

Feasibility Study

Consolidated Ditch Implementation Project

Prepared for the Colorado Water Conservation
Board's Loan Program

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  Date 

Prepared by
Emma Reesor, Executive Director
Rio Grande Headwaters Restoration Project

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Executive Summary

The proposed Consolidated Ditch Implementation Project (Project) seeks to address concerns surrounding aging and inefficient irrigation infrastructure and unstable streambanks surrounding the Consolidated Ditch and Pace Ditch diversion dam and headgates. Highlighted as a priority of the 2001 Study, the Project will result in the replacement of the Consolidated Ditch and Pace Ditch diversion dam and headgates and the stabilization of streambanks and riparian areas upstream and downstream of the diversion structure.

The objectives of the Project are to:

- Improve diversion efficiency and reduce maintenance by replacing the aging Consolidated Ditch headgate and Pace Ditch headgate installing automated water gates, and replacing the Consolidated Ditch diversion dam;
- Enhance water quality by reducing erosion and sediment input;
- Improve riparian condition by stabilizing up to 1,000 feet of streambanks in the Project area;
- Increase the capacity of the Rio Grande to transport sediment;
- Improve aquatic and wildlife habitat;
- Enhance local recreation by including fish and boat passage in the new diversion dam;
- Promote public involvement in water improvement activities through public outreach and education.

The estimated cost of the Project is \$1,862,000. The Consolidated Ditch and Headgate Company has partnered with the Colorado Rio Grande Restoration Foundation (Foundation), the fiscal agent for the Rio Grande Headwaters Restoration Project (RGHRP), to organize and raise funds for Project. The RGHRP secured \$750,000 from the Environmental Quality Incentive Program (EQIP). The RGHRP plans to apply for additional funding through the Colorado Water Conservation Board (CWCB) Water Supply Reserve Account (WSRA), which will be considered by the CWCB Board in September 2017. Additional commitments include \$112,000 from in-kind services. The Consolidated Ditch and Headgate Company will provide \$1,000,000, which they hope to obtain through the CWCB loan program.

Section 1 - Project Sponsors

The Project, the Consolidated Ditch Implementation Project, is sponsored by a partnership between the Colorado Rio Grande Restoration Foundation (Foundation), and the Consolidated Ditch and Headgate Company.

1.1 The Consolidated Ditch and Headgate Company

The Consolidated Ditch and Headgate Company (CDHC) is a mutual ditch company and a non-profit corporation registered in the State of Colorado. The CDHC diverts water from the Rio Grande 3.5 miles north and 4 miles west of the town of Monte Vista into the Consolidated Slough and Pace Ditch. The irrigation system includes a series of ditches making up approximately 40 ditch miles and serving 38 shareholders, including two mutual ditch companies. The total decree of the CDHC is 218.4 cfs and annual deliveries average around 33,550 acre-feet (Figure 1).

List of Consolidated Ditches and Decrees				
Ditch Name	Total Decree (cfs)	Ditch Length (miles)	Acres Irrigated*	Amount Diverted (AF)*
Consolidated Slough	n/a	4.63	n/a	
Anderson	16.15	5.59	711.00	6,387.50
Atencio	6.18	0.54	351.65	2,202.30
Horner/Ydren	12.70	1.53	575.68	4,274.60
John Anderson	3.20	1.82	105.05	1,020.10
Marajo	5.00	0.62	421.30	170.01
Star	13.60	2.13	455.20	1,501.00
Lariat**	106.80	12.78	3,069.46	10,140.00
Rio Grande San Luis**	53.24	10.90	1,160.30	7,512.00
Pace Ditch	1.50	0.30	106.99	349.10
TOTAL	218.367	40.84	6,956.63	33,556.61

* In 2015

** Mutual Ditch Company

Figure 1: Table of Ditches and Decrees served by the Consolidated Slough and Pace Ditch

1.2 The Colorado Rio Grande Restoration Foundation and the Rio Grande Headwaters Restoration Project

The Colorado Rio Grande Restoration Foundation (Foundation), a 501(c)(3) Colorado non-profit organization, is the fiscal agent for the Rio Grande Headwaters Restoration Project (RGHRP). The mission of the RGHRP is “to restore and conserve the historical functions and vitality of the Rio Grande in Colorado for improved water quality, optimal agricultural water use, riparian habitat, wildlife and aquatic species habitat, recreation, and community safety, while meeting the requirements of the Rio Grande Compact.”

The RGHRP was formed to implement the recommendations of a study completed in 2001. The 2001 Study was prompted by local stakeholders due to a realized deterioration of the historic functions of the Rio Grande, which include providing high quality water, healthy riparian areas, fish and wildlife habitat, and a functioning floodplain. The 2001 Study analyzed the condition of the riparian area and structures along a 91-mile reach of the Rio Grande and provided recommendations for improvement. The 2001 Study was sponsored by the San Luis Valley Water Conservancy District and funded with a \$250,000 grant from the Colorado Water Conservation Board (CWCB). In 2004, the need was identified for a well-defined Rio Grande Watershed Restoration Strategic Plan (Strategic Plan). Completed in 2007, the Strategic Plan

highlighted the importance of continued efforts to implement the recommendations from the 2001 Study. Since establishment, the RGHRP has accrued a successful record of performing projects on the Rio Grande through collaboration with landowners and local, state, and federal entities.

The RGHRP has four Programs: The Streambank Stabilization and Riparian Restoration Program, The Diversion and Headgate Repair and Replacement Program, The Watershed Stewardship Program, and The Outreach and Education Program. Through the Streambank Stabilization and Riparian Restoration Program, the RGHRP has administered five (5) cost-share restoration projects on fifty (50) sites with \$1.8 million grant funding raised. The projects have improved river function using a multi-faceted approach to riparian restoration and streambank stabilization, and have resulted in the treatment of approximately eleven (11) miles of streambanks. Including contribution from partners and landowners, the total value of these projects is \$2.2 million. The techniques used include bank and channel shaping, revegetation, installation of rock and log structures, and implementation of grazing best management practices. These Projects reduce sediment loading by stabilizing the streambanks, improve the riparian and upland habitat by increasing willow and riparian vegetation cover, and enhance the fishery. Additionally, the capacity of the Rio Grande to transport sediment that has entered the system from upstream reaches is increased. Finally, improvements to riparian habitat and floodplain function improve the condition of wetlands located throughout the riparian areas within the Project boundaries. The RGHRP works with the Colorado Watershed Assembly's Colorado Measurable Results Program (MRP) to complete long-term monitoring of the Projects.

Through the Diversion and Headgate Repair and Replacement Program, the RGHRP is working with ditch companies to address concerns surrounding aging and inefficient diversion and headgate structures. The first of these projects was the Plaza Planning Project – Phase 1 (Phase 1) in the Sevenmile Plaza area of Rio Grande County. The RGHRP worked with stakeholders to determine the primary issues in the area, identify remediation methods, and develop an implementation plan, The Plaza Plan, to improve the health and function of the Rio Grande in the Sevenmile Plaza area. The identified issues include streambank instability in the 2.8-mile project reach, a degraded wetland, and aging, hazardous, and inefficient diversion structures. The Plaza Project – Phase 2: McDonald Ditch Implementation Project (Phase 2) was the first phase of implementation of the Plaza Plan. Completed in 2016. Phase 2 included the reclamation of a 2-acre wetland, stabilization of 2,000 feet of streambanks, and replacement of the McDonald Ditch diversion and headgate with a new concrete diversion that allows for increased diversion efficiency and a headgate with automated gates. The Plaza Project – Phase 3: Prairie Ditch Implementation Project (Phase 3) continued the implementation of the Plaza Plan directly downstream of Phase 2. Completed in Spring 2017, Phase 3 included the replacement of the Prairie Ditch diversion and headgate and the stabilization of 500 feet of streambank. Both Phase 2 and Phase 3 diversion included passage for fish and boats. The proposed Project, the Consolidated Ditch Implementation Project, will continue implementation of the 2001 Study approximately one mile downstream of the Plaza Project area. These efforts will improve continuity and function of the Rio Grande.

Through the Watershed Stewardship Program, the RGHRP works with stakeholders and partners to complete wildfire restoration and hazard mitigation projects. In the summer of 2013, the West Fork Fire Complex severely damaged over 110,00 acres of critical natural resources in the upper watershed. In response, the Rio Grande Watershed Emergency Action Coordination Team (RWEACT) was formed, with the cooperation of over 40 entities. RWEACT includes 5 committees: Hydrology, Emergency Coordination, Communications, Economic Recovery, and Natural Resources. The RGHRP has taken the lead on coordinating the natural resources

committee. The natural resources committee worked closely with the US Forest Service's Burned Area Emergency Response (BAER) Team to identify Values at Risk (VARs) associated with human life and safety, cultural and historic resources, and significant natural resources. Currently, the RGHRP is coordinating several forest restoration and hazard mitigation projects through RWEACT's natural resources committee. For example, the RGHRP designed and implemented 10 experimental plots within the burned area to investigate different methods to provide ground cover and increase soil water holding capacity to improve vegetative cover and reduce hill slope erosion. Long-term data will be collected from these plots and the results will influence the methods used in future wildfire restoration projects. The implementation of this project was made possible through the donation of several mulch materials and the help of volunteers. Additionally, the RHGRP is organizing the Upper Rio Grande Watershed Assessment (URGWA), which will result in a comprehensive document of the ecological condition of the mainstem of the Rio Grande and major tributaries from the headwaters to the town of South Fork, identifying causes of concern, and developing a list of prioritized projects that will improve the function of uplands, and riparian and aquatic ecosystems.

The RGHRP administers a robust Outreach and Education Program. Informative press releases are submitted to local and regional media with notable project updates. Talks and tours are routinely given to local schools, community groups, and water related organizations. Volunteer events encourage community members to get involved and connected with the Rio Grande. The RGHRP website provides project updates and information. Content of the Outreach and Education program includes details about projects, partnerships, funding entities, and the importance of protecting and conserving the Rio Grande.

Section 2 - Previous Studies

2.1 The 2001 Study

The 2001 Study was prompted by local stakeholders due to a realized deterioration of the functions of the Rio Grande. The 2001 Study analyzed the condition of the riparian area and structures along a 91-mile reach of the Rio Grande from the town of South Fork to the Alamosa – Conejos County line (Figures 5). The 2001 Study was sponsored by the San Luis Valley Water Conservancy District and funded with a \$250,000 grant from the Colorado Water Conservation Board (CWCB). The study evaluated the condition of the river's functions as they related to:

- a. The condition of riparian habitat and fisheries;
- b. Accessibility of the river to existing irrigation structures and their condition and performance;
- c. The protection of lives and property;
- d. The protection of channel and floodplain from flood damage;
- e. The maintenance of river channel and over bank capacity;
- f. The ability to meet the Rio Grande Compact requirements.

The 2001 Study found the primary cause of degradation to be sedimentation and identified measures that could be implemented to holistically improve the river's functions. These measures were both structural in nature, such as riparian restoration or diversion replacement, or nonstructural measures, such as grazing management practices or land use issues. The proposed Project seeks to implement these actions in order to improve the function of the Rio Grande.

2.2 The 2007 Rio Grande Watershed Restoration Strategic Plan

In 2004, the need was identified for a well-defined Rio Grande Watershed Restoration Strategic Plan (Strategic Plan). Completed in 2007, the Strategic Plan outlined priority projects for the entire Rio Grande watershed in Colorado. Priority projects included: flood protection, riparian restoration, diversion and headgate improvements, grazing management, flow management, and future studies. The Strategic Plan highlighted the importance of continued efforts to implement the recommendations from the 2001 Study.

Section 3 - Water Source and Project Area

3.1 Water Source

The water body affected by Phase 3 is the Rio Grande. The Rio Grande watershed in Colorado covers 8,200 square miles (Figure 2). The river flows 200 miles through Colorado, originating near the Continental Divide. Numerous tributaries converge on the east slope of the Continental Divide from elevations near 13,000 feet to form the Rio Grande mainstem. The river flows to the east through the Rio Grande National Forest and then through private property for approximately 55 miles, where it passes near the town of Creede, located at approximately 8,850 feet. The Rio Grande continues its relatively steep descent for another 22 miles to the confluence with the South Fork of the Rio Grande at approximately 8,200 feet elevation, where the town of South Fork is located. The Rio Grande enters the San Luis Valley, the largest intermountain basin in Colorado, at the town of South Fork. The river then flows southeast for approximately 65 miles through Del Norte and Monte Vista to Alamosa, the largest city in the watershed, at an elevation of approximately 7,550 feet. The river turns to the south and flows for another 40 miles to the New Mexico border. The elevation at the New Mexico border is approximately 7,400 feet.



Figure 2: Location of the Consolidated Ditch Implementation Project

3.2 Project Area

The Project is located in Rio Grande County. The closest town is Monte Vista, Colorado, which is approximately 4 miles east and 3.5 miles south of the Consolidated diversion. The Project elements include the Consolidated diversion structure, the Consolidated and Pace headgates, and the streambanks upstream and downstream of the diversion.

3.3 Land Ownership

The land on which the Project is located is owned by the Thad R. Elliott, an active project partner and owner of the Pace ditch. Please see Figure 3 for detailed landownership.



Figure 3: Land Ownership in the Project Area

3.4 Service Area

Figure 4 shows the service area and ditches included in the Consolidated Ditch and Headgate Company.

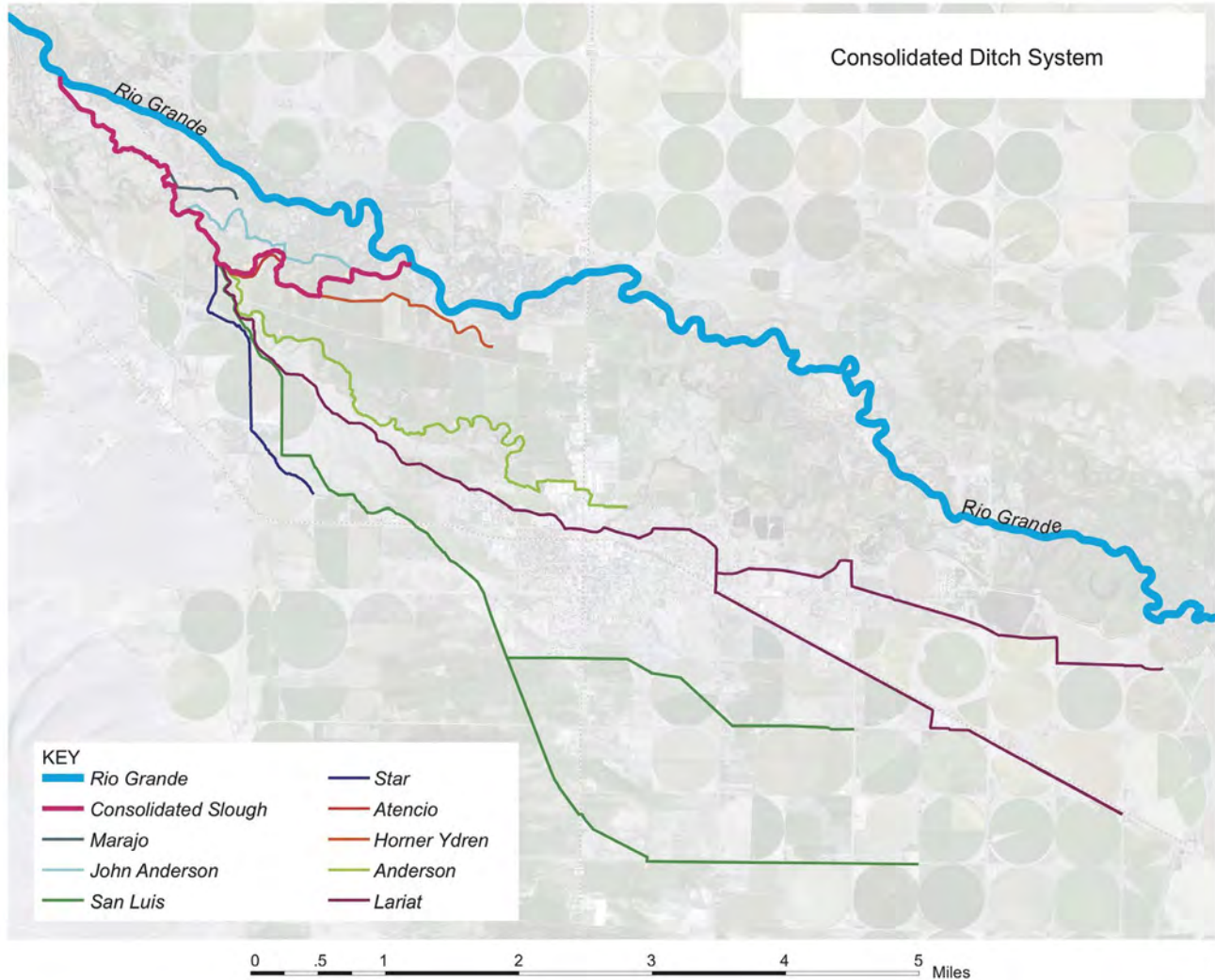


Figure 4: Map of Consolidated Ditch and Headgate Company's ditch system and service area

Section 4 - Water Rights Protection

The Consolidated Ditch Improvement Project is a structural and riparian improvement project that will improve the ability of the Rio Grande to meet both consumptive and non-consumptive needs of the area by replacing a poorly functioning diversion and headgate, stabilizing streambanks, and increasing the ability of the river to transport water. As such, the Project allows for agriculture demands to be met by increasing the ability of irrigators to divert their appropriated water right when they are in priority. Additionally, the Project sustains multiple non-consumptive uses by improving riparian conditions, repairing river channel problems, and reducing sediment load. Finally, the Project supports the preservation of the long-term cultural values inherent in this rural area's historical and current agricultural lifestyle. It complies with all applicable laws, regulations, and water rights.

The Project will in no way alter the current water rights held by Project participants or surrounding water users. This Project does not supersede, abrogate, or otherwise impair the State's current system of allocating water within Colorado. This project does not affect the State constitution's recognition of water rights as a private usufructuary property right nor is it intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. The Project protects water users and landowners along the Rio Grande from loss by replacing an aging diversion and headgate, repairing the river channel, and restoring the riparian corridor, thereby helping to ensure that the provisions of Section 37-75-102 C.R.S. are supported and observed.

Section 5 - Existing Conditions

The project elements include the streambanks in the project area and the Consolidated diversion and the Consolidated and Pace headgates. The elements included in Project were identified as priorities for restoration in the 2001 Study and the 2007 Watershed Strategic Plan.

5.1 Streambanks and Channel Current Condition

The 2001 Study area was broken into reaches based on homogeneity of geomorphic, hydrologic, bed material, and man-influenced conditions. The project area is located within Subreach D1 of Reach D (Figure 5).

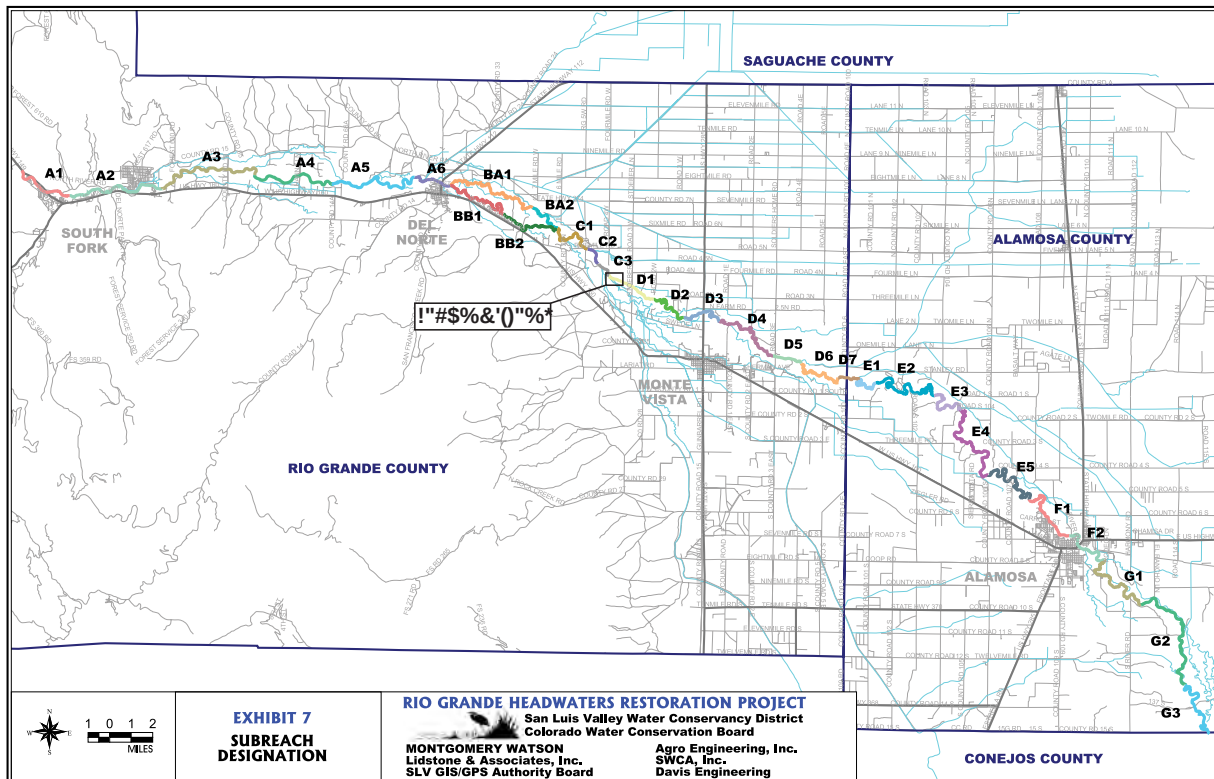


Figure 5: Location of Reach D and Subreach D1 (as designated by the 2001 Study) and the Consolidated Ditch Implementation Project

The Rio Grande in this Reach is primarily used for irrigation, wildlife habitat, ranching and recreation. Reach D was ranked “poorest” in channel stability and condition of the floodplain, and was identified as a high priority for restoration. Reach D is a gently sloped, poorly entrenched, gravel and sand bed channel with cobbles. The bed form is riffle/pool. A significant number of poorly functioning diversion structures exist within Reach D. Specifically, the 2001 Study highlights the Consolidated and Pace diversion structure as a priority for improvement. The fishery in the project area is a transition zone between cold water and warm water fisheries. The main factors limiting the extent and quality of the cold water fishery are dewatering, channelization, and aggradation. The loss of water reduces the pool capacity, increases the water temperature, and provides for high sedimentation rates - all detrimental to the primary cold-water fish, trout. Colorado Parks and Wildlife does not manage for trout in the Project area due to lack of public lands, amount of diversions, and presence of other competing landuses. Therefore, owners of private lands assume the responsibility for the majority of habitat improvements.



Figure 6: Example of steep, eroding streambanks in the Project Area

5.2 Consoloidated Diversion and Consolidated and Pace Headgate Current Condition

The diversion structure and headgates for the Consolidated Slough and Pace Ditch are in poor condition. At the diversion site, the river is unstable and moving away from the headgate. The existing diversion structure has essentially been abandoned, requiring the ditch company to construct a push-up dam annually to access low flows. In addition, erosion and sedimentation are significant problem at the diversion site. The annual maintenance and diversion reconstruction compounds these issues, negatively impacting channel and streambank stability and inducing downstream sedimentation. Because of these issues, the Consolidated Slough and Pace Ditch diversion structure and headgates were highlighted as structural priorities for rehabilitation in the 2001 Study.



Figure 7: Consolidated Diversion Dam



Figure 8: Consolidated Slough Headgate

Section 6 - Alternatives Evaluated

During the development of the 2001 Study and consultation with Project stakeholders, alternatives for the Project were analyzed. Project stakeholders included the Natural Resources Conservation Services (NRCS), Consolidated Ditch, Pace Ditch, Monte Vista Canal, Rio Grande Piedra Ditch, and project landowners. Through this process several possible alternatives were proposed to address the problems facing the Consolidated Slough and Pace Ditch.

6.1 Project Alternatives

The 2001 Study highlighted several possible alternatives, including the consolidation of the Consolidated and Pace diversion with the upstream Monte Vista Canal/Rio Grande Piedra Ditch diversion. The NRCS performed preliminary surveys of the project elements and developed initial designs for each of the alternatives. Project Stakeholders met to discuss the feasibility of each alternative.

The three alternatives were:

- Alternative #1: Combine Consolidated/Pace diversion with Monte Vista/Piedra Diversion
- Alternative #2: New Consolidated/Pace upstream of existing diversion location
- Alternative #3: New Consolidated/Pace at existing location

6.1.1 Alternative #1: Combine Consolidated/Pace with Monte Vista/Piedra Diversion

The existing Monte Vista/Piedra diversion dam, located half a mile upstream from the current Consolidated/Pace diversion, would be reinforced to divert water for all four ditches (MV Canal, RG Piedra, Consolidated, and Pace). The Consolidated and Pace diversion would be moved upstream into a new ditch within the easement between the MV Canal and RG Piedra ditch. A new headgate and sluice would be built for the Consolidated/Pace at the new ditch. The new ditch would run south between the Monte Vista Canal and the RG Piedra ditch and then turn south east. A new structure would be built to allow the Consolidated/Pace to cross the RG Piedra ditch and continue east to carry the Consolidated/Pace water to the existing Consolidated/Pace ditch where a new outlet structure would be built. River channel shaping and streambank stabilization work would occur around the existing Consolidated/Pace diversion. A Grade Control Structure would be installed at the site of the current diversion to maintain the grade of the river within this reach.

This alternative was ruled out because it would require the construction of a new ditch across private land and partners were unable to negotiate the required right of way with the landowner.

6.1.2 Alternative #2: New Consolidated/Pace Diversion Upstream of Existing

A new Consolidated and Pace diversion and headgate would be built 1000 feet upstream of the existing structures at a more stable location. The new diversion dam and sluice would be built to accommodate the needed flow for the Consolidated/Pace ditch. A new headgate structure for the Consolidated and Pace would be built at the new diversion location and a new ditch would be built to bring the water from the new diversion to the existing Consolidated and Pace ditches. River channel shaping and streambank stabilization work would occur around the existing Consolidated/Pace diversion structure. This would include the removal of two gravel bars and the filling in of eroded banks to correct the width/depth ratio. A Grade Control Structure would be installed at the site of the current diversion to maintain the grade of the river within this reach.

This alternative was ruled out because it would require the construction of a new ditch across private land and partners were unable to negotiate the required right of way with the landowner. Additionally, significant work would be required for the upstream location to be suitable for the new diversion dam.

6.1.3 Alternative #3: New Consolidated/Pace Infrastructure at Existing Location

A new Consolidated and Pace diversion and sluice would be built at the existing location to accommodate the needed flow. New headgate structures would be built at the river for the Consolidated and Pace. River channel shaping and streambank stabilization work would occur around the new structure, including the removal of two gravel bars and the filling of eroded banks to correct width/depth ratio.

This alternative was selected by the stakeholders, since it addresses the issues facing the Consolidated/Pace Ditches at the current project location, avoiding any new landowner negotiations and easements.

Section 7 - Selected Alternative

The stakeholders narrowed the developed alternatives and selected the alternative to replace the existing Consolidated and Pace diversion and headgates and the existing location. Upon selecting this alternative, stakeholders worked with the NRCS engineer to develop a desired implementation plan for each project element. The Project will include the following project elements:

- **Diversion:** The existing Consolidated and Pace diversion dam will be replaced with a concrete diversion dam, spanning the entire width of the river. The structure would include a radial sluice gate and a structure for fish and boat passage.
- **Trash rack:** A concrete trash rack will be built at the river to keep trash from getting in the headgates.
- **Consolidated Headgate:** The existing Consolidated headgate will be replaced with a concrete headgate with six gates, including 4-5 manual gates and 1-2 automated gates. The automated gates will regulate ditch flows, improving diversion accuracy and accounting. The manual gates will be used to regulate ditch flows if the automated gate malfunctions.
- **Pace Headgate:** The Pace headgate will be replaced with one manual slide gate and pipe to deliver water to the Pace Ditch.
- **Sluice:** A 54" arch pipe and slide gate will be installed as a sluice next to the headgates.
- **Channel Shaping and Streambank Stabilization:** Currently, the river channel at the diversion is wide and the streambanks are held in place by rocks and rubble. Narrowing the river channel, removing the rubble and stabilizing and revegetating the banks will improve flow and river function. The streambanks will be sloped, stabilized, and revegetated, and fish habitat structures will be installed.

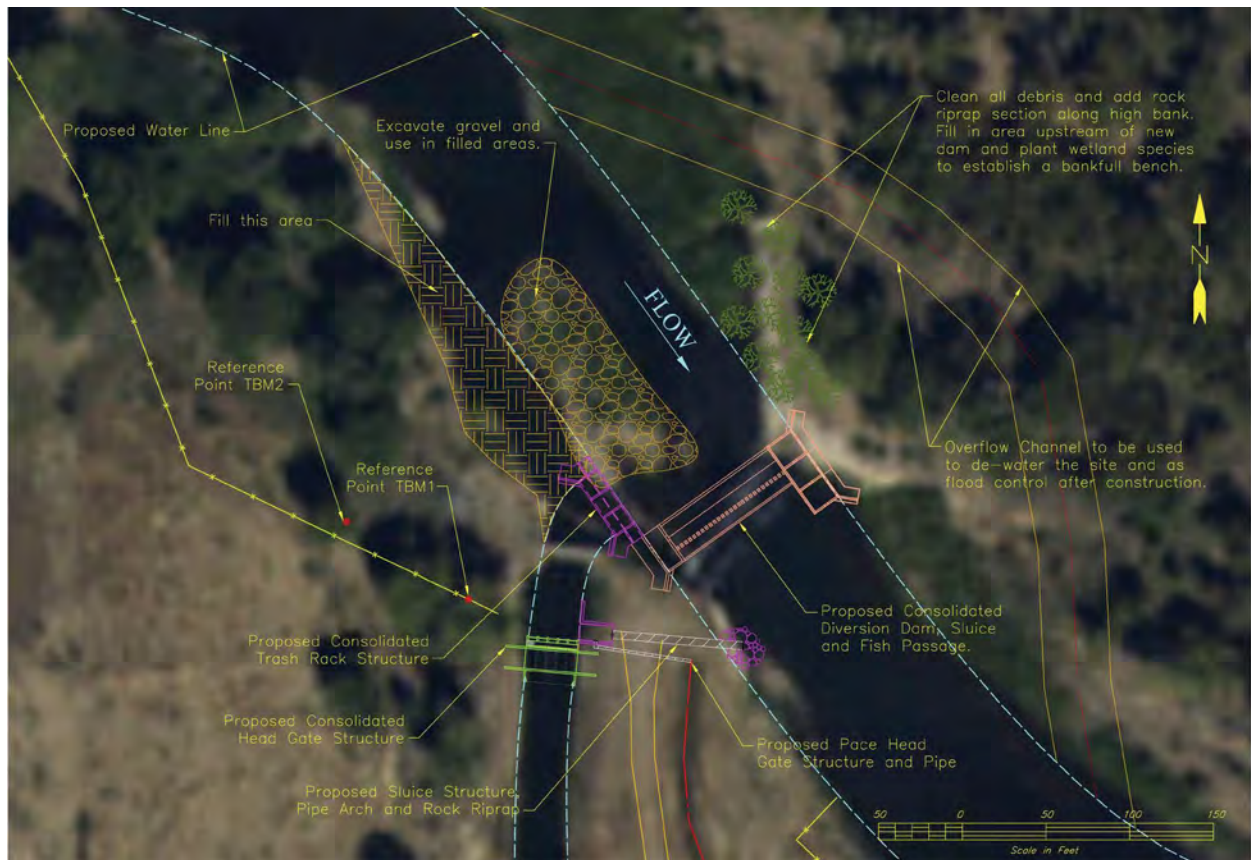


Figure 9: Project Elements and Deliverables – Consolidated Ditch Implementation Project

Section 8 - Project Budget and Schedule

8.1 Project Budget

The Project will be funded with \$750,000 from the NRCS's Environmental Quality Incentives Program (EQIP), \$1,000,000 from Consolidated Ditch and Headgate Company (CWCB loan), and \$112,000 from in-kind services. In addition, the RGHRP plans apply for additional funding through the Colorado Water Conservation Board (CWCB) Water Supply Reserve Account (WSRA) to support project implementation. These funds will depend on CWCB Board approval in September 2017. Total estimated project cost is \$1,865,000. The 1% loan origination fee is not included in the budget. A complete budget with expenses broken down by task and source of funds is attached in Appendix A.

The CDHC's CWCB Loan request is subject to change based on the final budget amounts and WSRA grant award.

8.2 Project Schedule

Preliminary designs for the Consolidated and Pace headgates and diversion structure were developed by the NRCS in 2016. Currently, project engineers are finalizing the design for each of the project elements. The Project will be a four-year project with execution of designs in years 1 and 2, monitoring in years 2 and 3, and final reporting in year 4. A complete milestone table is attached in Appendix B.

Section 9 - Financial Plan

9.1 Current Financial Condition

The Consolidated Ditch Company proposes to apply for a \$1,000,000 loan from the Colorado Water Conservation Board (CWCB) for 30 years at 1.80% interest. This amount represents 54% of the total project cost. Other sources of funds are detailed in Section 8. The 1% loan origination fee and loan payments will be paid with funds from the CDHC savings and stock assessments. Revenue is derived from assessments of 4879.5 shares of stock at \$8.50 annually. Shareholders plan to increase the assessment fee to pay the loan amount off in full in the 30 year term.

9.2 Credit Worthiness

The financial condition of the Consolidated Ditch Company is solid at the present time. The company has no debt and no outstanding obligations.

Section 10 - Opinion of Feasibility

There do not appear to be significant roadblocks that would keep the CDHC and RGHRP from successfully completing the project. The Project co-sponsors have secured 44% of the total Project costs through NRCS programs and in-kind contributions, which makes the project financially possible for the CDHC. The Project will greatly improve the function of the Rio Grande and the ability of the CDHC to deliver water to shareholders. A failure at the CDHC diversion and headgate would stop all deliveries to water users. As such, the project will secure the long-term stability of the CDHC system.

The CDHC is requesting a 30-year loan from the CWCB for up to \$1,000,000 at the rate of 1.80%. This will result in a total annual payment obligation of \$48,252, including the 10% emergency reserve account. Figure 12 summarizes the financial aspects of the project. Currently the annual assessment is set at \$8.50 per share, of which \$5.12 is allocated to the project budget. Annual assessments will increase from \$8.50 per share, up to \$13.72 per share. This represents an annual assessment increase of \$9.89, or \$1.44 per acre-foot, based on the average annual diversion of 33,550 AF)

Financial Summary Table	
Total Project Cost	\$1,862,000.00
Disbursed amount (54% of Project Cost)	\$1,000,000.00
CWCB Annual Loan Payment Obligation, including 10% loan reserve	\$48,252.00
Number of Shareholders	38.00
Number of Shares of Stock	4,879.50
Current Assessment per Share	\$8.50
Future Assessment per Share	\$13.27
Annual Project Cost per Acre-foot (average annual diversions: 33,550 AF)	\$1.44

Figure 10: Financial Summary Table

Section 11 - Collateral

The Consolidated Ditch and Headgate Company can offer the following collateral for the CWCB loan:

1. The revenue from assessments as allowed by the Company By-Laws and Articles of Incorporation.
2. The project itself.

Section 12 - Social, Economic, and Physical Impacts

The project will improve the social, economic, and physical condition of the Rio Grande in the Project reach. The social condition will be influenced by the diversion, which will include fish and boat passage. This will lead to improved condition of the fisheries and opportunity for recreation. The economic condition will be improved as maintenance costs will be reduced and the proposed headgate automation will more efficiently provide irrigation water to the stockholders. The physical condition of the Project area will be improved as the streambank stability, riparian and aquatic habitat, and Consolidated diversion and Consolidated and Pace headgates will be enhanced.

Section 13 - Permitting

The Consolidated Ditch Company, NRCS Engineers, and RGHRP staff have met with US Army Corps of Engineers (USACE) to review the project scope and discuss permitting requirements. Work surrounding the Consolidated diversion and headgate is associated with agriculture and will likely fall under the Nation Wide Permits. The local USACE representative has been involved in this Project throughout the planning phase and will continue to advise as final designs are completed. As such, no permitting issues are anticipated.

Section 14 - Institutional Considerations

Entities that are, or may be, involved in the management, design, construction and financing of the project include:

- Consolidated Ditch and Headgate Company: project owner, co-sponsor, financing, and project management;
- Colorado Rio Grande Restoration Foundation and Rio Grande Headwaters Restoration Project: project co-sponsor, financing, and project management;
- Natural Resources Conservation Service: financing, design, and construction;
- Thad Elliot: Pace Ditch owner, project landowner;
- Colorado Water Conservation Board: financing and construction;

CDHC and RGHRP are the co-sponsors of the Project. CDHC will enter into contracts with CWCB for a loan and with the NRCS. RGHRP has a contract with NRCS in place and will enter into a contract with CWCB for any grant funds secured for this project.

Appendices

Appendix A – Project Budgets

Appendix B – Project Schedule

Appendix C – CWCB Loan Application

Appendix D – Consolidated Ditch Articles of Incorporation

Appendix E – Consolidated Ditch Bylaws

Appendix F – Consolidated Colorado Certificate of Good Standing

Appendix G –2015 Balance Sheet

Appendix H –2016 Balance Sheet

Appendix A – Detailed Project Budget

Page 1

Detailed Budget for the Consolidated Ditch Implementation Project										Page 1 of 2
Project Tasks	Total	Sources of Funds						Total		
		Cash Contribution		In-Kind Contribution						
		NRCS/EQIP	Landowners			NRCS	RGHRP			
Task 1: Finalize Design										
NRCS District, Area, and State Engineers will complete the project design (in-kind contribution is an NRCS Estimate)	\$ 100,000.00	\$ -	\$ -	\$ 100,000.00	\$ -			\$ -	\$ 100,000.00	
Total Task 1	\$ 100,000.00	\$ -	\$ -	\$ 100,000.00	\$ -			\$ -	\$ 100,000.00	
Task 2: Diversion Replacement *										
Site Preparation: Includes clearing and grubbing, removal of the old structure, channel clearing and shaping, pollution control, and mobilization.	\$ 58,000.00	\$ -	\$ 58,000.00	\$ -	\$ -			\$ -	\$ 58,000.00	
Water Removal	\$ 63,000.00		\$ 63,000.00	\$ -	\$ -			\$ -	\$ 63,000.00	
Concrete and reinforcement : Includes earthfill and drainfill, concrete dam, fish/boat passage, and steel reinforcement of dam	\$ 488,500.00	\$ 248,500.00	\$ 240,000.00	\$ -	\$ -			\$ -	\$ 488,500.00	
Riprap and slope protection	\$ 100,000.00	\$ 100,000.00	\$ -	\$ -	\$ -			\$ -	\$ 100,000.00	
Water control gate and structural work (catwalk, etc.)	\$ 30,000.00	\$ -	\$ 30,000.00	\$ -	\$ -			\$ -	\$ 30,000.00	
Construction Contingency (20%)	\$ 148,000.00	\$ -	\$ 148,000.00	\$ -	\$ -			\$ -	\$ 148,000.00	
Total Task 2	\$ 887,500.00	\$ 348,500.00	\$ 539,000.00	\$ -	\$ -			\$ -	\$ 887,500.00	
Task 3: Headgate Replacement *										
Site Preparation: Includes clearing and grubbing, removal of the old structure, channel clearing and shaping, and pollution control.	\$ 16,300.00	\$ -	\$ 16,300.00	\$ -	\$ -			\$ -	\$ 16,300.00	
Foundation Work: Includes removal of water	\$ 63,000.00	\$ -	\$ 63,000.00	\$ -	\$ -			\$ -	\$ 63,000.00	
Concrete and Reinforcement: includes earthfill, concrete and steel reinforcement for Consolidated and Pace headgates and trashrack	\$ 472,200.00	\$ 258,500.00	\$ 213,700.00	\$ -	\$ -			\$ -	\$ 472,200.00	
Pipe: includes sluice to river and pipe to Pace ditch	\$ 20,000.00	\$ 20,000.00	\$ -	\$ -	\$ -			\$ -	\$ 20,000.00	
Water control gates and structural work	\$ 40,000.00	\$ 40,000.00	\$ -	\$ -	\$ -			\$ -	\$ 40,000.00	
Automation and Uplooker flow sensor	\$ 40,000.00	\$ 40,000.00	\$ -	\$ -	\$ -			\$ -	\$ 40,000.00	
Construction Contingency (20%)	\$ 131,000.00	\$ -	\$ 131,000.00	\$ -	\$ -			\$ -	\$ 131,000.00	
Total Task 3	\$ 782,500.00	\$ 358,500.00	\$ 424,000.00	\$ -	\$ -			\$ -	\$ 782,500.00	

Appendix A – Detailed Project Budget

Page 2

Detailed Budget for the Consolidated Ditch Implementation Project										Page 2 of 2
Project Tasks	Total	Sources of Funds						Total		
		Cash Contribution		In-Kind Contribution						
		NRCS/EQIP	Landowners		NRCS	RGHRP				
Task 4: Channel Shaping and Streambnak Stabilization										
Channel clearing and shaping	\$ 8,000.00	\$ 8,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,000.00	
Revegetation: includes seeding, spriggin, and mulcing disturbed sites	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00	
Total Task 4	\$ 13,000.00	\$ 13,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,000.00	
Task 5: Monitoring										
Construction Surveys and Contractor Quality Control	\$ 30,000.00	\$ 30,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000.00	
Field Personnel - Completed by RGHRP Staff	\$ 3,000.00	\$ -	\$ 3,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000.00	
Field Volunteer	\$ 2,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000.00	\$ 2,000.00	
Total Task 5	\$ 35,000.00	\$ 30,000.00	\$ 3,000.00	\$ -	\$ -	\$ -	\$ -	\$ 2,000.00	\$ 35,000.00	
Task 6: Outreach and Education										
Project Outreach and Education; press, tours, production of materials, and volunteer coordination by the RGHRP	\$ 4,000.00	\$ 4,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,000.00	
Total Task 6	\$ 4,000.00	\$ -	\$ 4,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,000.00	
Task 7: Administration										
Cost for the RGHRP to administer and manage the project at an average rate \$35 per hour	\$ 30,000.00	\$ -	\$ 30,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000.00	
Office Support In-kind Match	\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	
Project Administration In-kind Match	\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	
Total Task 7	\$ 40,000.00	\$ -	\$ 30,000.00	\$ -	\$ -	\$ -	\$ -	\$ 10,000.00	\$ 40,000.00	
TOTAL	\$ 1,862,000.00	\$ 750,000.00	\$ 1,000,000.00	\$ 100,000.00	\$ 12,000.00	\$ -	5%	1%	\$ 1,862,000.00	
Percent of Project Cost		40%	54%	5%	1%	100%				

Appendix A – Summary Project Budget

Summary Budget for the Consolidated Ditch Implementation Project									
Project Tasks	Total	Source of Funds					TOTAL		
		EQIP (NRCS)	Landowners (CWCB Loan)	In-Kind					
				NRCS	RHRP				
Task 1: Finalize Design	\$ 100,000.00	\$ -	\$ -	\$ 100,000.00	\$ -			\$ 100,000.00	
Task 2: Diversion Replacement	\$ 887,500.00	\$ 348,500.00	\$ 539,000.00	\$ -	\$ -			\$ 887,500.00	
Task 3: Headgate Replacement	\$ 782,500.00	\$ 358,500.00	\$ 424,000.00	\$ -	\$ -			\$ 782,500.00	
Task 4: Channel Shaping and Streambank Stabilization	\$ 13,000.00	\$ 13,000.00	\$ -	\$ -	\$ -			\$ 13,000.00	
Task 5: Monitoring	\$ 35,000.00	\$ 30,000.00	\$ 3,000.00	\$ -	\$ 2,000.00			\$ 35,000.00	
Task 6: Outreach and Education	\$ 4,000.00	\$ -	\$ 4,000.00	\$ -	\$ -			\$ 4,000.00	
Task 7: Administration	\$ 40,000.00	\$ -	\$ 30,000.00	\$ -	\$ 10,000.00			\$ 40,000.00	
TOTAL	\$1,862,000.00	\$750,000.00	\$1,000,000.00	\$100,000.00	\$12,000.00			\$1,862,000.00	
Percent of Project Cost		40%	54%	5%	1%				100%

Appendix B - Project Schedule

Milestone Table for the Consolidate Ditch Implementation Project																
Project Tasks	Year 1 - 2017				Year 2 - 2018				Year 3 - 2019				Year 4 - 2020			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Task 1: Finalize Design																
Task 2: Diversion Replacement																
Task 3: Headgate Replacement																
Task 4: Channel Shaping and Streambank Stabilization																
Task 5: Monitoring																
Task 6: Outreach and Education																
Task 7: Administration																

Appendix C - Loan Application



COLORADO

Colorado Water
Conservation Board

Department of Natural Resources

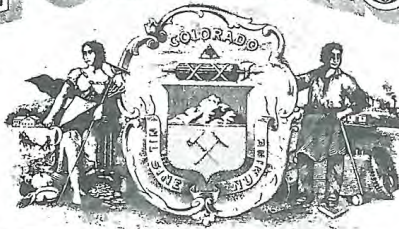
Water Project Loan Program

Application Type	
☐ Prequalification (Attach 3 years of financial statements)	☒ Loan Approval (Attach Loan Feasibility Study)
Agency/Company Information	
Company / Borrower Name: Consolidated Ditch and Headgate Company	
Authorized Agent & Title: Scot Schaefer, President	
Address: 3414 CR 104 S, Alamosa, CO 81101	
Phone: (719) 580-2592	Email: js_farm@msn.com
Organization Type: ☒ Ditch Co. ☐ District ☐ Municipality	Incorporated? ☒ YES ☐ NO
County: Rio Grande	Number of Shares/Taps: 4879.53
Water District: Division 3	Avg. Water Diverted/Yr: 33,550 acre-feet
Number of Shareholders/Customers Served: 38	Current Assessment per Share \$ 8.50 (Ditch Co)
Federal ID Number: 84-0176962	Average monthly water bill \$ (Municipality)
Contact Information	
Project Representative: Scot Schaefer & Mary Lynn Stillings, Secretary (contact info below)	
Phone: (719) 588-0112	Email: glenml@gojade.org
Engineer: Laurie Clark, P.E. and Rod Clark, P.E.	
Phone: (719) 852-5114	Email: Laurie.Clark@co.usda.gov, rodney.clark@co.usda.gov
Attorney:	
Phone: ()	Email:
Project Information	
Project Name: Consolidated Ditch Implementation Project	
Brief Description of Project: (Attach separate sheets if needed)	
The Project includes replacing the Consolidated Slough diversion dam with a concrete dam that allows for fish/boat passage, replacing the Consolidated Ditch and Pace Ditch headgates, and rehabilitating nearby streambanks. See feasibility study for details. (Other costs include monitoring, outreach and education and project administration)	
General Location: (Attach Map of Area)	
Rio Grande County, approximately 4 miles west and 3.5 miles north of Monte Vista, CO	
Estimated Engineering Costs: \$100,000	Estimated Construction Costs: \$1,683,000
Other Costs (Describe Above): \$79,000	Estimated Total Project Costs: \$1,862,000
Requested Loan Amount: \$1,000,000	Requested Loan Term (10, 20, or 30 years): 30 Years
Project Start Date(s) Design: January 2017	Construction: October 2017
Signature	
 Signature / Title: President S-30-17 Date	Return to: Finance Section Attn: Anna Mauss 1313 Sherman St #718 Denver, CO 80203 Ph. 303/866.3449 e-mail: anna.mauss@state.co.us

Appendix D

Consolidated Ditch Articles of Incorporation

STATE OF COLORADO



OFFICE OF THE SECRETARY OF STATE

UNITED STATES OF AMERICA, } ss.
STATE OF COLORADO.

CERTIFICATE.

*I, Byron A. Anderson, Secretary of State
of the State of Colorado, do hereby certify that*

the annexed are full, true and complete copies of Articles of Incorporation and
Articles of Amendments to the Articles of Incorporation of

THE CONSOLIDATED DITCH AND HEADGATE COMPANY

as filed in this office and admitted to record.

..... IN TESTIMONY WHEREOF *I have hereunto*
set my hand and affixed the Great
Seal of the State of Colorado, at the
City of Denver, this-----Eighteenth-----
day of-----November----- A. D. 1970

Byron A. Anderson
SECRETARY OF STATE.
By *Jeremiah J. Pannalup*
DEPUTY.

STATE OF COLORADO)
) SS
RIO GRANDE COUNTY (

I, Zeb. J. Wilson, County Assessor in and for
said county, do hereby certify that the Consolidated
Ditch And Headgate Co., is a corporation, which is or-
ganized for mutual benefit only. That said corporation
owns no property situated in Rio Grande County, Colo.
which is assessed for local taxation.

Witness my hand at Del Norte, Colo. this 20th
day of August, 1913.

Zeb. J. Wilson
County Assessor.

Entered Feb. 2, 1914
Book 4, P. 103. L. 9.

Bowers, Clerk,

STATE OF COLORADO
RIO GRANDE COUNTY | SS.

I, Zeb Wilson, being first duly sworn upon my oath to depose and say:

1.

That I am the duly elected, qualified and acting Assessor of the County of Rio Grande in the State of Colorado.

11.

That I am well acquainted with the property and business of The Consolidated Headgate Company.

111.

That said Company owns no property which is assessed for taxation/

1V.

That The Consolidated ^{Ditch Co} Headgate Company is a mutual Company, not for profit, and was organized and is maintained solely for the purpose of operating The Consolidated Headgate, through which water is delivered to its stock holders.

V.

That the only source of revenue of The Consolidated Headgate Company is through assessments levied upon the stock of the Company each year for the purpose of maintaining and operating its ditch system.

Zeb Wilson
County Assessor of Rio Grande Co.

Subscribed and sworn to before me this 11th day
of March, A. D. 1914.

W. C. Tharow
Notary Public

My commission expires the
____ day of _____
A.D. 19__

County Clerk and Records

STATE OF COLORADO
RIO GRANDE COUNTY

SS.

Charles Ydren being first duly sworn upon his oath does depose and say:

I.

That he is the duly elected, qualified and acting President of The Consolidated Headgate Company.

II.

That The Consolidated Headgate Company is a mutual Company, not for profit, and was organized and is maintained solely for the purpose of operating The Consolidated Headgate, through which water is delivered to its stock holders.

III.

That it does not deal in any kind of property, and its only source of revenue is through assessments levied on its stock holders for the maintenance of its headgate.

IV.

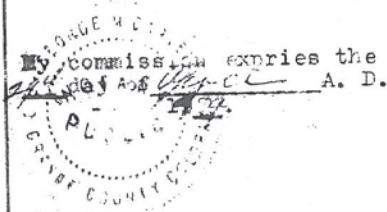
That it charges no rentals and has no stock for sale.

WHEREFORE, affiant asks as President and on behalf of the said The Consolidated Headgate Company that it be relieved of filing an annual report.

Charles Ydren
President of The Consolidated Head-
gate Company.

Subscribed and sworn to before me this 28 day of February
A. D. 1914.

George M. Barrett
Notary Public



KNOW ALL MEN BY THESE PRESENTS, that we, CHARLES YDREN, JOHN F. ANDERSON, and GEORGE W. GATES, residents of the State of Colorado, have associated ourselves together as a company, under the name and style of "THE CONSOLIDATED DITCH AND HEADGATE COMPANY", for the purpose of becoming a body corporate and politic under and by virtue of the laws of the State of Colorado, and in accordance with the provisions of the Laws of said State, we do hereby make, execute and acknowledge in triplicate this certificate in writing of our intention to so become a body corporate, under and by virtue of said laws.

FIRST. The Corporate name and style of our said Company shall be THE CONSOLIDATED DITCH AND HEADGATE COMPANY.

SECOND. The object for which our said Company is formed and incorporated is for the purpose of owning a sufficient right of way, and constructing and maintaining a headgate and ditch, by which water may be taken from the Rio Grande River and conveyed through the said ditch into a branch of the said river for the purpose of supplying water to certain ditches owned by the stockholders of the said Company, and which have heretofore been decreed water to be taken from the said Rio Grande River. The said headgate to be constructed is situate on the South Bank of the said River, from whence the North-west Corner of Section Sixteen (16), in Township Thirty-nine (39), North of Range Seven (7), E. N. M. M., bears North 13° 10' West 976 feet. The said Ditch to be constructed is described as follows:

(2)

Commencing at the point above mentioned as a place of beginning, thence South 8° 50' West 300 feet; thence South 42° 8' East 1225 feet.

THIRD. The Capital Stock of our said Company is to be Five Thousand (5000) Dollars, to be divided into Shares of One Dollar (\$1.00) each. Said Stock shall be assessable only for the purpose of maintaining and operating the said Ditch and Headgate after it is constructed, but for all other purposes said stock shall be non-assessable.

FOURTH. Our said Company is to exist for a term of Twenty-(20) years.

FIFTH. The affairs and management of our said Company is to be under the control of Three (3) Directors, and CHARLES YDREN, JOHN F. ANDERSON, and GEORGE W. GATES, are hereby selected to act as a Board of Trustees and to manage the affairs and concerns of the said Company for the first year of its existence, and until their successors are elected.

SIXTH. The operations of our said Company will be carried on in the County of Rio Grande, and the principal place and business office of the said Company shall be located in Monte Vista, Colorado.

SEVENTH. The Stock-holders of the said Company shall have power to make such prudential by-laws as they may deem proper for the management of the affairs of this Company, according to the statute in such case made and provided.

IN TESTIMONY WHEREOF, We have hereunto set our hands and seals on this 2nd day of October, 1909.

Charles Ydren (SEAL)
John F. Anderson (SEAL)
George W. Gates (SEAL)

STATE OF COLORADO)
SS.
RIO GRANDE COUNTY)

I, Jesse Stephenson, a Notary Public, in and for the said County, in the State aforesaid, do hereby certify that CHARLES YDREN, JOHN F. ANDERSON, and GEORGE W. GATES, personally known to me to be the persons whose names are subscribed to the annexed and foregoing certificate of Incorporation, appeared before me this day in person and acknowledged that they signed, sealed and delivered the said instrument of writing as their free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and seal this

2nd day of ~~September~~ ^{October}, 1909,

My Commission expires June 9 1913

Jesse Stephenson
Notary Public.

This document has been inspected
and properly entered on the Re-
cords of The Flat Tax Department.

Date 10/26/71 10/26/71

Robert B. ...
Clerk

CERTIFICATE OF INCORPORATION

The Consultants' Office

and Associate Company

51686

10/26/71

Indexed by 2

RECEIVED PAYMENT

10/26/71

JAMES PEARCE, Sec'y of State

James Pearce
Secretary of State

FILED IN THE OFFICE OF THE
SECRETARY OF STATE OF THE
STATE OF COLORADO, ON

1910 APR 4 AM 11 36

RECEIVED BY
JAMES PEARCE
BY *James Pearce*
FILED 10/26/71

James P. Pearce
Date 10/26/71

Received by
James P. Pearce
Date 10/26/71

18

CERTIFICATE OF AMENDMENT OF ARTICLES OF INCORPORATION
OF
THE CONSOLIDATED DITCH AND HEADGATE COMPANY

KNOW ALL MEN BY THESE PRESENTS:

That we, J. Frank Goff, President and C. Graves, Secretary, of The Consolidated Ditch and Headgate Company, a corporation, duly organized under and by virtue of the laws of the State of Colorado in that case made and provided, do hereby make this our certificate in triplicate and in accordance with the said laws of the State of Colorado, we make the following statements:

FIRST: That the holders of more than one-third of the capital stock of the Consolidated Ditch and Headgate Company subscribed, issued and credited to the holders thereof, and outstanding as shown by the books of the Corporation, did, on the 29th day of March A. D. 1930, in writing, request the President of the said Corporation, to call a meeting of the stockholders for the purpose of considering a certain proposed amendment to the Articles of Incorporation of the said Corporation, setting forth in said written request the substance of said proposed amendment.

SECOND: That at a regular meeting of the Board of Directors of the said Corporation, called by the President in pursuance of such request, and held at the office of said Corporation, in the City of Monte Vista, County of Rio Grande, in the State of Colorado, on the 29th day of March A. D. 1930, the President presented such request to said Board, and, thereupon, the following resolution was adopted:

RESOLUTION

WHEREAS the holders of more than one-third ($1/3$) of the capital stock of the Consolidated Ditch and Headgate Company have filed a request with this Board.

THAT, WHEREAS, the charter of this company will expire on the 4th day of April, A. D. 1930, and that under the laws of the State of Colorado it is necessary to file an application for extension within one year after such expiration, that the Board of Directors be requested to call a special meeting for the purpose of amending the Articles of Incorporation of the company to extend its corporate existence.

NOW, THEREFORE, BE IT RESOLVED that a special meeting of the stockholders of this corporation, be, and is hereby called to be held at the office of this corporation in the City of Monte Vista, County of Rio Grande and State of Colorado, for the purpose and object of considering a certain proposed amendment to the Articles of Incorporation of The Consolidated Ditch and Headgate Company in manner and form as follows, to-wit:

RESOLVED That Article Fourth of the Articles of Incorporation of said Corporation be amended to read as follows:

Our said company is to exist for a term of twenty (20) years from and after the 4th day of April, A. D. 1930.

RESOLVED That due notice be given as requested by law by the secretary.

RESOLVED.-That a special meeting of the stockholders of this Corporation be and is hereby called to be held at the office of this Corporation in the City of Monte Vista, County of Rio Grande, State of Colorado, for the purpose and object of considering a certain proposed amendment to the Articles of Incorporation of The Consolidated Ditch & Headgate Company in manner and form as follows, to-wit:

RESOLVED.-That Article Fourth of the Articles of Incorporation of the said Corporation be amended to read as follows:

"Fourth" that our said company is to exist for a term of twenty (20) years from and after the 4th day of April, A. D. 1920.

RESOLVED.-That due notice of said meeting be given, as required by law, by the Secretary.

THIRD: That thirty (30) days' notice of the said special meeting was given to each stockholder by delivering to each personally, or by depositing in the Post Office a notice, properly addressed, stating the time and object of the meeting, which said notice was signed by the President and Secretary of said Corporation; and that notice of said meeting was duly published ten (10) days prior to said meeting, in the Monte Vista Journal, a newspaper in said City of Monte Vista being the place in which the principal office of the Corporation is kept; a copy of which published notice clipped from said newspaper is pasted hereto and follows this paragraph.

NOTICE OF STOCKHOLDERS MEETING

TO ALL STOCKHOLDERS OF THE CONSOLIDATED DITCH & HEADGATE COMPANY:

NOTICE IS HEREBY GIVEN THAT a Special Meeting of stockholders of said Company is hereby called to be held at the office in the City of Monte Vista, County of Rio Grande, State of Colorado, on Monday the 23rd day of June, 1920, at 2 o'clock p. m. for the purpose of considering a certain proposed amendment to the Articles of Incorporation of said Corporation, extending the corporate life of said corporation for the term of twenty (20) years from and after the 4th day of April, A. D. 1920, and at said meeting the following resolution to the Articles of Incorporation of said company will be submitted for the consideration of the stockholders, to-wit:

"That Article Fourth of the Articles of Incorporation of said Corporation be amended to read as follows:

"Our said company is to exist for a term of twenty (20) years from and after the fourth day of April, A. D. 1920."

A special meeting is called for the purpose of such other matters as may properly be brought before the meeting.

CORNELIA GRAVES, Secretary.

First Pub. June 12
Last Pub. June 23

FOURTH: That the said special meeting of the stockholders of the said Corporation, thus duly called, was held at the Corporation's office in the City of Monte Vista, County of Rio Grande, and State of Colorado, on the 23rd day of June, A. D. 1930.

FIFTH: That at the said special meeting of the stockholders of the said Corporation, votes representing more than two-thirds of all the stock of the said Corporation, then subscribed and in good faith outstanding, were cast in favor of the adoption of the proposed amendment, and the same was declared duly adopted.

SIXTH: That the President and Secretary of the said Corporation were, at said special meeting, duly authorized and directed to make, verify and file such certificate as might be necessary or required by law to carry into effect the change adopted by said Corporation by amendment to its Articles of Incorporation.

IN WITNESS WHEREOF, we, the President and Secretary of
the said Corporation, have hereunto set our hands and seals,
this 23rd day of June, A. D. 1930, and have caused the seal
of our said Corporation to be affixed hereunto.

J. H. Hoff (SEAL)
President

ATTEST:

Cornelia Graves (SEAL)
Secretary.

STATE OF COLORADO,)
COUNTY OF RIO GRANDE.) SS.

Before me, a Notary Public in and for said County and State, personally appeared J. Frank Coff President, and Cornelia Graves Secretary, of the Consolidated Ditch & Headgate Company, personally known to me to be the persons whose names are subscribed to the foregoing certificate of amendment to the Articles of Incorporation of said Corporation, who each, being first duly sworn, depose and say upon their oaths each for himself and not one for the other, that they are the President and Secretary, respectively, of the said The Consolidated Ditch & Headgate Company and that the facts thus set forth in said certificate are true to the best of their knowledge and belief, and that they as such President and Secretary, respectively, of the said Corporation, made, signed and executed the said certificate for the uses and purposes therein mentioned.

J. Frank Goff
President.

Cornelia Graves
Secretary.

Subscribed and sworn to before me this 24th day of
June, A. D. 1980.

My commission expires June - 25 -, A. D. 1932.

John N. Allen
Notary Public.

1880

Certificate of Personal

The Commission

Atch and Headgate

Company

1880

1880

1880

Filed in the office of the Secretary of
State, of the State of New York, on the

day of

A.D. 1880, at the City of New York.

Witness my hand and the seal of the State

at the City of New York, this 1st day of

1880.

1880

1880

1880

1880

To Whom It May Concern:

This is to certify that a special meeting of the stockholders of THE CONSOLIDATED DITCH AND
HEADGATE COMPANY
a Colorado corporation, was held at Monte Vista, Colorado on the 28th day of
March, A. D. 1950, such meeting having been called by the stockholders
representing at least 10 per cent (10%) of the entire capital stock of the company outstanding. Notice of
such meeting as provided by law, was published ^{for two successive weeks} at least once ~~not more than thirty days~~ and at least ten
days prior to the date fixed for said meeting in a newspaper printed at Monte Vista, County of Rio Grande
State of Colorado, and notice of said meeting was delivered personally or mailed to each stockholder at
least thirty (30) days prior to the date of such meeting, there being represented at such meeting 3906.4
shares of the capital stock of said company out of a total of 4874.90 shares outstanding.
At said meeting a resolution was passed to extend the corporate existence of the said corporation
* in perpetuity from and after the date of the expiration of its corporate life,†
the resolution received a MAJORITY vote of all the outstanding stock of the corporation. The president
and secretary were authorized and directed to file under the corporate seal of the company, a certificate of
renewal with the Secretary of State of the State of Colorado, and to file a duplicate certificate in the office
of the Recorder of Deeds in each county wherein the company may do business in the State of Colorado.

Gust Cohen
President.

(Corporate Seal)

Claude W. Lath
Secretary.

*Corporate existence may be renewed perpetually or for any specified number of years.
†This certificate or renewal shall be filed before or within one year after the expiration of the charter.
Fee for filing certificate of renewal is \$25.00 for \$50,000 or less and twenty cents for each additional or fractional part
of one thousand dollars of authorized capital stock.

117939

CERTIFICATE OF RENEWAL
OF THE
CERTIFICATE OF INCORPORATION
OF

THE CONSOLIDATED DITCH AND HEADGATE COMPANY

DOMESTIC

RECORDED

BOOK 573 PAGE 327

FILED in the office of the Secretary of
State, of the State of Colorado, on the
29th day of March

A.D. 1950, at 3:15 o'clock P.M.

GEORGE J. BAKER,
Secretary of State

Filing Clerk _____ Post _____

Old Age Pension Fund _____

THE BRADFORD-ROBINSON CO., INC., DENVER

195 -- (9) V 08397 04-52-000

This document has been inspected
and properly entered on the Re-
cords of The Flat Tax Department.

Date March 30, 1950 OK
Winters Clerk

This document has been inspected
and properly entered on the Re-
cords of The Flat Tax Department.

Date April 17, 1950 OK
Passerone

Appendix E

Consolidated Ditch Bylaws

BY-LAWS OF
CONSOLIDATED DITCH & HEADGATE CO.
(A Colorado Corporation)

ARTICLE I
Stockholders

1. Place of meetings: Meetings of stockholders, annual and special, shall be held in Monte Vista, Colorado ~~may be held within or outside the State of Colorado~~, at such place as shall be specified in the notice.
2. Annual Meetings: Annual meetings of stockholders shall be held ~~in ----- and in each year thereafter, on the~~ during the month of February of each year hereafter at a time of day to be specified in the notice, or waiver of notice, of such meeting. If the annual meeting is omitted for any cause, the directors shall cause a meeting in lieu thereof to be held as soon thereafter as convenient, and any business transacted or elections held at such meeting shall be as valid as if done at the annual meeting.
3. Special Meetings: Special meetings of stockholders shall be held whenever called by president or vice-president or secretary or treasurer, or by a majority of the directors, or whenever one or more stockholders holding 10% or more of the issued and outstanding stock makes written application to the corporation and in the application states the time, place and purpose of the requested meeting.
4. Notice: Written or printed notice stating the place, day and hour of the meeting and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than ten or more than fifty days before the date of the meeting, either personally or by mail, by or at the direction of the president, the secretary, or the officer or persons calling the meeting, to each shareholder of record entitled to vote at such meeting, except that if the authorized capital stock is to be increased at least thirty days' notice shall be given. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail addressed to the shareholder at his address as it appears on the stock transfer books of the corporation, with postage thereon prepaid. Notices of the meeting shall likewise be published in the Monte Vista Journal for two weeks immediately preceeding the annual meeting.

5. Waiver of Notice: Written waiver of notice of any stockholders' meeting, signed by the person entitled to such notice, whether before, at, or after the meeting, shall be deemed equivalent to such notice.

6. Quorum: A majority in interest of all capital stock, issued and outstanding, represented by stockholders of record in person or by proxy, shall constitute a quorum.

7. Voting: When a quorum is present at any meeting, a majority in interest of the stock represented thereat shall decide any question brought before such meeting, except as otherwise provided by statute or by these by-laws.

Each stockholder shall be entitled to one vote for each share of stock owned by him.

~~As expressly set forth in the Articles of Incorporation, cumulative voting shall not be allowed in the election of directors;~~

8. Proxies: Shareholders of record may vote at any meeting in person or by written proxy, which proxy shall be filed with the secretary of the meeting before being voted.

ARTICLE II Directors

1. Eligibility: Directors need not be residents of Colorado, or shareholders. *per amendment*

2. Number: As provided by the Articles of Incorporation, never ~~less than three~~ directors shall constitute the initial Board of Directors. The number of directors may be increased or decreased from time to time by amendment to these by-laws, but no decrease shall have the effect of shortening the term of any incumbent director -- and the number of directors shall never be less than three.

3. Election and Term: Commencing with year 1971, one Director shall be elected for a one year term, one for a two year term, and one for a three year term, thereafter upon renewal of date or expiration of any term, the election of each Director shall be for a three year term. ~~Except as otherwise provided in these by-laws, the entire Board of Directors shall be elected at each annual meeting of shareholders to hold office until the next succeeding annual meeting of shareholders.~~ Each director shall hold office for the term for which he is elected and until his successor shall have been elected and qualified.

4. Removal: At a meeting called expressly for that purpose, the entire Board of Directors or any lesser number may be removed, with or without cause, by a vote of the holders of the majority of the shares then entitled to vote at an election of directors.

5. Vacancies: With the two exceptions described below in this Section 5, any vacancy occurring in the Board of Directors may be filled by the affirmative vote of a majority of the remaining directors though less than a quorum of the Board of Directors.

(a) Any directorship to be filled by reason of an increase in the number of directors under Section 2, shall be filled only by election by the shareholders at an annual meeting or at a special meeting of the shareholders called for that purpose.

(b) Any directorship to be filled by reason of the removal of one or more directors by the shareholders under Section 4 shall be filled only by election by the shareholders at an annual meeting or at a special meeting called for that purpose.

6. Powers: The board of directors shall have the entire management of the business and property of the corporation, including the power to ^{borrow money.} ~~determine what constitutes profits and surplus, respectively, what amount shall be reserved for working capital and for any other purpose, and what amount shall be declared as dividends.~~

7. Meetings: Regular and special meetings of the board may be held within ~~or outside~~ the State of Colorado, regular meetings as may be determined by the board, special meetings upon call by the president or the vice-president or the secretary-treasurer.

8. Notice and Waiver: Written notice of all regular and special meetings shall be mailed by the secretary to each director at his residence or place of business at least ten days previous to the day on which the meetings are to be held. Notice of any special meeting shall specify the business to be transacted. Provided, however, that any meeting may be held without notice if all directors are present or those not present shall at any time waive or have waived notice thereof.

9. Quorum and Voting: A majority of the members of the board of directors as constituted for the time being shall constitute a quorum for the transaction of business, ~~but a lesser number (not less than -----) may adjourn any meeting and the meeting may be held as~~

~~adjourned without further notice.~~ When a quorum is present at any meeting, a majority of the members present thereat shall decide any question brought before such meeting, except as otherwise provided by statute or by these by-laws.

ARTICLE III Officers

1. Eligibility: Every officer shall be a stockholder of this Corporation. ~~No officer need be a resident of Colorado or a shareholder. The office of Secretary-Treasurer shall be held by one person. Two persons may serve in Co-capacities as Secretary-Treasurer~~ ~~may be held by the same person.~~

2. Number: The officers of the corporation shall be _____: a president, vice-president, secretary-treasurer.

3. Election and Term: The officers shall be elected by the Board of Directors at the Board's first meeting after incorporation, and thereafter at the first meeting of the Board after each annual election of the Board by the shareholders.

4. Removal: At a meeting called expressly for that purpose, any one or more officers may be discharged from office, with or without cause, by the vote of a majority of the entire Board of Directors.

5. Vacancies: A vacancy occurring in any office may be filled by the affirmative vote of a majority of the then directors though less than a quorum of the Board of Directors, the successor to hold office for the unexpired term.

6. President: The president shall be the chief executive officer of the corporation ~~and, unless~~ some other person is specifically authorized by vote of the Board of directors, shall sign all certificates of stock, notes, bonds, deeds, mortgages, leases and contracts of the corporation.

7. Vice-President: Unless some other person is specifically authorized by vote of the Board of Directors, _____vice-president, during the absence or disability of the president, shall perform the duties and have all the powers of the president including the power to sign all certificates of stock, notes, bonds, deeds, mortgages, leases and contracts of the corporation.

8. Secretary: Unless some other person is specifically authorized by vote of the Board of Directors, the secretary shall:

- (a) Issue necessary notices of directors' and stockholders' meetings.
- (b) Keep minutes of all such meetings.
- (c) Be custodian of the corporate seal.
- (d) Attest with his signature and impress with the corporate seal all stock certificates, notes, bonds, deeds, mortgages, leases and contracts of the corporation.
- (e) Perform all other duties commonly incident to his office.

9. Treasurer: Unless some other person is specifically authorized by vote of the Board of Directors, the treasurer shall:

- (a) Have custody of all money, funds, valuable papers and documents of the corporation.
- (b) Keep books of account of the corporation's transactions.
- (c) Perform all other duties commonly incident to his office.

10. Checks: Funds of the corporation deposited in any bank shall be subject to withdrawal or charge upon checks, drafts, or other orders for the payment of money when signed on behalf of the corporation by either one of the co-secretary-treasurers of the Company ~~such officer or officers as shall be specifically authorized by vote of the Board of Directors.~~

ARTICLE IV Amendments

~~The Board of Directors shall have the power to adopt the initial by-laws after incorporation.~~

Thereafter, only the shareholders shall have the power to amend or add to the by-laws, or to repeal the by-laws and adopt new by-laws; and such action shall be taken by vote of the holders of not less than two-thirds of the issued and outstanding capital stock at any meeting of shareholders, provided notice of the proposed change is given in the notice of the meeting, or notice thereof is waived in writing.

ATTESTED BY:

W. W. Stiles
Secretary

CONSOLIDATED DITCH & HEADGATE CO.

Kenneth E. Biggenbach
President

Consolidated Ditch & Headgate Company
Amendments to By-Laws

Article II - Directors

1. Eligibility: Directors must be shareholders and residents of the San Luis Valley, State of Colorado.

Adopted: February 8, 1994

Secretary

Appendix F – Consolidated Ditch Colorado Certificate of Good Standing

OFFICE OF THE SECRETARY OF STATE OF THE STATE OF COLORADO

CERTIFICATE OF FACT OF GOOD STANDING

I, Wayne W. Williams, as the Secretary of State of the State of Colorado, hereby certify that, according to the records of this office,

CONSOLIDATED DITCH AND HEADGATE COMPANY

is a

Nonprofit Corporation

formed or registered on 04/04/1910 under the law of Colorado, has complied with all applicable requirements of this office, and is in good standing with this office. This entity has been assigned entity identification number 19871051686.

This certificate reflects facts established or disclosed by documents delivered to this office on paper through 05/24/2017 that have been posted, and by documents delivered to this office electronically through 05/29/2017 @ 20:02:28.

I have affixed hereto the Great Seal of the State of Colorado and duly generated, executed, and issued this official certificate at Denver, Colorado on 05/29/2017 @ 20:02:28 in accordance with applicable law. This certificate is assigned Confirmation Number 10265578.



Secretary of State of the State of Colorado

*****End of Certificate*****
Notice: A certificate issued electronically from the Colorado Secretary of State's Web site is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Validate a Certificate page of the Secretary of State's Web site: <http://www.sos.state.co.us/validateCertificateSearchCriteria.do> entering the certificate's confirmation number displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate. For more information, visit our Web site: <http://www.sos.state.co.us> click "Businesses, trademarks, trade names" and select "Frequently Asked Questions."