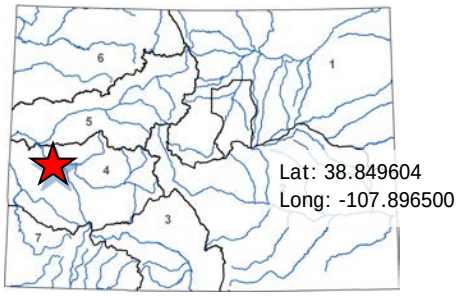
COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Water Plan Grant Application

Lower Cedar Mesa Ditch Pipeline
Cedar Mesa Ditch Company
July 2020 Board Meeting



LOCATION	
County/Counties:	Delta
Drainage Basin:	Gunnison

DETAILS	
Total Project Cost:	$1,365,000
Water Plan Grant Request:	$35,000
Recommended Amount:	$35,000
Other CWCB Funding:	$54,800 (WSRF)
Other Funding Amount:	$1,052,000 (NRCS)
Applicant Match:	$1,330,090
Project Type(s): Construction	
Project Category(Categories): Agricultural	
Measurable Result: Agricultural water efficiency (500 acre-feet), up to $100,000 in savings dollars/year, water quality improvement	

The Cedar Mesa Ditch is located near Cedaredge, Colorado, and supplied by a direct diversion from Surface Creek, which eventually flows into the Gunnison River. The Cedar Mesa Ditch has an absolute decree of 50.075 cfs and provides water to 58 shareholders irrigating approximately 1043 acres of grass pasture, grains, and fruit. The Cedar Mesa Ditch is a primarily earthen ditch with occasional culverts to convey water under roadways.

The Cedar Mesa Ditch is seeking WPG funds to pipe a significant portion (3.5 miles) of the lower ditch system to reduce seepage losses, enhance deliveries to shareholders in dry years, and improve water quality. Based on previous engineering reports, in a typical irrigation season, significant seepage contributes to curtailments of more junior right holders. Overall, the project will help save an estimated 250-500 feet of water annually and achieve substantial cost savings to water right holders in terms of the avoided value of water lost to system inefficiencies. The project's cost-share is being contributed by the United States Department of Agriculture-Natural Resources Conservation Service and the applicant through a previously approved CWCB loan and in-kind support.

In addition to enhancing system-efficiency, the project will further several Colorado Water Plan objectives, including improving water quality and benefiting the environment by reducing loadings of selenium and salinity. The lower portion of the ditch to be piped runs through Mancos Shale, the leaching of which contributes to the loading of selenium. Selenium has been identified as a contribution to reproductive health and recovery of Upper Colorado River endangered fish species. The Bureau of Reclamation estimates that piping the ditch will reduce salt loading by 900 tons annually to the Colorado River Basin.

Staff recommends Board approval of $35,000. This project furthers several of Colorado's Water Plan critical action goals relating to agriculture, including encouraging agriculture efficiency and resiliency while promoting agricultural productivity. This project will provide multiple benefits, including reducing salinity impacts on other water users, improving water quality, and furthering interstate objectives associated with salinity and selenium reduction in the Colorado River Basin.

Last Updated: July 2017

Colorado Water Conservation Board

Water Plan Grant Application

Instructions

To receive funding for a Water Plan Grant, applicant must demonstrate how the project, activity, or process (collectively referred to as "project") funded by the CWCB will help meet the measurable objectives and critical actions in the Water Plan. Grant guidelines are available on the CWCB website.

If you have questions, please contact CWCB at (303) 866-3441 or email the following staff to assist you with applications in the following areas:

Supply and Demand Gap Projects	Gregory.Johnson@state.co.us
Water Storage Projects	Anna.Mauss@state.co.us
Conservation, Land Use Planning	Kevin.Reidy@state.co.us
Engagement & Innovation Activities	Mara.MacKillop@state.co.us
Agricultural Projects	Brent.Newman@state.co.us
Environmental & Recreation Projects	Linda.Bassi@state.co.us

Applicants interested in submitting an 'Intent to Apply' in the future are encouraged to check here ☐ and fill in all sections with the best information available at the time. Exhibits may be excluded.

This "Intent to Apply" will help CWCB prioritize Projects that are not ready for fully completed Water Plan Grant Application due to the initial timeframe and required deadlines.

FINAL SUBMISSION: Submit all application materials to *waterplan.grants@state.co.us* in the original file formats [Application (word); Statement of Work (word); Budget/Schedule (excel)]. Please do not combine documents.

Water Project Summary

Name of Applicant	Cedar Mesa Ditch Company
Name of Water Project	Piping lower Cedar Mesa Ditch

CWP Grant Request Amount	$35,000
Other Funding Sources _____	NRCS Grants, CWCB Loan
Other Funding Sources _____	$45,000 (CWCB pending)
Other Funding Sources _____	$1,350,000 loan
Applicant Funding Contribution	$1,052,000 NRCS Grants
Total Project Cost	$1,350,000

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Applicant & Grantee Information	
Name of Grantee(s)	Cedar Mesa Ditch Company
Mailing Address	PO Box 1118, Cedaredge, CO 81413
FEIN	84-0873324
Organization Contact	Erik Fritchman
Position/Title	President, Cedar Mesa Ditch Company
Email	erikfritchman@yahoo.com
Phone	970 640 2925
Grant Management Contact	J Annie Holton
Position/Title	Board Member
Email	annieholton2@gmail.com
Phone	970 485 0905
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	

Description of Grantee/Applicant
Provide a brief description of the grantee's organization (100 words or less).
Cedar Mesa Ditch Company was organized October 13, 1898 as a non-profit water conveyance company. It has 403 shares of stock outstanding. The company has several water rights from Surface Creek totaling slightly over 26 cfs irrigation water and 2 cfs livestock water. From the Surface Creek headgate, it is approximately 12 miles to the end of the ditch. The ditch delivers water to 55 shareholders who raise cattle, hay, peaches, apples, hemp, plums, apricots and grapes. The company owns three water rights as follows: 1) September 1894, Surface Creek #36, 10 cfs.; 2) September 1894, Surface Creek #A32, 16 cfs.; 3) January 1999, Surface Creek #98CW30, 24 cfs.; 4) Aug. 1936, J-52, 2 cfs.. In an average year the ditch conveys about 2000 cfs (?) to irrigate approximately 1043 acres of land. Irrigated acreage has decreased in the past 4 decades Historically, land irrigated by Cedar Mesa Ditch was flood-irrigated, but in the past decades progress has been made as more shareholders have installed drip, micro-sprinkler, gated-pipe and side-roll systems. It is expected that these efficiencies will continue as water becomes more valuable and water rights are sold off. Cedar Mesa falls more than 2000 ft in 12 miles and many members have installed pressurized systems using the fall on their property. This fall has made piping the ditch with a pressurized system unnecessary (a requirement with BOR projects). During the past 4 decades, acreage irrigated by Cedar Mesa Ditch has decreased by 40%.

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Type of Eligible Entity (check one)	
	Public (Government): Municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
	Public (Districts): Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises.
X	**Private Incorporated:** Mutual ditch companies, homeowners associations, corporations.
	Private Individuals, Partnerships, and Sole Proprietors: Private parties may be eligible for funding.
	Non-governmental organizations (NGO): Organization that is not part of the government and is non-profit in nature.
	Covered Entity: As defined in Section 37-60-126 Colorado Revised Statutes.

Type of Water Project (check all that apply)	
	Study
X	Construction
	Identified Projects and Processes (IPP)
	Other -

Category of Water Project (check all that apply and include relevant tasks)

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X	Supply and Demand Gap - Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap. *Applicable Exhibit A Task(s):*	
	Water Storage - Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity. *Applicable Exhibit A Task(s):*	
	Conservation and Land Use Planning - Activities and projects that implement long-term strategies for conservation, land use, and drought planning. *Applicable Exhibit A Task(s):*	
	Engagement & Innovation - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website. *Applicable Exhibit A Task(s):*	
X	Agricultural - Projects that provide technical assistance and improve agricultural efficiency. *Applicable Exhibit A Task(s):*	
	Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. *Applicable Exhibit A Task(s):*	
X	Other	Explain: Water Quality – reducing salinity and selenium

Location of Water Project

Please provide the general county and coordinates of the proposed project below in **decimal degrees**. The Applicant shall also provide, in Exhibit C, a site map if applicable.

County/Counties	Delta		
Latitude	38.890605	south to	38.849604
Longitude	-107.878089		-107.896500

Water Project Overview

Please provide a summary of the proposed water project (200 words or less). Include a description of the project and what the CWP Grant funding will be used for specifically (e.g., studies, permitting process, construction). Provide a description of the water supply source to be utilized or the water body affected by the project, where applicable. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, and area of habitat improvements, where applicable. If this project addresses multiple purposes or spans multiple basins, please explain.
The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.

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Water Project Overview

This application is for assistance with **construction** of the Lower Cedar Mesa Ditch pipeline. Specifically any funding from a WPG would assist in purchasing 21" PVC pipe.

The pipeline will be constructed in the existing ditch right-of-way. No addition land purchases or easements are required. Feasibility studies and engineering design plans and are complete.

Cedar Mesa Ditch is supplied from Surface Creek which, in turn, is fed by numerous reservoirs on the Grand Mesa. The 12-mile ditch supplies irrigation water to 1043 acres through 37 head-gates. It serves 58 shareholders who raise cattle, hay, peaches, apples, plums, apricots and grapes. The lower part of the ditch runs thought Machos Shale where seepage is the greatest. The BOR estimates 900 ton/yr salt is contributed to the Colorado River from CMD. It is estimated that piping the lower 3.5 miles of the ditch will recover 60% of the shrink. This recovery will significantly reduce salt and selenium leaching from the ditch through the Mancos Shale. Significantly, seepage form CMD feeds into Fruitgrower's Reservoir, the second National Water Quality location identified in Colorado for which Best Management Plans will be developed.

Most irrigation water rights in the Surface Creek Valley belong to private, non-profit companies. Irrigation water is not tied to land and may be leased or sold to other users. Typical costs for leasing range from $25 - $150 an acre-foot, depending on availability (weather). During the 2018 drought year, water was being leased for more than $200 an acre-foot. Piping this portion of the ditch would recover $6,000 to $12,000 worth of water. In a drought year like 2018, that value would approach $100,000 if the water were available.

The project is phased to start in 2020 and be completed in 2 years. During 2020 approximately 33% of the construction will be completed. The project will be completed in 2021. Each year's plans and deliverables are detailed in Exhibit A. The budget is provided in Exhibit B in EXCELL format.

This project addresses agricultural efficiency and the water supply and demand gap.

Measurable Results

To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:

	New Storage Created (acre-feet)
250-500 acre-feet	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
	Existing Storage Preserved or Enhanced (acre-feet)
	Length of Stream Restored or Protected (linear feet)
@$50/af =$12500-25000/yr	Efficiency Savings (indicate acre-feet/year OR dollars/year)
	Area of Restored or Preserved Habitat (acres)
	Quantity of Water Shared through Alternative Transfer Mechanisms
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
~200	Number of Coloradans Impacted by Engagement Activity

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Measurable Results		
	Other	Explain:

Water Project Justification

Provide a description of how this water project supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the applicable Roundtable Basin Implementation Plan and Education Action Plan. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).

The proposed water project shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan Framework for State of Colorado Support for a Water Project (CWP, Section 9.4, pp. 9-43 to 9-44;)

Improvements to Cedar Mesa Ditch are listed as Proposed Project 22 on Tier 1 of the Gunnison Basin Water Plan. See Exhibit B.

This project addresses two aspects of Water Storage and Supply.

> First: "Improve agricultural water supplies to reduce shortages"

The 2010 Statewide Water Supply Initiative reported an annual shortage for District 40 of 75,128 acre-feet by 2050. That is approximately a 30% shortfall for the District. An update of the Statewide Water Supply Initiative, currently underway, is expected to increase that value. The proposed piping project is expected to recover approximately half the water need to address the gap among its users. This project is anticipatory to IPP 91 of the Gunnison Basin Implementation Plan (2015, p.105

> Second: "Discourage the conversion of productive agricultural land to all other uses within the context of property rights."

More frequently there are years when less than average water is available causing reduced productivity and/or increasing expense (water leasing). Increasingly, shortages result in the conversion of agricultural land to other uses. The Cedar Mesa Ditch Board has heard more than one producer say that if he can't get sufficient water, he'll subdivide and sell his land. By reducing water shortages, the piping project addresses the above second goal of the State Water Plan.

Related Studies

Please provide a list of any related studies, including if the water project is complementary to or assists in the implementation of other CWCB programs.

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Related Studies

Feasibility Study and Loan and Grand Application Report for Cedar Mesa Ditch Company, McDermith and Schuster, 1975

Cedar Mesa and Lone Pine Ditches – 2017 Technical Assistance Report – JUB Engineers Inc.

Statewide Water Supply Initiative – 2010 Appendix I, Technical Memorandum State of Colorado Current and 2050 Agricultural Demands, Appendix A, Western Slope Agricultural Demands, Table 1 and Figure 2, Water District 40 demands.

Engineering Design for Piping Lower Cedar Mesa Ditch 2018

Previous CWCB Grants, Loans or Other Funding

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order; 6) Percentage of other CWCB funding for your overall project.

A 1) Cedar Mesa Ditch Company; 2) Piping Lower Cedar Mesa Ditch; 3) CWCB loan up to $1,365,000, 1.55%, 30 yrs; 4) Jan 20,2020, 5) Loan No.CT2020-2680 ; 6) up to 100%

B) Cedar Mesa Ditch Company; 2) Piping Lower Cedar Mesa Ditch; 3) WSRF Grant $54,000; 4) Pending; 5) 4%

C) 1) NRCS (EQUIP program grants) to Erik Fritchman, Edward Badding, and Robert Halley; 2) Piping Lower Cedar Mesa Ditch; 3) $1,045,553 total; 4) December, 2019; 5) TBD; 6) 78% of project.

Note: This request for $70,000 represents about 5% of the project.

Taxpayer Bill of Rights

The Taxpayer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect your application.

None

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Submittal Checklist	
X	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.
Exhibit A	
	Statement of Work(1)
	Budget & Schedule(1)
	Letters of Matching and/or Pending 3rd Party Commitments(1)
Exhibit C	
	Map (if applicable)(1)
	Photos/Drawings/Reports
	Letters of Support (Support letter from Basin Roundtable encouraged)
	Certificate of Insurance (General, Auto, & Workers' Comp.) (2)
	Certificate of Good Standing with Colorado Secretary of State(2)
	W-9(2)
	Independent Contractor Form(2) (If applicant is individual, not company/organization)
Engagement & Innovation Grant Applicants ONLY	
	Engagement & Innovation Supplemental Application(1)

(1) Required with application.
(2) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.

Water Plan Grant - Exhibit A

Statement Of Work	
Date:	**1/15/2020 revised 6/28/2020**
Name of Grantee:	**Cedar Mesa Ditch Company**
Name of Water Project:	**Piping Lower Cedar Mesa Ditch**
Funding Source:	**NRCS Grants, CWCB Loan, CWCB Grants**

Water Project Overview:

Brief description of project “Piping Lower Cedar Mesa Ditch”

This application is for a portion (~2300 ft) of the 21” PVC irrigation pipe of lower Cedar Mesa Ditch pipeline. A detailed accounting estimate is provided in the budget and schedule template The pipeline will be constructed in the existing ditch right-of-way. No addition land purchases or easements are required. Feasibility studies and engineering design plans and are complete.

Cedar Mesa Ditch is supplied from Surface Creek which, in turn, is fed by numerous reservoirs on the grand Mesa. The 12-mile ditch supplies irrigation water to 1043 acres through 37 head-gates. It serves 64 shareholders who raise cattle, hay, peaches, apples, plums, apricots and grapes. The lower part of the ditch runs thought Mancos Shale where seepage is the greatest. It is estimated that piping the lower 3.5 miles of the ditch will recover 60% of the shrink. This recovery will significantly reduce salt and selenium leaching from the ditch through the Mancos Shale.

Most irrigation water rights in the Surface Creek Valley belong to private, non-profit companies. Irrigation water is not tied to land and may be leased or sold to other users. Typical costs for leasing range from $25 - $150 an acre-foot, depending on availability (weather). During this drought year (2018) water is being leased for $200 an acre-foot. Piping this portion of the ditch would recover $6,000 to $12,000 worth of water. In a drought year like 2018, that value would approach $100,000 if the water were available.

The project is phased to be completed in 3-4 years. Each year approximately 25- 35% of the construction will be completed.

Project Objectives:

The overall objective is to conserve water and improve water quality by piping the lower 3.5 miles of Cedar Mesa Ditch. These multiple objectives include:

A. Establishing buy-in from the membership
B. Securing funding
C. Completing final engineering based on detailed preliminary plans in hand.
D. Planning and open bid process (bid package, pre-bid meeting, bid acceptance, notifications)
E. Purchasing pipe and other equipment
F. Installation
G. Inspections and sign-off by engineer

Tasks

Task 1 – [Name]

Description of Task:

Using the preliminary engineering plans and the NRCS grants as a guide, the project has been broken down into three phases that are considered tasks. These tasks are listed in three pages that follow. Individual components within the tasks are detailed in Exhibit B. The engineering design is available on request.

1	Construction Phase 1
2	Construction Phase 2
3	Construction Phase 3
4	Grant Administration and Management
5	Outreach and restoration

Tasks

PRACTICE CODE - COMPONENT	Unit	Amount	Unit Cost	Proposed Payment Incentive	Protracts Payment Incentive	NOTES
587-Structure for Water Control: Concrete Turnout Structure	CuYd	20	1090.67	$ 21,813.40	$ 21,814.00	Overflow structure
587-Structure for Water Control: Concrete Turnout Structure	CuYd	30	1090.67	$ 32,720.10	$ 32,721.00	Intake structure
587-Structure for Water Control: Concrete Turnout Structure - Small	Ea		2715.38	$ -	$ -	6+16, 10+30, 15+54, 15+74, 156+50
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	27+55
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	48+10
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	58+40
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	74+33
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	102+00
587-Structure for Water Control: Cleaning Screens	Lb		10.01	$ -	$ -	
587-Structure for Water Control: Steel Fabrication	Lb		3.14	$ -	$ -	
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb		2.61	$ -	$ -	24" pipe
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb		2.61	$ -	$ -	21" pipe 5380' 80psi
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	20291	2.61	$ 52,959.51	$ 52,960.00	1435' 18" 80psi, 40' 18" 100psi 142+85-157+20
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb		2.61	$ -	$ -	18" hdpe
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	21357	2.61	$ 55,741.77	$ 55,742.00	2280' 15" 80psi, 40' 100psi 157+20-180+00
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	14669	2.61	$ 38,286.09	$ 38,287.00	1600' 15" 0+00-16+00
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	117+80
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	142+82
587-Structure for Water Control: Concrete Turnout Structure - Small	Ea	1	2715.38	$ 2,715.38	$ 2,716.00	156+50
587-Structure for Water Control: Concrete Turnout Structure	CuYd	4	1090.67	$ 4,362.68	$ 4,363.00	157+20
587-Structure for Water Control: Concrete Turnout Structure	CuYd	8	1090.67	$ 8,725.36	$ 8,726.00	174+86
Practice Code: Component	Unit_ Type		0	$ -	$ -	
587-Structure for Water Control: Steel Fabrication	Lb	808	3.14	$ 2,537.12	$ 2,538.00	covers & defkectors 120# @ 8.5 #/sqft
Practice Code: Component	Unit_ Type		0	$ -	$ -	50' 36", 20' 18", 350' 12"
			TOTAL	$219,861.41	$219,867.00	

Tasks

PRACTICE CODE - COMPONENT	Unit	Amount	Unit Cost	Proposed Payment Incentive	Protracts Payment Incentive	NOTES
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	1090.67	$ -	$ -	Overflow structure
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	1090.67	$ -	$ -	Intake structure
587-Structure for Water Control: Concrete Turnout Structure - Small	Ea	0	2715.38	$ -	$ -	6+16, 10+30, 15+54, 15+74, 156+50
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	1090.67	$ -	$ -	27+55
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	1090.67	$ -	$ -	48+10
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	1090.67	$ -	$ -	58+40
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	1090.67	$ -	$ -	71+33
587-Structure for Water Control: Concrete Turnout Structure	CuYd	6	1090.67	$ 6,544.02	$ 6,545.00	102+00
Practice Code: Component	Unit_ Type		0	$ -	$ -	
587-Structure for Water Control: Steel Fabrication	Lb	2966	3.14	$ 9,313.24	$ 9,314.00	covers and deflectors 8.5#/sqft: 95+95+159sqft
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb		2.61	$ -	$ -	24"
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	86532	2.61	$ 225,848.52	$ 225,849.00	4467' 21" 80 psi, 60' 21" 100 psi 71+33-102+00, 118+40-128+00
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	22820	2.61	$ 59,560.20	$ 59,561.00	1620' 18" 80psi, 40' 100psi 102+00-118+20
430-Irrigation Pipeline: HDPE (Iron Pipe Size & Tubing)	Lb	30295	2.88	$ 87,249.60	$ 87,250.00	1500' 18" hdpe DR21 128+00-142+85
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb		2.61	$ -	$ -	15" pipe 80psi, 100psi
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb		2.61	$ -	$ -	12" pipe
587-Structure for Water Control: Concrete Turnout Structure	CuYd	6	1090.67	$ 6,544.02	$ 6,545.00	117+80
587-Structure for Water Control: Concrete Turnout Structure	CuYd	16	1090.67	$ 17,450.72	$ 17,451.00	142+82
Practice Code: Component	Unit_ Type		0	$ -	$ -	
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	157+20
587-Structure for Water Control: Concrete Turnout Structure	CuYd		1090.67	$ -	$ -	174+86
587-Structure for Water Control: Cleaning Screens	Lb		10.01	$ -	$ -	deflectors
587-Structure for Water Control: Steel Fabrication	Lb		3.14	$ -	$ -	covers
Practice Code: Component	Unit_ Type		0	$ -	$ -	
			TOTAL	$412,510.32	$412,515.00	

Tasks

Tasks

PRACTICE CODE - COMPONENT	Unit	Amount	Unit Cost	Proposed Payment Incentive	Protracts Payment Incentive	NOTES
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	908.89	$ -	$ -	Overflow structure
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	908.89	$ -	$ -	Intake structure
587-Structure for Water Control: Concrete Turnout Structure - Small	Ea	4	2262.81	$ 9,051.24	$ 9,052.00	6+16, 10+30, 15+54, 15+74
587-Structure for Water Control: Concrete Turnout Structure	CuYd	7	908.89	$ 6,362.23	$ 6,363.00	27+55
587-Structure for Water Control: Concrete Turnout Structure	CuYd	5	908.89	$ 4,544.45	$ 4,545.00	48+10
587-Structure for Water Control: Concrete Turnout Structure	CuYd	8	908.89	$ 7,271.12	$ 7,272.00	58+40
587-Structure for Water Control: Concrete Turnout Structure	CuYd	8	908.89	$ 7,271.12	$ 7,272.00	71+33
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	908.89	$ -	$ -	102+00
Practice Code: Component	Unit_ Type	0	0	$ -	$ -	
587-Structure for Water Control: Steel Fabrication	Lb	5024	2.62	$ 13,162.88	$ 13,163.00	deflectors and covers 8.5#/sqft
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	143076	2.18	$ 311,905.68	$ 311,906.00	24" pipe 5670' 80psi, 220'100psi 0+00-58+40
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	24586	2.18	$ 53,597.48	$ 53,598.00	1293' 21" 80psi 58+40-71+33
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	0	2.18	$ -	$ -	535' 18" 80psi 0+00-5+35
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	0	2.18	$ -	$ -	18" hdpe 1582' DR21
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	0	2.18	$ -	$ -	1040' 15" 80psi 5+35-15+75
430-Irrigation Pipeline: PVC Pipe >= 10 inch	Lb	0	2.18	$ -	$ -	12" pipe
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	908.89	$ -	$ -	117+80
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	908.89	$ -	$ -	142+82
Practice Code: Component	Unit_ Type	0	0	$ -	$ -	
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	908.89	$ -	$ -	157+20
587-Structure for Water Control: Concrete Turnout Structure	CuYd	0	908.89	$ -	$ -	174+86
587-Structure for Water Control: Cleaning Screens	Lb	0	8.34	$ -	$ -	
587-Structure for Water Control: Steel Fabrication	Lb	0	2.62	$ -	$ -	covers/deflectors
430-Irrigation Pipeline: Steel (Corrugated Steel Pipe)	Lb	0	1.06	$ -	$ -	50' 36", 20' 18", 350' 12"
			TOTAL	$413,166.20	$413,171.00	

Method/Procedure:

Contractor will install pipe, concrete boxes, gates, culverts fittings etc. in accordance with the specifications given on the engineering plans and in compliance with NRCS and local rules and code. Each task will be observed and approved by the NRCS/company engineer.

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Water Plan Grant - Exhibit B
Budget Template Instructions

**** Please select the most appropriate budget template for your project from the worksheet tabs below. A general budget template is provided, as well as templates for studies, construction, and engineering projects.****

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Water Plan Grant - Exhibit B Cedar Mesa Ditch
Budget and Schedule

Prepared Date: June 27, 2020

Name of Applicant: Cedar Mesa Ditch Company

Name of Water Project: Piping Lower Cedar Mesa Ditch

Project Start Date: September 1, 2020

Project End Date: September 1, 2023

Task No.	Task Description	Task Start Date	Task End Date	Grant Funding Request	Match Funding	Total
1	Construction Phase 1	9/1/2020	9/1/2023	$35,000	$521,600	$556,600
2	Construction Phase 2	9/2/2020	9/2/2023		$508,650	$508,650
3	Construction Phase 3	9/3/2020	9/3/2023		$275,840	$275,840
5	Grant administration and management	9/5/2020	9/5/2023		$15,000	$15,000
6	Outreach and restoration	9/6/2020	9/6/2023		$9,000	$9,000
			Total	$35,000	$1,330,090	$1,365,090

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Water Plan Grant - Detailed Budget Estimate

Fair and Reasonable Estimate

Prepared Date: 7/27/2019
Name of Applicant: Crawford Water Conservancy District
Name of Water Project: Lower Aspen Canal Piping Project

EXAMPLE C: Construction

Task 1 - Engineering & Permitting

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
1a.) Final designs and EOPC (estimated at 9.4% construction cost)	1	LS	$ 112,211	$ 112,211	$ -	$ 112,211
1b.) Permitting (4.4% construction cost)	1	LS	$ 52,589	$ 52,589	$ -	$ 52,589
1c.) Hire engineering firm (estimate for contractual work)	1	LS	$ 2,500	$ 2,500	$ -	$ 2,500
		Subtotal:	**$ 167,300**	**$ 167,300**	**$ -**	**$ 167,300**

Task 2 - Construction

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds	
2c.) Construct 9,000 feet of lateral piping							
Mobilization	LS	1	$ 133,760	$ 133,760	$ 26,752	$ 107,008	
Site Preparation & Treatments	LS	1	$ 91,700	$ 91,700	$ 18,340	$ 73,360	
Main Pipeline	LF	9000	$ 77	$ 690,140	$ 136,028	$ 554,112	
Delivery structures & valves	LS	1	$ 181,200	$ 181,200	$ 36,240	$ 144,960	
Auxiliary features	LS	1	$ 98,200	$ 98,200	$ 19,640	$ 78,560	$ 1,195,000
		Subtotal:		$ 1,195,000	$ 237,000	$ 958,000	
2d.) Salinity Mitigation (5% construction cost)	LS	1	$ 59,750	$ 59,750	$ -	$ 59,750	
		Subtotal:		**$ 1,254,750**	**$ 237,000**	**$ 1,017,750**	

Task 3 - Construction Management

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
3a.) Prepare and release material bid packet; construction contractor RFQ; materials procurement	Hr	56	$ 150	$ 21,000	$ 21,000	$ -
3b.) Obtain any necessary permits	Hr	30	$ 150	$ 4,000	$ -	$ 4,000
3c.) Manage project, prepare regular progress reports, inspections, QC testing, surveys, pay request approvals, as builts, construction coordination, etc.	Hr	1701	$ 150	$ 255,000	$ 16,000	$ 239,000
		Subtotal:		**$ 280,000**	**$ 37,000**	**$ 243,000**

Task 4 - Grant Administration (All Grants)

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
4a.) Track project expenditures and in-kind	Hr	28	$ 60	$ 1,700	$ -	$ 1,700
4b.) Submit requlars invoices for reimbursement	Hr	86	$ 35	$ 3,000	$ -	$ 3,000
4c.) Maintain detailed records of match documentation	Hr	102	$ 60	$ 6,120	$ -	$ 6,120
4d.) Submit semi-annual progress (6) and final report (1)	Hr	95	$ 60	$ 5,680	$ -	$ 5,680
		Subtotal:		**$ 16,500**	**$ -**	**$ 16,500**

Task 5 - Evaluation & Data Management (NPS Activity)

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
5a.) Water quality data collection at Cottonwood Creek	LS	1	$ 33,500	$ 33,500	$ -	$ 33,500
5b.) Water-quality summary report to NPS	LS	1	$ 5,000	$ 5,000	$ -	$ 5,000
		Subtotal:		**$ 38,500**	**$ -**	**$ 38,500**

Task 6 - Outreach and Education (NPS Activity)

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds

6a.) Newspaper articles or website highlights	Hr	68	$	40	$	2,700	$ -	$ 2,700
6b.) Project updates and educational presentations	Hr	41	$	80	$	3,300	$ -	$ 3,300
		Subtotal:			**$**	**6,000**	**$ -**	**$ 6,000**
GRAND TOTAL:					**$**	**1,763,050**	**$ 274,000**	**$ 1,489,050**

Note: Engineer's Opinion of Probable Cost (EOPC) for construction of the project provided by Reclamation Western Colorado Area Office (U.S. Department of Interior) as a previously planned Colorado River Storage Project activity. Project engineer, Joshua Dunham, contact information: **jdunham@usbr.gov** or 970-248-0613