	Contingencies (10% of BCS + Mobilization …)				$1,710,000
Direct Construction Subtotal (DCS)					**$18,828,000**
	Design Engineering (5% of DCS)				$940,000
	Permitting (2% of DCS)				$190,000
	Legal and Administrative Costs (2% 0f DCS)				$380,000
	Construction Administration and Engineering (5% of DCS)				$940,000
TOTAL ESTIMATED PROJECT COST					**$21,278,000**

(1) Includes trench excavation, pipe installation, bedding, and backfill

Table 7: Cost Estimate for Alternative 2

Alternative 2
REPUBLICAN RIVER COMPACT COMPLIANCE PIPELINE
OPINION OF PROBABLE PROJECT COST
(Excluding Acquisition of Water Rights)
Delivery Rate = 15,000 AF/yr; 9-month Delivery Period

Item No.	Description	Quantity	Unit	Unit Price	Amount
1	Rights-of-way and easements	500	Ac	$500	$250,000
2	Wells, pumps and motors	10	Ea	$150,000	$1,500,000
3	0.5 MG storage tank	2	Ea	$300,000	$600,000
4	Furnish and Install 36-in pipe (1)	67,060	Ft	$160	$10,730,000
5	Furnish and Install 24-in pipe (1)	108,770	Ft	$82	$8,919,000
6	Furnish and Install 18-in pipe (1)	7,920	Ft	$62	$491,000
7	Furnish and Install 12-in pipe (1)	34,320	Ft	$48	$1,647,000
8	Valves and appurtenances	1	LS	$1,089,000	$1,089,000
9	Road and utility crossings	8	LS	$15,000	$120,000
10	Drainage crossings	4	Ea	$25,000	$100,000
11	Reclamation of disturbed areas	500	Ac	$1,000	$500,000
12	Outfall structure	1	LS	$150,000	$150,000
13	New access roads	41	Mi	$25,000	$1,033,000
14	Control building and yard	1	LS	$200,000	$200,000
15	Land for control building and yard	5	Ac	$8,000	$40,000
16	Montoring and SCADA system	1	LS	$100,000	$150,000
---	Unlisted Items (10% of subtotal of listed items)				$2,752,000
Base Construction Subtotal (BCS)					**$30,271,000**
	Mobilization, Bonds, Insurance (4.0% of BCS)				$1,210,000
	Contingencies (10% of BCS + Mobilization …)				$3,150,000
Direct Construction Subtotal (DCS)					**$34,631,000**
	Design Engineering (5% of DCS)				$1,730,000
	Permitting (2% of DCS)				$350,000
	Legal and Administrative Costs (2% 0f DCS)				$690,000
	Construction Administration and Engineering (5% of DCS)				$1,730,000
TOTAL ESTIMATED PROJECT COST					**$39,131,000**

(1) Includes trench excavation, pipe installation, bedding, and backfill

6.10 Implementation Schedule

GEI developed a preliminary project schedule using MS Project, which is presented on Figure 6. The schedule shows activities from the start of the studies documented in this report through the completion of construction. Key milestone dates in the schedule are indicated in Table 6 below.

Table 8: Key dates in the Project Schedule.

Milestone	Date
Begin Final Design	01/07/08
Complete 50% Design	04/25/08
Complete 90% Design	07/11/08
Finalize Contract Documents	08/15/08
Issue Bid Documents	08/18/08
Receive Bids	10/17/08
Award Construction Contract	10/20/08
Complete Construction	06/26/09
Begin Full Water Delivery	07/14/09

Achieving this schedule will enable full delivery of water for Compact compliance to begin in the latter part of June 2009. The project should be able to deliver close to 11,000 acre-feet in 6 to 7 months. Therefore, Colorado can be in substantial compliance with the terms of the Compact by year-end 2009.

6.11 Permitting Issues

A full assessment of likely permitting issues is beyond the scope of the current study. Based on review of requirements under the Corps of Engineers' Nationwide 404 Permit (NWP) process, we expect that construction of the river outlet structure will require a Nationwide 404 (dredge/fill) Permit (NWP No. 7). Any disturbance of wetlands along the pipeline route would also require a 404 permit (NWP No. 12). Recent pipeline planning and design by Aurora Water has been based on avoidance of wetlands and riparian zones by tunneling rather than trenching for pipeline installation.

Assuming that a Nationwide 404 Permit will be the framework for the permitting process, the following activities are also expected to be required, as conditions for obtaining the Corps' permit:

- State of Colorado 401 Water Quality Certification;
- Compliance with requirements of the National Pollution Discharge Elimination System (NPDES Permit);

- Threatened and Endangered Species clearance through the U. S. Fish and Wildlife Service and the Colorado Division of Wildlife;
- Cultural and historic resources assessment;
- Yuma County 1041 Permit; and
- Various construction-related permits that the pipeline construction contractor will be required to obtain.

The Corps provides guidance on what is required in the Nationwide 404 Permit application. Local Corps' representatives in the Denver Regulatory Office have indicated that the 404 Permits (NWP Nos. 7 and 12) could be obtained in about 30 days, perhaps less, once the documentation is provided. The process could be started using the information and maps presented in this report.

The proposed Project will require a change of rights to designated groundwater and this change must be approved pursuant to Rule 7 of GWC Rules and Regulations. Rule 7.2 requires publication of an application for a change of rights to designated groundwater, and a change in the type of use or an export out of a designated basin cannot result in an increase over the historical depletion of the aquifer by the well. An export of water from a well located within a groundwater management district (GMD) requires approval by the GMD. As long as the change is limited to the historical use of the right and the water is used for a Compact Compliance Pipeline, approval of the change and export by the GWC and the GMD is considered likely. Because of the importance of the Compact Compliance Pipeline, expedited consideration is expected.

The Final Settlement Stipulation requires submission to the RRCA of an augmentation plan and related accounting procedures for wells acquired for the purpose of offsetting stream depletions. The augmentation plan and related accounting procedures must be approved by the RRCA prior to implementation. It is expected that the Colorado State Engineer's Office will submit the augmentation plan and related accounting procedures to the RRCA as soon as a specific plan has been developed.

6.12 Potential Time and Cost Saving Measures

The District and the State of Colorado are anxious to move this project forward expeditiously and cost effectively. There are a number of measures that should be considered during the early stages of final design to help expedite the schedule and manage costs. Among these measures are:

- **Pre-purchase the pipe.** The District could pre-purchase the pipe and supply the pipe to the contractor selected to perform the construction. This would help to assure that delays in pipe delivery do not occur during the planned construction period and may save cost associated with contractor mark-up on the pipe supply. Disadvantages of pre-purchase include potential storage issues, possible

uncertainty relative to responsibilities for defects, and possibly reduced interest by contractors in bidding the work.

- **Modified design/build approach.** This measure involves selecting the contractor before the designs are completed. With the contractor on-board when decisions are being made, additional inputs can be obtained that can reduce cost and enhance the schedule. The contractor also could start building portions of the project, while others are in design, thereby accelerating the schedule.
- **Identify borrow sources for bedding materials.** Identification of the borrow sources within the project area during design will relieve the contractor of having to plan on off-site sources and should result in lower bids. Given the nature of the soils in the project area, it is likely that good bedding materials can be found near the pipe alignments.

- **Multiple construction contracts.** Separate construction contracts for the wells, pipeline, and storage tank could allow construction of each major component to proceed more quickly. This also would provide maximum opportunity for local well- drillers and small contractors to bid on the project.

Further study of the above cost and schedule management measures, and others yet to be identified, will be an important part of the initial design tasks.

7.0 Conclusions

The Compact Compliance Pipeline appears to be the most reliable option for enabling irrigated agriculture to continue at near-current levels in the Republican River Basin. Constructing the components of the Project will be straight-forward. There are no significant technical or permitting challenges that will need to be overcome. We believe that it is feasible to bring the project on-line in July 2009.

The project can be implemented at a cost of $21.3 million. The total cost, including the present value of the estimated $450,000 annual O&M cost, is estimated to be $27.5 million. The O&M cost includes pumping energy. We assumed an interest rate of 6 percent over 30 years to obtain the present worth of O&M cost. With an annual delivery of 15,000 acre-feet to meet Compact objectives, the well and pipeline cost is $1,831 per acre-foot of firm supply, excluding the cost of acquiring the water rights. This compares with typical development costs on the Front Range of $3,000 to $5,000 per acre-foot for water storage and delivery, excluding water rights. Economic and financial analyses of the Project, and financing plans, are being covered in a separate report.

8.0 Recommendations

The District, water users in the Republican River Basin, and the State of Colorado want to move ahead on the Compact Compliance Pipeline Project very quickly. The desire is to have the Project fully operational as soon as possible. We believe that the Project can be fully operational by mid-July 2009, possibly sooner. This schedule is aggressive, but achievable, especially if the following actions are taken:

- Initiate final design activities in January 2008.
  - This means that aerial photography, if required for topographic mapping, should be performed before heavy snowfall this winter.
  - Also, the final well locations and pipeline alignments must be fixed in early 2008.

- Begin immediately to secure the source(s) of water for the Project through negotiations with water users in the Basin who are willing to provide access to the source(s) of supply. (This will either be irrigated lands that will be retired so water can be transferred to Compact compliance or easements on property overlying unappropriated ground water, or some combination of both).

- Initiate and complete ground water permitting actions through the Colorado GWC and the local GMDs as soon as possible.

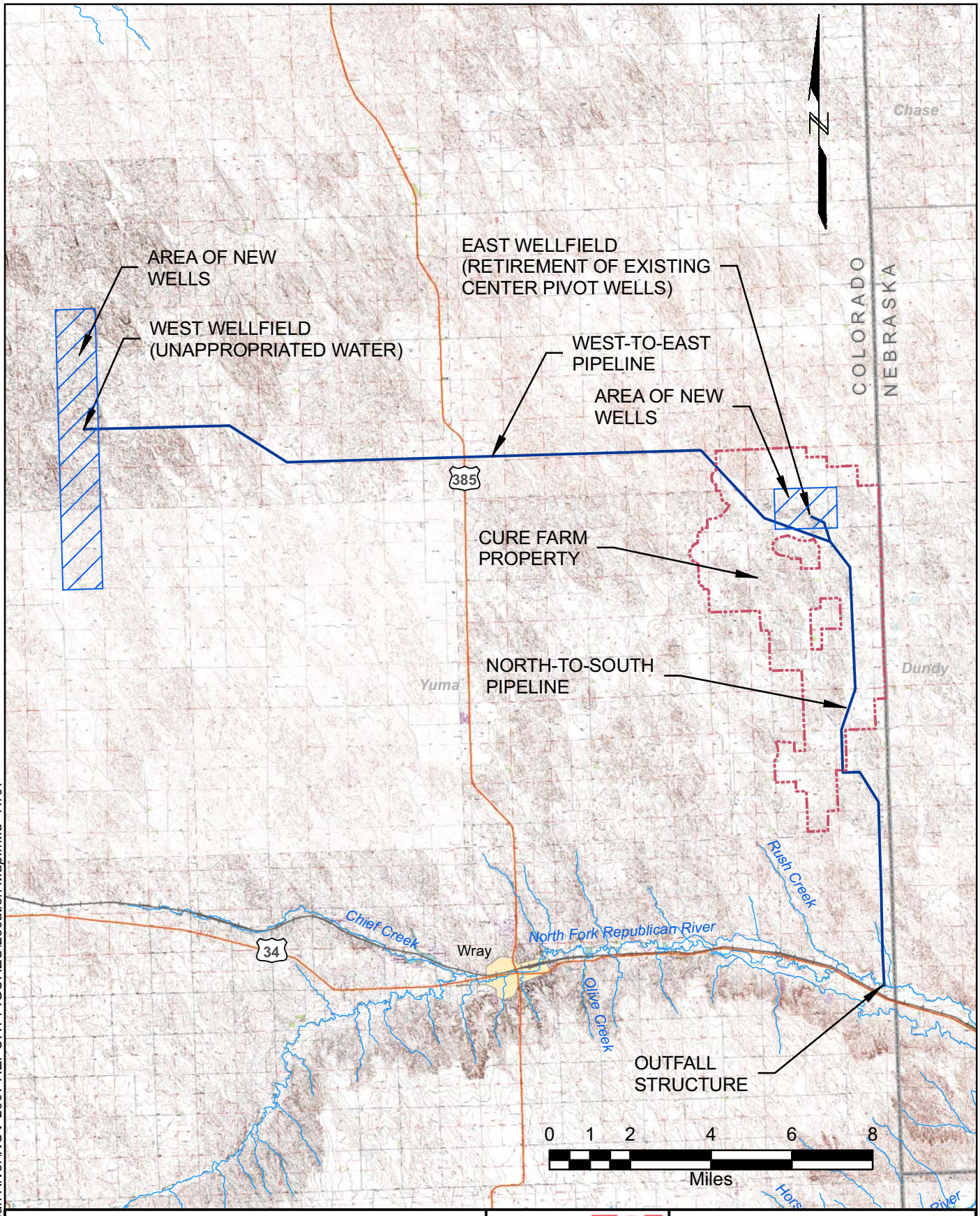
- Initiate environmental permitting (Corps 404 Nationwide process) in early 2008, based on Project configurations described in this report. Have permits in-hand prior to the beginning of construction, including the Corps 404, State 401 water quality, and County 1041 permits.

- When the design engineer is on-board, discuss options for project delivery, including pre-purchasing of pipe, conventional design-bid-build, and a modified design-build approach. These discussions would also establish goals for involving smaller local contractors in eastern Colorado in the Project and ideas for cost and schedule control. Opportunities for local farmers and ranchers to help on the construction would be discussed as well.

- Prepare clear and concise contract documents (drawings, technical specifications, bid schedule, and contract terms) that assure receipt of competitive bids and minimize potentials for costly change orders and schedule delays.

- Early in the final design process, establish a detailed project implementation plan that will guide the Project from beginning to end. This plan, which will be periodically updated, will include:
  - Detailed schedule and budget.
  - Communications plan.
  - Definition of the roles and responsibilities of all participants in the project implementation.

Figures



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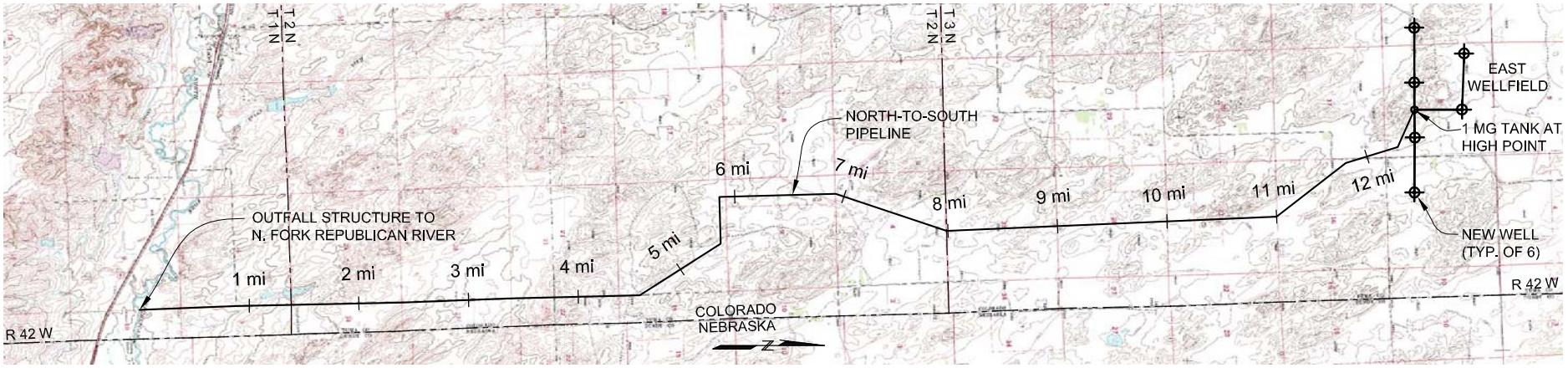
Republican River Compact Compliance Pipeline Yuma County, Colorado	GEI Consultants	FACILITIES LOCATION MAP
Republican River Water Conservation District	072670	November 2007 Figure 1

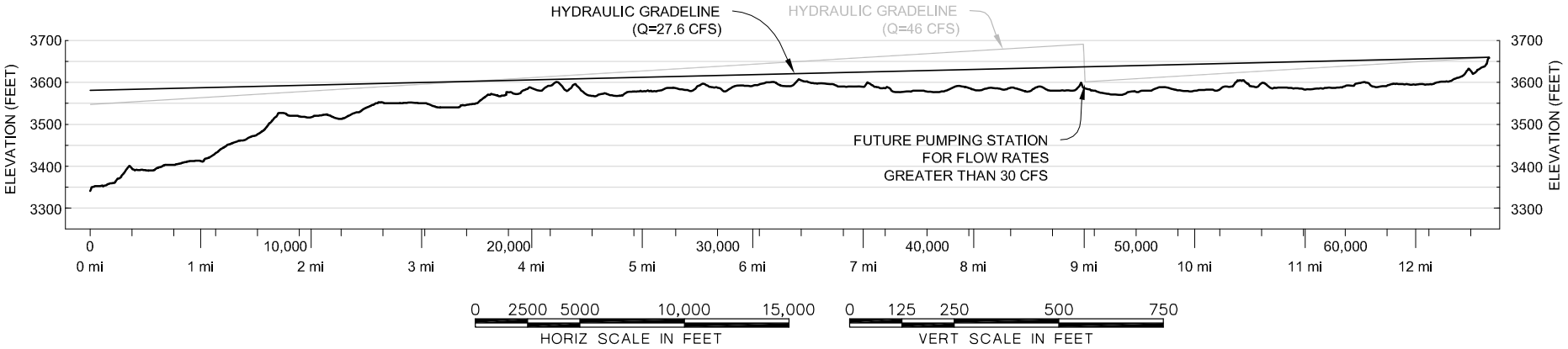


ALTERNATIVE 1: INCLUDES EAST WELLFIELD, 1MG TANK, 36-INCH DIAMETER PIPELINE, AND OUTFALL STRUCTURE.

ALTERNATIVE 2: BUILD SAME FEATURES AS OPTION 1, EXCEPT REDUCE NUMBER OF WELLS IN EAST WELLFIELD, REPLACE 1MG TANK WITH 0.5MG TANK, AND IMPLEMENT THE FACILITIES SHOWN ON FIGURE 3.

NOTES:

1. IF WEST WELLFIELD IS IMPLEMENTED, ONLY 3-4 NEW WELLS WILL BE NEEDED IN THE EAST WELLFIELD.



Republican River Compact Compliance Pipeline Yuma County, Colorado	GEI Consultants	PLAN AND PROFILE NORTH-TO-SOUTH PIPELINE	
Republican River Water Conservation District	Project 07267	November 2007	Figure 2

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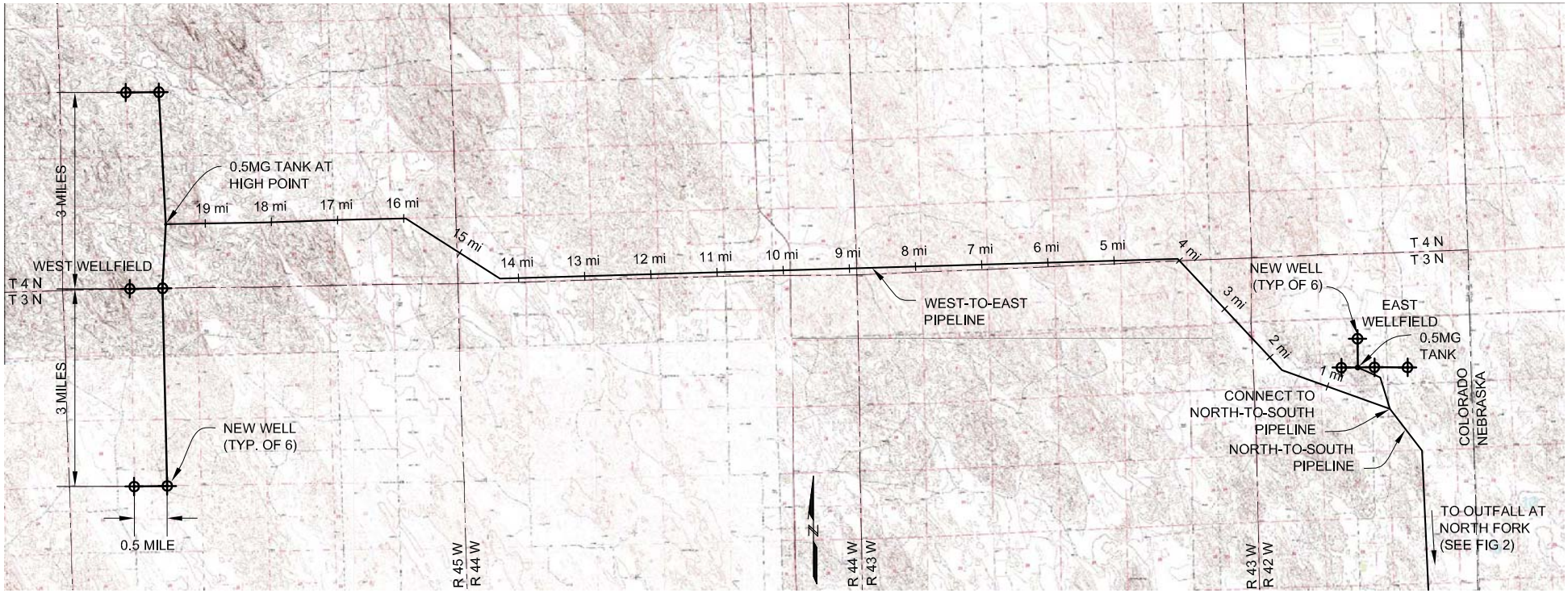
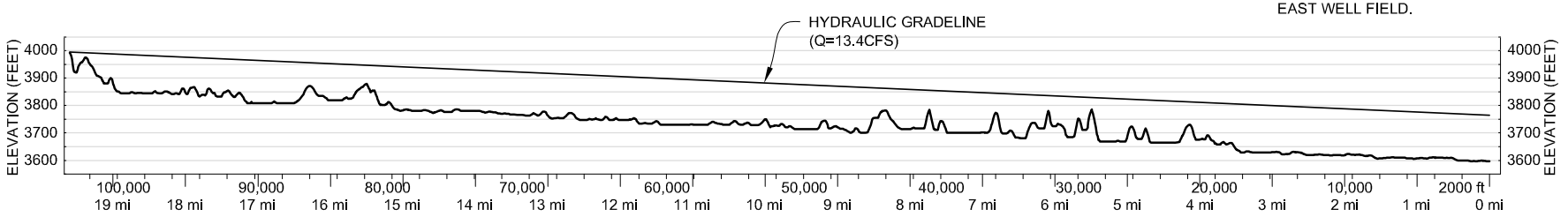


NOTE: IF WEST WELLFIELD IS IMPLEMENTED, ONLY 3-4 NEW WELLS WILL BE NEEDED IN THE EAST WELL FIELD.



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VERT SCALE IN FEET

Republican River Compact Compliance Pipeline Yuma County, Colorado	GEI Consultants	PLAN AND PROFILE WEST-TO-EAST PIPELINE
Republican River Water Conservation District	Project 07267	November 2007 Figure 3

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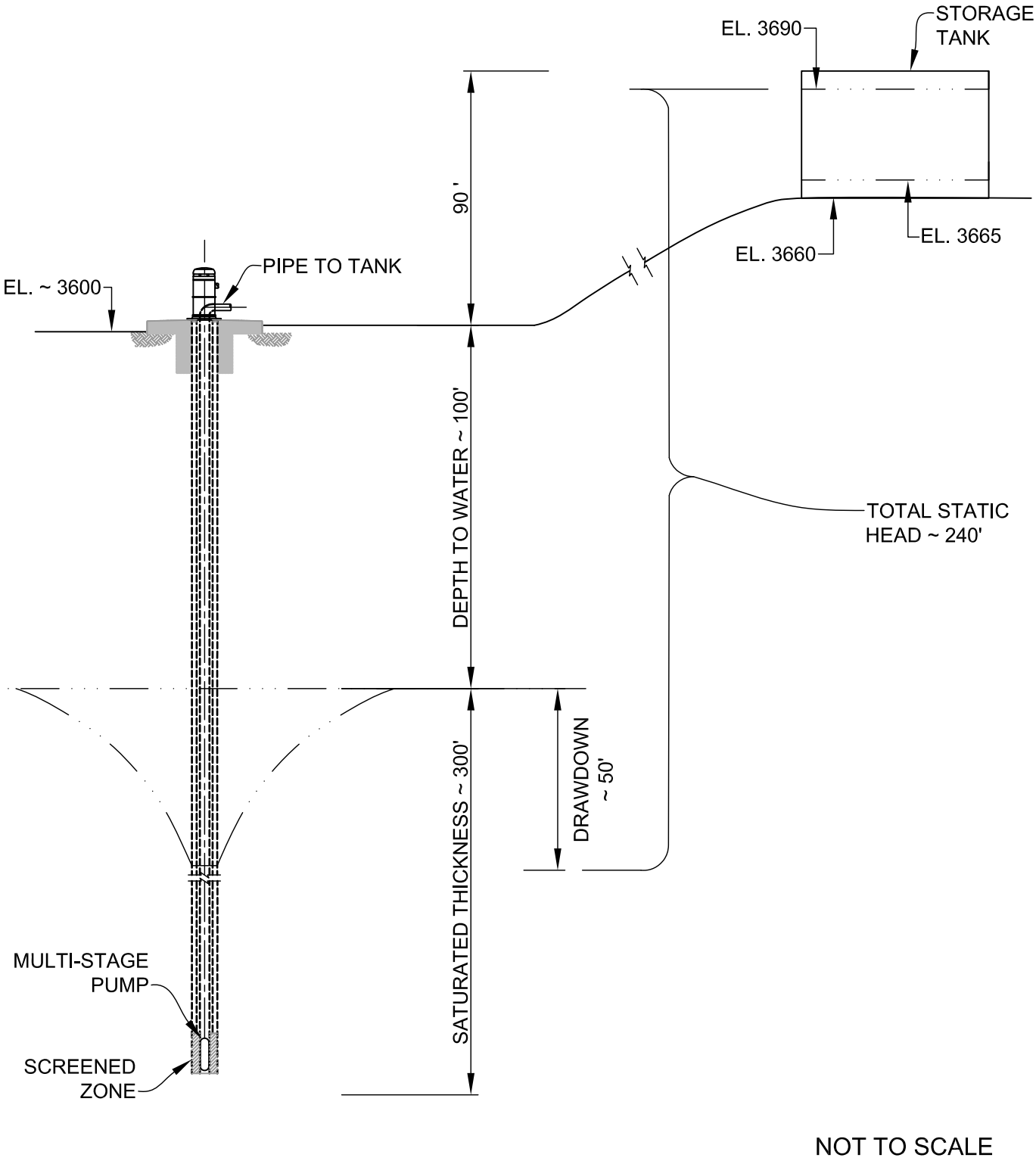

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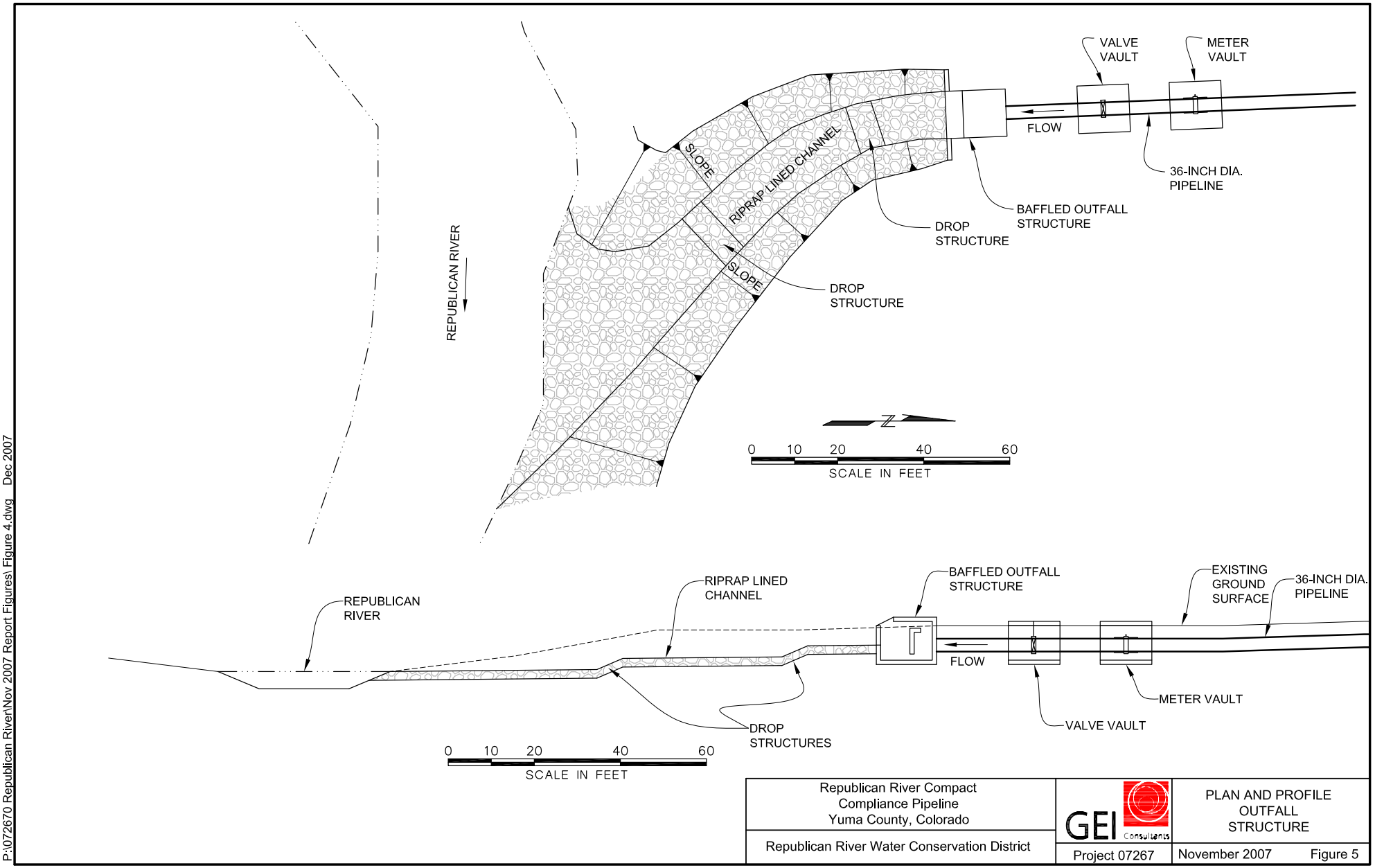
Republican River Compact Compliance Pipeline Yuma County, Colorado	GEI Consultants	SCHEMATIC OF WELL DEVELOPMENT
Republican River Water Conservation District	Project 072670	November 2007 Figure 4



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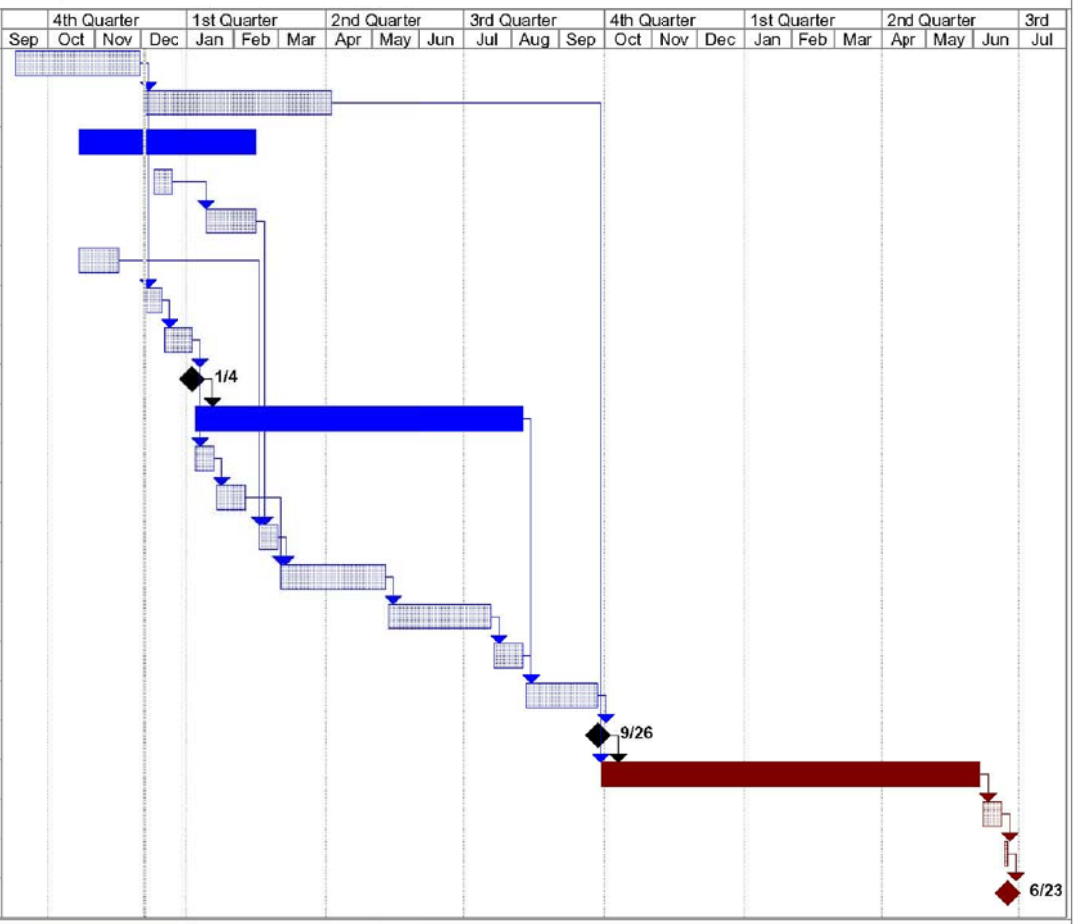
Republican River Compact Compliance Pipeline Yuma County, Colorado	GEI Consultants	PLAN AND PROFILE OUTFALL STRUCTURE	
Republican River Water Conservation District	Project 07267	November 2007	Figure 5

Preliminary Implementation Schedule
Republican River Compact Compliance Pipeline

GEI Consultants, Inc.

ID	Task Name	Duration
1	Preliminary Feasibility Study	60 days
2	CWCB Funding	90 days?
3	Pre-Design Work	85 days
4	Aerial Survey	10 days
5	Mapping	25 days
6	Alignment	20 days
7	Final Design SOW	10 days
8	RRWCD Review	15 days
9	N-T-P with Final Design	0 days
10	Final Design	155 days
11	Design Criteria	10 days
12	Analyses	15 days
13	Plan and Profile Sheets	10 days
14	50% Package	50 days
15	90% Package	50 days
16	Final Package	15 days
17	Bidding	35 days
18	Award Const. Contract	0 days
19	Construction	180 days
20	Startup and Testing	10 days
21	Project Acceptance	2 days
22	Full Water Delivery	0 days



Compliance Pipeline
Conventional Delivery
Date: Mon 12/3/07

Task — Milestone — External Tasks
Split — Summary — External Milestone
Progress — Project Summary — Deadline

Page 1

Republican River Compact Compliance Pipeline Yuma County, Colorado	GEI Consultants	PROJECT SCHEDULE
Republican River Water Conservation District	Project 072670	November 2007 Figure 6

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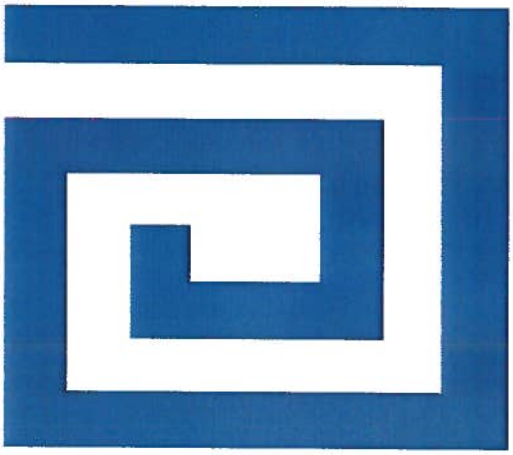
Appendix A

Hydraulic Calculations

High Plains Aquifer
and
Republican River Basin
Water Supply Plan



The future of irrigated agriculture within the area of the High Plains Aquifer in Colorado hangs in the balance. We can either control the future, or the future will control us.

January 5, 2008

SOUTH PLATTE RESOURCES, LLC
% Timothy R. Buchanan
7703 Ralston Road
Arvada, Colorado 80002
Tele: 303-431-9141
Fax: 800-803-6648
Email: trb@tbvs.net

Table of Contents

SOUTH PLATTE RESOURCES, LLC

Summary of Project

"If future generations are to remember us more with gratitude than sorrow, we must achieve more than just the miracles of technology. We must also leave them a glimpse of the world as it was created, not just as it looked when we got through with it."

Lyndon B. Johnson

The High Plains Aquifer and Republican River Water Supply Project is a innovative plan to resolve several water supply issues within the Northern High Plains area of Colorado. The residents, municipalities and businesses within the Northern High Plains are facing three severe issues with respect to the use of the High Plains Aquifer and Republican River for water supply purposes. The three issues are summarized as follows:

- Water levels within the High Plains Aquifer, also known as Ogallala Aquifer, are declining in many areas at a rate in excess of one-foot per year, and a significant portion of the original volume of water stored in the High Plains Aquifer has been pumped out of the Aquifer. The decline in the water levels in the High Plains Aquifer threatens to undermine the irrigated agriculture economy that has developed in reliance on the High Plains Aquifer.

- Colorado has failed to comply with the Republican River Compact and has overdrawn Colorado's allocation under the Republican River Compact. Drastic reductions in pumping water from the High Plains Aquifer and from the alluvium of the Republican River will be required to comply with the Republican River Compact. In addition, failure to comply with the Republican River Compact subjects Colorado and its citizens to litigation and damages.

- The Pioneer Irrigation District has requested that the Colorado Ground Water Commission "de-designate" the Northern High Plains Designated Basin because the low flows of water in the Republican River have deprived the Pioneer Irrigation District of water to be diverted pursuant to senior water rights. If all or a portion of the area comprising the Northern High Plains Designated Basin is "de-designated" by the Colorado Ground Water Commission, or judical action, the wells withdrawing water from the High Plains Aquifer and alluvial aquifer of the Republican River will be required to terminate irrigation, and thereby converted to dryland agriculture.

The High Plains Aquifer and Republican River Water Supply Project will help solve all three of the issues by importing to the High Plains Aquifer renewable water supplies that are diverted pursuant to senior water rights on the South Platte River, and use the water to (1) recharge the High Plains Aquifer and the alluvial aquifer of the Republican River, (2)

comply with the Republican River Compact, and (3) reduce or eliminate the risk associated with actions pertaining to the Northern High Plains Designated Basin. The water rights located on the South Platte River will be sold or leased to the Republican River Water Conservation District, or another entity, and a pipeline from the South Platte River will be constructed to deliver water to the required locations within the High Plains Aquifer.

South Platte Resources, LLC consists of owners of senior water rights located within Logan County, Colorado, that are willing to sell their water rights. The senior water rights have historically been used for agricultural irrigation and are anticipated to provide at least 10,000 acre feet of water per year to the High Plains Aquifer.

The High Plains Aquifer and Republican River Water Supply Project is economically viable. It is anticipated that the cost to purchase the senior water rights would be between $20.00 and $30.00 per irrigated acre per year if the High Plains Project is financed over twenty years, and would have additional operating costs of less than $5.00 per acre.

Prior to 1960, the area comprising the High Plains Aquifer was a predominately dryland agriculture economy. Since 1960, the development of irrigated agriculture has substantially changed the economy. For example, in 2006, the Yuma County assessor determined that Yuma County has 259,924 acres under sprinkler irrigation, which is the largest number of irrigated acres for any county within the High Plains Aquifer area, and the assessed value of the land was approximately $64.00 per acre. During that same year, the assessed value of dryland was approximately $22.00 per acre, which is approximately one-third (1/3) of the value of sprinkler irrigated land. Although assessed value is not equal to market value, it is anticipated that a similar drop in value would occur if large areas of the land overlying the High Plains Aquifer were converted from irrigation to dryland. In addition, Yuma County and Phillips County produced approximately forty-four percent (44%) of the corn for grain within the State of Colorado during 2002. As irrigated land is taken out of production, there will be a proportionate reduction in income to the farm operators and businesses located within the High Plains Aquifer area.

The area comprising the High Plains Aquifer is at a crossroads in its future. Resolution of the issues facing irrigated landowners, businesses and governmental entities will determine whether the land area that relies on the High Plains Aquifer will continue to be based on an irrigated agriculture economy, or will revert to dryland agriculture. The High Plains Aquifer and Republican River Water Supply Project provides the opportunity to protect and enhance the area overlying the High Plains Aquifer and its economy.

South Platte Resources, LLC

South Platte Resources, LLC ("SP Resources") is a Colorado limited liability company consisting of owners of senior water rights located on the South Platte River. The owners of the senior water rights are farm families that have agreed to sell or lease their senior water rights in order to implement the High Plains Aquifer and Republican River Water Supply Project.

The senior water rights have appropriation dates prior to 1900, which ensures that the water rights will provide a reliable annual water supply. The water rights have historically been used for agricultural irrigation and will be changed by the Water Court in and for Water Division No. 1 as part of a transaction implementing the Water Supply Project. The yield of the senior water rights is anticipated to be at least ten thousand (10,000) acre feet of water per year, which can be used to fulfill the proposed operation of the High Plains Project. A key factor associated with the senior water rights is that the water from the South Platte River is a **replenishable water supply**. As discussed below, the fundamental problems with the High Plains Aquifer derive out of the fact that the High Plains Aquifer is in a mining situation, and there is no significant replacement of the water mined from the High Plains Aquifer. By using a **replenishable water supply**, the effects of mining the High Plains Aquifer can be mitigated.

As discussed below, implementation of the Water Supply Project will require construction of a pipeline from the South Platte River to various locations within High Plains Aquifer. SP Resources will construct and operate the pipeline, or work with other entities to construct the pipeline.

Any contact with SP Resources may be made through Timothy R. Buchanan, 7703 Ralston Road, Arvada, Colorado 80002 Tele: 303-431-9141, Fax: 800-803-6648, Email: trb@tbvs.net .

High Plains Aquifer and Republican River Basin

The High Plains Aquifer, also known as the Ogallala Aquifer, spans several states and is the source of water supply for hundreds of thousands of acres of land. Within Colorado, the High Plains aquifer lies along the eastern edge of the state, and is generally divided into two parts, commonly referred to as the Northern High Plains Aquifer and the Southern High Plains Aquifer. The Republican River has its headwaters in the Northeast corner of Colorado, and is interconnected with the Northern High Plains Aquifer. The areal extent of the High Plains Aquifer is depicted on Figure 1.

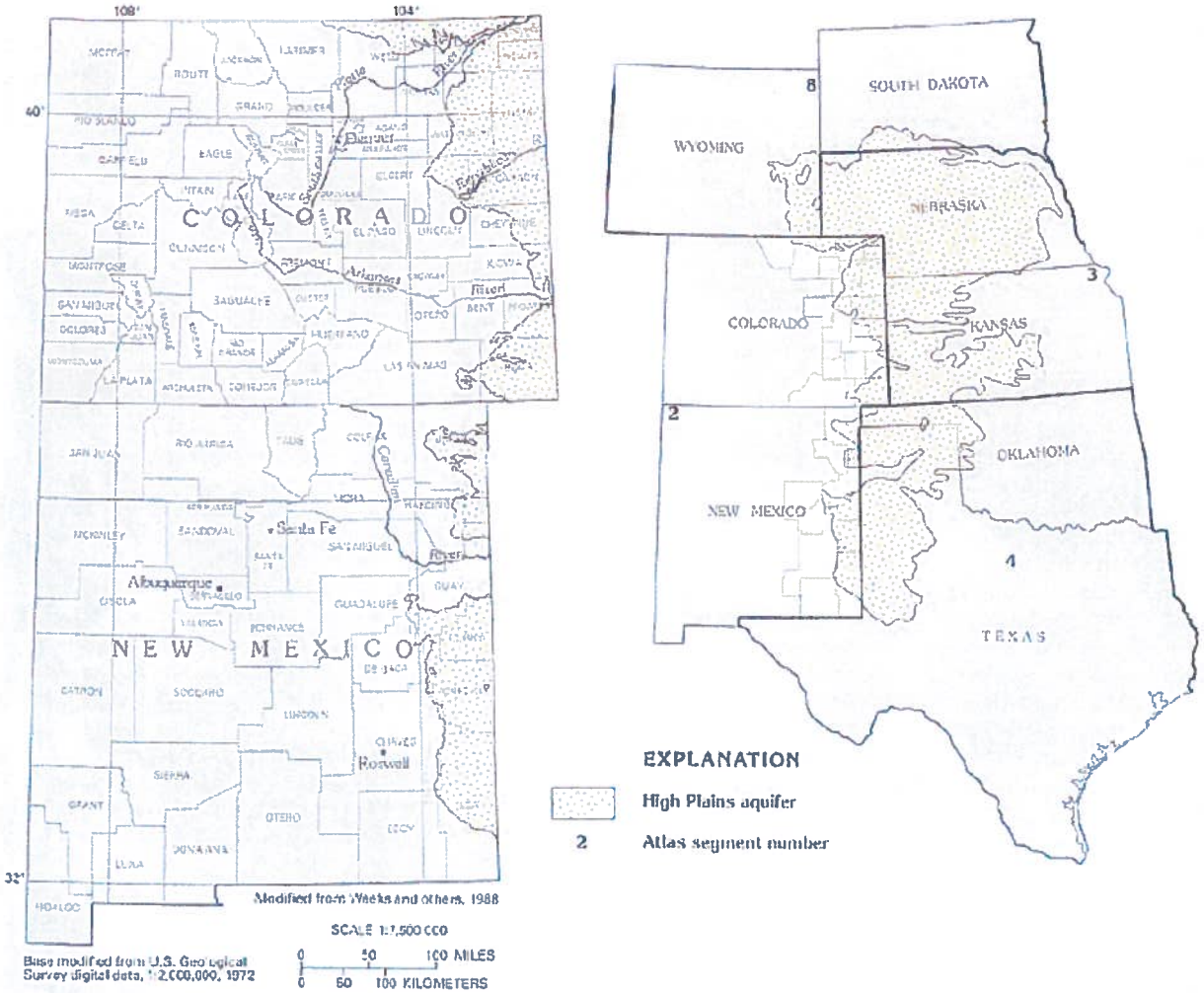


Figure 66. *The High Plains aquifer extends through an area of about 174,000 square miles in parts of eight States.*

Geology of the High Plains Aquifer and Republican River Alluvial Aquifer

In order for an aquifer to produce water, it is important that aquifer be composed of materials that will both hold water and allow the water to drain into a well hole. The geologic composition of the High Plains Aquifer is indicated by Figure 2.

Era	System		Series	Stratigraphic unit		Hydrogeologic unit	Physical characteristics
Cenozoic	Quaternary		Holocene and Pleistocene	Alluvial deposits, valley-fill deposits and dune sand		High Plains aquifer	Gravel, sand, silt, and clay
	Tertiary	Upper	Miocene	Ogallala Formation			Unconsolidated, poorly sorted gravel, sand, silt, and clay
				Arikaree Formation			Sandstone, fine to very fine. Local beds of volcanic ash, siltstone, claystone, and marl
		Lower	Oligocene	Brule Formation	White River Group		Siltstone with sandstone as beds and channel deposits
				Chadron Formation		Confining unit	Clay and silt

Modified from Gutentag and others, 1984

Figure 67. *Geologic units ranging in age from Oligocene to Quaternary compose the High Plains aquifer. The permeable units consist of sand, sandstone, and gravel.*

Figure 2, *Ground Water Atlas of the United States*, S. G. Robson and E. R. Banta, USGS,HA 730-C (1995)

A cross-sectional view of the High Plains aquifer illustrating the development of the aquifer is shown in Figure 3.

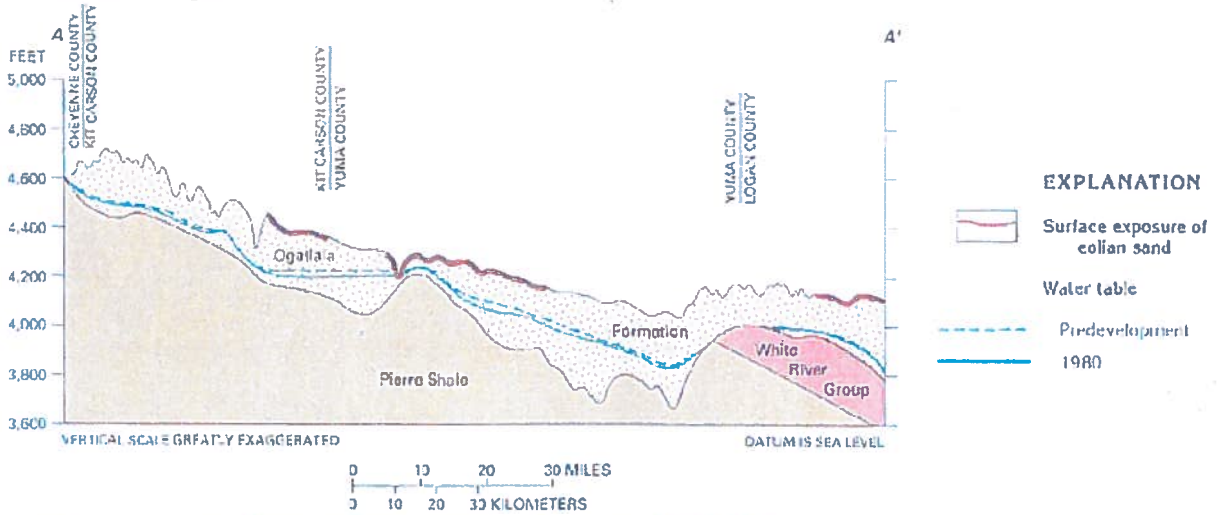


Figure 71. *The thickness of the High Plains aquifer varies greatly in northeastern Colorado. The aquifer is thickest where the Ogallala Formation fills ancient stream channels in the bedrock. The line of the section is shown in figure 68.*

Figure 3, *Ground Water Atlas of the United States*, S. G. Robson and E. R. Banta, USGS,HA 730-C (1995)

Historical Water Supply Development of the High Plains Aquifer and Republican River

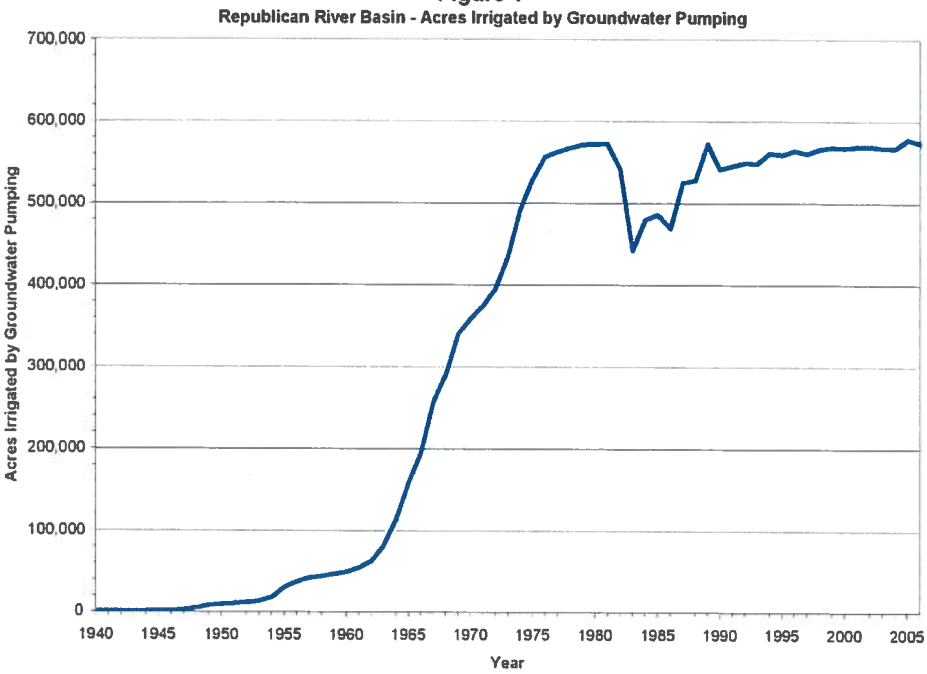
Prior to the 1960's, the primary irrigation water use within Northeastern Colorado was diversions from surface streams, including the Republican River. A senior water right that diverts water directly from the Republican River is the Pioneer Ditch, located east of Wray, Colorado. In *Pioneer Irrigation Dists. v. Danielson*, 658 P.2d 842 (Colo. 1983), the Colorado Supreme Court stated the following:

> Pioneer Irrigation Districts are surface water appropriators on the North Fork of the Republican River, an interstate stream, in Yuma County, Colorado. Pioneer holds a water right to 50 cubic feet per second (cfs.) of water with a priority date of April 4, 1890. The water is diverted into a canal called the Pioneer Ditch, which runs from Yuma County across the state border into Nebraska. Pioneer's right to divert water in Colorado to irrigate Nebraska lands has been memorialized by the Republican River Compact, an interstate agreement between the states of Colorado and Nebraska.

Although there are other water rights on the streams within the area encompassed by the High Plains Aquifer, the Pioneer Ditch water right is one of the largest and, as discussed below, a significant water right with respect to groundwater withdrawals from the High Plains Aquifer and the alluvium of the Republican River.

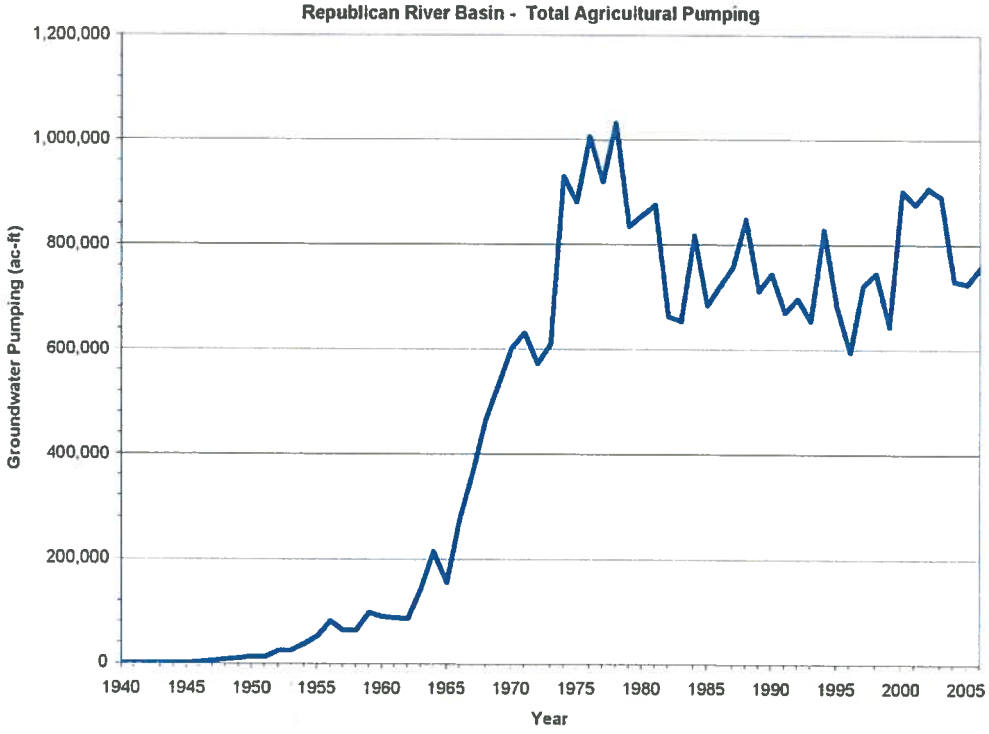
Intensive water supply development from the High Plains Aquifer began in the 1960's and continued through the 1970's. *See*, Figure 4. Initially, the irrigation methodology was flood irrigation. With the advent of the center pivot sprinkler, additional land that was not suitable for flood irrigation was able to be irrigated. The number of irrigated acres within the area comprising the High Plains Aquifer increased to nearly 600,000 acres by the late 1970's. *See*, Figure 5. In addition to the change from dryland agriculture to a combination of dryland and irrigated agriculture within the area comprising the Northern High Plains Aquifer, diverse businesses were developed to support the irrigated agriculture production and the economy of the area was dramatically changed.

Figure 1



Bonny Reservoir Presentation, J. Slattery (June 7, 2007)

Figure 3



Bonny Reservoir Presentation, J. Slattery (June 7, 2007)

The economic impact of conversion of land from dryland to irrigated land within the area comprising the High Plains aquifer has been significant. For example, the 2006 Abstract of Assessment prepared by the Yuma County Assessor indicates the following:

ASSESSED REAL ESTATE ACRES VALUE	Yuma County
Sprinkler Irrigation	
Acres	259,924
Assessed Value	$16,736,720
Assessed Value Per Acre	$64
Flood Irrigation	
Acres	943
Assessed Value	$55,110
Assessed Value Per Acre	$58
Dry Farm Land	
Acres	361,262
Assessed Value	$7,932,600
Assessed Value Per Acre	$21.96

The Assessor valuation indicates that the assessed value of sprinkler irrigated land is approximately three times the assessed value of dryland. If the presently irrigated area within the High Plains Aquifer were to revert to dryland, the assessed value of the land would drop to approximately one-third of its current assessed value. There would also be a similar reduction in the actual value of the land.

Another indication of the value of irrigation to the High Plains Aquifer area is the crop production from irrigated agriculture. For the year 2002, the Colorado Agriculture Statistics Service noted the following for Phillips and Yuma Counties:

	Colorado	Phillips		Yuma		Total	
Land in irrigated farms (Acres)			Percent of State		Percent of State		Percent of State
2002	12,864,432	265,872	2%	873,873	7%	1,139,745	9%
1997	15,893,749	268,791	2%	912,307	6%	1,181,098	7%
Irrigated land (Acres)							
2002	2,590,654	83,905	3%	253,241	10%	337,146	13%
1997	3,374,233	89,393	3%	276,419	8%	365,812	11%
Corn for grain (2002)							
acres	708,197	88,038	12%	185,692	26%	273,730	39%
bushels	102,653,083	12,436,394	12%	32,799,035	32%	45,235,429	44%
Irrigated Acres	634,015	65,772	10%	174,964	28%	240,736	38%

It is significant that for 2002, forty-four percent (44%) of the corn for grain raised in Colorado was produced by two counties, and such production occurred on only nine

percent (9%) of the State of Colorado irrigated land area. In addition, the two counties produced over 45 Million bushels of corn, which at a market price of $4.00 per bushel has a one-year value of approximately $180 Million.

Depletion of the Republican River and High Plains Aquifer

The effect of groundwater pumping from the High Plains Aquifer has been (1) to lower the water level within the High Plains Aquifer, and (2) to deplete the flow of the Republican River. Numerous studies have documented the depletion of the High Plains Aquifer. For example, a USGS study noted the following:

> In northeastern Colorado, the High Plains aquifer currently is being depleted at about 1.5 times the rate of recharge to the aquifer. To balance recharge and discharge, annual pumping would need to be reduced from 1.0 million acre-feet to 0.4 million acre-feet. This decline in pumping will adversely affect crop yields and farm income.

Water in Storage and Approaches to Ground-Water Management, High Plains Aquifer, 2000, V.L. McGuire, M.R. Johnson, R.L. Schieffer, J.S. Stanton, S.K. Sebree, and I.M. Verstraeten, U.S. Geological Survey, Circular 1243, pg 9 (2003). A 2007 report by the Colorado Division of Water Resources indicates the following:

> The average rate of decline during over the past year was -1.13 feet. This represents removal of approximately 1,017,000 acre-feet from storage. A decline of one foot is equal to a depletion from storage of approximately 900,000 acre-feet. Over the past five years (2002 to 2007), the basin-wide water level has declined an average of approximately 6.26 feet, representing a depletion of approximately 5,634,000 acre-feet or more than five percent of the estimated 1965 storage in the aquifer. The depletion for the past ten year (1997 to 2007) indicates that more than 8,496,000 acre-feet have been removed from storage (decline of -9.44 feet). This equates to a rate of depletion of a little more than one-half percent per year.

Ground Water Levels in the Northern High Plains Designated Ground Water Basin 2007, M. P. Schaubs, Colorado Division of Water Resources (2007). Assuming that the rate of depletion from 1965 to 2007 is one-half percent per year, approximately twenty-one percent (21%) of the High Plains Aquifer has already been depleted. However, the average rate of depletion is "misleading in that some areas in the basin are experiencing much higher rates of depletion due to a lesser saturated thickness and the fact that 2000 to 2003 were extremely dry years." *See, Ground Water Levels in the Northern High Plains Designated Ground Water Basin 2007.*

As the water levels in the High Plains Aquifer decline, the cost of pumping water is increased and the water yield of the aquifer is decreased. The United States Geological Survey noted the following occurs as the aquifer water levels reduced:

> Not all water in storage is economically available to large-capacity wells such as most irrigation and municipal wells; estimates of the volume of water in storage available to large-capacity wells ranges from 60 to 80 percent (Hansen, 1991). A minimum saturated thickness is required to operate a large-capacity well; the actual amount of saturated thickness required depends on well and pump design and aquifer characteristics. For planning purposes, the Kansas Geological Survey estimates that more than 30 feet of saturated thickness is required to operate a large-capacity well in the High Plains aquifer in Kansas (Schloss and Buddemeier, 2000).

Water in Storage and Approaches to Ground-Water Management, High Plains Aquifer, 2000, V.L. McGuire, M.R. Johnson, R.L. Schieffer, J.S. Stanton, S.K. Sebree, and I.M. Verstraeten, U.S. Geological Survey, Circular 1243, pg 25 (2003) Hence, the thicker the saturated thickness of the aquifer, the better the wells will yield and the lower the pumping costs. A related effect of the decline in the High Plains Aquifer water levels is that at some point the irrigation and commercial wells will not produce sufficient volumes of water to continue irrigation and other operations.

The evidence indicates that unless immediate action is taken to counteract the decline in the High Plains Aquifer, irrigation operations within the High Plains Aquifer will eventually terminate.

The Republican River Compact

In 1942, the states of Colorado, Kansas and Nebraska entered into the "Republican River Compact." Section 37-67-101, *et seq.*,C.R.S. The Compact applies to "all the area in Colorado, Kansas, and Nebraska, which is naturally drained by the Republican River, and its tributaries..." Compact, Art. II Pursuant to the Compact, Colorado was allocated for annual beneficial consumptive use a total of fifty-four thousand one hundred (54,100) acre feet of water per year.

In 1998, Kansas sued Nebraska and Colorado in the United States Supreme Court and claimed that excessive pumping of ground water was causing violations of the Compact. As discussed below, Colorado and Nebraska argued several positions with respect to the Compact that were not accepted by the Special Master appointed by the United States Supreme Court. On December 15, 2002, the three states entered into a Final Stipulation,

which provided, among other things, for a method of accounting for depletions to the Republican River, and its tributaries, associated with well pumping.

Pursuant to the Final Stipulation, Colorado's entitlement to the consumptive use of water within the Republican River Basin has been calculated, and is illustrated in the following.

Figure 2
Republican River Basin
Colorado Consumptive Use and Compact Entitlement (5-Year Running Average)

Bonny Reservoir Presentation, J. Slattery (June 7, 2007) (Arrows Added)

Beginning in the late 1900's, Colorado began exceeding its Compact allocation. The following table illustrates Colorado's Compact Allocation during the recent years.

Table 3A: Colorado's Compact Allocation (ac-ft/yr)

Year	Allocation	Computed Beneficial Consumptive Use	Amount Allocation is Exceeded
2003	21,420	33,470	12,050
2004	21,540	33,670	12,130
2005	25,040	35,460	10,420
2006	21,019	31,808	10,789
2007			
Average	22,250	33,600	11,350
Sum			45,389

Bonny Reservoir Presentation, J. Slattery (June 7, 2007)

As of December 31, 2007, Colorado had exceeded its allotments under the Compact and was in violation of the Compact. The State of Kansas recently sent a letter to the State of Nebraska regarding violations of the Compact by Nebraska, and Kansas demanded compensation and other actions regarding compliance with the Compact. *See, Appendix.*

In accordance with the Final Stipulation between the three States, the States agreed that if water was imported into the Republican River Basin, the State importing the water would receive credit for the imported water. The accounting procedures contain the following definitions:

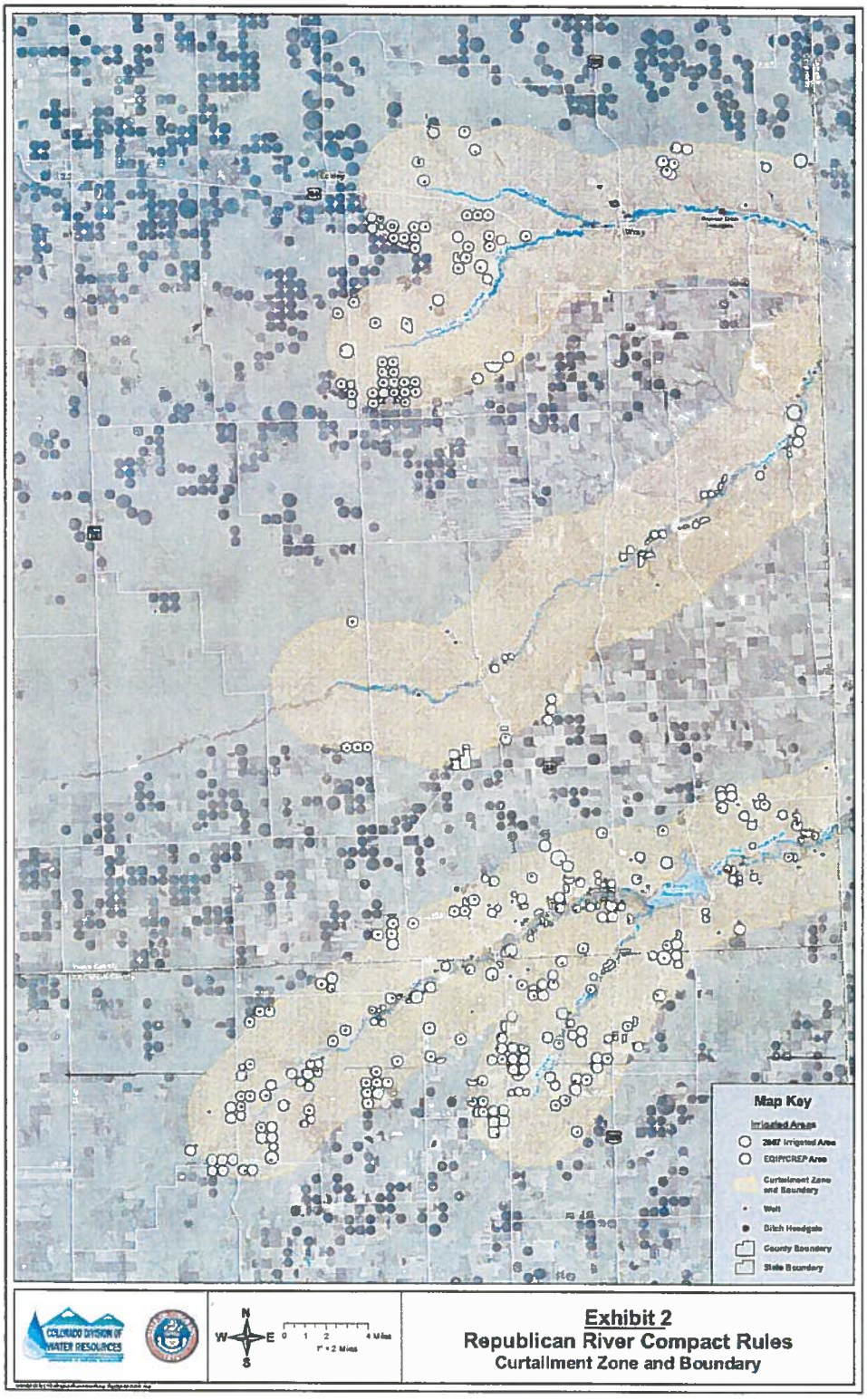
> Imported Water Supply: The water supply imported by a State from outside the Basin resulting from the activities of man;
>
> Imported Water Supply Credit: The accretions to stream flow due to water imports from outside of the Basin as computed by the RRCA Groundwater Model. The Imported Water Supply Credit of a State shall not be included in the Virgin Water Supply and shall be counted as a credit/offset against the Computed Beneficial Consumptive Use of that State's Allocation, except as provided in Subsection V.B.2.of this Stipulation and Subsections III.I. – J. of the RRCA Accounting Procedures;

Republican River Compact Administration Accounting Procedures and Reporting Requirements, Revised January 2005, Pg 7. The State of Nebraska is already importing water into the Republican River Basin and the accounting procedures give Nebraska credit for the imported water. The accounting procedures further provide that "[s]hould another State import water into the Basin in the future, the RRCA will develop a similar procedure

to determine Imported Water Supply Credits." Republican River Compact Administration Accounting Procedures and Reporting Requirements, Revised January 2005, Pg 12. Therefore, if water was imported into the High Plains Aquifer from the South Platte River, Colorado would be entitled to Import Water Supply Credits for the water imported from the South Platte River.

In order to address Colorado's excess diversions pursuant to the Compact, the former State Engineer has proposed *Rules and Regulations Governing the Diversion, Use, and Control of Water Resources in the Republican River Basin in Colorado for Compliance with the Republican River Compact* (Draft September 24, 2007). The proposed Rules and Regulations define the procedures for Colorado's Compact compliance. Among the provisions in the proposed Rules and Regulations is the definition of a "Curtailment Zone Boundary", which "is a 3-mile boundary that surrounds the principal streams and tributaries within the Republican River Basin in Colorado." Proposed Rules and Regulations, Rule 6. The Colorado Agriculture Preservation Association estimates that the proposed Rules and Regulation would take "approximately 225 parcels of irrigated land out of production. This would result in a $60 million reduction in land value and lost agricultural production of $20 million per year." Colorado Agriculture Preservation Association, News Release. The proposed Curtailment Zone Boundary is depicted on the following map.

Compact compliance is crucial to the citizens of Colorado. By annually importing approximately 10,000 acre feet of fully consumable, replenishable water from the South Platte River to the High Plains Aquifer and Republican River Basin, Colorado can achieve compliance with the Republican River Compact. Such compliance with the Republican River Compact will also have minimal impact on water users within the High Plains Aquifer and Republican River Basin and the citizens of the State of Colorado.


Map Key
Irrigated Areas
2007 Irrigated Area
EQIP/CREP Area
Curtailment Zone and Boundary
Well
Ditch Headgate
County Boundary
State Boundary
COLORADO DIVISION OF WATER RESOURCES
N
W
E
S
0 1 2 4 Miles
1" = 2 Miles
Exhibit 2
Republican River Compact Rules
Curtailment Zone and Boundary

Pioneer Irrigation District Claims

The Pioneer Irrigation District ("Pioneer District") owns a water right that diverts from the Republican River. The Pioneer District and certain owners of the Laird Ditch water right have filed a petition with the Colorado Ground Water Commission seeking to "de-designate" substantial portions of the Northern High Plains Designated Basin. If the request by Pioneer Irrigation District is successful, substantially all of the irrigated agriculture within the Northern High Plains will be terminated.

Pursuant to an *Order Granting Summary Judgment Motions In Part And Denying Summary Judgment Motions In Part*, entered by the District Court in and for Yuma County on July 23, 2007, in Case No. 2006CV31, which is known as *Pioneer Irrigation District, Colorado Board, et al. v. Colorado Ground Water Commission*, the District Court found that the following facts were undisputed:

> b. The Pioneer Ditch is decreed for 50 cfs from the North Fork [of the Republican River] for irrigation with an appropriation date of April 4,1890. The Pioneer Ditch is an inter-state ditch that serves both the Pioneer Irrigation District in Colorado and a companion irrigation ditch in Nebraska.
>
> c. The Laird Ditch water right is decreed for 12 cfs for irrigation with an appropriation date of October 20, 1888, which is priority No. 5 on the North Fork.
>
> d. The [Republican River Compact] was ratified by the respective state legislatures of Colorado, Kansas and Nebraska and approved by the United States Congress and President of the United States.
>
> e. Article V of the Compact expressly recognizes the 50 cfs Pioneer Ditch water right as binding on Nebraska and Colorado.
>
> f. In 1966, more than 75 years after the Pioneer and Laird Ditch water rights were appropriated and more than 20 years after the Compact was ratified, the Commission created the NHP [Northern High Plains] Basin. The designation, which the Pioneer Ditch protested, occurred after a hearing that lasted less than three hours.
>
> g. In the Order designating the NHP Basin, the Commission concluded that the Ogallala-Alluvium aquifer in the NHP is designated ground water as

defined by statute in that it "is ground water which in its natural course would not be available to and required for the fulfillment of decreed surface rights."

h. The entire drainage basin of the North Fork is included in the NHP Basin. *See Pioneer Irrigation,* 658 P.2d at 844. Moreover, the "aerial extent" of the Ogallala Aquifer coincides with the aerial extent of the NHP Basin. *Rules and Regulations for the Management and Control of Designated Ground Water* 2 CCR 410 -1 § 5.2.2.1

I. In 1998, Kansas initiated the Compact Litigation against Nebraska in the United States Supreme Court claiming excessive pumping of ground water was causing violations of the Compact. Kansas included Colorado as a defendant because Colorado was also a Compact state.

j. In ruling on a motion to dismiss, the Special Master appointed by the United States Supreme Court held that "as a matter of law, the Compact restricts and allocates . . . any ground water that would become part of the stream flow in the basin if not previously depleted through an activity of man such as pumping." *See First Report of Special Master* ("First Report") p.34. Colorado had argued that the Compact allocates only alluvial ground water but not the Ogallala Aquifer groundwater. Nebraska argued that groundwater was not subject to the Compact.

k. The Special Master held that "the Compact restricts ground water consumption to whatever extent it depletes stream flow in the Republican River." In so ruling, the Special Master held that the "hydraulic connection between stream flow and groundwater is a well established fact." *See First Report* p. 2 n.3 The Special Master expressly rejected Colorado's argument to treat Ogallala Aquifer groundwater differently than alluvial groundwater. Groundwater in the Ogallala Aquifer is thus subject to the terms of the Compact in the same manner as alluvial groundwater. *Id.* pp. 41 - 44.

l. After the Special Master's findings and conclusions in the First Report, Colorado, Kansas and Nebraska entered into the Final Settlement Stipulation ("Compact Stipulation") on December 15, 2002. The governors and attorneys general of each State agreed to the settlement of the Compact Litigation.

m. Under the Compact Stipulation, the Compact states agreed to jointly construct the RRCA Compact Model in conjunction with representatives of the United States to determine "stream flow depletions by Well pumping" for

purposes of Compact accounting and administration. *See Compact Stipulation* pp. 18 - 20.

n. The United States Supreme Court approved the Compact Stipulation in May, 2003, noting its binding effect in developing the RRCA Model. All claims were dismissed with prejudice, effective upon the filing of the Special Master's Final Report certifying adoption of the RRCA Model. *See Kansas v. Nebraska and Colorado*, 538 US 720 (2003). The Court accepted the Final Report on October 20, 2003, *See Kansas v. Nebraska and Colorado*, 540 US 964 (2003).

o. The Special Master filed a Final Report with the Supreme Court on September 17,2003 in which he certified adoption of the RRCA Model by Colorado, Kansas and Nebraska and found that the primary purpose of the RRCA Model was "to determine the amount, location and timing of stream flow depletions to the Republican River caused by well pumping and to determine streamflow accretions from recharged water imported from the Platte River Basin into the Republican River Basin." *See Final Report*, pp, 6,8.

p. The Final Report pointed out that there were virtually no wells in the River Basin in Colorado in the 1940s and that the number of wells increased dramatically from the mid-1960s to the mid-1970s to the current number of approximately 4,000 wells. *See Final Report*, pp, I 7 -1 8 and *RRCA Model Summary*, p.6.

q. The Final Report found that the RRCA "Model construction and calibration represent the physical and hydrogeological characteristics of the River Basin to a reasonable degree." *See Final Report*, p.8 and *RRCA Model Summary*, pp. 1,2.

r . Stream flow depletion results of the RRCA Model through year are included in Appendix U of the Final Report. In 2000, the impact to the North Fork was 13,173 acre feet of depletions increasing every year preceding that time.

s. The Compact allocates to Colorado 10,000 acre-feet of consumptive use in the North Fork. *See Compact, Art. IV*. The Compact further recognizes that consumption attributable to the Pioneer Ditch's water right must be included in Colorado's and Nebraska's Compact allocations. *See Compact, Art. V*. The Compact Stipulation also allows Colorado to average the

consumptive use in all of the sub-basins in Colorado for the purpose of Compact compliance.

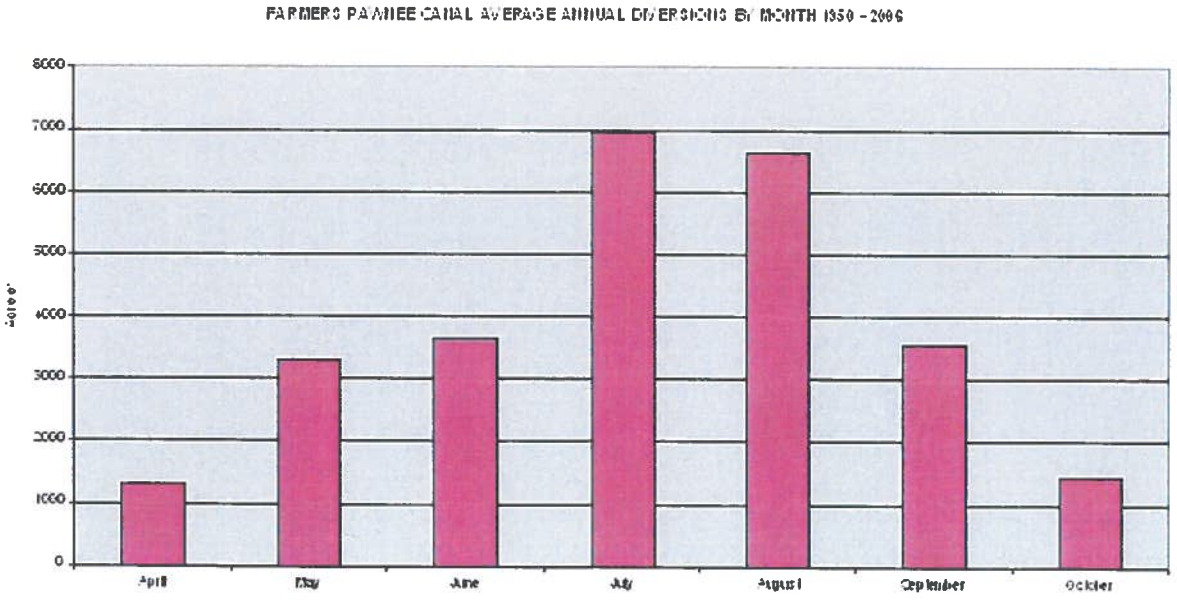
The District Court remanded the proceedings to the Ground Water Commission for additional determinations, including whether the withdrawal of water from the High Plains Aquifer causes more than a *de minimis* impact on the flow of water in the Republican River. However, as noted above, the District Court found that it was undisputed that in 2000 "the impact to the North Fork was 13,173 acre feet of depletions increasing every year preceding that time." If the Ground Water Commission, the District Court, or the Colorado Supreme Court finds that the wells withdrawing water from the High Plains Aquifer are causing more than a *de minimis* impact to the Republican River, there is the potential for hundreds of wells to be permanently shut down to supply water to the Republican River. The impacts on well owners within the High Plains Aquifer and the economy of area as a result of such action would be devastating.

South Platte Resources Proposal

In order to solve the three issues confronting the landowners within the High Plains Aquifer, it is necessary to provide a new replenishable water supply to the area. Unlike the High Plains Aquifer, the South Platte River is an annually replenished water supply. The water rights available through SP Resources are senior water rights that have judicially decreed water rights from the South Platte River that date prior to 1900. As senior water rights, the water rights are a reliable supply of water that will ensure that water will be available to landowners within the High Plains Aquifer every year. The following generally describes the senior water rights that are available through South Platte Resources. Please note that not all of the water rights described below are proposed for this transaction, and that only a portion of the owners of the water rights are proposing to sell their water rights. However, it is anticipated that at least 10,000 acre feet of fully consumable, annually replenished water will be provided by the selling water right owners.

Farmers Pawnee Canal Water Rights

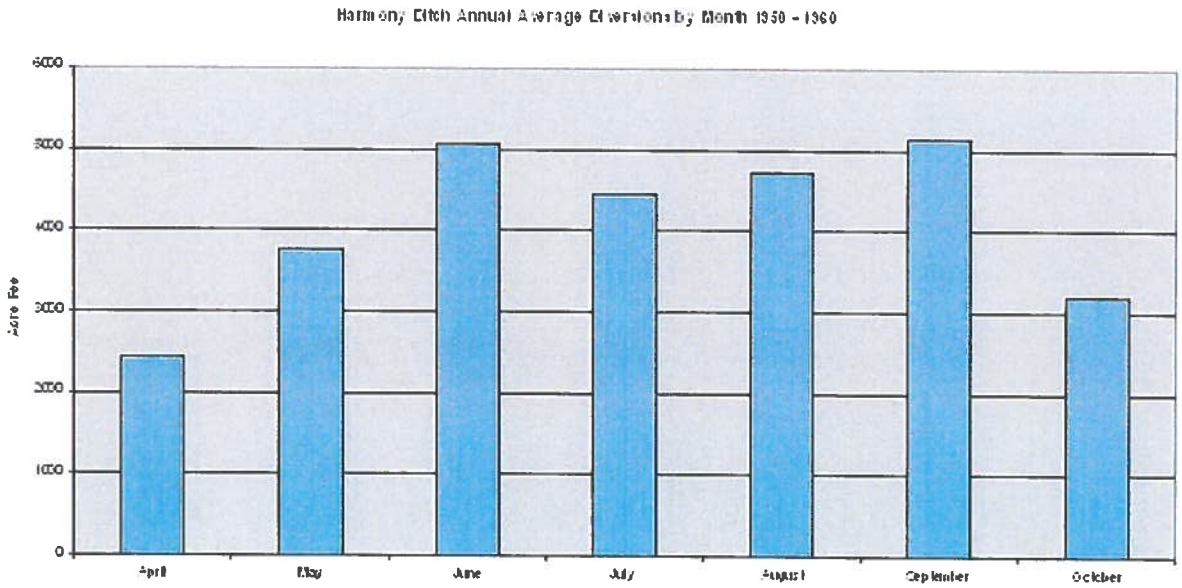
The Farmers Pawnee Canal headgate is located on the South Platte River in the vicinity of Merino, Colorado. Direct flow irrigation water rights for diversion at the Farmers Pawnee Canal headgate have been judicially decreed in the amount of 14.4 cfs, with an appropriation date of September 17, 1873, and in the amount of 124 cfs, with an appropriation date of June 22, 1882. The following chart illustrates the average annual diversions by the Farmers Pawnee Canal for over fifty years.



The total average annual diversions from April through October for the time period from 1950 to 2006 were approximately 26,800 acre feet.

Harmony Ditch Water Right

The headgate of the Harmony Ditch is located on the South Platte River near Crook, Colorado. The Harmony Ditch was decreed a senior direct flow water right in the amount of 252 cfs with an appropriation date of April 28, 1895. For the time period from 1950 to 2006, the average annual diversions at the headgate of the Harmony Ditch from April through October were as follows:

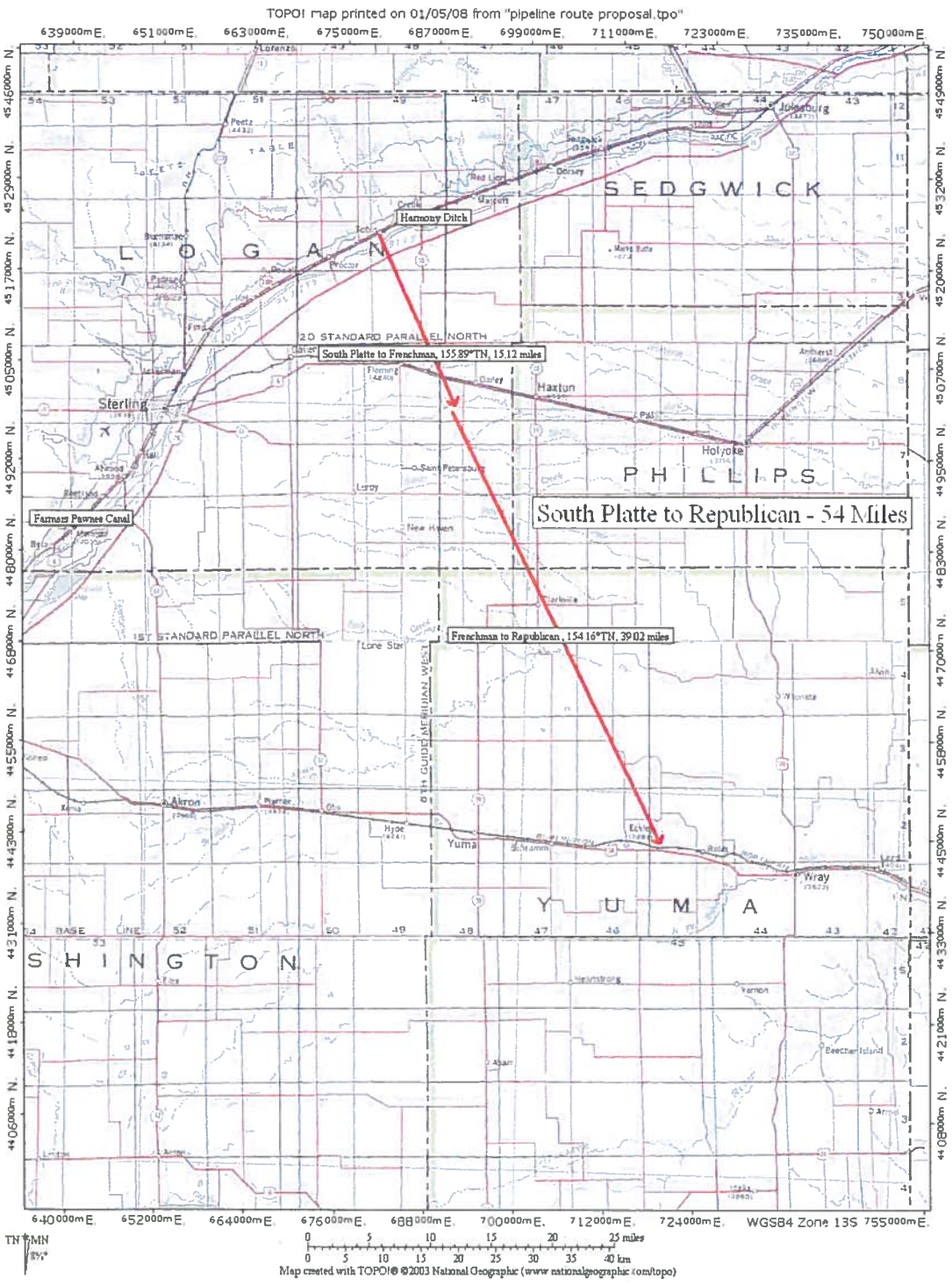


The total average annual diversions from April through October for the time period from 1950 to 2006 were approximately 28,800 acre feet.

Delivery of South Platte Water to Republican River Basin

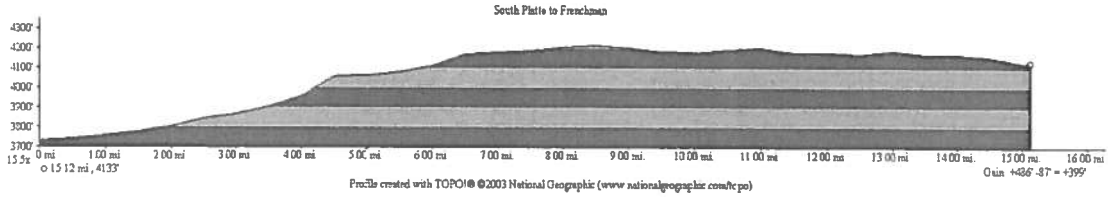
In order to deliver water from the South Platte River to the Republican River Basin, it is proposed to construct a pipeline from the South Platte River to the locations within the Republican River Basin. While the final location or route of the pipeline has not been determined, preliminary investigations indicate the viability of the pipeline. The proposed diversion point on the South Platte River is near the Harmony Ditch headgate, near Crook, Colorado. This location was selected for two reasons. First, both the Harmony Ditch water and the Farmers Pawnee water can be diverted at this location. The second reason is that the Harmony Ditch is the last reservoir diversion point within Colorado. As a result, during

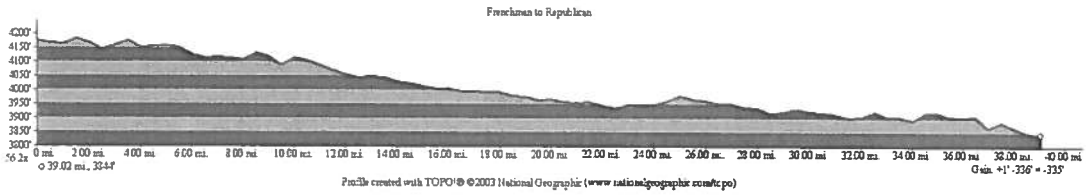
the winter months it is anticipated that there will be additional water available for diversion and delivery to the High Plains Aquifer and Republican River Basin, which will allow for delivery of more than the proposed 10,000 acre feet per year. The conceptual pipeline route is depicted on the following map.


TOPO! map printed on 01/05/08 from "pipeline route proposal.tpo"
Harmony Ditch
South Platte to Frenchman, 155 89°TN, 15.12 miles
Frenchman to Republican, 154 16°TN, 39 02 miles
South Platte to Republican - 54 Miles
Farmers Pawnee Canal
20 STANDARD PARALLEL NORTH
1ST STANDARD PARALLEL NORTH
6TH GUIDE MERIDIAN WEST
BASE LINE
Sterling
Haxtun
Holyoke
Akron
Yuma
Wray
Joes burg
SEDGWICK
PHILLIPS
YUMA
WASHINGTON
LOGAN
WGS84 Zone 13S
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

As indicated by the map, the direct route from the South Platte River to Frenchman Creek is approximately 15 miles, and the direct route from Frenchman Creek to the Republican River is approximately 39 miles, for a total distance of approximately 54 miles. The actual route of the pipeline may be longer in order to take advantage of road crossing locations and other topographical benefits.

In order to assess the elevational differences from the South Platte River to the Republican River, the following elevation profiles illustrate the changes in elevation from the South Platte River to Frenchman Creek, and from Frenchman Creek to the Republican River.





Hence, the maximum elevation differential in delivery of water from the South Platte River to the Republican River is approximately 490 feet. At various points along the pipeline route, it will also be possible to install discharge points to deliver water to the tributaries of the Republican River, which will provide the opportunity to recharge the High Plains Aquifer.

Financial Terms

The valuation of water rights is a function of several factors, including the seniority or reliability of the water rights, the annual replenishment of the water rights, and the market demand. As indicated above, the Harmony Ditch and Farmers Pawnee Canal water rights are senior, reliable water rights. During the drought years of 2002 and 2006, both the Harmony Ditch and Farmers Pawnee Canal water rights provided reliable water supplies.

Since the drought year of 2002, the water rights market demand of senior water rights has substantially changed. Prior to 2002, senior water rights in the Denver Metropolitan Area sold for $4,000 to $6,000 per acre foot of fully consumable water. After 2002, senior water rights in the Denver Metropolitian Area are selling for over $15,000 per acre foot of fully consumable water supplies.

Municipal water suppliers are also looking farther east of the Denver Metropolitian Area to find more water supplies. For example, the Parker Water and Sanitation District, a water supply entity located south of Denver in Douglas County, has been purchasing farms in Logan County, Colorado, with the intent of using the South Platte water rights for future development. As the availability of senior water rights becomes more limited, more and more municipal water suppliers will consider piping water supplies from distances that would previously have been considered unfeasible.

Similarly, as senior water rights are acquired by other entities, the ability to purchase senior water rights by agricultural water users becomes more limited. Two significant examples of the failure to plan for the future to protect groundwater well pumping occurred on the South Platte River in the last five years. The Central Colorado Water Conservancy District (Central) operated a "substitute supply plan" for approximately 1,000 wells that withdraw water from the alluvium of the South Platte River, and Groundwater Appropriators of the South Platte River Basin, Inc. (GASP) operated a "substitute supply plan" for approximately 3,000 wells that withdraw water from the alluvium of the South Platte River. Although Central and GASP were advised on numerous occasions over thirty years to develop reliable water supplies for replacing depletions from well pumping on the South Platte River, both Central and GASP decided to not purchase significant quantities of senior water rights and to lease water as cheaply as they could on an annual basis. In 2001, the Colorado Supreme Court held that the actions of the State Engineer in approving "substitute supply plans" was contrary to Colorado law. Since neither Central nor GASP had planned for the future by acquiring senior water rights, neither Central nor GASP could afford to purchase senior water rights to replace the depletions from their well pumping. GASP has since gone out of business, and well owners within Central are operating with between a zero water supply and approximately fifteen percent water supply. While the impacts on Central and GASP well owners have been severe and dramatic, the impacts on the well owners could have been avoided by proper planning and purchase of senior water rights.

SP Resources proposes to sell approximately 10,000 acre feet of fully consumable, replenishable water rights from the Farmers Pawnee Canal and the Harmony Ditch at a purchase price of $6,000 per acre foot of consumable water, for a total purchase price of approximately $60 Million. As discussed below, the Farmer Pawnee Canal and the Harmony Ditch water rights will need to be changed for the use within the Republican River Basin and the actual amount of fully consumable water to be sold will be determined at that time. A recent estimate of the number of irrigated acres within the Republican River Basin

in Colorado is approximately 580,000 acres. Assuming that the number of irrigated acres is 580,000, the cost of the senior, replenishable water rights would be approximately $103.00 per acre. SP Resources is willing to finance the sale of the water rights, which would reduce the per acre cost to an annual payment. For example, if the per acre assessment was $20.00 per acre, the revenue from 580,000 acres would be $11.6 Million per year.

In addition to the purchase of the water rights, a pipeline will need to be constructed and pumping costs will be associated with operation of the pipeline. Preliminary estimates indicate that a twenty-four inch (24") diameter pipeline would provide the pumping capacity, and would cost between $500,000 and $1 Million per mile to purchase and install. Assuming that the pipeline cost would be $750,000 per mile and that approximately fifteen (15) miles were constructed in the first phase, the total cost would be $11.25 Million. Assuming the same cost per mile, the additional 40 miles would cost approximately $30 Million. SP Resources, and its affiliates, will construct the pipelines, or the pipelines may be constructed by the purchaser.

It is further anticipated that pumping costs will be between $75.00 and $100.00 per acre foot of water delivered. For 10,000 acre feet of delivery per year, the annual cost of pumping the water will be between $750,000 and $1 Million. If the pumping cost is allocated among the approximately 580,000 irrigated acres, the pumping cost is approximately $1.30 per acre.

Timeline for Water Delivery

The SP Resources proposal can be implemented on a relatively fast timeline. As soon as a contract for purchase of the water rights is completed, SP Resources, or its affiliates, will file an application in the Water Court in and for Water Division No. 1 to change the portions of the water rights owned by the farmers willing to sell that are associated with the Harmony Ditch and the Farmers Pawnee Canal. The proceedings in the Water Court may take between two and three years to complete, but the water should be deliverable prior to completion of the proceedings. Pursuant to Colorado law and at the request of the purchaser, SP Resources will file a request with the Colorado State Engineer to allow a portion of the water to be delivered to the Republican River Basin prior to completion of the Water Court Proceedings.

While the Water Court proceedings are ongoing, construction on the pipeline facilities can commence. It is anticipated that the South Platte River to Frenchman Creek pipeline can be completed within six months, and the Frenchman Creek to Republican River pipeline can be completed within eighteen months.

Appendices

KANSAS
DEPARTMENT OF AGRICULTURE

Kathleen Sebelius, Governor
Adrian J. Polansky, Secretary

www.ksda.gov

December 19, 2007

Ann Bleed, P.E.
Nebraska Commissioner,
Republican River Compact Administration
Director, Nebraska Department of Natural Resources
P.O. Box 94676
Lincoln, NE 68509-4676

Subject: Remedy for Nebraska's violation of the Decree in *Kansas v. Nebraska & Colorado*, No. 126, Original, U.S. Supreme Court

Dear Commissioner Bleed:

The State of Nebraska is in violation of the May 19, 2003 Supreme Court Decree in *Kansas v. Nebraska & Colorado,* 538 U.S. 720 (2003). The Decree approved the Final Settlement Stipulation ("FSS"), which had been filed with the Special Master on December 16, 2002. The FSS requires compliance on a five-year running average, and, when Water-Short Year Administration is in effect, compliance is also calculated on a two-year running average unless Nebraska submits an Alternative Water-Short Year Administration plan to the Republican River Compact Administration ("RRCA"). Appendix B to the FSS provides the FSS Implementation Schedule, which sets the first normal compliance year as 2007 (5-year running average for 2003-2007) and the first Water-Short Year Administration compliance year as 2006 (2-year running average for 2005-2006) if water supply conditions for Water-Short Year Administration are present.

Pursuant to the Implementation Schedule and water supply conditions, Water-Short Year Administration began in 2006. Data for the year 2006 was received in 2007. Analysis of that data and data for 2005 shows the 2-year running average of Nebraska's Computed Beneficial Consumptive Use above Guide Rock for 2005-2006 to be 41,430 acre-feet per year in excess of Nebraska's allocations above Guide Rock, contrary to Subsection V.B.2 (a) of the FSS. For the two years, Nebraska's total overuse of water in violation of the FSS amounts to 82,870 acre-feet. See Attachment 1 hereto. For comparison, this amount is more than a city in Kansas of 100,000 population consumes in 10 years. It is also more than twice the amount of water that would be consumed per year under full supply conditions on all the acreage authorized to be irrigated in the Kansas Bostwick Irrigation District in the Republican Basin.

Kansas began to express its concerns in the 1980s that Nebraska was violating the Compact. Despite continued complaints by Kansas and attempts at mediation, Nebraska allowed further significant increases in water development and use by its water users. Consequently, Kansas was forced to file *Kansas v. Nebraska & Colorado,* No.126, Orig., in 1998. After rulings by the Special Master and the Supreme Court, the States agreed to the FSS in December 2002 as noted above. Since then Kansas has complied with all of its obligations under the FSS in good

faith. The State of Nebraska, on the other hand, has seriously neglected its obligations under the FSS. Actions by the State of Nebraska have been grossly insufficient and unrealistic, resulting in injury to Kansas and its water users. As was the case when David Pope wrote his letter of January 24, 2007, actions apparently being discussed by the State of Nebraska will continue to be insufficient and ignore growing river depletions due to past groundwater pumping.

It is now five years since the FSS was agreed to by Nebraska. But again, the State of Nebraska has failed to meet its obligations to the State of Kansas under the Republican River Compact, and Kansas' water users have continued to suffer as a result. Although there are disagreements between Kansas and Nebraska on certain portions of the final accounting for 2005 and 2006, Nebraska is significantly out of compliance for this first period of Water-Short Year Administration regardless of which State's methodology is used. Further, although the accounting for 2007 is not yet available, it is clear that Nebraska will not be in compliance for the statewide five-year accounting period 2003 through 2007. The cumulative Nebraska overuse for 2003 through 2006 is 143,840 acre-feet. See Attachment 2 hereto. This is the amount that Nebraska needed to make up in 2007 in order to be in compliance for 2003-2007, an unlikely event. In addition, 2007 was also a Water-Short Year Administration year, and it is highly unlikely, as well, that Nebraska will meet the Water-Short Year Administration requirements for that year.

In light of the foregoing, Kansas proposes the remedy set out in Attachment 3 to this letter. The remedy includes: (1) entry of an order by the Supreme Court finding Nebraska in violation of the Court's Decree; (2) Kansas' damages for the years 2005-2006 or Nebraska's gains, whichever are greater, plus compounded interest and attorneys fees and costs, together with any additional relief that may be considered appropriate by the Court; and (3) (a) shutdown of wells and groundwater irrigation in Nebraska within 2 ½ miles of the Republican River and its tributaries, (b) shutdown of groundwater irrigation of acreage added after the year 2000 throughout the Republican River Basin in Nebraska and (c) such further reductions of net consumptive use in the Basin in Nebraska necessary to maintain yearly compliance, or the hydrologic equivalent of the foregoing. In addition, if Nebraska continues to be unable or unwilling to control its water users, further relief, including a Court-appointed River Master, may be necessary.

Supporting Materials

Although the most urgent need is to bring Nebraska into compliance, sanctions for the 2005-2006 violations are also appropriate. Kansas' preference is for repayment in water, but repayment in water by Nebraska appears to be impractical, given the overwhelming deficit that has been accumulated by Nebraska. Therefore, monetary payment is proposed, equal to the gains reaped by Nebraska as a direct result of violating the Court's decree, or Kansas' damages, whichever are greater. This should reduce Nebraska's incentive to violate the Court's Decree in the future.

During recent years, Nebraska's groundwater consumptive beneficial use has been approximately 200,000 acre-feet per year. Even with purchase of surface water and other actions by Nebraska, however, Nebraska has been significantly short of Compact compliance. Kansas' attached analysis demonstrates that Nebraska must reduce its annual groundwater consumptive use (depletions of the surface waters of the Republican River Basin in Nebraska) to 175,000 acre-feet per year, or otherwise achieve the hydrologic equivalent, to dependably meet its 5-year compliance test. See Attachment 4 hereto.

The stipulated RRCA Ground Water Model has been used to determine the extent to which ground water pumping must be curtailed in order to reduce and maintain river depletions caused by groundwater pumping in Nebraska down to 175,000 acre-feet per year. See Attachment 5 hereto. That analysis indicates that a reduction in groundwater irrigated acreage of approximately 515,000 acres is required of 1,201,000 irrigated acres assumed in the future case. As is demonstrated in Figure 4 of Attachment 5, failure to address groundwater depletions in a substantive way will result in continued loss of streamflow. Without this reduction in groundwater pumping, significantly less surface water will be available for existing irrigation projects and/or to assist in achieving Compact compliance. Immediate additional actions by Nebraska are also necessary to achieve near-term compliance. In the long term, further actions will likely be needed, especially in Water-Short Year Administration years.

Designated Schedule for Resolution

Kansas is proposing the foregoing remedies to address the past and continuing violations of the Supreme Court Decree in order that you may consider whether you can agree to these remedies. This situation comes as no surprise to you. Nebraska has been aware that its consumptive use has exceeded allocation every year since 2003. At the 2006 and 2007 Republican River Compact Administration meetings, for instance, Kansas pointed to the increasing likelihood that Nebraska would be out of compliance as soon as the data became available. In addition, by letter of January 24, 2007, Kansas specifically addressed the inadequacy of actions then being proposed in Nebraska as a means of bringing Nebraska into compliance.

Please review this proposal and respond to me within 45 days with regard to whether Nebraska is willing to agree to the proposed remedy. If we do not reach an agreement within that time period, Kansas will submit the dispute to the RRCA. If the dispute is not resolved by the RRCA, we will submit the dispute to the RRCA as a "fast track" issue and will proceed pursuant to the FSS Dispute Resolution procedure according to the schedule set out in Attachment 6 hereto, unless otherwise agreed.

Very truly yours,

David W. Barfield

David W. Barfield, P.E
Kansas Chief Engineer
Kansas RRCA Commissioner

cc: (w/encl.) (Via Email & U.S. Mail)
Kansas Attorney General Paul Morrison
Dick Wolfe, Colorado RRCA Commissioner
Aaron M. Thompson, U.S. Bureau of Reclamation
Col. Roger Wilson, Jr., U.S. Army Corps of Engineers
James J. DuBois, U.S. Department of Justice

Attachments:

Attachment 1 – Nebraska's Violations of the Final Settlement Stipulation: 2005-2006

Attachment 2 – Nebraska's Statewide Allocation and Computed Beneficial Consumptive Use: 2003-2006

Attachment 3 – Proposed Remedy for Violations of the Court's Decree

Attachment 4 – Engineering Report: Requirements for Nebraska's Compliance with the Republican

Attachment 5 – Report: RRCA Groundwater Model Analysis

Attachment 6 – Designated Schedule for Resolution

Attachment 1

Nebraska's Violation of Water-Short Year Administration Requirement 2005 and 2006

Table 5C Nebraska's Compliance During Water-Short Year Administration (from App. C of the FSS p. C65)*								
Year	Allocations			Computed Beneficial Consumptive Use (CBCU)			Credits from Imported Water	Difference Between Allocation and Consumptive Use Minus Imported Water Supply above Guide Rock
Column	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8
	State Wide Allocation	Allocation below Guide Rock	State Wide Allocation above Guide Rock	State Wide CBCU	CBCU Below Guide Rock	State Wide CBCU Above Guide Rock	Credits above Guide Rock	Col 3 – (Col 6 – Col 7)
2005	199,450	4,586	194,864	253,740	4,052	249,689	11,965	(42,860)
2006	189,180	3,615	185,565	240,850	3,064	237,786	12,214	(40,010)
Average	194,320	4,100	190,210	247,300	3,560	243,740	12,090	(41,430)

*All average and total values are rounded to the nearest 10.

For 2005, two accountings were approved by the RRCA. The difference was caused by dispute over the inclusion or exclusion of evaporation from non-federal reservoirs in Nebraska below Harlan County Reservoir. The values displayed are from the accounting includes all non-federal reservoir evaporation in Nebraska, as proposed by Kansas.

For 2006, no accounting was approved by the RRCA. Only input data for the accounting was approved. The values displayed are from an accounting consistent with Kansas position on accounting inclusive of (1) all non-federal reservoir evaporation in Nebraska and (2) a Harlan County Reservoir evaporation assignment method that assigns evaporation to both Kansas and Nebraska when only one State takes water from Harlan County Storage.

The totals for 2005 and 2006 from table 5C are below:

Year	Allocations			Computed Beneficial Consumptive Use (CBCU)			Credits from Imported Water	Difference Between Allocation and Consumptive Use Minus Imported Water Supply above Guide Rock
Column	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8
	State Wide Allocation	Allocation below Guide Rock	State Wide Allocation above Guide Rock	State Wide CBCU	CBCU Below Guide Rock	State Wide CBCU Above Guide Rock	Credits above Guide Rock	Col 3 – (Col 6 – Col 7)
Totals	388,630	8,200	380,430	494,590	7,120	487,470	24,180	(82,870)

Attachment 2

Nebraska's Five-Year Running Average Allocation and Computed Beneficial Consumptive Use for Determining Compact Compliance 2003 through 2006

Table 3C: Nebraska's Five-Year Average Allocation and CBCU (from App. C of the FSS p. 62)*				
	Col. 1	Col. 2	Col. 3	Col. 4
Year	Allocation	Computed Beneficial Consumptive Use	Credits from Imported Water Supply	Difference between Allocation and Computed Beneficial Consumptive Use minus Imported Water Supply
2003	227,580	262,780	9,782	(25,418)
2004	205,630	252,650	10,386	(36,640)
2005	199,450	253,740	11,965	(42,325)
2006	189,180	240,850	12,214	(39,456)
2007				
Average	205,460	252,510	11,090	(35,960)

*All average and total values are rounded to the nearest 10.

The values for years 2003 and 2004 were approved by the Republican River Compact Administration.

For 2005, two accountings were approved by the RRCA. The difference was caused by dispute over the inclusion or exclusion of evaporation from non-federal reservoirs in Nebraska below Harlan County Reservoir. The values displayed are from the accounting includes all non-federal reservoir evaporation in Nebraska, as proposed by Kansas.

For 2006, no accounting was approved by the RRCA. Only input data for the accounting was approved. The values displayed are from an accounting consistent with Kansas position on accounting inclusive of (1) all non-federal reservoir evaporation in Nebraska and (2) a Harlan County Reservoir evaporation assignment method that assigns evaporation to both Kansas and Nebraska when only one State takes water from Harlan County Storage.

The totals of table 3 C are below:

Year	Allocation	Computed Beneficial Consumptive Use	Credits from Imported Water Supply	Difference between Allocation and Computed Beneficial Consumptive Use minus Imported Water Supply
Totals for 2003 to 2006	821,840	1,010,020	44,350	(143,840)

Attachment 3

Proposed Remedy for Violation of the Court's Decree
in
Kansas v. Nebraska and Colorado,
No. 126, Orig., U.S. Supreme Court
Decree of May 29, 2003, 538 U.S. 720

1. Order of Supreme Court finding Nebraska in violation of the Court's Decree and imposing the following remedy.

2. For 2005-2006 violation of the Final Settlement Stipulation (FSS), Nebraska shall pay to Kansas the following:

   A. Kansas' damages or Nebraska's gains, whichever are greater;

   B. Prejudgment interest compounded from the date of Nebraska's overuse;

   C. Attorneys fees and costs; and

   D. Such further relief as may be considered appropriate by the Court to address fully the Decree violation by Nebraska.

3. To achieve compliance with the FSS in the future, Nebraska shall:

   A. Immediately (a) shut down wells and groundwater irrigation in Nebraska within 2 ½ miles of the Republican River and its tributaries, (b) shut down groundwater irrigation of acreage added after the year 2000 throughout the Republican River Basin in Nebraska and (c) such further reductions of net consumptive use in the Basin in Nebraska necessary to maintain yearly compliance. This will reduce groundwater consumptive use to approximately 175,000 acre-feet per year. Nebraska is invited to submit an alternative remedy that is the hydrologic equivalent in quantity and timing;

   B. Further reduce Nebraska's Computed Beneficial Consumptive Use to the extent necessary to keep Nebraska (1) within its Compact allocation until the effects of the reduction of groundwater pumping brings Nebraska into compliance with the Compact and the FSS, and (2) in compliance when the actions listed above in are insufficient, especially in Water-Short Year Administration years;

   C. Be subject to preset damages, costs, attorneys' fees, and additional sanctions for any failure to comply with the Court's order in the future.

Attachment 4

Requirements for Nebraska's Compliance with the Republican River Compact

Report to

David Barfield

Kansas Department of Agriculture, Division of Water Resources

from

Spronk Water Engineers, Inc.

Dale E. Book, P.E.

December 18, 2007

Introduction

This report describes the analysis made to determine the reductions in Groundwater Computed Beneficial Consumptive Use (CBCU) necessary in Nebraska to achieve compliance with the Republican River Compact as implemented by the Final Settlement Stipulation (FSS). Nebraska's CBCU exceeded the allocation above Guide Rock for the two-year water short year test applied to 2005 and 2006. The expected result for the five-year period of 2003 through 2007 is that Nebraska's statewide CBCU will exceed its corresponding allocation. For the four years of 2003 through 2006, Nebraska's statewide CBCU has exceeded allocations by a total of 143,840 acre-feet using the Kansas methodology.

The analysis described in this report is intended to estimate the level of Groundwater CBCU that could occur within Nebraska's allocation to achieve compliance with the five-year test. Compliance with the Water Short year standard would require that additional reduction of surface water CBCU or equivalent offset be supplied. This analysis was intended to quantify the level of groundwater CBCU that could occur within Nebraska's allocation. The RRCA Groundwater model was used to determine reductions in pumping that would be necessary to achieve this level of CBCU (see Attachment 5).

This analysis relies on the data for the period of 2002 - 2006 to compare CBCU with the allocation under the Republican River Compact. This comparison provides the amount of groundwater CBCU that can occur, in combination with the limited surface water CBCU of this period, to achieve compliance with the FSS for this period. The amount of groundwater CBCU that can occur is a reduction from recent levels of groundwater CBCU of approximately 200,000 acre-feet/year. The RRCA groundwater model was used to quantify the projected groundwater depletions in Nebraska resulting from reductions in pumping as well as changes to Imported Water Supply Credits that would occur with the reduced groundwater pumping. The projected effects of these reductions on surface water CBCU and compliance with the FSS over this period were estimated.

Criteria and Assumptions

The level of groundwater CBCU that would allow the total CBCU to be within the allocation over the five-year period of 2002 through 2006 was determined as follows. The increased streamflow caused by a proposed level of pumping reduction would increase the supply available for surface water use in Nebraska and increase supply available to Kansas. The net change of Nebraska use was estimated assuming that additional water would be consumed by the surface water users as a result of the increased supply.

The level of groundwater depletion that would provide compliance with the five-year statewide standard in Nebraska was determined by estimating the change in groundwater CBCU, surface water CBCU, and Imported Water Supply Credits and then comparing the resulting net total CBCU to the allocation for the five-year period. The analysis is based on the following criteria and assumptions:

- CBCU should not exceed the statewide allocation, over a five-year period.
- The Imported Water Supply Credit was estimated from analysis with the RRCA Groundwater Model
- Reductions in CBCU necessary to achieve compliance are assumed to be accomplished from reductions in groundwater irrigation pumping, as represented in the groundwater model simulation.
- Surface water CBCU in Nebraska would be increased due to increased streamflow.
- Compliance with the two-year standard for water short conditions may require reduction in surface water use, in addition to the pumping reductions.
- The time required for groundwater CBCU, as predicted with the RRCA Groundwater model, to decline to the necessary level will be several years. Until CBCU is reduced to that level, other reductions will be needed to achieve compliance.

Description of Analysis

The analysis computes the change in statewide CBCU corresponding to a reduced level of groundwater depletions. It is necessary to reduce the groundwater depletions by more than the actual deficit, since additional surface water consumptive use would be expected to occur, as a result of the increased streamflow resulting from less depletion to streamflow from groundwater pumping.

Using available compact data, the five-year average statewide allocation over the period of 2002 - 2006 was 212,000 acre-feet/year. Table 1 shows the actual FSS accounting for this period. The overuse averaged 32,000 acre-feet/year for this period.

The amount of increased surface water consumptive use in Nebraska was estimated, based on the location of the changes in groundwater depletions. For the storage conditions in effect during these years, it was assumed that the increased flows would be largely diverted for irrigation, with some additional reservoir evaporation. The amount of additional streamflow that would be consumed by surface water uses in Nebraska was estimated to be 45%. Table 1 shows the adjusted CBCU and the comparison with the allocation.

The Imported Water Supply Credit was estimated using the RRCA Groundwater Model, with the projected future level of pumping determined from this analysis. The credit was estimated to be approximately 30,000 acre-feet/year. Actual credit would of course depend on the amounts of continued importation of Platte River water into the basin.

Results of Analysis

1. The average annual allocation for Nebraska for 2002 - 2006 was 212,000 acre-feet/year. The actual use, including both surface and groundwater, averaged 254,000 acre-feet/year. After adjusting for the Imported Water Supply Credit, the Computed Beneficial Consumptive Use exceeded the allocation by 32,000 acre-feet/year.

2. When the groundwater CBCU is reduced to 175,000 acre-feet/yr, average surface water CBCU is estimated to increase from 55,000 to 67,000 acre-feet/year. Imported Water Supply Credits increase to approximately 30,000 acre-feet/year.

3. The total CBCU that could occur within the Nebraska's allocation is 242,000 acre-feet/yr, after applying the estimated Imported Water Supply Credit.

4. The Groundwater CBCU must be reduced to 175,000 acre-feet/yr to achieve a balance with the statewide allocation over the five year period.

Conclusions

The Nebraska beneficial consumptive use has exceeded the statewide allocation for each of the years 2002 - 2006. The five-year total for the period of 2003 - 2007 is expected to exceed the allocation over that period, given the status of the accounting through 2006. Based on the five-year allocation through 2006, it would be necessary to reduce the total CBCU to approximately 242,000 acre-feet/year for Nebraska to be in compliance with the FSS.

A reduction of stream depletions due to groundwater pumping in Nebraska from 200,000 to 175,000 acre-feet was estimated to be necessary to provide compliance with the five-year test of the FSS over a period of similar water supply conditions. This would result in a balance between CBCU and allocation. This level of groundwater depletions corresponds to the pumping reductions described in Attachment 5.

To achieve compliance with the Water-short year periods, additional reductions to CBCU beyond those described above will be necessary. It would be necessary to limit surface water consumptive use or provide equivalent offsets from alternate sources.

Table 1

Estimated Effect on Compliance from a Reduction in Nebraska's Pumping: 2002 - 2006

(1000 acre-ft)

Table 3C: Nebraska's Five-Year Average Allocation and CBCU					
Year	Actual				
	Statewide Allocation	Ground Water CBCU	Surface Water CBCU	Imported Water Supply Credit	Allocation - (CBCU - IWS Credit)
2002	237	180	85	14	-15
2003	228	204	59	10	-25
2004	206	213	40	10	-37
2005	199	203	51	12	-42
2006	189	198	42	12	-39
Average	212	200	55	12	-32

Year	Adjusted				
	Ground Water [1] CBCU	Effect on [2] Nebraska's Surface Water CBCU	Surface Water [3] CBCU	Imported Water [4] Supply Credit	Allocation - [5] (Adjusted CBCU - IWS Credit)
2002	175	2	88	30	4
2003	175	13	72	30	11
2004	175	17	57	30	4
2005	175	13	63	30	-9
2006	175	11	53	30	-9
Average	175	11	67	30	0

[1] Nebraska's projected amount of Ground Water CBCU

[2] 45% of the difference between the actual Ground Water CBCU and adjusted Ground Water CBCU

[3] Adjusted Surface Water CBCU = the actual surface water CBCU plus the Effect on Nebraska's Surface Water CBCU

[4] Nebraska's projected Imported Water Supply Credit

[5] Adjusted compliance = Nebraska's allocation - (the adjusted Ground Water CBCU + the adjusted Surface Water CBCU - the adjusted imported water supply credit)

Attachment 5: RRCA groundwater model analysis
Impact of Nebraska pumping and proposed remedy

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December 18, 2007

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Introduction

The analysis described in Attachment 4 has shown that annual groundwater consumptive use in Nebraska must be reduced to 175,000 acre-feet in order to achieve sustained compliance with the compact. The approved RRCA groundwater model was used to determine the reduction in pumping necessary for Nebraska to meet this requirement and thereby achieve sustained compliance with the Republican River Compact. This memo describes the basis for the projected depletions computed by the groundwater model under the base case and reduced pumping scenarios.

In order to reach and then sustain a groundwater consumptive use of 175,000 acre-feet (AF) needed to comply with the Compact over the next 50 years, the proposed remedy case imposes the following conditions on future groundwater pumping for irrigation within the Republican River basin in Nebraska: first, a no-pumping zone for irrigation is imposed within 2.5 miles of RRCA groundwater model stream cells; second, groundwater irrigation area is held at 2000 levels at distances greater than 2.5 miles from stream cells; third, commingled irrigation area is held at 2000 levels at all distances from stream cells within the Republican River basin in Nebraska. Under this scenario, future groundwater irrigation area in Nebraska is reduced by 514,610 acres: 350,970 acres within the no-pumping zone, and 163,640 acres outside the no-pumping zone. For comparison, Nebraska's reported groundwater irrigated acreage within the Republican River basin has increased by 211,000 acres since 2000 and by 309,900 acres since 1990.

The proposed remedy is intended to allow recovery of streamflow as quickly as groundwater response will allow by focusing on groundwater pumping near the Republican River and its tributaries. The groundwater model was used to represent impacts of Nebraska groundwater pumping on Republican river streamflow and of imported water supply from the Platte River. Model scenarios were run to represent both status quo conditions and the proposed remedy. Projected Nebraska impacts for a 51-year future time period, as well as computed Republican River streamflow, are presented here under both scenarios.

Projected average annual impacts over 51 years (2007-2057) on Republican River streamflow under base case, or status quo, conditions are 259,900 acre-feet per year (afy) for Nebraska groundwater pumping, reduced by 13,300 afy for imported water supply credit from Platte River imports, for a net impact of 246,600 afy. The corresponding impacts under the reduced pumping scenario are 163,500 afy for Nebraska pumping, reduced by 27,700 afy for imported water supply credits, for a net impact of 135,800 afy. However, the net impact under the proposed remedy shows an initial decline followed by an upward trend for years 2015-2057, indicating a possibly larger net impact beyond the simulated time period. Compared with the base case scenario, the proposed remedy scenario shows an average decrease in pumping impact of 96,400 afy and increase in imported water supply credit of 14,400 afy, for a reduction in Nebraska's net impact of 110,800 afy.

Using a sequence of historical years to represent futures

Model datasets for historical years 1990-2006 were used to construct future scenarios. These years were chosen initially because of the higher quality of Kansas water use reporting data beginning in 1990. The sequence of historical years 1990-2006, beginning with year 1990, was repeated three times to represent future scenarios for years 2007-2057. Median annual precipitation for years 1990-2006, spatially averaged over the groundwater model domain, is 19.58 inches/year. Compared

against the model's years of record 1918-2006, this corresponds to a probability of 54.5 percentile, which is slightly above median rainfall of 19.28 in/yr for years 1918-2006. This indicates that the sequence is a reasonable projection, at least with respect to the historical record. Additionally, the sequence consists of a relatively wet period (1990-1999) followed by a relatively dry period (2000-2006).

Hydrologic conditions for future years were represented by the conditions of the historical sequence of years. These conditions include mean monthly streamflow and reservoir elevations at the end of each month, both of which are specified for the stream (STR) package, and evapotranspiration (for the EVT package) as input to Modflow (mf2k). Groundwater recharge, pumping and irrigated area are also based on conditions of the historical sequence of years, but with adjustments to specify conditions for the specific cases as input files to the pumping (WEL) and recharge (RCH) packages. Irrigated area is a consideration due to the dependence of precipitation recharge on whether or not the land is irrigated. Input files to Modflow were assembled by the preprocessor programs mketff (EVT package), mkstrff (STR package) and rrppf (RCH and WEL packages).

Base case: status quo scenario

Recharge and pumping conditions for the status quo, or base case, scenario were represented by historical conditions with adjustments as follows.

Kansas data for irrigated area, groundwater pumping and return flow in future years were based on corresponding historical years' data, but with adjustments to reflect 2006 conditions with respect to return flow (based on improvements in irrigation systems), metering and development.

Data for irrigated area served by groundwater and commingled pumping as reported in 2006 by Colorado and Nebraska were used to represent all future years under base case conditions. Irrigated area served by surface water pumping in future years was represented by data for the corresponding historical years. For Colorado, 2006 groundwater irrigated area was substituted for the corresponding historical years' area as a correction to the Colorado dataset from authorized area, as specified in years 1990-2000, to reported area used for irrigation, as specified in years 2001-2006. No corresponding adjustment was made to groundwater pumping for Colorado.

In the case of Nebraska, 2006 groundwater and commingled irrigated area were substituted for corresponding historical years' data in order to represent continued development through 2006. Groundwater pumping by Nebraska in future years was represented by reported pumping in the corresponding historical years to reflect hydrological conditions. To reflect the change in development associated with irrigation from a given historical year to the year 2006, historical pumping corresponding to each grid cell was multiplied by the ratio of total groundwater and commingled irrigated area in 2006 to the total area for the corresponding historical year. In order to reflect differences in development across Natural Resource Districts in Nebraska, this ratio was calculated for each NRD within the groundwater model domain, and applied to total reported pumping and groundwater return flow for each model grid cell within the corresponding District. NRD boundaries are shown in Figure 1.

The assumptions of historical conditions for the Nebraska dataset that are projected into the future include return flow from groundwater pumping for irrigation, which is assumed to be 20 percent. This is considered to be a generous assumption, even for recent historical years, and may warrant revision for scenario refinements, especially if allocations imposed by Natural Resource Districts are to be incorporated.

Proposed remedy case: reduced Nebraska pumping scenario

Conditions for the reduced Nebraska pumping scenario are summarized above in the Introduction. The conditions are explained in greater detail as follows.

No-pumping zone

The no-pumping zone was specified in terms of model grid cells as an approximation of an actual zone, which would likely be independent of the model grid; for example, it might reference a boundary based on the Public Land Survey System. The grid-based approximation has the advantage of allowing the affected pumping in Nebraska to be selected from datasets previously prepared by Nebraska for the model, including groundwater pumping, recharge and irrigated area. Additionally, defining the no-pumping zone with reference to model stream cell centers is intended to be consistent with prior decisions made during model development to represent the stream network.

Figure 1 shows the extent of the proposed no-pumping zone on Nebraska groundwater pumping for irrigation within the Republican River basin as gray-shaded grid cells. Model cells representing streams and federal reservoirs (turquoise) are included in the no-pumping zone. By selecting model grid cells whose centers lie within two miles of stream cell centers, the resulting no-pumping zone applies to groundwater diversions within 2.5 miles of the stream. The model grid cells corresponding to the no-pumping zone were selected in GIS and converted into a "mask", i.e., an array of 1's and 0's that was written to a text file for input to a preprocessor to identify grid cells for which pumping is to be excluded.

2000 irrigated area

Outside the no-pumping zone, groundwater and commingled irrigation area for the year 2000 were substituted for corresponding historical years' data to hold development at 2000 levels. Groundwater pumping by Nebraska in future years was represented by reported pumping in the corresponding historical years to reflect hydrological conditions, multiplied by a factor to reflect the change in irrigated area, given by the ratio of total groundwater and commingled irrigated area in 2000 to the total area for the corresponding historical year.

An implicit assumption of the above conditions for the proposed remedy scenario is that pumping within the no-pumping zone cannot be transferred outside the zone.

Commingled irrigated area

Future scenario years are represented by both groundwater and commingled irrigated area datasets for a specified historical year outside the no-pumping zone—i.e., by Nebraska's 2000 dataset within the Republican River Basin and Nebraska's 2006 dataset outside the basin. However, within the no-pumping zone, whereas groundwater irrigation area is excluded, the commingled irrigation area is retained, under the assumption that commingled area could be irrigated if surface water is available. Commingled irrigated area inside the no-pumping zone totaled 47,840 acres in 2000 and 11,040 acres in 2006.

The combined effects of imposing the no-pumping zone and fixing irrigated area at 2000 elsewhere in the Republican River basin are to reduce groundwater irrigated area within the Republican River basin by 514,600 acres, or 43 percent, from 1,200,600 acres for assumed status quo conditions to 686,000 acres under the proposed remedy.

Evaluation of impacts of Nebraska pumping under status quo and reduced pumping conditions

In order to compute Nebraska impacts of both groundwater pumping and imported water supply, three additional cases were run for comparison against the status quo and reduced pumping cases, above. Conditions for the third case specify no groundwater pumping in Nebraska for the entire simulation period, beginning in 1918, but are otherwise the same as conditions for the base case. Similarly, conditions for the fourth case specify no imported water supply from the Platte River in Nebraska for the entire simulation period, beginning in 1918, but are otherwise the same as conditions for the base

case. The fifth case is identical to the reduced pumping cases (above), except for the assumption that future imported water supplies from the Platte River are excluded.

Based on these five future scenario runs, impacts of Nebraska pumping and imported water supply were evaluated with respect to both base case (status quo) and reduced pumping conditions. First, the impact of Nebraska pumping under status quo conditions was evaluated as the difference given by computed Republican River flows for the "no Nebraska pumping" case minus corresponding flows for the status quo case. Second, the impact of Nebraska pumping under the proposed remedy is evaluated as the difference given by computed Republican River flows for the "no Nebraska pumping" case minus corresponding flows for the proposed remedy case. Similarly, imported water supply credits were evaluated twice: first, with respect to status quo conditions, and then with respect to reduced pumping conditions under the proposed remedy case.

Results: impacts of Nebraska pumping and imported water supply from Platte River

The reduction in groundwater irrigated area of 514,600 acres within the Republican River basin under the proposed remedy results in a groundwater pumping reduction of 564,400 acre-feet/year. Impacts of this reduction on streamflow are presented here.

Table 1 lists computed annual impacts for years 2007-2057, and averages over the same period, of Nebraska pumping on Republican River streamflow and of imported water supply under both the status quo and reduced pumping scenarios. The rightmost column of Table 1 lists the reduction of impacts achieved under the reduced pumping scenario.

Table 1 shows that projected average annual impacts over 51 years (2007-2057) on Republican River streamflow under base case, or status quo, conditions are 259,900 acre-feet/per year (afy) for Nebraska groundwater pumping, reduced by 13,300 afy for imports from the Platte River, for a net impact of 246,600 afy. The corresponding impacts under the reduced pumping scenario are 163,500 afy for Nebraska pumping, reduced by 27,700 afy for imported water supply, for a net average impact of 135,800. However, the net impact under the proposed remedy shows an initial decline followed by an upward trend for years 2015-2057 that indicates a possibly larger net impact beyond the modeled time period. Compared with the base case scenario, the proposed remedy scenario shows an average decreased pumping impact of 96,400 afy and increase in imported water supply credit of 14,400 afy, or an average net Nebraska impact reduction of 110,800 afy.

Nebraska impacts are shown graphically in Figures 2 and 3. Figure 2 shows the separate impacts of Nebraska pumping and imported water supply under both scenarios. Figure 3 shows the net impacts given by the sum of pumping and imported water supply impacts for each of the scenarios.

Figure 2 shows historical impacts of Nebraska pumping on Republican River streamflow and imported water supply according to the RRCA groundwater model for years 1960-2006. The historical impact of Nebraska pumping reached peak levels of 212,900 acre-feet/year in 2001 and 213,100 acre-feet/year in 2004, and was 198,400 acre-feet/year in 2006.

Figure 2 also shows projected impacts of Nebraska pumping on Republican River streamflow and imported water supply under both the status quo scenario and the reduced pumping scenarios for years 2007-2057. The impact of Nebraska pumping on Republican River streamflow in future years under the status quo scenario shows greater variability than under the reduced pumping scenario because of the greater magnitudes of the pumping under the status quo scenario. Projected pumping impacts under both scenarios appear to have upward trends, although impacts under status quo conditions show a decreasing rate of change. Projected impacts of imported water supply under the proposed remedy are greater and show less variability than those under status quo conditions.

Figure 2 shows that the impact of Nebraska pumping under the proposed remedy is projected to fall below 175,000 acre-feet/year for the first time in 2011, or in the fifth year of the future scenario, and

then occasionally exceeds 175,000 acre-feet/year beginning in 2044. Based on linear trends for years 2011-2057, the impact of Nebraska pumping increases by 383 acre-feet/year under the proposed remedy, and by 994 afy under status quo conditions.

Figure 3 shows that the net impact of Nebraska pumping and imported water supply under the proposed remedy is projected to fall below 150,000 acre-feet/year for the first time in 2011, and then stay below 150,000 acre-feet/year for the remaining years of the simulation. Based on linear trends for years 2011-2057, the net impact of Nebraska pumping and imported water supply increases by 250 acre-feet/year under the proposed remedy, and by 1,113 afy under status quo conditions.

Figure 4 shows computed Republican River flows contributed by groundwater for the historical period 1960-2006 and for the two scenarios 2007-2057. Under status quo conditions, computed annual flows for years 1960-2057 diminish at an average rate of 2.2 percent per year, based on an exponential fit. Under the proposed remedy scenario, computed flows after 2006 show relatively rapid recovery during the first few years, followed by a relatively slow decline; annual flows for years 2010-2057 decline at an average linear rate of 480 acre-feet/year.

Future hydrologic conditions

It is important to keep in mind that the projections, particularly on an annual basis or in the short term, are strongly dependent on the hydrological conditions of the assumed sequence of years. Because of this, the time required to reduce the impact of Nebraska pumping to less than 175,000 acre-feet/year, and the net impact of Nebraska pumping and imported water supply to less than 150,000 acre-feet/year, will be strongly influenced by future and unknown hydrological conditions.

Table 1. Projected impacts of Nebraska pumping and Platte River imports under both status quo conditions and the proposed remedy (acre-feet/year)

year	Status quo conditions			Proposed remedy			Impact reduction
	pumping	imports	Net impact	pumping	imports	Net impact	
2007	204,840	16,072	188,768	189,184	17,473	171,711	-17,057
2008	224,512	11,250	213,262	185,857	18,154	167,703	-45,559
2009	228,325	10,407	217,918	184,071	24,614	159,457	-58,461
2010	262,371	29,825	232,546	187,111	28,769	158,342	-74,204
2011	227,775	18,017	209,758	167,089	23,559	143,530	-66,228
2012	249,359	18,470	230,889	168,252	25,807	142,445	-88,444
2013	269,801	23,542	246,259	169,507	27,090	142,417	-103,842
2014	247,313	18,602	228,711	160,491	25,647	134,844	-93,867
2015	232,593	14,668	217,925	152,431	24,340	128,091	-89,834
2016	252,899	14,009	238,890	161,317	27,746	133,571	-105,319
2017	228,620	14,548	214,072	148,757	23,986	124,771	-89,301
2018	241,910	13,523	228,387	150,532	26,722	123,810	-104,577
2019	213,099	10,189	202,910	137,112	20,616	116,496	-86,414
2020	233,198	9,847	223,351	150,146	25,743	124,403	-98,948
2021	243,676	9,844	233,832	153,893	27,341	126,552	-107,280
2022	242,742	10,139	232,603	151,289	25,869	125,420	-107,183
2023	227,972	9,722	218,250	147,370	26,385	120,985	-97,265
2024	234,629	11,778	222,851	149,546	25,218	124,328	-98,523
2025	253,547	9,674	243,873	157,124	26,165	130,959	-112,914
2026	254,536	10,212	244,324	157,983	27,613	130,370	-113,954
2027	299,036	25,412	273,624	166,395	29,939	136,456	-137,168
2028	257,289	18,679	238,610	156,655	27,783	128,872	-109,738
2029	278,120	14,386	263,734	160,228	29,111	131,117	-132,617
2030	303,309	18,195	285,114	165,524	30,221	135,303	-149,811
2031	271,865	19,952	251,913	159,834	29,159	130,675	-121,238
2032	259,045	12,091	246,954	154,699	27,922	126,777	-120,177
2033	279,529	11,753	267,776	164,346	30,380	133,966	-133,810
2034	250,874	11,838	239,036	153,979	27,265	126,714	-112,322
2035	265,920	11,035	254,885	156,601	29,499	127,102	-127,783
2036	232,417	8,482	223,935	145,034	23,281	121,753	-102,182
2037	246,038	9,503	236,535	158,008	28,340	129,668	-106,867
2038	260,994	9,665	251,329	162,361	29,600	132,761	-118,568
2039	265,103	9,975	255,128	160,195	28,326	131,869	-123,259
2040	247,751	9,535	238,216	157,100	28,648	128,452	-109,764
2041	255,502	9,350	246,152	158,959	27,569	131,390	-114,762
2042	273,424	9,374	264,050	167,868	28,276	139,592	-124,458
2043	273,450	10,131	263,319	169,192	29,706	139,486	-123,833
2044	327,385	19,966	307,419	178,860	32,329	146,531	-160,888
2045	275,049	18,063	256,986	167,419	29,994	137,425	-119,561
2046	299,589	12,203	287,386	172,202	31,344	140,858	-146,528
2047	327,204	14,606	312,598	178,452	32,458	145,994	-166,604
2048	290,800	18,403	272,397	172,503	31,556	140,947	-131,450
2049	277,063	10,468	266,595	166,163	29,937	136,226	-130,369
2050	296,299	11,600	284,699	177,440	32,434	145,006	-139,693
2051	269,532	10,047	259,485	166,064	29,195	136,869	-122,616
2052	283,437	10,507	272,930	169,363	31,609	137,754	-135,176
2053	242,200	8,300	233,900	155,725	24,755	130,970	-102,930
2054	257,282	9,441	247,841	170,669	29,988	140,681	-107,160
2055	271,890	9,582	262,308	174,923	31,432	143,491	-118,817
2056	280,087	10,047	270,040	173,130	30,086	143,044	-126,996
2057	263,074	9,547	253,527	168,435	30,162	138,273	-115,254
2007-2057	259,888	13,264	246,624	163,478	27,670	135,808	-110,816

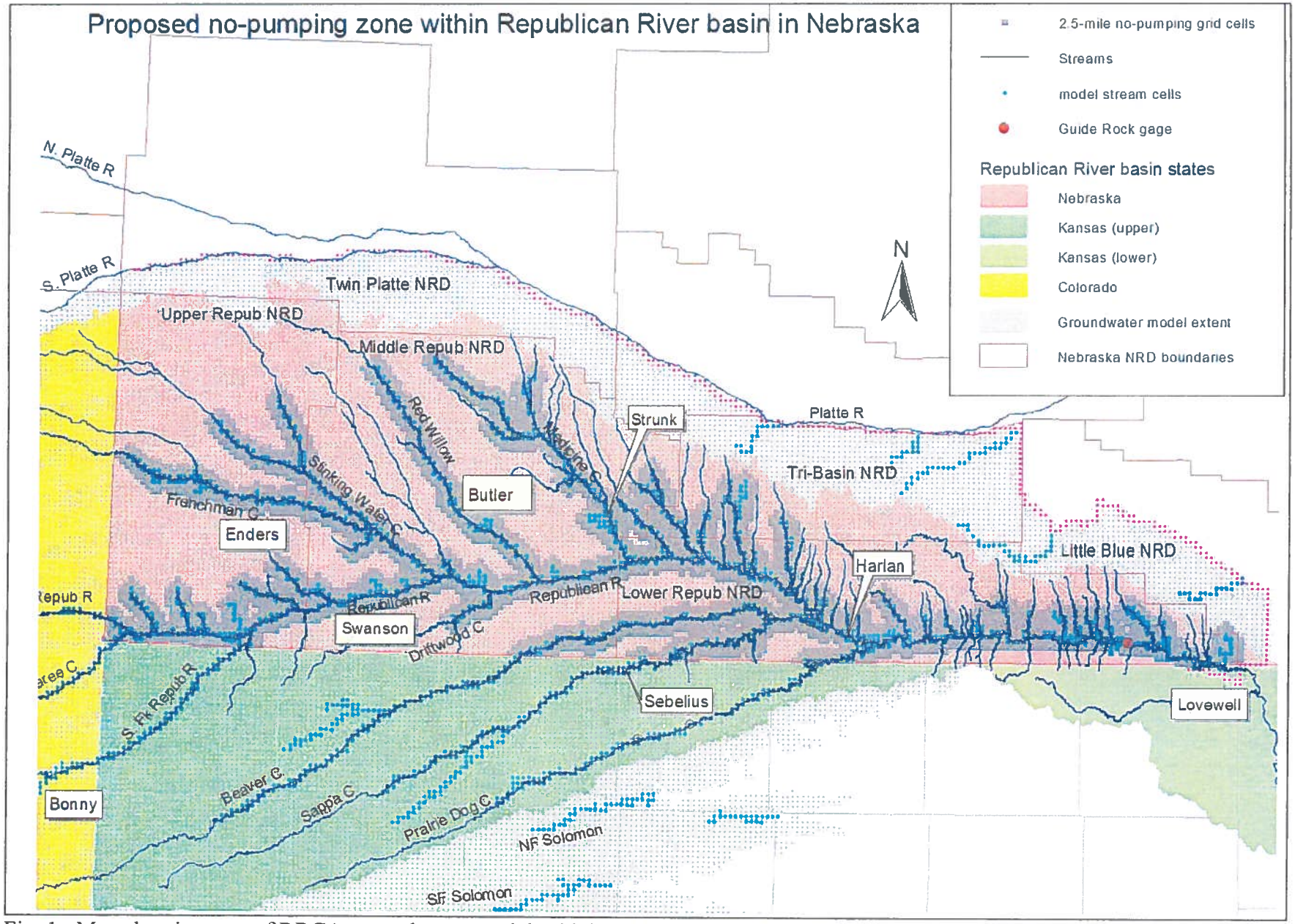

Fig. 1. Map showing part of RRCA groundwater model grid domain. Proposed no-pumping zone lies within the Republican River basin in Nebraska. Grid cells shaded dark gray are those whose centers lie within three miles of centers of stream cells (turquoise).

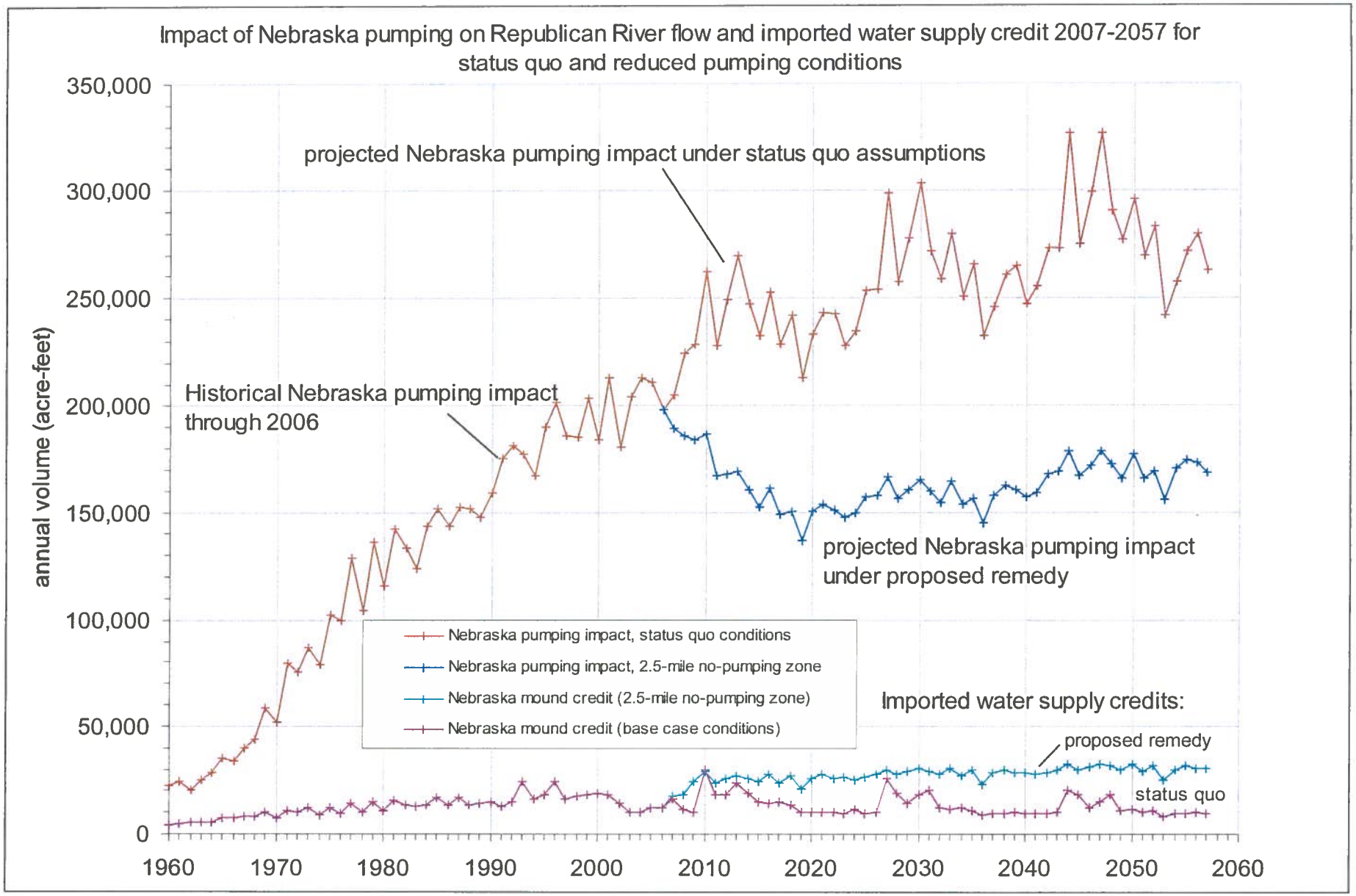

Fig. 2. Nebraska pumping impact on streamflow and imported water supply credit for a status quo scenario with continued pumping under current conditions, and for a reduced pumping scenario corresponding to the proposed remedy.

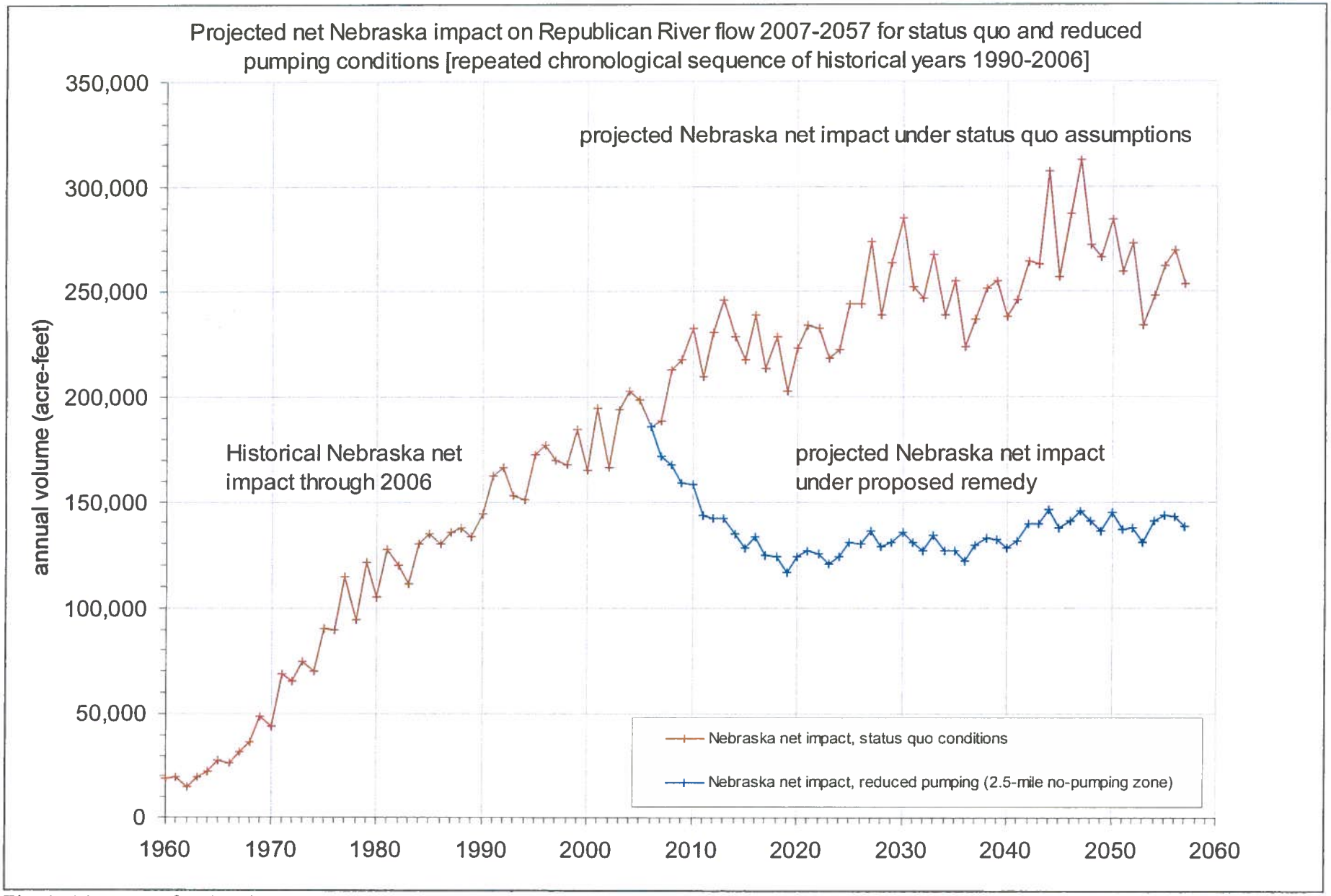

Fig. 3. Net sum of Nebraska pumping impact on streamflow and imported water supply credit for a status quo scenario with continued pumping under current conditions, and for a reduced pumping scenario corresponding to the proposed remedy.

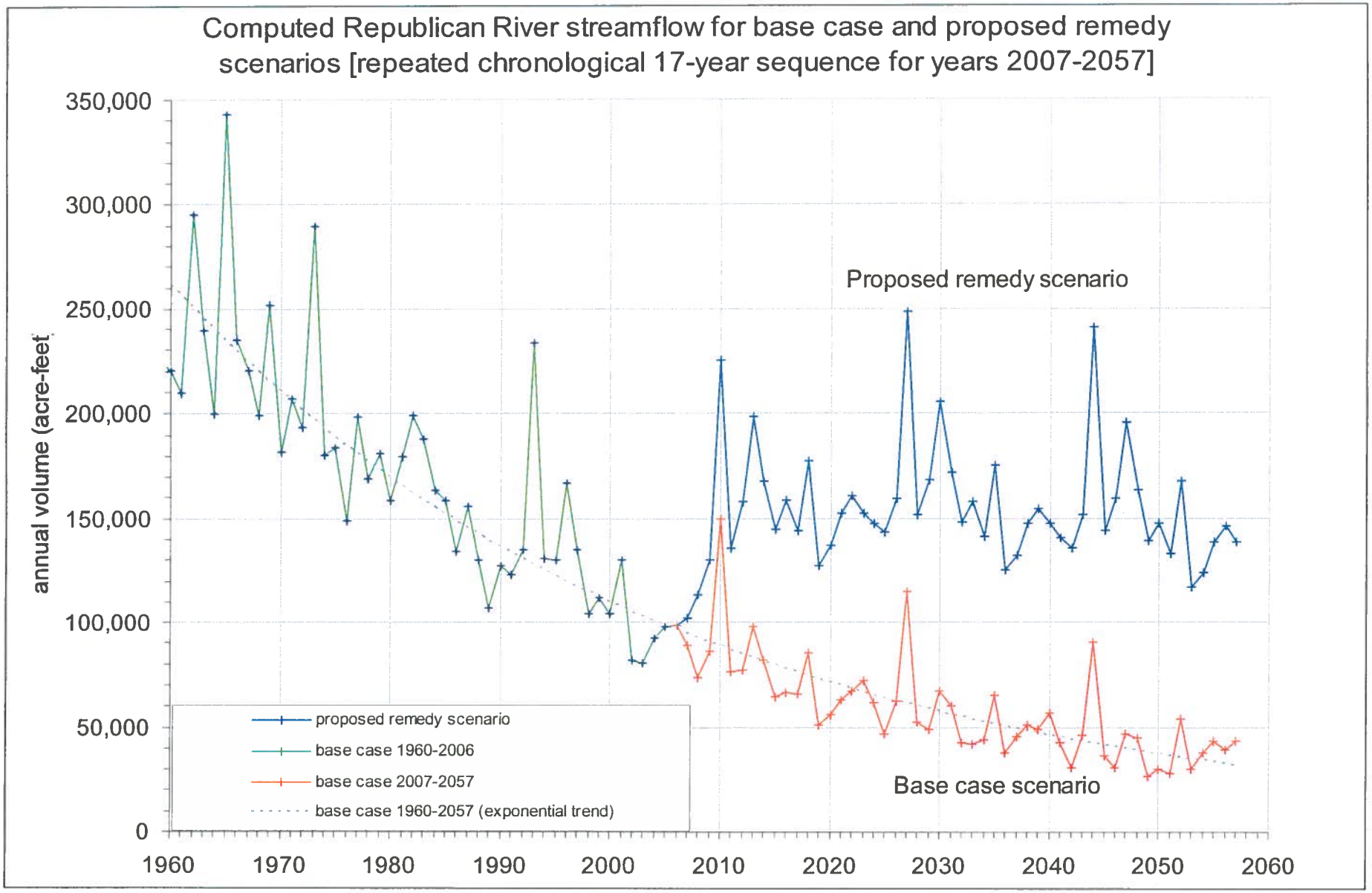

Fig. 4. Computed Republican River streamflow for a status quo scenario with continued pumping under current conditions, and for a reduced pumping scenario corresponding to the proposed remedy.

Attachment 6

Kansas v. Nebraska & Colorado,
No. 126, Orig., U.S. Supreme Court

Designated Schedule for Resolution

December 19, 2007	Kansas provides proposed remedy to Nebraska with copies to Colorado and United States.
February 4, 2008	If agreement is not reached, Kansas submits dispute to the Republican River Compact Administration (RRCA) as a "fast-track" issue.
March 5, 2008	By this date, the RRCA meets to resolve the dispute.
March 20, 2008	If the RRCA fails to resolve the dispute, Kansas invokes nonbinding arbitration.
April 3, 2008	Kansas or Nebraska may amend the scope of the dispute to address additional issues.
April 17, 2008	Kansas and Nebraska submit names of proposed arbitrators and qualifications to each other.
April 28, 2008	Kansas and Nebraska representatives meet in person or by telephone to confer and agree on arbitrators; if agreement cannot be reached, the selection is submitted to CDR Associates of Boulder, Colo.
May 1, 2008	Arbitrators engaged.
May 12, 2008	Initial meeting/scheduling conference of Kansas and Nebraska before the arbitrators.
November 12, 2008	Deadline to complete arbitration and render decision.
December 12, 2008	Kansas and Nebraska give written notice whether they will accept the arbitrators' decision.
Thereafter	If the dispute is not resolved, Kansas makes the appropriate filings in the U.S. Supreme Court.

Slattery Aqua Engineering LLC

8357 Windhaven Drive, Parker, CO 80134 Office: (720) 851-1619 Fax: (303) 840-2575 email: SlatteryAquaEngineering@comcast.net

To: Republican River Water Conservation District Board of Directors
Dennis M. Montgomery – Hill & Robbins, P.C.
David W. Robbins – Hill & Robbins, P.C.

From: James E. Slattery

Date: January 21, 2008

Subject: Preliminary Review of South Platte Resources, LLC Report "High Plains Aquifer and Republican River Basin Water Supply"

As you requested, this memorandum is my preliminary review of the report prepared by Mr. Timothy R. Buchanan for South Platte Resources, LLC entitled "High Plains Aquifer and Republican River Basin Water Supply" dated January 5, 2008 ("SP Resources"). My review also considered the presentation by Tim Buchanan at the Republican River Water Conservation District (RRWCD) board meeting on January 10, 2008 and discussions with the RRWCD Board at the January 10, 2008 meeting.

South Platte Resources Proposal

In summary the SP Resources proposal consists of the following:

1. The sale of approximately 10,000 ac-ft/year of fully consumable water for $60 million. The source of the water would be from water historically diverted from the South Platte River by the Farmers Pawnee Canal and the Harmony Ditch. The unit cost of this water is $6,000 per ac-ft.
2. The construction of a 54 mile pipeline from the South Platte to the upper reaches of Chief Creek near the town of Eckley about 20 miles west of the Stateline. The 24" pipeline would be approximately 55 miles long and would cost approximately $41 million. The cost per mile of pipeline would be $750,000 per mile.
3. The project is represented to cost a total of $101 million for the delivery of 10,000 ac-ft or approximately $10,100 per ac-ft. The pipeline could be completed within 18 months.
4. There is apparently a phase of the project that would deliver water to the upper reaches of the Frenchman Creek drainage for recharge to the High Plains aquifer.

RRWCD Compact Compliance Pipeline

In evaluating the SP Resources proposal I believe it is important to compare the project to the benefits and costs of the RRWCD Compact Compliance Pipeline which has the following features:

3. The cost of the SP Resources project pipeline is represented to be $750,000 per mile. Based on GEI Consultants estimated cost for a 36" pipeline, a more realistic cost for the pipeline is $1.5 million per mile. The cost for an 80 mile long pipeline will be approximately $120 million instead of the $41 million cost estimated by SP Resources.

4. SP Resources proposes that some or all of this water could be recharged into the High Plains aquifer. Any water recharged into the aquifer only counts toward Colorado's compact compliance after it travels through the groundwater system and becomes streamflow that reaches the state line or a compact gaging station. The vast majority of the recharge water would never reach the North Fork, but would go into aquifer storage. As the compact accounting is currently structured, Colorado would only receive credit for 22% of the water that would reach the North Fork as flow to the state line. The benefit to Colorado would be minimal to zero for any water recharged to the aquifer as part of the SP Resources proposal.

5. SP Resources proposal to recharge the High Plains aquifer in the Frenchman Creek basin does not make sense from an economic standpoint. The $22 million cost of a 15 mile pipeline to the upper reaches of Frenchman Creek plus the $60 million cost of the water would result in a recharge project costing $82 million for 10,000 ac-ft/yr of recharge. This is a unit cost of $8,200 per ac-ft. Recharge in the Frenchman Creek drainage basin would not assist Colorado in complying with the compact because most of the water would go into storage. Moreover, the most cost-effective form of recharge is to leave the water in the aquifer in the first place by not pumping the water out. The RRWCD is currently using the leverage of federal money under the Republican River Conservation Reserve Enhancement Program (CREP) to retire irrigated acres, which effectively recharges the aquifer. Under the current Republican River CREP program, matching federal funds allow the RRWCD WAE to leverage every 1 dollar of local funds into 5 to 10 dollars in terms of land retirement. Therefore, the Republican River CREP program can be used to develop a 10,000 ac-ft of recharge project for about $5 million (8,000 acres x 1.25 af/ac of consumptive use x $3,500/acre x 15%). The SP Resources proposal to recharge the Frenchman Creek drainage basin is 16 times more expensive than the Republican River CREP program that is already in place. In addition the Republican River CREP results in the recharge being distributed throughout the basin and not just in one drainage sub basin.

6. The change of the South Platte water rights in the SP Resources proposal has not been approved by the Colorado water court at this time and is likely to be highly contested by many objectors. It is highly doubtful that the pipeline to deliver water would be constructed until the outcome of the water right change case was known with some certainty. Contested water right change cases typically take 3 to 4 years to complete and include terms and conditions to protect other water users.

7. One of the water rights offered is decreed to the Harmony Ditch. This ditch is used to fill Julesburg Reservoir and for direct flow irrigation. The diversion records reported by SP Resources appear to include both the direct flow diversions and the storage water

Summary and Recommendations

The following table is a comparison of the major features of each project. It should be noted that the pipeline cost shown in Table 1 for the SP Resources proposal is based on the cost per mile of pipeline developed by GEI, Consultants.

Table 1
Comparison of SP Resources Proposal and the RRWCD Compact Compliance Pipeline Project

Description	South Platte Resources Proposal	RRWCD Compact Compliance Pipeline	Difference
Yield of Project (ac-ft/yr)	10,000	15,000	-5,000
Cost of Water	$60 million	$50 million	+10 million
Unit Cost of Water per ac-ft	$6,000	$3,400	+$2,600
Length of Pipeline to state line	80 miles	13 miles	+67 miles
Cost of Pipeline	$120 million	$21 million	$99 million
Annual Operating Cost	$1 million/year	$0.5 million/year	+$0.5 million/year
Total Cost of Project	$180 million	$71 million	+109 million
Unit Cost of Project per ac-ft	$18,000	$4,800	+$13,200
Projected Delivery Date	1.5 to 4 years	1.5 years	+2.5 years

As shown in Table 1, the SP Resources proposal is approximately 3.7 times more expensive per ac-ft than the RRWCD Compact Compliance Pipeline project. Colorado is currently about 11,000 ac-ft/yr out of compact compliance. This compact compliance shortfall is projected to grow to approximately 14,000 or 15,000 ac-ft/year in the next 25 to 30 years. The SP Resources proposal does not have sufficient water to meet Colorado's current obligation and no reserve to meet projected future compact obligations.

In theory, the SP Resources proposal could be modified to deliver approximately 15,000 ac-ft/yr to have the same yield as the RRWCD Compact Compliance Pipeline project. The SP Resources pipeline construction cost would increase some and it is reasonable to estimate that the additional water would probably cost $6,000/ac-ft. The operating cost would increase by 50% due to additional pumping cost. This would increase the total cost of the SP Resource proposal to at least $210 million and would lower the unit cost to about $14,000 per ac-ft. This would still be almost 3 times more expensive than the RRWCD Compact Compliance Pipeline project. The RRWCD projects a fee increase of $9 per acre to cover the cost of the RRWCD Compact Compliance Pipeline. An increase of at least $27/acre would be required to cover the cost of a comparable SP Resource proposal.

In my opinion, the SP Resource proposal is not a cost-effective or realistic alternative to the RRWCD Compact Compliance Pipeline project. The SP Resources proposal would be 3 to 4 times more expensive on an acre-foot basis and would cost at least $0.5 million/year more to operate. In addition, a realistic timeline for delivery of water to the Colorado-Nebraska state line

KANSAS
DEPARTMENT OF AGRICULTURE

Kathleen Sebelius, Governor
Adrian J. Polansky, Secretary

www.ksda.gov

December 19, 2007

Ann Bleed, P.E.
Nebraska Commissioner,
Republican River Compact Administration
Director, Nebraska Department of Natural Resources
P.O. Box 94676
Lincoln, NE 68509-4676

Subject: Remedy for Nebraska's violation of the Decree in *Kansas v. Nebraska & Colorado,* No. 126, Original, U.S. Supreme Court

Dear Commissioner Bleed:

The State of Nebraska is in violation of the May 19, 2003 Supreme Court Decree in *Kansas v. Nebraska & Colorado,* 538 U.S. 720 (2003). The Decree approved the Final Settlement Stipulation ("FSS"), which had been filed with the Special Master on December 16, 2002. The FSS requires compliance on a five-year running average, and, when Water-Short Year Administration is in effect, compliance is also calculated on a two-year running average unless Nebraska submits an Alternative Water-Short Year Administration plan to the Republican River Compact Administration ("RRCA"). Appendix B to the FSS provides the FSS Implementation Schedule, which sets the first normal compliance year as 2007 (5-year running average for 2003-2007) and the first Water-Short Year Administration compliance year as 2006 (2-year running average for 2005-2006) if water supply conditions for Water-Short Year Administration are present.

Pursuant to the Implementation Schedule and water supply conditions, Water-Short Year Administration began in 2006. Data for the year 2006 was received in 2007. Analysis of that data and data for 2005 shows the 2-year running average of Nebraska's Computed Beneficial Consumptive Use above Guide Rock for 2005-2006 to be 41,430 acre-feet per year in excess of Nebraska's allocations above Guide Rock, contrary to Subsection V.B.2 (a) of the FSS. For the two years, Nebraska's total overuse of water in violation of the FSS amounts to 82,870 acre-feet. See Attachment 1 hereto. For comparison, this amount is more than a city in Kansas of 100,000 population consumes in 10 years. It is also more than twice the amount of water that would be consumed per year under full supply conditions on all the acreage authorized to be irrigated in the Kansas Bostwick Irrigation District in the Republican Basin.

Kansas began to express its concerns in the 1980s that Nebraska was violating the Compact. Despite continued complaints by Kansas and attempts at mediation, Nebraska allowed further significant increases in water development and use by its water users. Consequently, Kansas was forced to file *Kansas v. Nebraska & Colorado,* No.126, Orig., in 1998. After rulings by the Special Master and the Supreme Court, the States agreed to the FSS in December 2002 as noted above. Since then Kansas has complied with all of its obligations under the FSS in good

faith. The State of Nebraska, on the other hand, has seriously neglected its obligations under the FSS. Actions by the State of Nebraska have been grossly insufficient and unrealistic, resulting in injury to Kansas and its water users. As was the case when David Pope wrote his letter of January 24, 2007, actions apparently being discussed by the State of Nebraska will continue to be insufficient and ignore growing river depletions due to past groundwater pumping.

It is now five years since the FSS was agreed to by Nebraska. But again, the State of Nebraska has failed to meet its obligations to the State of Kansas under the Republican River Compact, and Kansas' water users have continued to suffer as a result. Although there are disagreements between Kansas and Nebraska on certain portions of the final accounting for 2005 and 2006, Nebraska is significantly out of compliance for this first period of Water-Short Year Administration regardless of which State's methodology is used. Further, although the accounting for 2007 is not yet available, it is clear that Nebraska will not be in compliance for the statewide five-year accounting period 2003 through 2007. The cumulative Nebraska overuse for 2003 through 2006 is 143,840 acre-feet. See Attachment 2 hereto. This is the amount that Nebraska needed to make up in 2007 in order to be in compliance for 2003-2007, an unlikely event. In addition, 2007 was also a Water-Short Year Administration year, and it is highly unlikely, as well, that Nebraska will meet the Water-Short Year Administration requirements for that year.

In light of the foregoing, Kansas proposes the remedy set out in Attachment 3 to this letter. The remedy includes: (1) entry of an order by the Supreme Court finding Nebraska in violation of the Court's Decree; (2) Kansas' damages for the years 2005-2006 or Nebraska's gains, whichever are greater, plus compounded interest and attorneys fees and costs, together with any additional relief that may be considered appropriate by the Court; and (3) (a) shutdown of wells and groundwater irrigation in Nebraska within 2 ½ miles of the Republican River and its tributaries, (b) shutdown of groundwater irrigation of acreage added after the year 2000 throughout the Republican River Basin in Nebraska and (c) such further reductions of net consumptive use in the Basin in Nebraska necessary to maintain yearly compliance, or the hydrologic equivalent of the foregoing. In addition, if Nebraska continues to be unable or unwilling to control its water users, further relief, including a Court-appointed River Master, may be necessary.

Supporting Materials

Although the most urgent need is to bring Nebraska into compliance, sanctions for the 2005-2006 violations are also appropriate. Kansas' preference is for repayment in water, but repayment in water by Nebraska appears to be impractical, given the overwhelming deficit that has been accumulated by Nebraska. Therefore, monetary payment is proposed, equal to the gains reaped by Nebraska as a direct result of violating the Court's decree, or Kansas' damages, whichever are greater. This should reduce Nebraska's incentive to violate the Court's Decree in the future.

During recent years, Nebraska's groundwater consumptive beneficial use has been approximately 200,000 acre-feet per year. Even with purchase of surface water and other actions by Nebraska, however, Nebraska has been significantly short of Compact compliance. Kansas' attached analysis demonstrates that Nebraska must reduce its annual groundwater consumptive use (depletions of the surface waters of the Republican River Basin in Nebraska) to 175,000 acre-feet per year, or otherwise achieve the hydrologic equivalent, to dependably meet its 5-year compliance test. See Attachment 4 hereto.

The stipulated RRCA Ground Water Model has been used to determine the extent to which ground water pumping must be curtailed in order to reduce and maintain river depletions caused by groundwater pumping in Nebraska down to 175,000 acre-feet per year. See Attachment 5 hereto. That analysis indicates that a reduction in groundwater irrigated acreage of approximately 515,000 acres is required of 1,201,000 irrigated acres assumed in the future case. As is demonstrated in Figure 4 of Attachment 5, failure to address groundwater depletions in a substantive way will result in continued loss of streamflow. Without this reduction in groundwater pumping, significantly less surface water will be available for existing irrigation projects and/or to assist in achieving Compact compliance. Immediate additional actions by Nebraska are also necessary to achieve near-term compliance. In the long term, further actions will likely be needed, especially in Water-Short Year Administration years.

Designated Schedule for Resolution

Kansas is proposing the foregoing remedies to address the past and continuing violations of the Supreme Court Decree in order that you may consider whether you can agree to these remedies. This situation comes as no surprise to you. Nebraska has been aware that its consumptive use has exceeded allocation every year since 2003. At the 2006 and 2007 Republican River Compact Administration meetings, for instance, Kansas pointed to the increasing likelihood that Nebraska would be out of compliance as soon as the data became available. In addition, by letter of January 24, 2007, Kansas specifically addressed the inadequacy of actions then being proposed in Nebraska as a means of bringing Nebraska into compliance.

Please review this proposal and respond to me within 45 days with regard to whether Nebraska is willing to agree to the proposed remedy. If we do not reach an agreement within that time period, Kansas will submit the dispute to the RRCA. If the dispute is not resolved by the RRCA, we will submit the dispute to the RRCA as a "fast track" issue and will proceed pursuant to the FSS Dispute Resolution procedure according to the schedule set out in Attachment 6 hereto, unless otherwise agreed.

Very truly yours,

David W. Barfield

David W. Barfield, P.E
Kansas Chief Engineer
Kansas RRCA Commissioner

cc: (w/encl.) (Via Email & U.S. Mail)
Kansas Attorney General Paul Morrison
Dick Wolfe, Colorado RRCA Commissioner
Aaron M. Thompson, U.S. Bureau of Reclamation
Col. Roger Wilson, Jr., U.S. Army Corps of Engineers
James J. DuBois, U.S. Department of Justice

By THE ASSOCIATED PRESS
Published: December 20, 2007

TOPEKA, Kan. (AP) — Kansas threatened a court fight Wednesday unless Nebraska reduced the amount of water it took from the Republican River and paid an undetermined amount for allegedly taking too much water in the past.

Kansas contends that Nebraska's water use has exceeded what it was allowed under an interstate agreement for the years 2005 and 2006 by about 27 billion gallons, enough to supply a city of 100,000 people for 10 years.

Attorney General Paul Morrison of Kansas and the State Division of Water Resources sent letters to Attorney General Jon Bruning of Nebraska and to Ann Bleed, director of that state's Department of Natural Resources.

A spokeswoman for Mr. Morrison, Ashley Anstaett, said Kansas lawyers were still trying to calculate how much they thought Nebraska should pay, but David Barfield, chief engineer for the Division of Water Resources, said the amount would be "certainly in the tens of millions."

Water use from the Republican River is governed by a 2003 decree from the United States Supreme Court, which approved a settlement among Colorado, Kansas and Nebraska of a lawsuit that Kansas filed in 1998.

"I don't think there's any question that they've overused the water," Ms. Anstaett said of Nebraska. "We believe that our remedy package is fair and will begin to get them on the right track with compliance."

Mr. Morrison's letter said Kansas would consider going to court if Nebraska did not agree to its demands.

"Absent such a resolution," he wrote, "we will have no choice but to pursue a litigation solution."

In Nebraska, Mr. Bruning called the letters "another step in the process of resolving this dispute." He said he hoped that the matter could be resolved without a lawsuit and that he was confident Nebraska would achieve compliance without the "drastic actions" proposed by Kansas.

Mr. Barfield said that meeting Kansas' demand to reduce irrigation would require the shutting down of wells supplying about 500,000 acres of the roughly 1.2 million irrigated acres in Nebraska's part of the Republican River Basin.

Gov. Dave Heineman of Nebraska said state and local officials had imposed water management plans that would resolve Kansas' concerns. "We intend to continue in good faith with that effort," Mr. Heineman said.

Even though the three states settled the 1998 lawsuit, Nebraska and Kansas officials have disagreed over how to calculate each state's allowed water use.

North and south forks of the Republican flow from northeast Colorado into Nebraska and converge. The river then flows through southern Nebraska into north-central Kansas. Its basin covers almost 25,000 square miles.

A 1943 agreement among the three states allocated 49 percent of the river's water to Nebraska, 40 percent to Kansas and 11 percent to Colorado. The 1998 lawsuit alleged that Nebraska had violated that compact by allowing the drilling of thousands of irrigation wells along the river and its tributaries.

Kansas has no plans to make similar demands of Colorado because it is not out of compliance, Ms. Anstaett said.

Republican River Water Conservation District - Pipeline Cash Flow

		CWCB	RRWCD
Pipeline Cost	71,000,000	60,000,000	11,000,000
Interest Rate		2.00%	
Term (years)		20	
Fee Assessment / Acre		14.50	
O&M Annual Costs		500,000	

Annual Payment	$ 3,669,403
Assessed Acres	480,000
Annual Income	$ 6,960,000

Year	Income	Operating Expenses	Program Expenses	Interest on Loans	Pipeline Principle	CWCB Reserve	Ending Balance	Pmt	Loan Balance
Beginning Cash 1/1/08							6,052,459		
2008	2,983,000	625,727	1,948,911	100,000	5,500,000		860,821		
2009	6,960,000	875,727	1,864,348		4,500,000		580,746		
2010	6,960,000	1,125,727	1,795,037	1,800,000	1,000,000		1,819,982		
2011	6,960,000	1,125,727	2,496,069	1,200,000			3,958,186		
2012	6,960,000	1,125,727	2,414,603	1,200,000	2,469,403	366,940	3,341,512	1	57,530,597
2013	6,960,000	1,125,727	795,653	1,150,612	2,518,791	366,940	4,343,789	2	55,011,806
2014	6,960,000	1,125,727	795,653	1,100,236	2,569,167	366,940	5,346,065	3	52,442,639
2015	6,960,000	1,125,727	795,653	1,048,853	2,620,550	366,940	6,348,341	4	49,822,088
2016	6,960,000	1,125,727	1,764,387	996,442	2,672,961	366,940	6,381,884	5	47,149,127
2017	6,960,000	1,125,727	1,710,253	942,983	2,726,421	366,940	6,469,560	6	44,422,707
2018	6,960,000	1,125,727	795,653	888,454	2,780,949	366,940	7,471,837	7	41,641,758
2019	6,960,000	1,125,727	795,653	832,835	2,836,568	366,940	8,474,113	8	38,805,190
2020	6,960,000	1,125,727	795,653	776,104	2,893,299	366,940	9,476,389	9	35,911,890
2021	6,960,000	1,125,727	1,764,387	718,238	2,951,165	366,940	9,509,932	10	32,960,725
2022	6,960,000	1,125,727	1,710,253	659,215	3,010,189		9,964,549	11	29,950,537
2023	6,960,000	1,125,727		599,011	3,070,392		12,129,419	12	26,880,144
2024	6,960,000	1,125,727		537,603	3,131,800		14,294,288	13	23,748,344
2025	6,960,000	1,125,727		474,967	3,194,436		16,459,158	14	20,553,908
2026	6,960,000	1,125,727		411,078	3,258,325		18,624,028	15	17,295,583
2027	6,960,000	1,125,727		345,912	3,323,491		20,788,898	16	13,972,091
2028	6,960,000	1,125,727		279,442	3,389,961		22,953,768	17	10,582,130
2029	6,960,000	1,125,727		211,643	3,457,760		25,118,638	18	7,124,370
2030	6,960,000	1,125,727		142,487	3,526,916		27,283,508	19	3,597,454
2031	6,960,000	1,125,727		71,949	3,597,454		29,448,378	20	(0)
		26,267,448	22,242,168	16,488,062	71,000,000	3,669,403			

Assumptions made for the Pipeline Cash Flow

1. The 2008 income, operating expenses, and program expenses are from the 2008 adopted budget.
   The budget assumes CREP & EQIP programs will be signed up to the maximum including all surface water acres.
   Increased payments from RRWCD to EQIP 2008 are included in the budget.
   Beginning cash is the actual checking, savings and CD's as of 1/1/08.

2. Future assessed acres is estimated at 480,000 (520,000 in 2006 less 40,000 into CREP & EQIP).
   If less than 40,000 acres go into CREP & EQIP then there will be more acres to assess and less program expenses in the future.

3. Fee assessments will be increased for the 2008 year so the District will start receiving increased revenue in 2009.

4. The pipeline will be built during 2008 and 2009.

5. Colorado Water Conservation Board (CWCB) loan for $60,000,000 @ 2% for 20 years.
   Cost share of 10% of the loan required as costs are incurred.
   Assuming cost share up to $5,500,000 in 2008 and any remainder in 2009.
   Loan payments will be made annually, starting in 2012.
   10% of an annual loan payment will be put into a reserve account for the first 10 years of the loan.

6. A short-term loan from Farm Credit will be used in 2008 and paid off as CD's come due.
   Estimated interest due on the note is $100,000.

Compact Compliance Pipeline -- Annual O&M

Energy			$175,000	@ $.06/kWh
44 kW per well -- 6570 hours per year				
Staff				
GM	25%	$100,000	$25,000	
Staff Eng.	100%	$80,000	$80,000	
Admin.	50%	$50,000	$25,000	
Field Tech.	100%	$60,000	$60,000	
			$190,000	
3 Vehicles			$18,000	Depreciated value plus operation
Replacements for motors, pumps, etc.			$50,000	
Office supplies			$10,000	
		Total	$443,000	
		Say	**$450,000**	

PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT ("Agreement") is made and entered this 10th day of January, 2008, by and between Cure Land, LLC ("Cure Land"), a Colorado Limited Liability company, whose address is 36977 Road CC, Bethune, Colorado 80805, and the Republican River Water Conservation District, acting by and through its Water Activity Enterprise ("RRWCD WAE"), whose legal address is 410 Main Street, Suite 8, Wray, Colorado 80758.

RECITALS

R.1 The Republican River Water Conservation District ("District") was created by Colorado statute in 2004 to assist the State of Colorado to carry out the State's duty to comply with the Republican River Compact ("Compact").

R.2 The District has established a water activity enterprise (the "RRWCD WAE") pursuant to Article 45.1 of Title 37 of the Colorado Revised Statutes.

R.3 The RRWCD WAE intends to construct a Compact Compliance Pipeline to deliver water to the North Fork of the Republican River to assist the State of Colorado to comply with the Compact.

R.4 Cure Land owns or will own certain rights to designated ground water and land that it desires to sell to the RRWCD WAE and that the RRWCD WAE desires to purchase from Cure Land for a Compact Compliance Pipeline to assist the State of Colorado to comply with the Compact.

JPC MIC ESC DC

NOW THEREFORE, for and in consideration of the mutual promises, warranties, and agreements set forth herein, Cure Land and the RRWCD WAE agree as follows:

ARTICLE 1
PURCHASE AND SALE AND PURCHASE PRICE

1. Purchase and Sale of Property. Cure Land agrees to sell to the RRWCD WAE, and the RRWCD WAE agrees to buy from Cure Land, the following property in Yuma County, Colorado: the rights to designated ground water listed on Attachment "A," the rights to designated ground water listed on Attachment "B," and the "Dryden" real property described on Attachment "C" (all of which are collectively referred to herein as "the Property"), subject to and on the terms and conditions stated in this Agreement.

2. Purchase Price. The total purchase price for the Property and the easements provided in Article 2 below is forty-nine million, one hundred eighty-one thousand, two hundred eighty dollars ($49,181,280.00). Cure Land shall have an option up until the Closing Date provided below to retain the right to designated ground water for field number 7-19 (Permit #14122-FP) as shown on Attachment "A." If Cure Land exercises this option, the Purchase Price shall be reduced by $675,444. If Cure Land does not exercise this option, the parties agree that Permit #14122 shall be amended to reflect that Cure Land has retained title to the portion of the right to designated ground water represented by Permit #14122 that is used on field number 7-20. The Purchase Price shall be payable by the RRWCD WAE to Cure Land as follows:

(a) Down Payment. Four million, nine hundred eighteen thousand, one hundred twenty-eight dollars ($4,918,128), payable by wire transfer, shall be payable to and held by Yuma County Abstract, in its trust account, on behalf of both Cure Land and the RRWCD WAE on or before January 11th, 2008, as part payment of the Purchase Price. Upon delivery of the

JPC MAC Wire EJC DK

Water Rights Report provided for in Article 3, paragraph 1 of this Agreement, $250,000 shall be paid to Cure Land. One-half of the Down Payment, less $250,000 previously paid to Cure Land, together with one-half of the interest that has accrued on the Down Payment, shall be paid to Cure Land at the end of the period of title review, unless the RRWCD WAE gives notice of title defects, as provided in Article 3 below, in which case one-half of the Down Payment, less $250,000 previously paid to Cure Land, together with one-half of the accrued interest on the Down Payment, shall be paid to Cure Land if Cure Land cures said title defects, the RRWCD WAE waives said title defects, or the RRWCD WAE elects to partially terminate the Agreement as provided in Article 3 below. The parties authorize delivery of the remaining one-half of the Down Payment deposit ("Remaining Down Payment") to the company conducting the closing ("Closing Company"), if any, at or before the closing. Interest on the Remaining Down Payment shall be paid to Cure Land at closing, unless this Agreement is terminated as provided below. The parties shall each pay one-half of the fees of Yuma County Abstract and the Closing Company. If Cure Land does not cure said title defects and the RRWCD WAE does not (a) waive said title defects or (b) elect to partially terminate the Agreement as provided in Article 3 below, this Agreement shall terminate and the remainder of the Down Payment, together with the accrued interest, shall be paid to the RRWCD WAE.

(b) Upon the Closing Date provided below, the Remaining Down Payment will be paid to Cure Land and the remainder of the Purchase Price will be paid to Cure Land by wire transfer.

JPC MRC WEL EJL D.C

ARTICLE 2
EASEMENTS, WELL PERMITTING, DISCONNECTION AND ABANDONMENT OF WELLS, AND DRY-UP COVENANT

1. At closing, Cure Land will provide easements on or across land owned by Cure Land in Yuma County, Colorado, that is north of the North Fork of the Republican River for well sites for new wells, a Compact Compliance Pipeline, connector pipelines, and related facilities, including but not limited to a systems control building, maintenance yard, one or more storage tanks, any utility lines necessary to provide power for the new wells and related facilities for a Compact Compliance Pipeline. The easements for well sites for new wells and the related facilities except utility lines shall be exclusive easements. The easements for the Compact Compliance Pipeline, connector pipelines, and utility lines shall be non-exclusive easements, but Cure Land shall not construct or place any new building, fence, (unless the fence is gated to allow access) or retaining wall, or plant any tree, shrub, woody plant, or nursery stock on any part of such easements without the RRWCD WAE's consent. The preliminary design for the Compact Compliance Pipeline project calls for 6-8 new well sites, although additional well sites may be necessary to pump the amounts approved by the Colorado Ground Water Commission pursuant to the applications described in Article 6, in which case consideration will be given to using one or more existing Cure Land wells in the project. The approximate location of the well sites, the Compact Compliance Pipeline, and related facilities is shown on Attachment "D." The dimensions of the easements are described on Attachment "E." The final number of well sites and their location, the location of the Compact Compliance Pipeline, and the related facilities and their location will be determined after the final design engineering and the changes of the rights to designated ground water have been approved, provided the well sites are located within the "well field boundary" shown on Attachment "D." The parties agree that the easements (a) will require restoration of the ground surface and replacement of fences, roads, and other structures

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following the RRWCD WAE's construction activities and that the RRWCD WAE will restore such land and replace such fences, roads, or other structures to the same or as good a condition as existed prior to the construction, and (b) will not encroach upon lands that will continue to be irrigated by Cure Land with rights to designated ground water that are not purchased by the RRWCD WAE in accordance with the Agreement without Cure Land's prior consent. The easements to be provided shall include the right to reasonable ingress and egress for maintenance and repair, and the easements for the well sites shall include the right to redrill wells within 300 feet of the location of the wells.

2. Cure Land agrees that it will not object to changes in location and use of the rights to designated ground water rights sold to the RRWCD WAE pursuant to this Agreement.

3. In the event the Colorado Ground Water Commission ("GWC") amends its rules and regulations for the management and control of designated ground water to allow new Republican River Compact Compliance Wells ("Compact Compliance Wells") to be constructed for the purpose of offsetting stream depletions to the Republican River and its tributaries in order to comply with Colorado's Compact allocations under the Republican River Compact, the RRWCD WAE shall have the right to drill new Compact Compliance Wells on lands owned by Cure Land in Yuma County, Colorado, and Cure Land will provide easements as provided in Article 2, paragraph 1 of this Agreement, on or across lands owned by Cure Land in Yuma County, Colorado, for up to 10 well sites for such Compact Compliance Wells, connector pipelines, utility lines, and related facilities to connect such Compact Compliance Wells to the Compact Compliance Pipeline, provided that (a) the total amount of future withdrawals under the rights to designated ground water listed on Attachment "A" and such Compact Compliance Wells shall not exceed the total permitted amounts of the rights to designated ground water listed

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on Attachment "A;" (b) such new wells are located at least 10 miles north of the North Fork of the Republican River and more that three miles from any well that is used to divert ground water under a right to designated ground water that is currently owned by Cure Land and that is not being sold to the RRWCD WAE pursuant to this Agreement; and (c) such easements are otherwise consistent with the provisions of Article 2, paragraph 1 of this Agreement.

4. Cure Land and the RRWCD WAE agree that the RRWCD WAE intends to construct new wells and a Compact Compliance Pipeline to deliver water available under the rights to designated ground water listed on Attachment "A" that are purchased by the RRWCD WAE in accordance with this Agreement to the North Fork of the Republican River via a Compact Compliance Pipeline. After the Closing Date provided below, if requested in writing by the RRWCD WAE, Cure Land, at its cost and expense, shall disconnect and abandon all wells currently used to withdraw ground water under the rights to designated ground water listed on Attachment "A" that are purchased by the RRWCD WAE in accordance with this Agreement, provided that Cure Land shall not be required to disconnect or abandon any such wells before the end of the 2008 growing season or so long as any of such wells are required to comply with the terms of a conservation plan for lands enrolled in the Republican River Conservation Reserve Enhancement Program ("Republican River CREP") that were historically irrigated by said rights to designated ground water or are required to comply with the terms of a valid law or regulation requiring such irrigated lands to be revegetated (collectively "Revegetation Requirement.") Notwithstanding the sale of the rights to designated ground water listed on Attachment "A" to the RRWCD WAE, Cure Land shall have the right to divert water under those rights from wells currently used to withdraw ground water under such rights in an amount not to exceed 6 inches per acre to comply with the terms of a Revegetation Requirement. Cure Land shall pay the costs

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for power and maintenance of pumps and motors to pump ground water to comply with the terms of a Revegetation Requirement, but shall not otherwise pay for the cost of the water for the Revegetation Requirement, including RRWCD use fees for 2009 and subsequent years.

5. After closing, except during 2008 and thereafter as necessary to comply with the terms of a Revegetation Requirement, Cure Land agrees that it will not irrigate the permitted or historically irrigated acreage associated with the rights to designated ground water listed on Attachment "A" that are purchased by the RRWCD WAE in accordance with this Agreement, unless irrigation of those lands is permitted by a change of a right to designated ground water approved by the GWC, and will comply with the terms of any Revegetation Requirement. The lands historically irrigated by the rights to designated ground water listed on Attachment "A" are shown on Attachment "D." This provision shall be a covenant running with the land and shall be binding on Cure Land and its successors and assigns.

ARTICLE 3
TITLE, DEED, TAXES AND DUE DILIGENCE

1. On or before March 10, 2008, Cure Land shall caused to be furnished to the RRWCD WAE, at Cure Land's expense, a written report, prepared under the supervision of Trout, Raley, Montaño, Witwer & Freeman, P.C., or another licensed Colorado attorney acceptable to RRWCD WAE (the "Water Rights Report"), that consists of the following: Based solely upon a) vesting deeds provided by Yuma County Abstract Company showing ownership, from the time well permit applications were filed through a date no earlier than two business days prior to the date of the report, of the land described as the permitted acreage on the well permits corresponding to each field number listed on Attachment "A" or Attachment "B" for which rights to designated ground water are being conveyed herein; b) well permit applicant and

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holder name information available from the files of the State Engineer's Office for such well permits; and c) a search of the grantor indexes in the office of the Yuma County Clerk and Recorder forward in time to a date no earlier than two business days prior to the date of the report, the Water Rights Report will disclose any recorded conveyance(s) of the rights to designated ground water listed on Attachment "A" and Attachment "B" during the searched period(s) to persons not shown, on the date of such conveyance(s), to be either the record owner(s) of the corresponding permitted acreage listed on such attachment(s) or the applicant or permit holder for the corresponding well permit(s). Cure Land shall also furnish any abstract or abstracts of title in the possession or control of Cure Land for the lands on which those rights to designated ground water have been used. The Water Rights Report shall state that it is being provided for the benefit of the RRWCD WAE and that it may be relied upon by the RRWCD WAE.

2. On or before March 3, 2008, Cure Land shall caused to be furnished to the RRWCD WAE, at Cure Land's expense, a current Title Commitment in the amount of $4,000,000 for the Dryden property described on Attachment "C" ("Dryden property"), and Cure Land shall cause the title insurance policy to be issued and delivered to the RRWCD WAE as soon as practicable at or after Closing. The RRWCD WAE shall have the right to review the Title Commitment.

3. On or before March 10, 2008, Cure Land, at Cure Land's expense, shall furnish the RRWCD WAE (1) copies of any plats, declarations, covenants, conditions and restrictions burdening the rights to designated ground water listed on Attachment "A" and Attachment "B" and copies of any documents listed in the schedule of exceptions to the Title Commitment.

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4. For a period of 30 days after the Water Rights Report and the Title Commitment are furnished to the RRWCD WAE, whichever is furnished later, the RRWCD WAE shall have the right to investigate the title to the Property. If there are any title defects discovered regarding the title to the Property, then the RRWCD WAE shall provide written notice to Cure Land of those defects within 30 days of the date of receipt of the Water Rights Report or the Title Commitment, whichever is later. If the RRWCD WAE gives notice of such title defects, it shall do so by giving notice in writing, identifying the specific title defect or defects. If such notice is given, then Cure Land shall have 30 days in which to cure said title defects. If Cure Land fails or is unable to cure said title defects, then Cure Land shall give notice in writing to the RRWCD WAE on or before the 30th day and the RRWCD WAE shall have 15 days from written notice that Cure Land is unable to cure the title defects to elect to terminate this Agreement or waive said title defects by giving notice in writing to Cure Land; provided, however, that if a title defect or defects affect(s) only some but not all of the rights to designated ground water listed on Attachment "A" and/or Attachment "B," the RRWCD WAE shall have the right to partially terminate this Agreement as to the rights to designated ground water listed on Attachment "A" or Attachment "B" for which there are title defects and to purchase the remainder of the rights to designated ground water listed on Attachment "A," Attachment "B," and/or the Dryden property. If the RRWCD WAE partially terminates this Agreement, the Purchase Price shall be reduced by $2,850 times the historical consumptive use in acre-feet per year shown in column (9) of Attachment "A" and/or Attachment "B" for the right or rights for which this Agreement has been terminated. Notice of this election shall be given in writing by the RRWCD WAE to Cure Land.

5. Title to the Property shall be marketable.

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6. On the Closing Date, Cure Land shall execute and deliver to the RRWCD WAE a good and sufficient special warranty deed conveying the rights to designated ground water on Attachments "A" and "B" free and clear of all liens and encumbrances, except those title defects which the RRWCD WAE may, but is not required to, have chosen to waive. On the Closing Date, Cure Land shall execute and deliver to the RRWCD WAE a good and sufficient assignment of final permits listed on Attachments "A" and "B", provided that Cure Land shall not be obligated to assign Permit No. 14122-FP as such permit may be modified consistent with RRWCD WAE's rights to designated groundwater associated with Field 7-19 under this Agreement. On the Closing Date, Cure Land shall execute and deliver to the RRWCD WAE a good and sufficient general warranty deed for the Dryden property described on Attachment "C" free and clear of all liens and encumbrances, except those title defects which the RRWCD WAE may, but is not required to, have chosen to waive. On the Closing Date, Cure Land shall execute and deliver to the RRWCD WAE good and sufficient easements as specified in Article 2, paragraphs 1 and 3, above. Title to such easements shall be subject to all easements of record.

7. On the Closing Date, the RRWCD WAE shall pay $44,263,152.00 in cash or equivalent funds to Cure Land, subject to the reduction as provided in Article 1, paragraph 2, above, if Cure Land exercises its option to retain the right to designated ground water for field number 7-19, and subject to any further reduction if the RRWCD WAE partially terminates this Agreement as provided in paragraph 4 of this Article 3.

8. Cure Land will be responsible for the payment of all taxes and RRWCD use fees attributable to the Property for 2007 and previous years. Notwithstanding the conveyance of the rights to designated ground water listed on Attachment "A" to the RRWCD WAE, Cure Land shall be responsible for the payment of all taxes on lands historically irrigated by those rights.

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Taxes for 2008 on the Dryden property described on Attachment "C" shall be prorated to the closing based on the taxes for the calendar year immediately preceding the closing. RRWCD use fees for 2008, due in 2009, for diversions under the rights to designated ground water listed on Attachments "A" and "B" shall be paid by Cure Land.

9. For a period of 60 days after the date of this Agreement, Cure Land shall cooperate with the RRWCD WAE in its inspections and investigations of the condition and status of the Property, and will provide the RRWCD WAE reasonable access to its land and facilities for well testing, water level measurements, and other testing, provided the RRWCD WAE's testing does not interfere with Cure Land's operations. In addition, Cure Land will cooperate with and provide the RRWCD WAE reasonable access to its land in Yuma County, Colorado, north of the North Fork of the Republican River during 2008 for final design engineering for new wells, including drilling test wells for new wells, the Compact Compliance Pipeline, connector pipelines, and related facilities, provided the RRWCD WAE's operations do not interfere with Cure Land's operations.

ARTICLE 4
FINANCING

1. The RRWCD WAE has applied for a loan from the Colorado Water Conservation Board (CWCB) Construction Loan Fund for a minimum of $40 million at an interest rate of 2.25%. The loan is subject to approval by the CWCB and the Colorado General Assembly and will not be available before July 1, 2008. If the loan from the CWCB Construction Loan Fund has not been approved by July 1, 2008, and the RRWCD WAE is not able to secure another source of acceptable financing within 45 days thereafter, this Agreement shall terminate and, if Cure Land has not yet received a full one-half of the Down Payment under the provisions of

JPC MNC WEC EJC DC

Article 1, paragraph 2(a) of this Agreement, Cure Land shall receive one-half of the Down Payment and Yuma County Abstract shall pay the Remaining Down Payment to the RRWCD WAE. Any interest accrued on any portion of the Down Payment shall be paid to Cure Land.

ARTICLE 5
CLOSING

1. Closing Date. Cure Land and the RRWCD WAE agree that the Colorado Ground Water Commission ("GWC") must approve a change in location and use of the rights to designated ground water listed on Attachment "A" before those rights can be used in a Compact Compliance Pipeline and that the Sand Hills Ground Water Management District ("GWMD") must approve the export of ground water from the Sand Hills GWMD before water diverted under the rights to designated ground water listed on Attachment "A" can be delivered to the North Fork of the Republican River for Compact Compliance. The closing shall take place within 30 days after the CWCB loan has been approved and is available, provided that the approvals of the GWC and the Sand Hills GWMD and any appeals are final prior to closing. If the approvals by the GWC and the Sand Hills GWMD and any appeals are not final within 30 days after the CWCB loan has been approved and is available, the closing shall take place within 30 days after the approvals by the GWC and the Sand Hills GWMD and any appeals are final. If Cure Land or other entities approved by Cure Land have applied to enroll land irrigated by the rights to designated ground water listed on Attachment "A" in the Republican River CREP and the closing cannot take place until the CREP contracts have been signed, the closing will take place once the CREP contracts have been approved and signed by the FSA County Committee. The RRWCD WAE will provide normal and reasonable assistance to Cure Land or other entities approved by Cure Land that are eligible to enroll such irrigated lands in the Republican River CREP in reviewing information required for CREP contracts.

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2. At the closing Cure Land shall execute and deliver the deeds and easements, as provided above, to the RRWCD WAE, and Yuma County Abstract or the Closing Company shall deliver the Remaining Down Payment, including interest on the Remaining Down Payment, to Cure Land and the RRWCD WAE shall deliver the cash or equivalent funds for the remainder of the Purchase Price to Cure Land, as provided above.

ARTICLE 6
APPLICATIONS

1. Upon execution of this Agreement, Cure Land authorizes the RRWCD WAE to file applications with the GWC and the Sand Hills GWMD to change the location and use of the rights to designated ground water listed on Attachment "A" to new well locations and for Compact Compliance use and to allow the use of ground water diverted under such rights outside the boundaries of the Sand Hills GWMD, provided that Cure Land has acquired title to the rights at the time of the filing of the applications. The RRWCD WAE shall file such applications within 45 days of the execution of the Agreement and thereafter shall prosecute such applications with diligence until final decisions are made. Cure Land, represented by its counsel, may join the RRWCD WAE as a co-applicant in such applications and may participate in any proceedings held concerning such applications to ensure that the terms of this Agreement are complied with, provided, however, that the RRWCD WAE shall pay any fees and expenses for such applications, including the engineering and legal fees necessary to prepare, file, and prosecute such applications. Cure Land will pay its own legal fees or any other expenses to participate in any proceedings held concerning such applications. The applications shall include a term and condition that the existing wells will be alternate points of diversion for the rights to designated groundwater listed on Attachment "A" in 2008 for irrigation use and thereafter as required to comply with a Revegetation Requirement. The RRWCD WAE may file such applications with

JPC MAC w/cc EJC D.C.

the GWC and the Sand Hills GWMD before the rights to designated ground water listed on Attachment "A" have been conveyed to the RRWCD WAE, but the applications shall state that any change shall not be effective until the rights are transferred to the RRWCD WAE unless Cure Land expressly authorizes the RRWCD WAE in writing to use water prior to that time.

2. Upon signing this Agreement, the RRWCD WAE will request the Colorado State Engineer to seek approval of Republican River Compact Administration for the Compact Compliance Pipeline project.

ARTICLE 7
LEASE OF RIGHTS TO DESIGNATED GROUND WATER

1. If the closing takes place prior to August 31, 2008, the RRWCD WAE agrees to lease the Property to Cure Land during the remainder of 2008 as follows: (a) for use of the rights to designated ground water listed on Attachment "A," the lease payment will be calculated by multiplying the number of days by which the Closing Date precedes August 31, 2008, by $3928; and b) for use of the rights to designated ground water listed on Attachment "B" and the Dryden property, the lease payment will be calculated by prorating an assumed annual lease payment of $100,000 for the remainder of 2008 following the Closing Date. After 2008, any use by Cure Land of rights to designated ground water conveyed herein to comply with the terms of any Revegetation Requirement consistent with the provisions of Article 2, paragraph 4 of this Agreement shall be at no cost to Cure Land.

ARTICLE 8
NOTICES

1. Notices, consents, approvals or other communications provided for herein or given in connection herewith shall be deemed given, made, delivered or served if made in

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writing and delivered personally or sent by registered or certified United States mail, return receipt requested and postage prepaid, to:

RRWCD WAE:
Stan Murphy
Republican River Water Conservation District
410 Main Street, Suite 8
Wray, CO 80758

With copy to:

David W. Robbins, Esq.
Hill & Robbins, P.C.
1441 18th Street, Suite 100
Denver, CO 80202

Cure Land, LLC:
36977 Road CC
Bethune, CO 80805

With copy to:
James S. Witwer, Esq.
Trout Raley Montaño Witwer & Freeman PC
1120 Lincoln Street, Suite 1600
Denver, CO 80203-2141

or to such other address as either party hereto may from time to time designate in writing and deliver in a like manner to the other party. Such notices or other communications shall be deemed given or made upon delivery, if delivered personally, or upon the date of the execution of the return receipt, if sent by registered or certified United States mail.

ARTICLE 9
DEFAULT, RIGHT TO CURE AND REMEDIES

1. In the event that either party believes that the other is in default of any obligation under this Agreement, the non-defaulting party shall give written notice of the default to the party it believes is in default. If a notice of default is provided, the party accused of the default shall either cure it or provide a written statement explaining why it is not in default. If the

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alleged default is not cured or otherwise resolved within 30 days, the parties may resort to their remedies.

2. Time is of the essence hereof and if any payment or condition hereof is not made, tendered or performed by either Cure Land or the RRWCD WAE as provided herein, and such default is not cured as provided above, the non-defaulting party may have any such remedies as provided by law, including the right to specific performance and damages. If any date or time period provided for in this Agreement is or ends on a Saturday, Sunday or federal or Colorado state holiday, then such date shall automatically be extended to the next day which is not a Saturday, Sunday or federal or Colorado state holiday. In no event shall either party hereto be liable to the other for lost profits or punitive, exemplary or consequential damages.

ARTICLE 10
BINDING EFFECT AND ASSIGNMENT

1. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors.

2. There shall be no assignment of any interest under this Agreement without the prior written consent of the other party. Upon an authorized assignment, all the provisions hereof shall inure to the benefit and be binding upon the successors and assigns of Cure Land and the RRWCD WAE.

ARTICLE 11
WAIVER

1. No delay in exercising any remedy shall constitute a waiver thereof, and no waiver by Cure Land or the RRWCD WAE of the breach of any covenant or condition of this

JPC MNC WEC EJC DC

Agreement shall be construed as a waiver of any preceding or succeeding breach of the same, or any other covenant or condition of this Agreement.

ARTICLE 12
CAPTIONS

1. The captions of the articles of this Agreement are for convenience only and shall not govern or influence the interpretation hereof.

ARTICLE 13
COLORADO LAW, PLACE OF PERFORMANCE AND VENUE

1. This Agreement shall be governed by the laws of the State of Colorado.

2. The parties agree that this Agreement is performable in the County of Yuma, Colorado, and that venue for any disputes over any issue resulting from this Agreement shall be in Yuma County District Court.

ARTICLE 14
FURTHER DOCUMENTS, ETC.

1. Each party shall execute and deliver all such documents and perform all such acts as reasonably requested by the other party from time to time at and after the closing to carry out the matters contemplated by this Agreement.

ARTICLE 15
ENTIRE AGREEMENT AND CHANGES

1. This Agreement constitutes the entire agreement between the parties pertaining to the subject matter hereof. All prior and contemporaneous agreements, representations and understanding of the parties, oral or written, are hereby superseded and merged herein. No change or addition may be made to this Agreement, except by a written agreement executed by the parties.

JJK MAC w/c EJC D.C.

ARTICLE 16
COMMISSIONS

1. Each party represents to the other that no commissions are due to any other person or entity as a result of the execution of this Agreement or the sale and transfer of the rights to designated ground water and the real property interests pursuant thereto.

ARTICLE 17
SURVIVAL OF CLOSING

1. All terms and conditions of this Agreement shall survive the closing and shall not merge into the deeds.

ARTICLE 18
COUNTERPARTS

1. This Agreement may be executed in duplicate counterparts and the counterparts shall together constitute this Agreement.

ARTICLE 19
DATE OF THIS AGREEMENT

1. The date of this Agreement shall be the date of the execution of this Agreement by Cure Land and the RRWCD WAE, if executed on the same date. If the Agreement is not executed by Cure Land and the RRWCD WAE on the same date, then the date of this Agreement shall be the latest date on which Cure Land or the RRWCD WAE executed this Agreement.

ARTICLE 20
ADDITIONAL WARRANTIES

1. The RRWCD WAE makes the following representations, warranties and covenants to Cure Land:

JPC MMC WEC ESC D.C.

(a) The execution and performance of this Agreement has been duly approved by the board of directors of the District, which is the Governing Body of the RRWCD WAE, in accordance with applicable law.

(b) The RRWCD WAE has the right, power and authority to enter into this Agreement and to perform its obligations hereunder, and the person executing this Agreement on behalf of the RRWCD WAE has the right, power and authority to do so.

(c) This Agreement constitutes the legal, valid and binding obligation of the RRWCD WAE enforceable against the RRWCD WAE in accordance with its terms. Neither this Agreement nor the consummation of any of the transactions contemplated hereby violates or shall violate any provision of any agreement or documents to which the RRWCD WAE is a party or to which the RRWCD WAE is bound.

(d) There is no suit, action or arbitration, or legal, administrative, or other proceeding, formal or informal, pending or threatened, which affects the RRWCD WAE's ability to perform this Agreement.

(e) The execution, delivery and performance of this Agreement shall not breach or constitute a default, or grounds for the acceleration of the maturity of, any agreement, indenture, undertaking or other instrument, to which the RRWCD WAE is a party or by which the RRWCD WAE or any of its property may be bound or affected.

2. Cure Land makes the following representations, warranties and covenants to the RRWCD WAE:

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(a) The execution and performance of this Agreement has been duly approved Cure Land in accordance with applicable law.

(b) Cure Land has the right, power and authority to enter into this Agreement and to perform its obligations hereunder, and the person executing this Agreement on behalf of Cure Land has the right, power and authority to do so.

(c) This Agreement constitutes the legal, valid and binding obligation of Cure Land enforceable against Cure Land in accordance with its terms. Neither this Agreement nor the consummation of any of the transactions contemplated hereby violates or shall violate any provision of any agreement or documents to which Cure Land is a party or to which Cure Land is bound.

(d) There is no suit, action or arbitration, or legal, administrative, or other proceeding, formal or informal, pending or threatened, which affects Cure Land' ability to perform this Agreement.

(e) The execution, delivery and performance of this Agreement shall not breach or constitute a default, or grounds for the acceleration of the maturity of, any agreement, indenture, undertaking or other instrument, to which Cure Land is a party or by which Cure Land or any of its property may be bound or affected.

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REPUBLICAN RIVER WATER CONSERVATION DISTRICT, Acting by and through THE REPUBLICAN RIVER WATER CONSERVATION DISTRICT WATER ACTIVITY ENTERPRISE

By: _____
Dennis Coryell
President
RRWCD Board of Directors

ATTEST:

By: _____
TIMOTHY ~~Tim~~ Pautler
TP Secretary

CURE LAND, LLC

By: _____
William E. Cure
Manager

By: _____
Edward J. Cure
Manager

By: _____
John R. Cure
Manager

By: _____
Michael R. Cure
Manager

ESC DC

STATE OF COLORADO)
) ss.
COUNTY OF Kit Carson)

Subscribed and sworn to before me this 10th day of January, 2008 by Dennis Coryell as President and ~~Tim~~ Timothy Pautler as Secretary of the Republican River Water Conservation District, acting by and through its Water Activity Enterprise.

Witness my hand and seal.
My commission expires: 6-23-2011

DARVIN MEURISSE
Notary Public
State of Colorado

Darvin Meurisse
Notary Public
Darvin Meurisse
390 18th St
Burlington, CO 80807

STATE OF COLORADO)
) ss.
COUNTY OF Kit Carson)

Subscribed and sworn to before me this 10th day of January, 2008 by William E. Cure, as Manager of Cure Land, LLC.

Witness my hand and seal.
My commission expires: 6-23-2011

DARVIN MEURISSE
Notary Public
State of Colorado

Darvin Meurisse
Notary Public
Darvin Meurisse
390 18th St
Burlington, CO 80807

JPC MLC w/c ESC D.C.

STATE OF COLORADO)
) ss.
COUNTY OF Kit Carson)

Subscribed and sworn to before me this 10th day of January, 2008 by Edward J. Cure, as Manager of Cure Land, LLC.

Witness my hand and seal.
My commission expires: 6-23-2011

DARVIN MEURISSE
Notary Public
State of Colorado

Notary Public
Darvin Meurisse
390 18th St
Burlington, CO 80807

STATE OF COLORADO)
) ss.
COUNTY OF Kit Carson)

Subscribed and sworn to before me this 10th day of January, 2008 by John P. Cure, as Manager of Cure Land, LLC.

Witness my hand and seal.
My commission expires: 6-23-2011

DARVIN MEURISSE
Notary Public
State of Colorado

Notary Public
Darvin Meurisse
390 18th St
Burlington, CO
80807

JPC MLC with ESC D.C.

STATE OF COLORADO)
) ss.
COUNTY OF Kit Carson)

Subscribed and sworn to before me this 10th day of January, 2008 by Michael R. Cure, as Manager of Cure Land, LLC.

Witness my hand and seal.
My commission expires: 6-23-2011

DARVIN MEURISSE
Notary Public
State of Colorado

Notary Public
Darvin Meurisse
390 18th St
Burlington, CO 80807

JPC MRC Init ESC D.C.

Attachment A - Rights to Designated Groundwater

(note values shown in bold red indicate incomplete data and values are estimated for the purposes of this table)

Field Number (1)	Permit #1 (2)	Permit #2 (3)	Average Acreage to be Reported in Change of Use Form (4)	Irrigated Acreage from Satellite Photos (5)	Permitted Acreage (6)	Permitted ac-ft/yr (7)	GPM from Pump Test (8)	Historical Consumptive Use (ac-ft/yr) (9)
1-1	12967-FP	16920-FP	194	191	197	493	1,469	345
1-2	14403-FP		181	180	183	458	1,280	306
1-3	14019-FP		133	130	135	380	825	217
1-4	14018-FP		164	167	168	418	1,057	252
1-5	19372-FP		136	139	136	340	962	218
1-6 and 1-7	18780-FP		127	131	138	345	898	192
Subtotal			**935**	**938**	**957**	**2,434**	**6,491**	**1,530**
2-1	14396-FP		130	135	130	325	791	192
2-2	13858-FP		133	133	133	333	823	228
2-3	13859-FP	16069-FP	188	187	189	473	1,106	270
2-4	13857-FP		147	141	146	365	1,153	229
2-5	14398-FP		144	142	144	360	1,059	240
2-6	13856-FP	16067-FP	164	168	165	413	1,159	249
Subtotal			**906**	**906**	**907**	**2,269**	**6,091**	**1,408**
3-1	14397-FP		127	127	126	315	890	192
3-2	14027-FP		153	153	154	385	1,191	251
3-3	14022-FP		180	181	180	450	1,236	289
3-4	14023-FP		133	133	133	333	989	219
3-5	14600-FP		124	125	126	315	832	197
3-6	15285-FP		98	101	97	243	747	161
3-7	20896-FP		107	108	106	265	814	169
Subtotal			**922**	**928**	**922**	**2,306**	**6,699**	**1,479**
4-1	13513-FP	16074-FP	186	182	187	468	1,283	303
4-2	14028-FP		146	159	146	365	1,147	218
4-3	14753-FP		185	186	185	463	1,230	310
4-4	13522-FP		135	134	137	343	1,073	204
4-5	14024-FP		93	96	94	235	699	141
4-6	13509-FP	16075-FP	179	174	179	448	1,223	284
4-7	13511-FP		123	124	124	310	927	192
4-8	18781-FP		128	130	128	320	873	216
4-9	21476-FP		88	91	88	220	589	143
5-1	18783-FP		173	180	180	400	938	273
Subtotal			**1,437**	**1,456**	**1,448**	**3,572**	**9,982**	**2,284**
6-0	19004-FP		82	127	328	700	1,000	129
6-1	19005-FP		124	125	180	335	798	178
6-2	18966-FP		94	87	408	900	769	172
6-3	18018-FP		148	151	204	400	995	230
6-4,6-5	18017-FP	19001-FP	245	251	336	800	1,699	359
6-6, 6-7	23222-FP		148	148	194	267	1,000	171
6-8	18019-FP		108	115	194	400	707	174
6-9, 6-10	18014-FP		176	179	251	400	988	259
6-11,12,13,14	18013-FP		250	260	228	400	1,812	350
6-15, 6-16	18011-FP		244	248	428	900	2,254	431
6-17, 6-18, 6-19	18015-FP		329	333	280	900	2,371	543
6-20, 6-21	18012-FP	19000-FP	208	208	262	582	1,436	322
Subtotal			**2,156**	**2,232**	**3,293**	**6,984**	**15,829**	**3,319**

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Attachment A - Rights to Designated Groundwater

(note values shown in bold red indicate incomplete data and values are estimated for the purposes of this table)

Field Number (1)	Permit #1 (2)	Permit #2 (3)	Average Acreage to be Reported in Change of Use Form (4)	Irrigated Acreage from Satellite Photos (5)	Permitted Acreage (6)	Permitted ac-ft/yr (7)	GPM from Pump Test (8)	Historical Consumptive Use (ac-ft/yr) (9)
7-1	13813-FP	16923-FP	126	128	160	400	941	206
7-2, 7-2A	13814-FP		219	246	240	480	1,405	334
7-3, 7-3a	13815-FP		197	243	240	480	1,291	291
7-13, 7-14	14718-FP		358	406	480	800	1,990	535
7-15, 7-16	14121-FP		284	279	320	800	1,618	436
7-17, 7-18	14719-FP		263	262	320	800	2,018	455
7-19 [a)]	14122-FP		131	132	160	400	918	215
7-21, 7-21a	12589-FP		251	291	200	560	1,640	376
7-23	12567-FP		126	125	126	315	1,002	201
Wiley	4319-FP		62	78	50	125	374	75
Wilder/Cure [b)]	20198-FP		124	124	124	310	1,000	170
Wilder/Cure [b)]	20196-FP		165	165	165	413	1,000	230
Subtotal			**2,308**	**2,479**	**2,585**	**5,883**	**15,196**	**3,523**
Total			**8,663**	**8,939**	**10,112**	**23,448**	**60,287**	**13,543**
Total with Dryden wells in Attachment B			**9,330**	**9,604**	**10,932**	**25,498**	**62,504**	**14,536**

Footnotes

a) Permit allows for irrigation of parcels 7-19 and 7-20. Only the portion of permit historically used to irrigate parcel 7-19 is included in this table.

b) Under contract for purchase by Cure Land.

Explanation of Columns

(1) Field Number as shown on Attachment D

(2) Final permit for the Northern High Plains Designated Ground Water Basin. See permit for well location, priority date, and other information, including any allowable commingling with other permits.

(3) Second permit associated with the permit shown in column 2. Typically, these are permits for additional acreage, but see permit for details.

(4) Average acreage reported in change of use form used to determine values in Column 9.

(5) Irrigated acreage as determined from 2004 and 2005 Satellite photography.

(6) Reported permitted acreage.

(7) Reported permitted amount.

(8) Reported gallons per minute for the well from the power coefficient pumping test.

(9) Historical consumptive use determined from irrigated acreage, crop records and power records.

Attachment B - Dryden Rights to Designated Groundwater

(note values shown in bold red indicate incomplete data and values are estimated for the purposes of this table)

Field Number (1)	Permit #1 (2)	Permit #2 (3)	Average Acreage to be Reported in Change of Use Form (4)	Irrigated Acreage from Satellite Photos (5)	Permitted Acreage (6)	Permitted ac-ft/yr (7)	GPM from Pump Test (8)	Historical Consumptive Use (ac-ft/yr) (9)
W-1	13353-FP	16931-FP	157	158	180	450		236
W-2	13316-FP		135	133	160	400	1,157	211
W-3	13317-FP		117	121	160	400	1,060	140
W-4	19910-FP		127	123	160	400		183
W-5	14422-FP		131	130	160	400		223
Subtotal			**667**	**665**	**820**	**2,050**	**2,217**	**993**

See Attachment A for explanation of columns.

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ATTACHMENT C

Township 2 North, Range 44 West of the 6th P.M., Yuma County, Colorado:

Section 1: E/2NW/4, W2NE/4, SW/4, W/2SE/4, SE/4SE/4

Section 12: That part of said Section 12, more particularly described as follows:

Beginning at the Northwest corner of said Section 12; thence South 89°40'30" East and along the North line of said Section 12 a distance of 3974.4 feet; thence South 15°06'30" East a distance of 721.7 feet; thence South 27°53'00" East a distance of 695.4 feet; thence South 17°55'30" West a distance of 268.5 feet; thence South 57°44'30" East a distance of 401.4 feet; thence South 46°47'30" East a distance of 338.5 feet; thence South 26°43'30" East a distance of 682.3 feet to a point on the East line of said Section 12; thence South 00°01'00" West and along the East line of said Section 12 a distance of 126.0 feet; thence South 10°18'30" West a distance of 579.8 feet; thence South 37°29'30" West a distance of 837.1 feet; thence South 65°24'00" West a distance of 488.4 feet; thence South 76°07'30" West a distance of 371.6 feet; thence North 71°37'00" West a distance of 670.3 feet; thence North 52°51'30" West a distance of 334.3 feet; thence South 89°33'00" West a distance of 301.5 feet; thence North 10°58'30" West a distance of 545.0 feet: thence South 84°26'00" West a distance of 1029.4 feet; thence North 80°03'30" \Vest a distance of 811.4 feet: thence North 89`40'00" West a distance of 755.7 feet to a point on the West line of said Section 12; thence North 0°07'00" East and along the West line of said Section 12,a distance of 3307.4 feet to the point of beginning and containing 399.54 acres, more or less, subject to U.S. Highway N. 385 Right-of-Way, Except a 40.1 acre tract described in Book 510 at Page 390 described as follows:

A tract of land in the NE/4 of Section 12, Township 2 North. Range 44 West of the 6" P.M., Yuma County, Colorado, said tract being more particularly described as follows:

Commencing at the Northeast corner of said Section 12; thence North 89°40'30" \Vest and along the North line of said Section 12 a distance of 1324.8 feet to the true point of beginning; thence South 15°06'30" East a distance of 721.7 feet; thence South 27°53'00" East a distance of 695.4 feet; thence South 17°55'30" West a distance of 268.5 feet; thence North 57°54'00" West a distance of 266.4 feet; thence North 84°09'00" West a distance of 260.3 feet; thence South 73°50'30" West a distance of 763.0 feet; thence South 44°51'00" West a distance of 175.9 feet; thence North 0°09'30" \Vest a distance of 1740.4 feet to a point on the North line of said Section 12; thence South 89°40'30" East and along the North line of said Section 12 a distance of 914.9 feet to the point of beginning, and containing 40.1 acres, more or less.

Reserving, however, to Grantor all of the remaining oil, gas, and minerals, of every kind and nature, after the grants or reservations of record in the Yuma County Clerk and Recorder's records, lying in, on, and under, and that may be produced from all of the Property, together with rights to reduce the same to possession, of ingress and egress and use of so much of the surface

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JYC MRC ESC DG

as may be necessary for the full enjoyment of the mineral estate herein saved and reserved, including rights incident to the development, production, conservation, and transportation thereof.

And further subject, however, to a life estate reserved to Gleason E. Dryden for the entire use and possession of a tract of approximately 35 acres, more or less, located in Section 12, Township 2 North, Range 44 West of the 6th P.M., Yuma County, Colorado, which is part of the Property described herein, including the residence, out buildings, corrals, and pasture.

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JPC MRC ESC DG

Attachment E- Easements

The exact location of the Compact Compliance Pipeline system (CCPS) has not been determined. The general layout and alignment of the CCPS, based on the preliminary design, is shown in Attachment D. At the northern end of the main conveyance pipeline there will be a storage tank, a maintenance yard, and a control building. The rights to designated ground water listed on Attachments "A" and "B" will be transferred to approximately 6 to 15 wells that will be connected to the storage tank by collector pipelines. The dimensions of the easements for the CCPS are described below.

Well Sites

There will be exclusive easements for up to 15 well sites. The final location of the wells has not been determined, but the wells will be located within the well field boundary line shown on Attachment D. It is anticipated that one or more existing irrigation wells owned by Cure Land could be used for purposes of pumping groundwater for the Compact Compliance Pipeline, thereby reducing the need to construct a similar number of new wells. However, easements will be required for existing wells if used in this manner. The individual well site easements will consist of three components: 1) a nonexclusive access easement that will allow for access to the well sites through land owned by Cure Land along agreed upon farm roads from county roads; 2) a well site easement consisting of a square that is six hundred feet on a side with the well located at its center to allow for maintenance and repair on the well and to allow for the well to be re-drilled within 300 feet of the original well location in any direction; and 3) a sufficient nonexclusive easement to allow for construction and maintenance of electric power lines from the well to the closest REA lines capable of providing service. It is understood that the actual well facility within the easement may be fenced to protect its integrity.

Well Connector Pipelines

There will be non-exclusive easements for approximately 8 to 16 miles of 12" to 24" pipe to connect the wells to the storage tank, depending on the

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number of wells and the required spacing of the wells. These collector pipe easements will require a 70-foot construction easement and a 50-foot permanent easement. The permanent easements will be centered along the center line of the connector pipe. The crown of the pipe will be buried a minimum of 3 feet below ground surface. In addition, the easements will allow for access manholes, air release valves, and drain values at appropriate locations along the pipeline.

Storage Tank, Maintenance Storage Yard, and Control Structure.

There will be an exclusive easement for a storage tank of approximately a 1 million gallons, a maintenance storage yard, and a control building. Located adjacent to the storage tank will be a maintenance storage yard and a building with controls for the pipeline operations. The total easement area for these three structures will be up to 5 acres. The area will be fenced to prevent cattle from crossing onto the grounds and to protect the integrity of the structures.

In addition, there will be a temporary 10-acre construction easement along a county road to serve as a pipe yard.

Main Conveyance Pipeline

There will be a non-exclusive easement on the Cure Land for approximately 9 to 15 miles of 36" pipe to deliver the water from the storage tank south toward the North Fork of the Republican River. The approximate location of the conveyance pipeline is shown on Attachment D. The conveyance pipe easement will require a 100-foot construction easement and a 50-foot permanent easement. The permanent easement will be centered along the center line of the pipe. The crown of the pipe will be buried at least 3 feet below ground surface. In addition the easement will allow for access manholes, air release valves, and drain values at appropriate locations along the pipeline.

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