Feasibility of Rehabilitation of Rio Grande Reservoir Hinsdale County, CO

Sponsored by
San Luis Valley Irrigation District
In conjunction with the
Colorado Water Conservation Board

Prepared by
DiNatale Water Consultants
February 2018

DiNatale WATER CONSULTANTS

Contents

List of Figures

List of Tables

Farmers Union Canal lateral

1. Introduction

The San Luis Valley Irrigation District (Irrigation District) is an irrigation district formed and operating pursuant to Title 37, Article 42 of the Colorado Revised Statutes. The District's offices are in Center, Colorado. The District owns and operates 135 miles of irrigation ditches, including its primary ditch, the Farmers Union Canal, which diverts water from the Rio Grande River and delivers this water to nearly 62,000 acres of land located in the San Luis Valley in Alamosa, Rio Grande and Saguache Counties. The District owns and operates the Rio Grande Reservoir located on the headwaters of the Rio Grande in Hinsdale County, Colorado, which has a storage capacity of approximately 54,000 acre-feet.

As described in this Feasibility Report, the District is seeking a loan to fund a portion of the Phase 2 Rehabilitation of Rio Grande Reservoir, which is the infrastructure component of the Rio Grande Cooperative Project. In November of 2011, the CWCB Board recommended approval of a funding package of $30 million for the Rio Grande Cooperative Project. This was subsequently placed in the CWCB Projects Bill SB12-165 and was signed by the Governor in 2012. The authorization included a loan for $10 million for the improvements needed for the Beaver Park Reservoir, which is owned and operated by Colorado Parks and Wildlife and was completed in 2015.

In addition, a $5 million grant was awarded to the Irrigation District to prepare final design plans for repairs needed at the Rio Grande Reservoir and to fund the seepage control improvements. The authorization also included a $15 million loan-grant for the repair of the outlet tunnel and spillway.

The District recently received approval of final design by the State Dam Safety Branch for the repairs. This resulted in an increase in the engineer's estimate of total project cost. The CWCB Board requested that the General Assembly authorize an additional $10 million for a total of $40 million funding package for the Rio Grande Cooperative Project. This increase was authorized in the 2017 CWCB Projects Bill as a $25 million loan/grant funding package to the SLV District's Rio Grande Reservoir Rehabilitation Project.

2. Project Sponsor

The District is a Colorado Irrigation District organized and existing under and pursuant to the Irrigation District Law of 1905, C.R.S. §§ 37-41-101, et seq., as amended. The purpose of irrigation districts is to bring into cultivation the arid lands of the state and making them highly productive by the process of irrigation.

The District Board for 2018 are:

- Randall Palmgren, President
- Sheldon Rockey, Vice-president
- Mark Beiriger, Director
- Terry Chiles, Director
- Tuck Slane, Director

The management staff of the District are:

- Rob Phillips, Superintendent
- Amy Dean, Secretary

3. Project Service Area and Facilities

The Irrigation District is comprised of 61,920 acres of irrigated land as shown in Figure 1. Annual assessment by the District on these acres are $1,500 per acre for a total of $580,500. The Rio Grande County Assessor, its annual property tax notice to landowners within the Irrigation District, includes the Irrigation District's assessment and also collects the assessments and distributes the collected assessments to the Irrigation District. In addition to the annual assessment, the District landowners also pay a variable fee to Groundwater Management Subdistrict No. 1 for replacement of well pumping that is not covered by the Irrigation District's annual diversions.

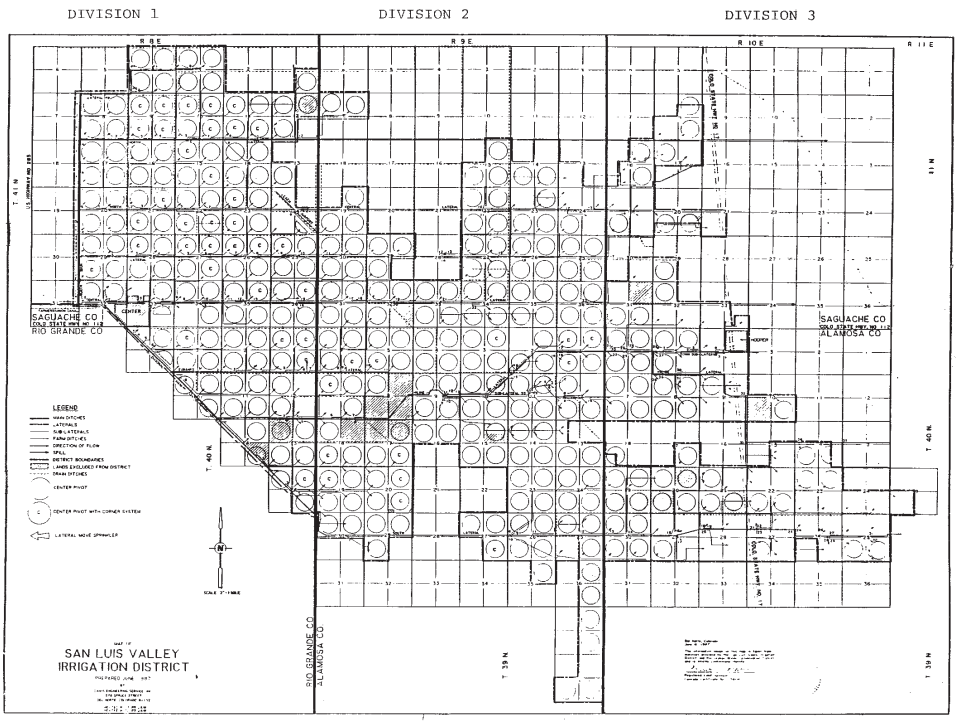
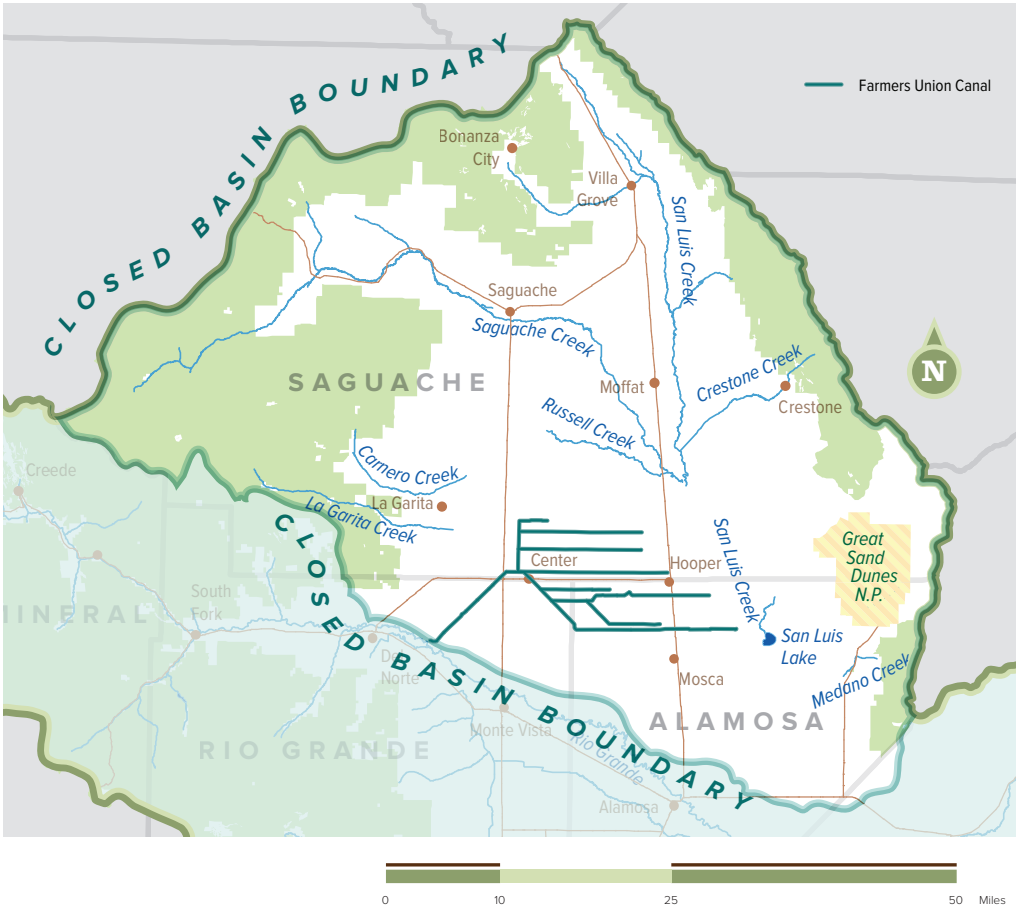


FIGURE 1.

District Service Area

FIGURE 2.

Farmers Union Canal System



4. Hydrology and Water Rights

The District has direct flow rights decreed to the Farmers Union Canal. It also has storage right for Rio Grande Reservoir. The Districts water rights are summarized in Table 1.

TABLE 1.

San Luis Valley Irrigation District Water Rights

Structure	Appropriation Date	Priority Number	Amount
Farmers Union Canal	April 1, 1887	308	0.25 cfs
Farmers Union Canal	November 9, 1887	314	138.80 cfs
Farmers Union Canal	April 1, 1988	328	0.25 cfs
Farmers Union Canal	April 1, 1889	353	0.95 cfs
Farmers Union Canal	June 30, 1889	1903-17-B	5.45 cfs
Farmers Union Canal	June 30, 1890	1903-22-E	105.41 cfs
Farmers Union Canal	June 30, 1891	1903-24-F	280.47 cfs
Farmers Union Canal	June 30, 1892	1903-30-F	159.69 cfs
Farmers Union Canal	June 30, 1893	1903-34-G	110.18 cfs
Rio Grande Reservoir	June 3, 1903	1916-63A	45,833 AF
Rio Grande Reservoir	June 1, 1903	1934-2	5,280 AF

The Farmers Union Canal diverts from the North Chanel of the Rio Grande east of Del Norte. The main canal travels NE approximately 10 miles before its first diversion. The Districts' delivery system has 7 laterals that generally travel from west to east to provide irrigation water for the Irrigation District's 61,920 acres. The delivery system has a series of concrete check structures that provide head pressure at farm delivery headgates. The Farmers Union Canal diversions are mainly used for recharging the unconfined aquifer. There are approximately 135 miles of laterals in the Farmers Union Canal system.

Farmers Union Canal headgate

The District diverted an average of approximately 41,770 AF per year for the period 2013-2017 at the Farmers Union Canal as shown in Table 2. Of this annual average amount, 27,040 AF or 65%, is attributable to direct flow rights decreed to the Farmers Union Canal. Reservoir releases diverted at the Farmers Union during this period averaged 14,730 AF, or 35%, of the water diverted at the Farmers Union. The reservoir releases are of water stored under the District's priorities for Rio Grande Reservoir, released from the Reservoir, and diverted into the Farmers Union Canal. A small amount of water diverted into the Farmers Union is attributable to water that has been leased from other entities or provided to the District in lieu of payments for storage in Rio Grande Reservoir.

The District owns Rio Grande Reservoir located in Sections 5, 6, 7, 8, 9, 10, 13, 14, 15, and 16, Township 40 North, Range 4 West, and Sections 31 and 32, Township 41 North, Range 4 West of the N.M.P.M., Hinsdale County, Colorado.

Year	Direct Flow River Water	Reservoir Water	Total Delivered
2013	5,464	6,762	12,225
2014	30,014	18,617	48,631
2015	34,515	20,865	55,380
2016	32,108	13,725	45,833
2017	33,082	13,695	46,777
5 Year Total:	135,183	73,664	208,847
5 Year Average:	27,037	14,733	41,769

TABLE 2.

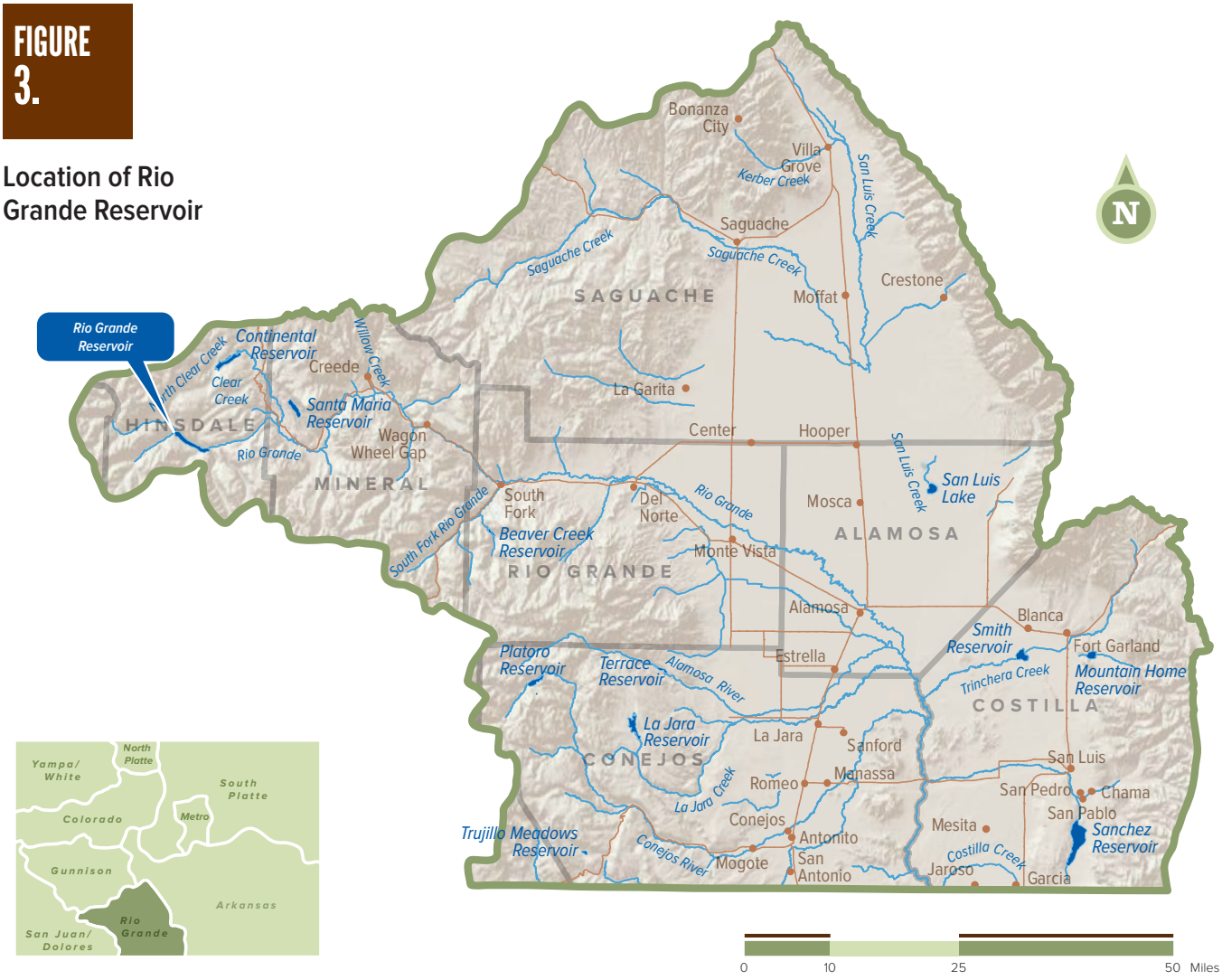
Water Diverted into Farmers Union Canal

Farmers Union Canal downstream of river headgate

The Reservoir is located approximately 20 miles southwest of Creede, Colorado, as shown in Figure 3. The Reservoir is located on the headwaters of the mainstem of the Rio Grande and has a present storage capacity of approximately 52,500 acre-feet (AF). Although water from the Reservoir could be delivered via the Rio Grande mainstem for use in Hinsdale, Mineral, Alamosa, Rio Grande, Costilla, and Saguache Counties, all of the water presently used is for irrigation and augmentation in Saguache, Mineral, Rio Grande, and Alamosa Counties. Located at an altitude of approximately 9,500 feet, the Reservoir has a drainage area of approximately 165 square miles. The two water storage rights for the Reservoir are 45,833 AF under Priority No. 1916-63A and 5,280 AF under Priority No. 1934-2 for a total of 51,113 AF. Both water storage rights pre-date the Rio Grande Compact.

FIGURE 3.

Location of Rio Grande Reservoir



5. Project Description and Alternatives

5.1 : History of Rio Grande Reservoir Dam Construction and Maintenance Issues

Construction plans for the original dam were submitted to the State Engineer's Office (SEO) in 1910, and construction to a capacity of approximately 46,000 AF was completed in 1914. The earthen and rockfill dam crest stood 100 feet high, at an elevation of 9,449 feet. The original outlet works as constructed in 1914 had five slide gates that almost immediately sustained severe damage due to vibration and erosion (Deere & Ault 2006). The gates were shortly thereafter repaired, and two were permanently plugged with concrete.

The dam embankment and outlet works have been modified on several occasions since the initial construction. The spillway, which is 32 feet wide and 600 feet long, was excavated in rock and lined with concrete. Spillway capacity was increased in 1962 through the construction of a side channel ogee spillway weir (Deere & Ault 2006). The spillway was repaired in 1970 and again in 1972. In 1979, the dam crest was raised an additional 5 feet due to overtopping concerns given that year's large snowpack (Miller 2003). In 1982, the dam crest was raised to its current height of 111 feet, and the downstream slope of the dam was flattened from 1:1.5 to 1:2. The gate structures were repaired in 1983 and then again in 1987 to correct problems associated with the 1983 work. Continuing repairs to the outlet tunnel and gate chamber area have occurred since. The primary cause of the recurring repairs is that the original gate design of the early 20th century is antiquated and would not be used in a modern setting given the pressures and release rates required for the Reservoir (Miller 2003). The high pressures and release rates have caused extensive and recurring erosion to the outlet works chamber and structure.

5.2 : Project Description

Phase 1 rehabilitation work, primarily seepage mitigation, was constructed in the summer and fall of 2013 and included:

1. A clay slope liner over left abutment slide mass.
2. A double line grout curtain in the bedrock on the right abutment.
3. Clay blankets that transition into the slope liner and the grout curtain.
4. Replenishment of riprap on the upstream dam face.
5. Installation of movement monuments on the dam and an inclinometer on the left abutment.

The work proposed for Phase 2 is illustrated on Figure 4. Phase 2A consists of construction of a new concrete intake structure with guard gates (bulkheads) and a trash rack. Also included in Phase 2A is shotcrete lining of the intake tunnel and placement of a concrete invert, a rock trap, and pre-reinforcement of the future bypass tunnel. Phase 2A will be constructed September through April of 2019 and will facilitate the schedule for the larger works proposed in Phase 2B.

Phase 2B (shown in brown Figure 4) consists primarily of construction of a new outlet works and includes:

1. Construction of a 70-foot long reinforced shotcrete lined bypass tunnel around the existing gates.
2. Steel lining of 270 feet of the existing outlet tunnel with 0.5-inch thick, 10.5-foot internal diameter pipe.
3. Extension of the outlet works 147 feet northeast along the valley bottom with a 10.5-foot internal diameter steel pipe.
4. Construction of a pre-cast concrete valve vault with twin 84-inch fixed cone valves and a 36-inch low flow valve. This system will accommodate operational flows of 30 to 1,600 cfs and emergency release flows up to 2,500 cfs.
5. Filter, drain, and buttress of the toe of the dam and the left abutment with 30 feet of granular fill in the valley bottom.
6. Construction of a new access road to the downstream toe of the dam.

5.3 : Alternatives Evaluated

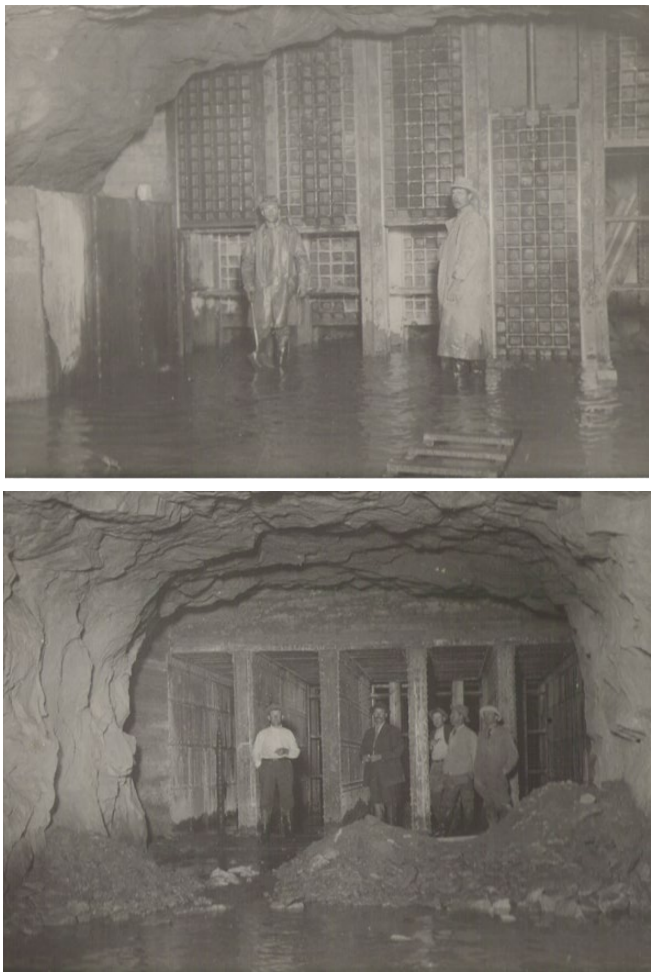
In addition to the selected Phase 2 alternative, three other alternatives were evaluated for the rehabilitation:

5.3.1 : No Action Alternative

Under the No Action Alternative, there is a high risk of loss of reservoir control due to sticking of gates or damage from high releases.

5.3.2 : New Downstream Tunnel

This alternative involved constructing a new downstream tunnel from spillway to upstream of gate structure. This alternative is the highest cost but could be constructed primarily with reservoir in operation. This alternative is what is shown in the 2008 CDM study. It is similar to the selected alternative (pressurized tunnel with pipe and cone valves) but has 700 feet of new tunnel. This would be the preferred alternative except for the high cost.



Outlet gates in tunnel at time of reservoir construction

5.3.3 : Demolish and Build New Slide Gates

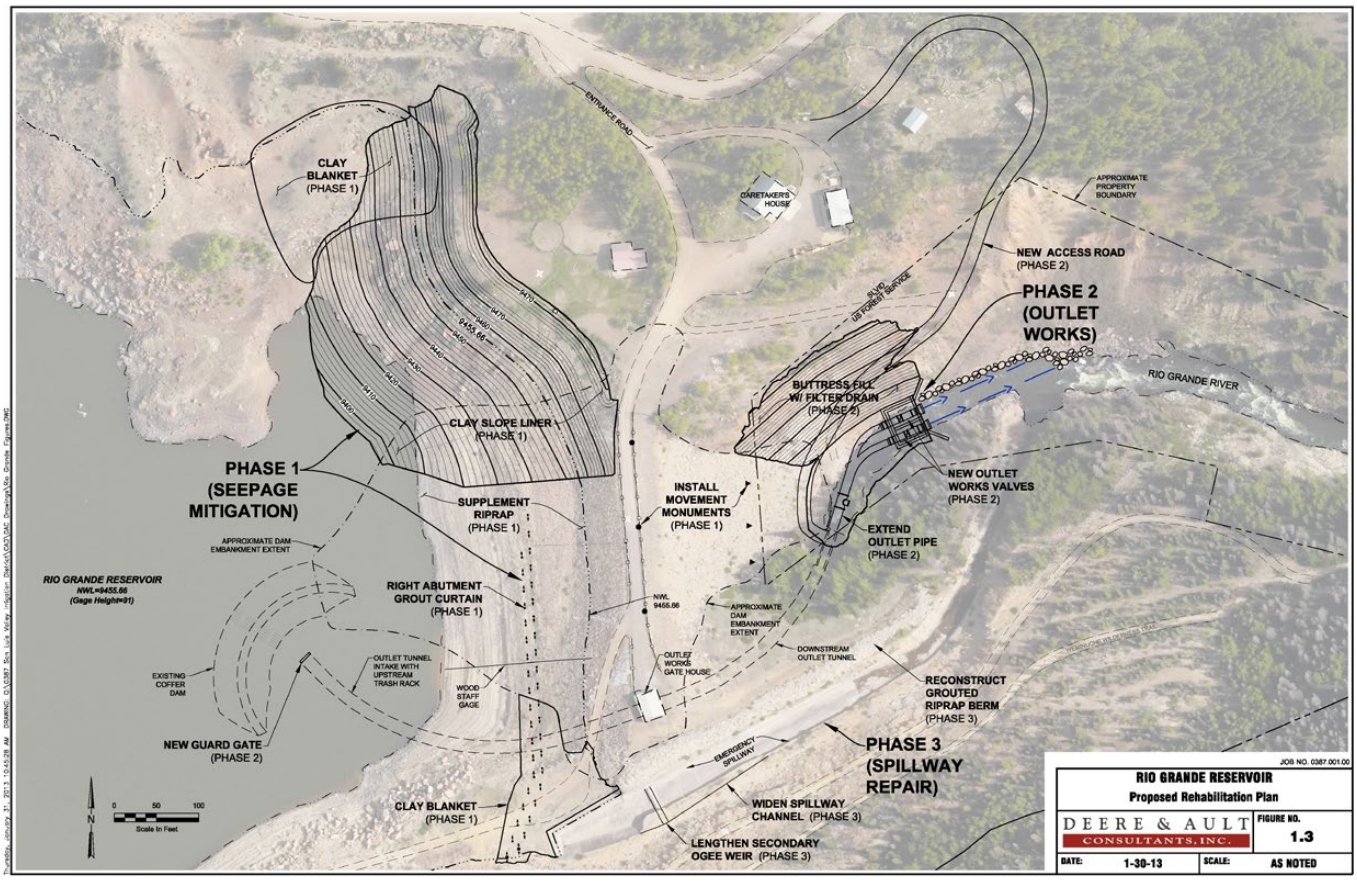
This alternative involved the demolition and construction of new slide (sluice) gates. This is similar to the existing installation except it also includes removal of the guard gates next to the operating gates, which may be a main cause of excess vibration. The stop log guard gate at the tunnel intake would be constructed. This would be the least cost action alternative but the current concerns with the hydraulics of pressurized to gravity flow would remain. This is not desirable under the reservoir head levels at the reservoir.

Existing Outlet Tunnel

5.4 : Selected Alternative

The selected Phase 2 alternative provides a modern pressurized system at lower cost than the new downstream tunnel alternative but a higher cost than demolition and construction of new slide gates. In the selected alternative, tunneling is reduced from 700 feet to 70 feet of bypass tunnel. The tradeoff for the reduced cost over the new downstream tunnel is that the reservoir will be out of operation for a longer time to put pipe in the existing downstream tunnel and the additional construction risk of working during the winter months.

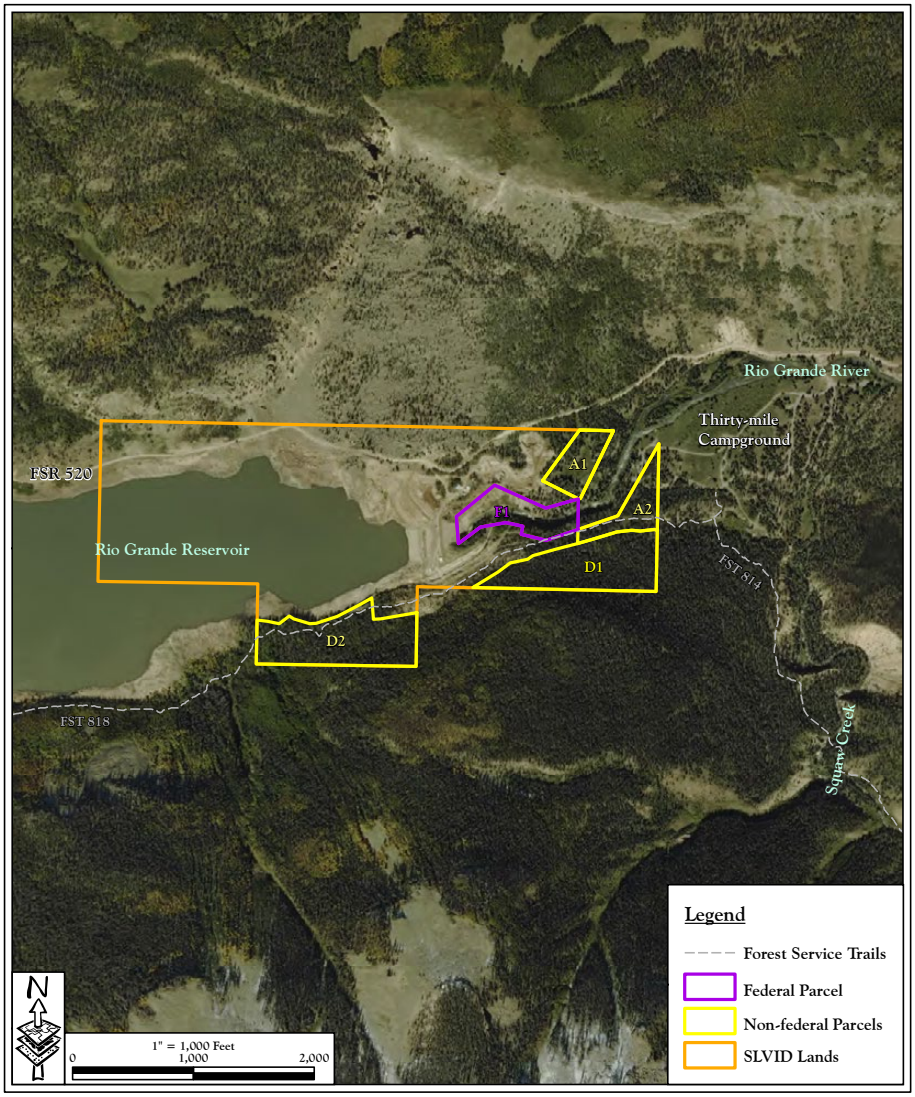
FIGURE 4. Proposed Phase 2 Rehabilitation



Rio Grande Reservoir Phase 1 slope liner installation

6. Land Exchange

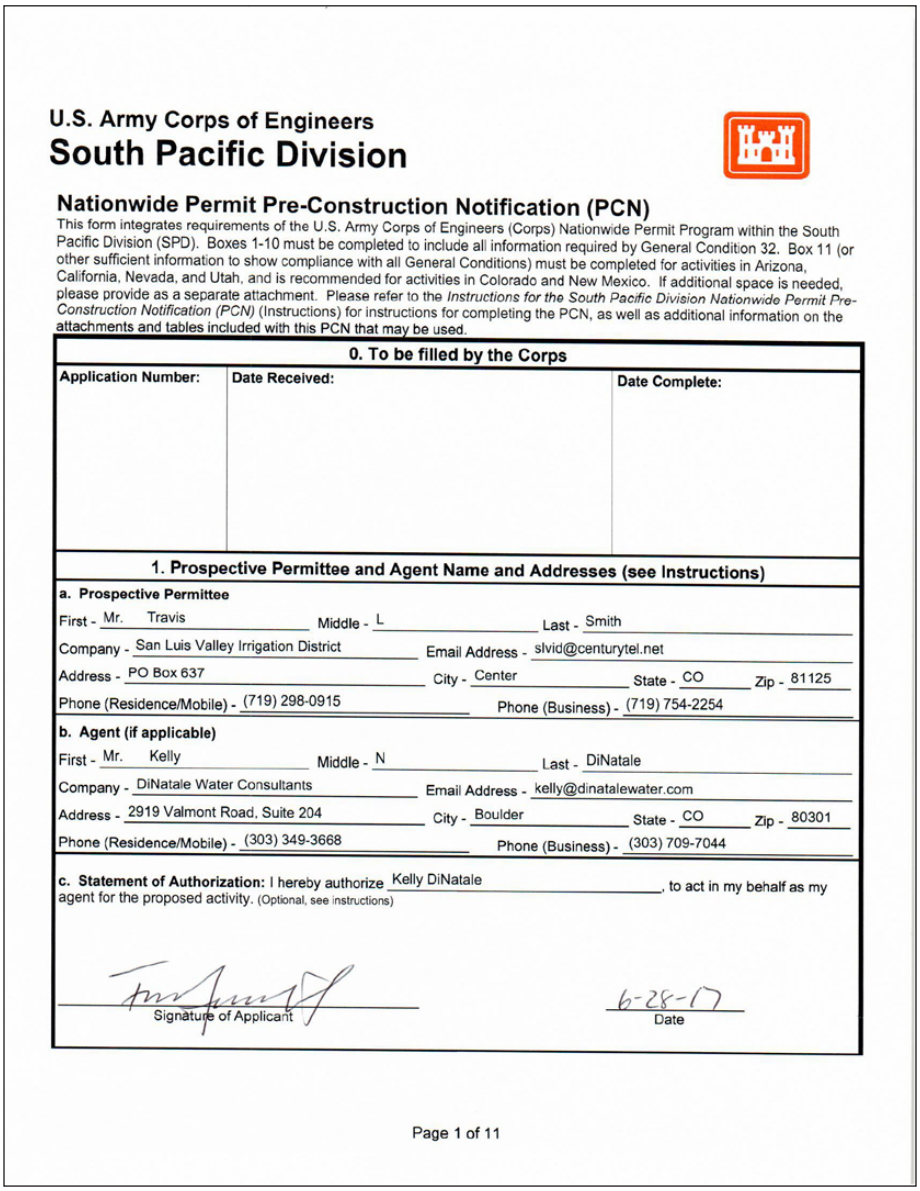
A land exchange with the U.S Forest Service was completed in May 2017. This land exchange allowed the Irrigation District to perform all the construction activities and build the permanent facilities entirely on property owned by the Irrigation District. Because of the land exchange, no permits were required from the Forest Service for the rehabilitation project.



SME ENVIRONMENTAL CONSULTANTS 679 East 2nd Ave. Unit E2 Durango, Colorado 81301 www.sme-env.com (970) 259-9595	AERIAL MAP	MAP 3
	RIO GRANDE RESERVOIR LAND EXCHANGE	Sources: Aerial photo by ESRI ArcGIS Online (2014).

7. Permits

The Irrigation District was issued a Nationwide 404 Permit for the rehabilitation in June 2017. The Floodplain Development Permit was issued by Hinsdale County in August 2017. A building permit application will be filed with Hinsdale County by the contractor before construction commences. Upon completion of the valve house construction, an elevation certificate will be provided to Hinsdale County.



U.S. Army Corps of Engineers
South Pacific Division

Nationwide Permit Pre-Construction Notification (PCN)

This form integrates requirements of the U.S. Army Corps of Engineers (Corps) Nationwide Permit Program within the South Pacific Division (SPD). Boxes 1-10 must be completed to include all information required by General Condition 32. Box 11 (or other sufficient information to show compliance with all General Conditions) must be completed for activities in Arizona, California, Nevada, and Utah, and is recommended for activities in Colorado and New Mexico. If additional space is needed, please provide as a separate attachment. Please refer to the *Instructions for the South Pacific Division Nationwide Permit Pre-Construction Notification (PCN)* (Instructions) for instructions for completing the PCN, as well as additional information on the attachments and tables included with this PCN that may be used.

0. To be filled by the Corps

Application Number:	Date Received:	Date Complete:

1. Prospective Permittee and Agent Name and Addresses (see Instructions)

a. Prospective Permittee

First - Mr. Travis Middle - L Last - Smith
Company - San Luis Valley Irrigation District Email Address - slvid@centurytel.net
Address - PO Box 637 City - Center State - CO Zip - 81125
Phone (Residence/Mobile) - (719) 298-0915 Phone (Business) - (719) 754-2254

b. Agent (if applicable)

First - Mr. Kelly Middle - N Last - DiNatale
Company - DiNatale Water Consultants Email Address - kelly@dinatalewater.com
Address - 2919 Valmont Road, Suite 204 City - Boulder State - CO Zip - 80301
Phone (Residence/Mobile) - (303) 349-3668 Phone (Business) - (303) 709-7044

c. Statement of Authorization: I hereby authorize Kelly DiNatale, to act in my behalf as my agent for the proposed activity. (Optional, see instructions)

Signature of Applicant 6-28-17 Date

Page 1 of 11

8. Construction Cost and Schedule

The engineer's estimated construction cost is $25,000,000. A breakdown of the cost is shown in Table 3. Phase 2A has an estimated cost of $9,135,000 and Phase 2B is estimated at $15,180,000. A contingency of $685,000 has been included to cover both phases.

The Project schedule is shown in Figure 5. Phase 2A construction will be performed between August 2018 and February 2019. Phase 2B construction will be performed July 2019 through May 2020.

TABLE 3.

Phase 2 Cost Estimate

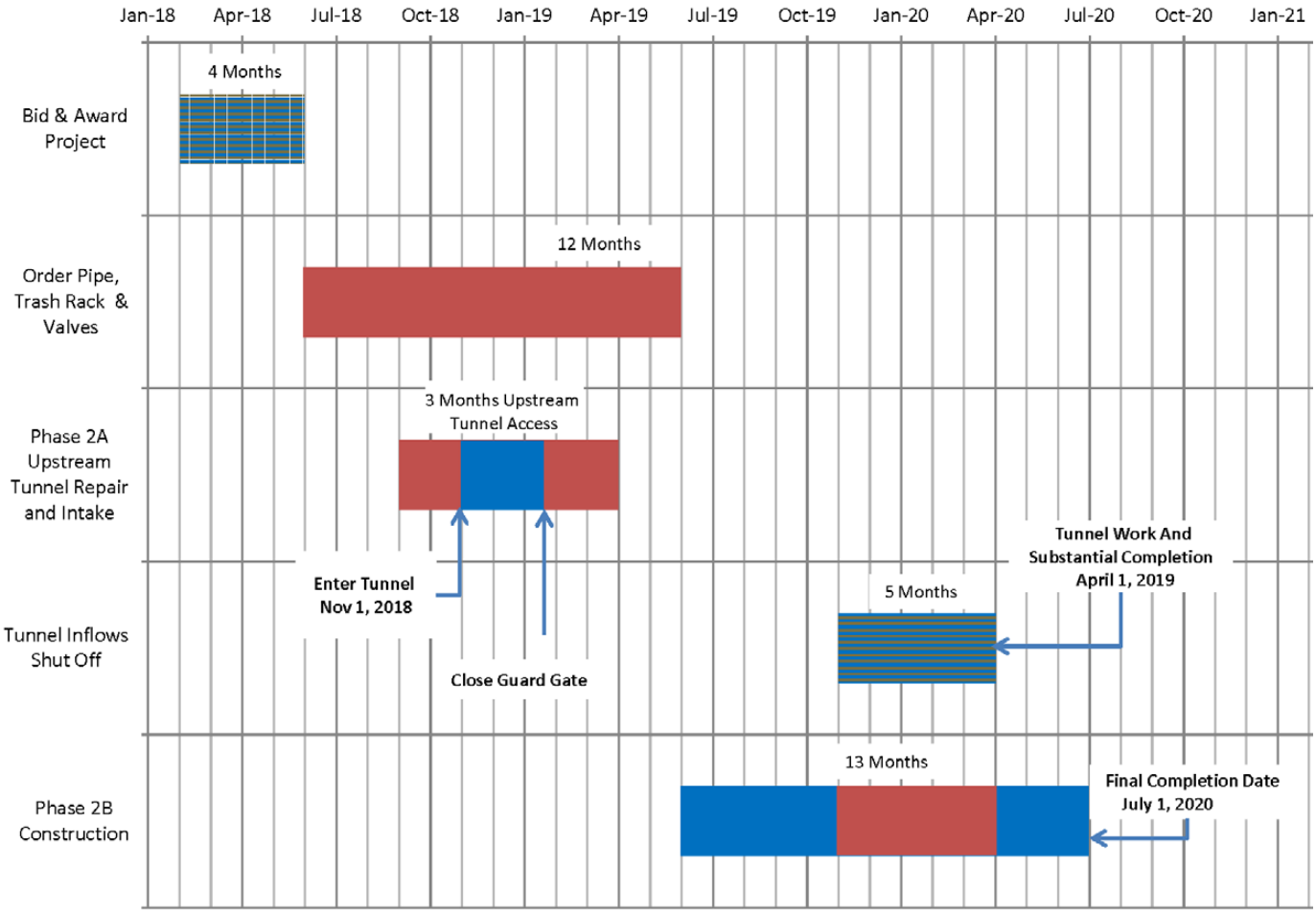
DEERE & AULT CONSULTANTS, INC.

RIO GRANDE COSTS TO COMPLETE
January 23, 2018

Description		Cost
Phase 2A - Upstream Improvements (2018)		
Atkinson Bid (May 2016 prices; escalated 3.5% per year or approximately 7%)	$	3,700,000.00
Order of Special Materials (pipe, valves, etc.; escalated 7%)	$	5,000,000.00
D&A Engineering Support (escalated 7%)	$	435,000.00
Subtotal	$	9,135,000.00
Phase 2B - Downstream Tunnel, Valve House, Buttress (2019)		
Atkinson Bid (minus access road plus 10.5% escalation)	$	13,790,000.00
D&A Engineering Support (escalated 7%)	$	1,390,000.00
Subtotal	$	15,180,000.00
Project Subtotal	$	24,315,000.00
Contingency	$	685,000.00
Grand Total to Complete Project	**$**	**25,000,000.00**

FIGURE 5.

Phase 2 Schedule



9. Financial Analysis

9.1 : Current Income

The Irrigation District currently has 61,920 assessed irrigated acres. The current assessment is $9.38 per acre or $1,500 per 160-acre quarter section. Annual assessment income is $580,500. In addition to the Irrigation District landowner assessment, landowners within the Irrigation District are required to pay a variable fee to the Groundwater Management Subdistrict No. 1. The current variable fee is $75 per AF. The variable fee pays for the additional water consumed by each landowner that is not brought in and recharged by the Irrigation District under its direct flow and storage water rights. The average supply per acre that is credited to landowners from the Irrigation District's direct flow and storage rights is 0.67 AF per acre or 107 AF per quarter. The required water supply per quarter is 240 AF. This results in a shortfall of 133 AF per quarter that is covered by the variable fee paid to Subdistrict No. 1.

In addition to the $580,500 in landowner assessment income, the Irrigation District also receives annual income from multiple parties for the lease of storage space in Rio Grande Reservoir. Colorado Parks and Wildlife (CPW) has a 30-year lease at an annual rate of $100,000 per year, which is adjusted by the Consumer Price Index every five years. The San Luis Valley Water Conservancy District has a lease which is under renegotiation for a 30-year lease at approximately $65,000 per year. Subdistrict No. 1 has been leasing storage space. The payment to the Irrigation District by the Subdistrict No. 1 in 2017 was $338,080. These three leases resulted in lease income in 2017 of $505,830, as shown in Table 4.

TABLE 4.

2017 Storage Lease Income

Lessee	2017 Lease Payment
Colorado Parks and Wildlife	$ 100,000
Rio Grande Subdistrict No. 1	$ 338,080
San Luis Valley Water Conservancy District	$ 67,750
2017 Total	**$ 505,830**

9.2 : Current Landowner Payments

A summary of the average water supply and shortfall, and current annual payments, including the landowner assessment and variable fee per quarter is shown in Table 5. The average water supply is 0.67 AF per acre and the required supply is 1.5 AF per acre, resulting in a shortfall of 0.83 AF per acre. Annual payments per acre for the landowner assessment is $9.38 per acre ($1,500 per quarter) and the variable fee paid to Subdistrict No. 1 to cover the water shortfall is $62 per acre for a total payment of $72 per acre ($11,460 per quarter).

TABLE 5.

Current Annual Landowner Payments

	Per Acre	Per Quarter
Average supply, AF	0.67	107.2
Required supply, AF	1.5	240
Water shortfall to be acquired from Subdistrict No. 1, AF	0.83	132.8
Current assessment	$ 9.38	$ 1,500
Subdistrict variable fee	$ 62.25	$ 9,960
Subdistrict administration fee (maximum allowed)	$ 5.00	$ 800
Total current assessment + variable fee	**$ 76.88**	**$ 12,260**

9.3 : Estimated Loan Payments

The Irrigation District is requesting $10,000,000 in grant funds and $15,000,000 as a CWCB loan. The current CWCB agricultural loan interest rate is 1.65% for a 30-year loan and 1.90% for a 40-year loan. The CWCB charges a 1% loan service fee. A 30-year loan would have an annual payment of approximately $638,000. A 40-year loan would have an annual payment of approximately $539,000.

9.4 : Analysis of Ability to Pay

The Irrigation District Statement of Revenues, Expenditures and Changes in Fund Balance is available for Fiscal Year ending December 31, 2016 and shown in Table 6. The 2017 statement is not yet available. Financial statements for 2014 and 2015 are included In 2016, revenues from all sources totaled of $1,276,000. Total expenditures, including existing CWCB loan payments were $840,000, resulting in net revenues of $435,000. In addition, the fund balance in various accounts totaled $1,630,673 at the end of 2016. The 2016 Statement of Net Position is shown in Table 7. This table provides additional detail on the assets and liabilities and net position of the Irrigation District as of the end of 2016.

Rio Grande Reservoir

TABLE 6. Statement of Revenues, Expenditures and Fund Balance, 2016

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF REVENUES, EXPENDITURES,
AND CHANGES IN FUND BALANCE
GENERAL FUND
For the Year Ended December 31, 2016

	GENERAL FUND
REVENUES	
Assessments	$ 583,087
Cooperative Agreements	602,671
District Operations	27,660
Intergovernmental Revenue	58,160
Interest on Investments	4,426
TOTAL REVENUES	1,276,004
EXPENDITURES	
Administration	119,990
Operations and Maintenance	519,274
Assessments	32,896
Capital Outlay	97,523
Debt Service	70,673
TOTAL EXPENDITURES	840,356
Excess (deficiency) of revenues over expenditures	435,648
Fund Balance, Beginning of Year	1,195,025
Fund Balance, End of Year	$ 1,630,673

The accompanying notes are an integral part of this financial statement.
5

TABLE 7. Statement of Net Position, 2016

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF NET POSITION
December 31, 2016

	GENERAL FUND	ADJUSTMENTS	STATEMENT OF NET POSITION
ASSETS			
Current Assets			
Cash and Cash Equivalents	$ 1,532,050	$ -	$ 1,532,050
Accounts Receivable	590,940	-	590,940
Grants Receivable	16,337	-	16,337
Patronage Equities	3,684	-	3,684
Non-Current Assets			
Capital Assets			
Land	-	28,000	28,000
Construction in Progress	-	1,287,946	1,287,946
Dam, Spillway, Structures, Laterals and Improvements	-	6,186,629	6,186,629
Buildings	-	71,896	71,896
Heavy Equipment	-	347,766	347,766
Vehicles	-	161,316	161,316
Less: Accumulated Depreciation	-	(2,184,857)	(2,184,857)
TOTAL ASSETS	$ 2,143,011	5,898,696	8,041,707
LIABILITIES			
Current Liabilities			
Accounts Payable	29,338	-	29,338
Unearned Revenue	483,000	-	483,000
Notes Payable	-	42,435	42,435
Non-Current Liabilities			
Notes Payable	-	529,406	529,406
Compensated Absences	-	22,213	22,213
TOTAL LIABILITIES	512,338	594,054	1,106,392
FUND BALANCE			
Unassigned Fund Balance Designated for Subsequent Expense	1,021,088	(1,021,088)	-
Unassigned	609,585	(609,585)	-
TOTAL FUND BALANCE	1,630,673	(1,630,673)	-
TOTAL LIABILITIES AND FUND BALANCE	$ 2,143,011		
NET POSITION			
Net Investment in Capital Assets		5,326,855	5,326,855
Unrestricted		1,608,460	1,608,460
TOTAL NET POSITION		$ 6,935,315	$ 6,935,315

The accompanying notes are an integral part of this financial statement.
3

The Irrigation District has existing debt service payments of $70,673 as listed in Table 6. The debt service is for three existing CWCB loans. These loans were for previous outlet works rehabilitation at Rio Grande Reservoir. A summary of the remaining balance on these loans is shown in Table 8. The combined balance on the three loans is $532,054. The Irrigation District may use existing funds that it has saved to pay off these loans in full in advance of the requested new $15,000,000 loan. If the Irrigation District were to decide to pay off the existing loans in their entirety, the Irrigation District would have a remaining fund balance of over $1,000,000.

TABLE 8.

Existing CWCB Loans

Loan Contract No.	Balance
C153318	$ 14,472
C153386	$ 207,230
C153478	$ 310,351
Total	**$ 532,053**

The Irrigation District first intends to use revenues from 30-year storage leases to make the loan payment. The completed Phase 2 rehabilitation will allow the Irrigation District to lease storage capacity to multiple parties. Once the rehabilitation is completed, the Irrigation District will be able to lease storage to multiple users with individual storage accounts. As shown in Table 4, revenue from cooperative agreements and lease payments was $602,000 in 2017. The Irrigation District's current net revenues over expenditures and debt service was $435,000.

The Irrigation District anticipates that with the Phase 2 rehabilitation of Rio Grande Reservoir, it will negotiate 30-year leases with other entities such as other groundwater management subdistricts, the San Luis Valley Well Owners, La Garita Ranch, Trinchera Irrigation Company, City of Alamosa and Town of Del Norte.

The projected combined net revenues over current expenditures is estimated at $542,700 per year as shown in Table 9. An analysis of how the Irrigation District would make payments for a 30-year and 40-year loan is shown in Table 10. If storage lease revenues are realized as projected, additional revenue of $95,250 per year or $1.54 per acre (would be required to finance a 30-year loan. A 40-year loan would not require any additional revenue.

A worst-case analysis has been prepared to show the required additional Irrigation District Assessment if no storage leases were negotiated, leaving only the existing CPW ($100,000) and the San Luis Valley Water Conservancy District (currently $67,000) long-term leases. The CPW lease was finalized in 2016 and is for a 30-year term. There is currently a 99-year lease with the Conservancy District, but negotiations are ongoing for a replacement 30-year lease. Under this worst case analysis, shown in Table 10, landowner assessments would increase $7.61 per acre ($1,218 per quarter) for a 30-year loan and a $6.00 per acre increase ($960 per quarter) would be required for a 40-year loan.

At the completion of 30-year leases, the Irrigation District intends to renew the then existing storage leases. Renewal of the leases will ensure that the Reservoir will be maintained at a high standard of safety.

TABLE 9.

Estimated Future Revenue Post-Rehabilitation

2017 Revenue from Landowner assessments	$ 580,500
2017 Revenue from Cooperative Agreements (storage leases)	$ 602,000
2017 other revenue	$ 90,200
Total 2017 Revenue	$ 1,272,700
2017 Total Expenditures	$ 840,000
2017 Net Revenue	$ 432,700
Anticipated net additional storage lease revenue post-rehab	$ 100,000
Anticipated future revenue available for loan repayment	$ 532,700

TABLE 10.

Estimated Required Landowner Assessment Increase

	30-year loan	40-year loan
Annual payment on 30-year loan	$ 637,950	$ 538,770
Anticipated future revenue available for loan repayment	$ 532,700	$ 532,770
Required additional annual revenue for loan payment	$ 105,250	$ 6,070
Additional landowner assessment per acre	$ 1.70	$ 0.10
Worst case lease revenue (only existing CPW and SLVWCD long-term leases)	$ 167,000	$ 167,000
Additional landowner assessment per acre to make loan payment	$ 7.61	$ 6.00
Additional landowner assessment per quarter to make loan payment	$ 1218	$ 960

By annual resolution under C.R.S. Sec. 37-41-120, the Irrigation District Board establishes and may raise, as necessary, landowner assessments. The Irrigation District Board has committed to increasing landowner assessments when required to ensure the District's ability to meet the annual loan repayment obligation.

Acceptance of the CWCB loan requires approval of the landowners. The Irrigation District intends to call a special landowner election for a vote on the loan. Finalization of the loan package will occur upon approval of the landowners.

10. Multiple/Regional Benefits

The Cooperative Project's primary objectives are to store and regulate water rights to better meet water demands of the San Luis Valley and the upper Rio Grande basin including: instream flow enhancement, channel maintenance, recreation, terrestrial and aquatic wildlife habitat, irrigation, augmentation, municipal and industrial, and other beneficial water uses including Compact compliance. The Cooperative Project provides basin-wide and regional benefits that promote water management and administration practices that are adaptive, flexible, and responsive to optimize multiple benefits (Basin Plan Goal #10) The reoperation and retiming of water stored and released from Rio Grande Reservoir provides regional benefits that include enhancing the ability of CPW to manage its water resources by timing releases and exchanges to address stream health issues, including periods of low flow and high water temperatures for aquatic habitat.

Regional benefits include

- Storage of Rio Grande Compact curtailment water to minimize over-deliveries to New Mexico.
- Long-term storage of augmentation supplies for multiple users.
- Assisting in the management of the water supplies for the ground water management subdistricts.
- Partnering with CPW, Trout Unlimited, and the SLV Water Conservancy District and Conejos Water Conservancy District by addressing late season stream flows on the Rio Grande and Conejos River through the operation of the Winter Flow Program.

10.1 : Colorado Water Plan and Basin Plan

The Rio Grande Cooperative Project is identified in the Colorado Water Plan and the Rio Grande Basin Implementation Plan (Basin Plan) as providing multiple benefits. The Cooperative Project meets 13 of the 14 goals of the BIP. The Basin Plan recognizes the critical role the basin's reservoirs play in providing a means of meeting the Basin's multiple water needs, especially in this time of extensive drought. The Rio Grande Reservoir is the only on-

stream reservoir on the Rio Grande. The Reservoir plays an important role in not only providing irrigation water to its owners but, in recent years, has been recognized as having a role in Rio Grande Compact compliance through the Colorado Division of Water Resources, Division 3, utilizing the Reservoir for storage and subsequent release of Compact water; downstream flood control; and, partnering with the Colorado Division of Parks and Wildlife in modifying river flows to enhance fisheries and wildlife habitat.

10.2 : Colorado Parks and Wildlife Benefits

Rio Grande Reservoir provides storage for the several water rights owned by CPW. The planned rehabilitation allowed the Irrigation to enter into a 30-year lease with CPW that allows for the annual storage in RGR of water owned by CPW. The ability of CPW to store water in the Reservoir is essential to the State in achieving the maximum beneficial use of its water rights. Beaver Creek Reservoir, which was recently rehabilitated, does not have a storage capacity large enough to accommodate the amount of water stored and managed by CPW annually for meeting its obligations. The Irrigation District and CPW have worked informally to cooperatively make timely deliveries of CPW's water to meet CPW's augmentation and conservation pool deliveries while providing streamflow benefits. Storage and releases of CPW water can be coordinated between Rio Grande and Beaver Park reservoirs to improve streamflow, wetlands, riparian, and provide fish and wildlife benefits while simultaneously optimizing the yield of CPW's water resources. Coordinated reservoir operations can result in improved timing of water deliveries in the basin that will benefit all basin water users, including the State of Colorado Department of Natural Resources agencies, including Parks and Wildlife, Division of Water Resources and the Water Conservation Board.

10.3 : Benefits to Water Users

The proposed rehabilitation of the reservoir will ensure the long-term ability to use the full reservoir capacity. Without the rehabilitation, the Irrigation District would not be able to enter into long-term leases with entities, including the Conservancy District, groundwater management subdistricts, San Luis Valley Well Owners and other irrigators, and numerous cities and towns. These long-term leases are vital to the ability of agricultural, domestic, commercial and industrial users to have reliable water supplies and meet well pumping replacement requirements. Failure of these entities to have operating firm storage accounts would result in the need to dry up thousands of acres of irrigated lands in order to show that firm supplies are available in order to project that future year well pumping replacements can be met.

10.4 : Environmental and Recreational Benefits

The rehabilitation of the outlet works will result in a significant increase in the reservoir's ability to enhance recreation, mimic natural hydrology, and provide environmental services. The ability to better control releases has an obvious benefit for river administration and water users. In addition, anglers, populations of trout and the ecosystem as a whole can experience benefits from improved releases. Changes to releases that could occur continuously and more precisely are an opportunity to provide a more natural hydrograph that will benefit anglers, boaters, fish, the river, and the ecosystem as a whole, and still deliver the water for its decreed use. Additionally, the project can benefit recreation by facilitating late season reservoir releases from various leased storage pools, extending related recreation season and improving water quality for fish and macro-invertebrates as well as ensuring a "live river" to the state line benefiting riparian and riverine ecosystems of the Rio Grande.

10.5 : Other Benefits

The Rio Grande Basin relies on a fully functioning Rio Grande Reservoir to help ensure public safety, protect critical infrastructure such as roads, culverts and bridges and to help improve an economy through increased recreational opportunities and tourism that have been declining in the past decade and certainly since the West Fork Complex Fire. The West Fork Complex Fire of 2013 consumed 88,000 acres of the RG National Forest at the headwaters of the Rio Grande. It is crucial for the protection and function of the Rio Grande River watershed that rehabilitation of Rio Grande Reservoir be completed to allow operation of the reservoir for well-timed storage and release of water to support water quality, aquatic life and a healthy watershed during recovery from the fire and into the future for Colorado and downstream States.

11. Space Available River Administration Pool

The Rio Grande Cooperative Projects objective is to develop a public/private partnership between the CWCB and the SLV Irrigation District to achieve multiple benefits that coordinate their uses of water that enhance the environment, provide recreation, increase supplies and meet compact compliance. To achieve this objective, the Irrigation District is committed to working with the CWCB to develop a 10,000 AF space available storage pool that can be used by the CWCB to facilitate river administration, Rio Grande Compact compliance and environmental and recreational benefits through the retiming of releases for river administration and compact compliance. These benefits have been demonstrated through operations of the reservoir over the past 5 years.

A space available pool in the reservoir for river administration and the storage of Compact water will provide the State of Colorado with a tool to better manage, retain, and utilize the State's share of Rio Grande water while assuring that the State meets its water delivery obligations under the Compact at the Colorado-New Mexico border. The storage and re-regulation of the delivery of Compact water to the state border can help to enhance instream flows for fish and riparian habitat particularly at low flow periods late in the irrigation season and during the winter. It will also provide the State Engineer with a tool to help reduce the wide fluctuation in curtailments – the percentage reduction in the flow available at the Del Norte gage allocated for diversion to assure Colorado meets its water delivery obligations to the New Mexico border. This will provide irrigators with a more consistent water supply during the irrigation season while assuring that Colorado has stored a sufficient amount of water that, if needed, can be released to meet any remaining Compact obligation after the irrigation season ends. Proper accounting of stored Compact water, particularly if there is a surplus pool at the end of the year, will be required. While storing Compact water will not yield a surplus every year, the Compact pool at the Reservoir provides a buffer against the uncertainties inherent in streamflow forecasting, summer and fall precipitation and runoff patterns.

Additional discussion regarding a space available River Administration Pool will be required to determine the operations and supplies that may be stored in this pool. It is important that this River Administration Pool does not compete with potential storage leases needed by the Irrigation District to assist with the CWCB loan payments. We anticipate a stakeholder group of CWCB, Division of Water Resources and basin stakeholders will be convened to discuss the operations of a River Administration Pool. Basin stakeholders would, at a minimum include the Rio Grande Water Users, Conservancy District, Conservation District and environmental and recreational interests.

The Rio Grande

12. Conclusions

- The Irrigation District is a quasigovernmental agency authorized to enter into a contract with the CWCB for loans.
- The Project is technically and financially feasible.
- The Irrigation District has completed the land exchange and has been issued the permits necessary for the rehabilitation project.
- The Project will ensure storage for the Irrigation District landowners and allow long-term leases, etc.
- CWCB has previously approved a $5,000,000 grant for the project. These funds were used for the Phase 1 of the Rio Grande Reservoir rehabilitation including environmental studies, hydrology modeling, development of cooperative agreement, installation of seepage control measures, permitting and final design of the Phase 2 improvements.
- CWCB is authorized to provide up to an additional $25,000,000 in grants and loans for Phase 2. Total estimated cost of Phase 2 is $25,000,000. It is proposed that $10,000,000 be provided as a grant and $15,000,000 as a loan.
- The Irrigation District has the financial capability to pay a $15,000,000 loan. Primary funding will be from annual revenues from 30-leases of storage capacity with funding as required from District landowner assessments. The Irrigation District Board has the authority to increase the assessments as necessary to make the annual loan payment.
- Rio Grande Reservoir is the only on-stream reservoir on the Rio Grande and serves a critical need in providing the limited reservoir capacity in the Rio Grande Basin. It serves the needs of the owners in providing a source of irrigation water, but in recent years has been recognized as a mechanism to provide the opportunity for varying flow regimes on the Rio Grande to serve multiple purposes, including fish habit improvements through the timing of releases; Rio Grande Compact compliance by the planned storage and subsequent release of Compact water; and flood control downstream of the reservoir.

13. Appendix A : 2014–2016 Financial Statements and 2018 Budget

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF NET POSITION
December 31, 2014

	GENERAL FUND	ADJUSTMENTS	STATEMENT OF NET POSITION
ASSETS			
Current Assets			
Cash and Cash Equivalents	$ 1,233,031	$ -	$ 1,233,031
Accounts Receivable	426,924	-	426,924
Grants Receivable	55,366	-	55,366
Patronage Equities	3,684	-	3,684
Non-Current Assets			
Capital Assets:			
Land	-	28,000	28,000
Construction in Progress	-	1,027,774	1,027,774
Dam, Spillway, Structures, Laterals and Improvements	-	6,186,629	6,186,629
Buildings	-	71,896	71,896
Heavy Equipment	-	347,766	347,766
Vehicles	-	151,170	151,170
Less: Accumulated Depreciation	-	(1,946,882)	(1,946,882)
TOTAL ASSETS	1,719,005	5,866,353	7,585,358
LIABILITIES			
Current Liabilities			
Accounts Payable	172,917	-	172,917
Deferred Revenue	525,000	-	525,000
Notes Payable	-	38,611	38,611
Non-Current Liabilities			
Notes Payable	-	612,320	612,320
Compensated Absences	-	30,683	30,683
TOTAL LIABILITIES	697,917	681,614	1,379,531
FUND BALANCE			
Assigned- Designated for Subsequent Year	1,021,088	(1,021,088)	-
Unassigned	-	-	-
TOTAL FUND BALANCE	1,021,088	(1,021,088)	-
TOTAL LIABILITIES AND FUND BALANCE	$ 1,719,005		
NET POSITION			
Net Investment in Capital Assets		5,215,422	5,215,422
Unrestricted		990,405	990,405
TOTAL NET POSITION		$ 6,205,827	$ 6,205,827

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2014

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants & Contributions	Program Revenues: Capital Grants & Contributions	Net (Expenses) Revenues and Changes in Net Position: Primary Government
Primary Government:					
Governmental Activities:					
General Government					
Administration	$ 97,354	$ -	$ -	$ -	$ (97,354)
Operations and Maintenance	644,092	1,086,276	-	659,043	1,101,227
Assessments	36,733	-	-	-	(36,733)
Interest Expense	33,844	-	-	-	(33,844)
Total Governmental Activities	$ 812,023	$ 1,086,276	$ -	$ 659,043	933,296
	General Revenues:				
	Interest on Investments				3,372
	Total General Revenues				3,372
	Change in Net Position				936,668
	Net Position - Beginning of Year				5,269,159
	Net Position - End of Year				$ 6,205,827

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
GENERAL FUND
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE
For the Year Ended December 31, 2014

	GENERAL FUND
REVENUES	
Assessments	$ 579,951
Cooperative Agreements	471,441
District Operations	34,884
Intergovernmental Revenue	659,043
Interest on Investments	3,372
TOTAL REVENUES	1,748,691
EXPENDITURES	
Administration	93,324
Operations and Maintenance	508,697
Assessments	36,733
Capital Outlay	952,751
Debt Service	70,673
TOTAL EXPENDITURES	1,662,178
Excess (deficiency) of revenues over expenditures	86,513
Fund Balance, Beginning of Year	934,575
Fund Balance, End of Year	$ 1,021,088

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE OF GOVERNMENTAL FUND TO THE STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2014

Net change in fund balance - governmental fund		$ 86,513
Amounts reported for governmental activities in the statement of activities are different because:		
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense. This is the amount by which capital outlay exceeded depreciation in the current period.		
Capital asset additions	$ 946,785	
Depreciation expense	(129,429)	
Excess of capital outlay over depreciation		817,356
Debt proceeds provide current financial resources to governmental funds, but issuing debt increases long-term liabilities in the statement of net position. Repayment of debt principal is an expenditure in the governmental funds, but the repayment reduces long-term liabilities in the statement of net position. Repayment of principal include:		
Principal payments on Notes Payable		36,829
Some expenses reported in the statement of activities do not require the use of current financial resources and therefore are not reported as expenditures in governmental funds.		
Compensated Absences		(4,030)
Change in net position of governmental activities		$ 936,668

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF NET POSITION
December 31, 2015

	GENERAL FUND	ADJUSTMENTS	STATEMENT OF NET POSITION
ASSETS			
Current Assets			
Cash and Cash Equivalents	$ 1,290,956	$ -	$ 1,290,956
Accounts Receivable	452,076	-	452,076
Grants Receivable	61,558	-	61,558
Patronage Equities	3,684	-	3,684
Non-Current Assets			
Capital Assets			
Land	-	28,000	28,000
Construction in Progress	-	1,213,063	1,213,063
Dam, Spillway, Structures, Laterals and Improvements	-	6,186,629	6,186,629
Buildings	-	71,896	71,896
Heavy Equipment	-	347,766	347,766
Vehicles	-	161,316	161,316
Less: Accumulated Depreciation	-	(2,051,550)	(2,051,550)
TOTAL ASSETS	$ 1,808,274	5,957,120	7,765,394
LIABILITIES			
Current Liabilities			
Accounts Payable	$ 109,249	-	109,249
Unearned Revenue	504,000	-	504,000
Notes Payable	-	40,477	40,477
Non-Current Liabilities			
Notes Payable	-	571,842	571,842
Compensated Absences	-	31,377	31,377
TOTAL LIABILITIES	613,249	643,696	1,256,945
FUND BALANCE			
Unassigned	1,195,025	(1,195,025)	-
TOTAL FUND BALANCE	1,195,025	(1,195,025)	-
TOTAL LIABILITIES AND FUND BALANCE	$ 1,808,274		
NET POSITION			
Net Investment in Capital Assets		5,344,801	5,344,801
Unrestricted		1,163,648	1,163,648
TOTAL NET POSITION		$ 6,508,449	$ 6,508,449

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2015

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants & Contributions	Program Revenues: Capital Grants & Contributions	Net (Expenses) Revenues and Changes in Net Position: Primary Government
Primary Government:					
Governmental Activities					
General Government					
Administration	$ 85,324	$ -	$ -	$ -	$ (85,324)
Operations and Maintenance	765,632	1,088,116	-	135,869	458,353
Assessments	43,861	-	-	-	(43,861)
Interest Expense	32,061	-	-	-	(32,061)
Total Governmental Activities	$ 926,878	$ 1,088,116	$ -	$ 135,869	297,107
	General Revenues:				
	Interest on Investments				5,515
	Total General Revenues				5,515
	Change in Net Position				302,622
	Net Position - Beginning of Year				6,205,827
	Net Position - End of Year				$ 6,508,449

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE
GENERAL FUND
For the Year Ended December 31, 2015

	GENERAL FUND
REVENUES	
Assessments	$ 579,575
Cooperative Agreements	474,105
District Operations	34,436
Intergovernmental Revenue	135,869
Interest on Investments	5,515
TOTAL REVENUES	1,229,500
EXPENDITURES	
Administration	84,630
Operations and Maintenance	623,989
Assessments	43,861
Capital Outlay	232,410
Debt Service	70,673
TOTAL EXPENDITURES	1,055,563
Excess (deficiency) of revenues over expenditures	173,937
Fund Balance, Beginning of Year	1,021,088
Fund Balance, End of Year	$ 1,195,025

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE OF GOVERNMENTAL FUND TO THE STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2015

Net change in fund balance - governmental fund		$ 173,937
Amounts reported for governmental activities in the statement of activities are different because:		
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense. This is the amount by which capital outlay exceeded depreciation in the current period.		
Capital asset additions	$ 224,075	
Depreciation expense	(133,308)	
Excess of capital outlay over depreciation		90,767
Debt proceeds provide current financial resources to governmental funds, but issuing debt increases long-term liabilities in the statement of net position. Repayment of debt principal is an expenditure in the governmental funds, but the repayment reduces long-term liabilities in the statement of net position. Repayment of principal include:		
Principal payments on Notes Payable		38,612
Some expenses reported in the statement of activities do not require the use of current financial resources and therefore are not reported as expenditures in governmental funds.		
Compensated Absences		(694)
Change in net position of governmental activities		$ 302,622

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF NET POSITION
December 31, 2016

	GENERAL FUND	ADJUSTMENTS	STATEMENT OF NET POSITION
ASSETS			
Current Assets			
Cash and Cash Equivalents	$ 1,532,050	$ -	$ 1,532,050
Accounts Receivable	590,940	-	590,940
Grants Receivable	16,337	-	16,337
Patronage Equities	3,684	-	3,684
Non-Current Assets			
Capital Assets			
Land	-	28,000	28,000
Construction in Progress	-	1,287,946	1,287,946
Dam, Spillway, Structures, Laterals and Improvements	-	6,186,629	6,186,629
Buildings	-	71,896	71,896
Heavy Equipment	-	347,766	347,766
Vehicles	-	161,316	161,316
Less: Accumulated Depreciation	-	(2,184,857)	(2,184,857)
TOTAL ASSETS	$ 2,143,011	5,898,696	8,041,707
LIABILITIES			
Current Liabilities			
Accounts Payable	29,338	-	29,338
Unearned Revenue	483,000	-	483,000
Notes Payable	-	42,435	42,435
Non-Current Liabilities			
Notes Payable	-	529,406	529,406
Compensated Absences	-	22,213	22,213
TOTAL LIABILITIES	512,338	594,054	1,106,392
FUND BALANCE			
Unassigned Fund Balance Designated for Subsequent Expense	1,021,088	(1,021,088)	-
Unassigned	609,585	(609,585)	-
TOTAL FUND BALANCE	1,630,673	(1,630,673)	-
TOTAL LIABILITIES AND FUND BALANCE	$ 2,143,011		
NET POSITION			
Net Investment in Capital Assets		5,326,855	5,326,855
Unrestricted		1,608,460	1,608,460
TOTAL NET POSITION		$ 6,935,315	$ 6,935,315

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2016

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants & Contributions	Program Revenues: Capital Grants & Contributions	Net (Expenses) Revenues and Changes in Net Position: Primary Government
Primary Government:					
Governmental Activities					
General Government					
Administration	$ 110,826	$ -	$ -	$ -	$ (110,826)
Operations and Maintenance	675,222	1,213,418	-	58,160	596,356
Assessments	32,896	-	-	-	(32,896)
Interest Expense	30,194	-	-	-	(30,194)
Total Governmental Activities	$ 849,138	$ 1,213,418	$ -	$ 58,160	422,440
	General Revenues:				
	Interest on Investments				4,426
	Total General Revenues				4,426
	Change in Net Position				426,866
	Net Position - Beginning of Year				6,508,449
	Net Position - End of Year				$ 6,935,315

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE
GENERAL FUND
For the Year Ended December 31, 2016

	GENERAL FUND
REVENUES	
Assessments	$ 583,087
Cooperative Agreements	602,671
District Operations	27,660
Intergovernmental Revenue	58,160
Interest on Investments	4,426
TOTAL REVENUES	1,276,004
EXPENDITURES	
Administration	119,990
Operations and Maintenance	519,274
Assessments	32,896
Capital Outlay	97,523
Debt Service	70,673
TOTAL EXPENDITURES	840,356
Excess (deficiency) of revenues over expenditures	435,648
Fund Balance, Beginning of Year	1,195,025
Fund Balance, End of Year	$ 1,630,673

The accompanying notes are an integral part of this financial statement.

SAN LUIS VALLEY IRRIGATION DISTRICT
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE OF GOVERNMENTAL FUND TO THE STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2016

Net change in fund balance - governmental fund		$ 435,648
Amounts reported for governmental activities in the statement of activities are different because:		
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense. This is the difference between capital outlay and depreciation in the current period.		
Capital asset additions	$ 74,883	
Depreciation expense	(133,308)	
Excess of capital outlay over depreciation		(58,425)
Debt proceeds provide current financial resources to governmental funds, but issuing debt increases long-term liabilities in the statement of net position. Repayment of debt principal is an expenditure in the governmental funds, but the repayment reduces long-term liabilities in the statement of net position. Repayment of principal include:		
Principal payments on Notes Payable		40,479
Some expenses reported in the statement of activities do not require the use of current financial resources and therefore are not reported as expenditures in governmental funds.		
Compensated Absences		9,164
Change in net position of governmental activities		$ 426,866

The accompanying notes are an integral part of this financial statement.

San Luis Valley Irrigation District
PO Box 637, 296 Miles St.
Center, Colorado 81125

General Fund - 2018 Budget

	Actual 2016	Budget 2017	Projected 2017	Budget 2018	
REVENUES					
Sale of Assets	$ 0	$ 5,000	$ 0	$ 5,000	
Machine Hire	16,850	25,000	5,711	25,000	
Assessments	583,088	580,285	580,285	580,285	
Cooperative Agreements	602,671	625,000	587,047	520,000	
Interest Earned	4,447	5,000	7,382	10,000	
Miscellaneous	0	0	0	500	
RG Coop Project CWCB Revenues	51,674	773,141	33,053	569,618	
TOTAL REVENUES	$ 1,258,730	$ 2,013,426	$ 1,213,478	$ 1,710,403	
EXPENDITURES					
Administrative					
Accounting & Audit	$ 9,270	12,000	9,500	$ 12,000	
Assessment/RGWU	32,896	40,000	32,896	40,000	
Debt Service	70,673	70,673	70,673	70,673	
Director's Expense	2,314	3,000	2,400	3,000	
Election Expense	947	1,500	1,000	1,500	
Engineering Fees	7,491	25,000	62,444	100,000	
Insurance	33,529	35,000	33,935	35,000	
Legal Fees	28,564	30,000	10,021	30,000	
Meetings	5,904	10,000	4,484	10,000	
Permits/Fees/Taxes	2,467	5,000	2,667	5,000	
Publications/Dues	1,797	2,000	1,200	2,000	
Telephone	7,504	7,500	5,798	7,500	
Utilities	12,788	15,000	10,480	15,000	
Misc Administrative/Donations	381	5,000	6,500	11,632	
Radar Project/Maintenance Fees	0	0	0	5,000	
Total Administrative	$ 216,525	$ 261,673	$ 253,998	$ 348,305	
Operations					
Payroll					
Salaries	$ 300,452	271,532	294,223	$ 304,521	
Mileage	4,069	10,000	4,480	10,000	3.5%
Benefits	71,450	130,000	78,448	100,000	
Taxes	25,173	25,000	20,111	25,000	
Insurance (Workmen's Comp)	17,815	25,000	23,480	25,000	
Other Payroll Expense	2,737	6,000	1,200	5,000	
Total Payroll	$ 421,696	$ 467,532	$ 421,942	$ 469,521	
Office & Shop					
Office/Computer Supplies	4,343	5,000	2,040	10,000	
Postage/Freight	487	500	205	500	
Janitorial Supplies	483	500	163	500	
Shop Supplies/Tools	5,984	5,000	2,740	10,000	
Shop/Reservoir	0	1,000	150	1,000	
Ditch Rider Expense	301	500	472	500	
Superintendent Expense	0	250	0	250	
Miscellaneous Shop/Office	396	1,000	0	500	
Total Office & Shop	$ 11,994	$ 13,750	$ 5,770	$ 23,250	
Gas/Diesel/Oil	$ 20,397	$ 25,000	$ 17,960	$ 25,000	

	Actual 2016	Budget 2017	Projected 2017	Budget 2018
Repair & Maintenance				
Reservoir/Dam/Spillway	$ 2,539	195,582	8,240	$ 250,000
Laterals/Structures	3,777	200,000	915	150,000
Buildings	21,526	100,000	4,500	115,000
Equipment				
Autos/Trucks	6,015	100,000	4,875	140,000
Heavy Equipment	9,405	100,000	2,765	200,000
Trailers	30	10,000	1,975	10,000
Other Equipment	801	50,000	200	50,000
Total Repair & Maintenance	$ 44,093	$ 755,582	$ 23,470	$ 915,000
Weed Control	$ 5,107	$ 10,000	$ 7,500	$ 10,000
Total Operations	$ 503,287	$ 1,271,864	$ 476,642	$ 1,442,771
Capital Outlay				
Autos/Trucks/Trailers	$ 0	50,000	0	100,000
Buildings	4,000	50,000	0	$ 100,000
Equipment	0	100,000	0	100,000
Reservoir/Dam/Spillway	3,357	1,000,000	0	1,000,000
Structures/Laterals	0	150,000	0	150,000
RG Coop Project Engineering	45,990	80,095	26,220	150,000
RG Coop Project Legal	8,679	20,000	275	50,000
RG Coop Project Land Exchange	16,857	50,000	12,341	0
Total Capital Outlay	$ 78,883	$ 1,450,095	$ 38,836	$ 1,550,000
TOTAL EXPENDITURES	$ 798,695	$ 2,983,632	$ 769,476	$ 3,341,076
	**		**	**
BEGINNING FUND BALANCE	$ 1,021,088	$ 1,021,088	$ 1,630,673	$ 1,630,673
TOTAL REVENUE	$ 1,258,730	$ 2,013,426	$ 1,213,478	$ 1,710,403
TOTAL EXPENDITURES	$ 798,695	$ 2,983,632	$ 769,476	$ 3,341,076
ENDING FUND BALANCE	$ 1,481,123	$ 50,882	$ 2,074,675	$ 0

** Audited

DiNatale Water Consultants
2919 Valmont Rd, Ste 204
Boulder, CO 80301
dinatalewater.com

Deere & Ault Consultants performed investigations integral to this report.