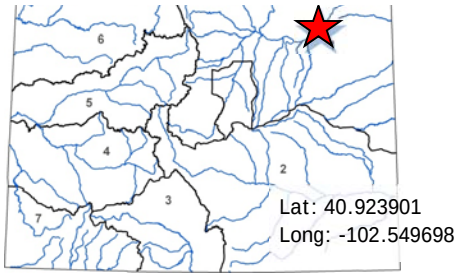
COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Petersen Ditch Diversion Integrated Rehabilitation Project
Julesburg Irrigation District

May 2019 Board Meeting

Water Plan Grant Application



L O C A T I O N	
County/Counties:	Sedgwick
Drainage Basin:	South Platte

D E T A I L S	
Total Project Cost:	$3,508,230
Water Plan Grant Request:	$500,000
Recommended Amount	$450,000
Other CWCB Funding:	$0
Other Funding Amount:	$1,030,000
Applicant Match:	$1,978,230
Project Type(s): Construction	
Project Category(Categories): Agricultural	
Measurable Result: 3,124 AF of new annual water supplies developed, habitat restoration (more than 215 acres)	

The Julesburg Irrigation District (JID) is applying for $500,000 through Colorado's Water Plan (CWP) Grant to rehabilitate the Petersen Ditch and Diversion structure which diverts water from the South Platte River and provides water to 8,925 irrigated acres. The ditch also delivers recharge water to more than sixty recharge ponds for 1) the augmentation supply of irrigation and municipal wells, 2) the enhancement of wildlife habitat, and 3) the contribution of water towards Colorado's Platte River Recovery Implementation Program (PRRIP) under which the state has an obligation to mitigate new in-basin water development of post 1997 native water supplies and reuse projects for the benefit of target species.

The existing river diversion was built out of wood and concrete in 1956. The existing concrete is eroded and in need of replacement. The existing structure leads to the accumulation of sediment on the upstream side the dam. This buildup causes diversion and maintenance problems within the canal system. The existing wooden check board diversion structure is also difficult to operate and requires personnel to enter the river during flowing conditions to adjust flow thus creating potentially dangerous conditions for personnel. The diversion structure was built to operate during the normal irrigation season, but in the last several years winter season operation has become necessary to satisfy winter augmentation requirements. Adjusting the existing river diversion structure during the winter is not practical or safe. Grant funds will be used to rehabilitate the river diversion structure. Collectively, these improvements will improve operability. Matching funds will be provided by the applicant, the South Platte Water Related Activities Program (SPWRAP), and the District 64 Reservoir Company.

Staff recommends Board approval for $450,000. This project furthers several of Colorado's Water Plan critical action goals relating to agriculture including addressing critical irrigation infrastructure improvements. The project also supports collaboration; bringing a diverse group of stakeholders together to leverage public dollars. Finally, this project will provide multiple benefits. It is anticipated that a rehabilitated diversion structure will increase efficiency and diversions for offseason recharge operations, especially during times when recharge water is currently not diverted due to weather and operational constraints. Therefore, these improvements will enhance the reliability of recharge for irrigation and municipal uses, as well as, wildlife habitat. The SPWRAP also utilizes recharge accretions derived from Petersen Ditch diversions during non-call periods as credit towards Colorado's water obligation under the PRRIP. Recharge accretion credits generated from Petersen account for 18,809 ac-ft (14%) of Colorado's total PRRIP water contribution over the last decade. Additionally, the diversion structure is only 15 miles downstream of the Tamarack State Wildlife Area (SWA) where recharge water accretions provide 21% of Colorado's total PRRIP contributions. Since Petersen is senior to Tamarack, improvements to the reliability of the existing structure could alleviate any potential impacts that the Tamarack well pumping may have on Petersen recharge diversions and should assist in increasing water supplies to SPWRAP for PRRIP obligations. As a result, an enhanced Peterson Ditch diversion structure plays a critical role in mitigation of new South Platte water development.

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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:

Water Storage Projects	Anna.Mauss@state.co.us
Conservation, Land Use Planning	Kevin.Reidy@state.co.us
Engagement & Innovation Activities	Ben.Wade@state.co.us
Agricultural Projects	Alexander.Funk@state.co.us
Environmental & Recreation Projects	Chris.Sturm@state.co.us

FINAL SUBMISSION: Submit all application materials in one email 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. In the subject line, please include the funding category and name of the project.

Water Project Summary

Name of Applicant	Julesburg Irrigation District (JID)
Name of Water Project	Petersen Ditch Diversion - Integrated Rehabilitation Project

CWP Grant Request Amount	$ 500,000
Other Funding Sources **South Platte Water Related Activities Program, Inc. (SPWRAP)** **Pending Funding Agreement**	$ 600,000
Other Funding Sources **District 64 Reservoir Company (District 64)** **Pending Carriage Agreement**	$ 330,000
Other Funding Sources **Ducks Unlimited** **Pending Funding Agreement**	$ 100,000
Applicant Funding Contribution **Julesburg Irrigation District** **Pending Landowner Meeting**	$ 1,978,230
Total Project Cost (Diversion Structure and Well Field Rehabilitation)	$ 3,508,230

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Applicant & Grantee Information
Name of Grantee(s) **Julesburg Irrigation District**
Mailing Address **315 Cedar Street, Suite 150**
FEIN **84-6000185**
Organization Contact **Larry Frame**
Position/Title **Superintendent**
Email **supt.jid@pctelcom.coop**
Phone **970-520-3347**
Grant Management Contact **Pam Ornelas**
Position/Title **Secretary**
Email **jid@pctelcom.coop**
Phone **970-474-3737**
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).

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The Julesburg Irrigation District (JID) was formed in 1904, and serves 19,129 bonded acres within the District, owned by 110 landowners. The District's total average diversion for all owned water rights is 54,421 acre-feet per year, serving the District lands in Sedgwick County. The District uses the terms shares and acres interchangeably, as one share is equivalent to one bonded acre of land ownership. The District has a three-member board of directors elected by the shareholders at large. The majority of revenues are from annual shareholder assessments. The District operates under the Colorado Revised Statutes Title 37 Article 41, the Irrigation District Law of 1905.

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.
X	**Public (Districts):** Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises.
	Private Incorporated: Mutual ditch companies, homeowners associations, corporations.
	Private Individuals, Partnerships, and Sole Proprietors: 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 the primary category that applies and include relevant tasks)	

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X $150,000 Request	Water Storage - Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap.. *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 $200,000 Request	Agricultural - Projects that provide technical assistance and improve agricultural efficiency. *Applicable Exhibit A Task(s):*	
X $150,000 Request	Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. *Applicable Exhibit A Task(s):*	
	Other	Explain:

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	Sedgwick County
Latitude	40.923901
Longitude	-102.549698

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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JID operates the Petersen Ditch and Diversion Structure on the South Platte River, approximately 1.4 miles west of the Town of Sedgwick. The wood and concrete diversion structure was built in 1956 and serves as the primary mechanism for diverting South Platte River streamflow into the Petersen ditch. The ditch serves multiple purposes and beneficiaries including supplying direct flow irrigation water to 8,925 acres of agricultural land, delivering recharge water to more than sixty recharge ponds for 1) the augmentation supply of irrigation and municipal wells, 2) the enhancement of wildlife habitat and 3) the contribution of water towards Colorado's Platte River Recovery Implementation Program water obligation. In addition, the Petersen Ditch is the planned conveyance method for the proposed Ovid Reservoir site.

JID also operates three high capacity wells along the ditch for irrigation and recharge that can pump directly into the Petersen Ditch. The wells provide a net beneficial supply of water due to their close proximity to the river, their ability to pump during the non-compact season, and the ability of JID to augment any depletions from the wells.

Both the Petersen diversion structure and the wells are in need of rehabilitation and repair in order to enhance and maintain constant reliable supplies of water to all the uses listed above and to improve the structures' operational safety. Construction is now anticipated during the 2019-2020 winter months prior to the 2020 irrigation season. Various funding partners including SPWRAP, District 64 Reservoir Company and Ducks Unlimited have committed nearly 30% of the total project cost of the integrated rehab project. JID is asking for approximately 14% of the total project to be funded by a Colorado Water Plan grant from CWCB and will look to its shareholders this spring for a commitment to fund the remainder of the project.

Measurable Results	
To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:	
5,770 ac-ft (Phase I of Ovid Reservoir)	New Storage Created (acre-feet)
1,785 ac-ft to 4,463 ac-ft (30 to 45 days of increased operations at 30 to 50 cfs of new water developed – both consumptive and non-consumptive)	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
N/A	Existing Storage Preserved or Enhanced (acre-feet)
N/A	Length of Stream Restored or Protected (linear feet)
N/A	Efficiency Savings (indicate acre-feet/year OR dollars/year)
Greater than 215 acres (Currently over 215 acres of recharge ponds under the Petersen Ditch with new	Area of Restored or Preserved Habitat (acres)

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Ducks Unlimited sites and other ponds being added in the near future that will all benefit from increased water deliveries under the integrated rehab project).	
N/A	Quantity of Water Shared through Alternative Transfer Mechanisms
N/A	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
	Number of Coloradans Impacted by Engagement Activity
18,800 ac-ft generated to the PRRIP for Colorado over the last ten years (14%).	Other: Increased contributions to the PRRIP will likely occur through this project. This will provide benefits to the entire South Platte Basin by assisting mostly municipal water providers mitigation of existing and future depletion obligations to Endangered Species in Central Nebraska.

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;)

The Petersen Ditch Diversion Integrated Rehabilitation Project addresses multiple goals and objectives of the South Platte Basin Implementation Plan (SPBIP) and the Colorado Water Plan.

In addition to addressing existing agricultural gaps outlined in the SPBIP, this project addresses other key multiple benefits as identified in Section 4.6 of the SPBIP and four of the eleven Plan Elements of the SPBIP (1 – Maximize Implementation of IPPs, 3 – Maximize use and effectiveness of native South Platte supplies, 5 – Protect and enhance environmental and recreation attributes through collaboration with other water use sector, and 7 – Promote multi-purpose storage projects that enhance other South Platte Basin solutions) listed on Figure 5-4 on page 5-23 of the SPBIP. These benefits are further detailed below:

1) The Petersen Ditch can divert up to 164 cfs for the surface irrigation of 8,925 acres. The Petersen Ditch is a junior irrigation ditch near the CO-NE state line which has historically limited its ability to divert irrigation water to landowners. During the most recent 20 year period (1998-2007) the Petersen Ditch has averaged a modest 6,442 ac-ft of diversions per year for irrigation use. Construction of an efficient and automated diversion structure along with the

rehabilitation of the existing well field should aid with increased irrigation deliveries within the last major diversion on the South Platte River.

2) Since the mid 1990's the Petersen Ditch has been steadily increasing year-round diversions to supply junior water rights to now over 60 recharge ponds under the ditch system as a water supply. Water diverted for recharge under the Petersen Ditch is used first for augmentation of irrigation and municipal (Towns of Sedgwick, Ovid, and Julesburg) wells in Sedgwick County. During the most recent 20 year period (1998-2007) the Petersen Ditch has averaged 10,956 ac-ft of diversions per year for recharge and during the most recent 10 year period (2008-2017) the Petersen Ditch has averaged 15,498 ac-ft of diversions per year for recharge. It is anticipated that a rehabilitated and enhanced Petersen Diversion structure and well field will increase efficiency and diversions for offseason recharge operations, especially during times when recharge water is currently not diverted due to existing weather and operational constraints.

3) In addition to well augmentation supplies, recharge water supplies provide a direct supply of water to over 215 acres of shallow wetland waterfowl and wildlife habitat in Sedgwick County. Recharge ponds under the Petersen Ditch are viewed as key habitat areas for waterfowl and wildlife. Ducks Unlimited (DU) has partnered with the Julesburg Irrigation District (JID) to construct the Harms recharge pond to provide a multi-use project that includes waterfowl habitat. Ducks Unlimited and the U.S. Fish and Wildlife Service 'Partners for Wildlife' program have also both assisted with cost sharing on various recharge ponds under the Petersen Ditch to provide additional open water habitat. Ducks Unlimited also recently purchased the Petersen Bend property along the Petersen Ditch and plans to install several acres of new shallow recharge wetlands for habitat and local augmentation uses. Increased efficiencies from this project including warm groundwater deliveries from the rehabilitated well field will improve water deliveries to these key habitat areas.

4) The South Platte Water Related Activities Program, Inc. (SPWRAP) utilizes recharge water accretions derived from Petersen Ditch diversions during non-call periods as credit towards Colorado's water obligation for endangered species in Central Nebraska under the Platte River Implementation Program (PRRIP). Recharge accretion credits generated from Petersen Ditch diversions accounted for 18,809 ac-ft (14%) of Colorado's total PRRIP water contribution (138,267 ac-ft) over the last 10 years. In comparison, recharge water accretions from the Tamarack State Wildlife Area totaled 29,003 ac-ft (21%) of Colorado's total PRRIP contributions. Additionally, the Petersen diversion structure is only about 15 river miles downstream of the Tamarack

SWA and most of the recharge water rights under the Petersen Ditch are senior to the Tamarack SWA water rights. Improvements to the efficiency of the current Petersen Ditch diversion structure could alleviate any potential conflict and impacts that the Tamarack SWA well pumping may have on Petersen recharge diversions (both of which are utilized by Colorado under the PRRIP) and should assist in increasing water supplies available to SPWRAP for PRRIP obligations.

5) In correlation with the Platte River Recovery Implementation Program, Colorado has an obligation to mitigate new in-basin water development of post 1997 native water supplies and re-use projects based on population growth. Identified Projects and Processes (IPPs) listed in the SPBIP that are built after 1997 and that rely on development of in-basin water supplies along with new re-use projects built after 1997 must mitigate their impacts to endangered species in Central Nebraska with retimed water supplies near the Colorado-Nebraska state line. These municipal and industrial water supply and storage projects that are planned in the South Platte basin rely entirely on groundwater (alluvial aquifer) recharge projects in the lower South Platte near the state line to mitigate any impacts. As noted above, a significant contribution (14%) of Colorado's current water obligation to the PRRIP is being met by Petersen Ditch operations. As a result of an enhanced Petersen Ditch diversion structure, current and new water supply development in the South Platte basin should continue to maintain reliance on, or even increasingly utilize, Petersen Ditch water supplies for mitigation of new South Platte water development.

6) The proposed Ovid Reservoir site is located approximately one mile west of Ovid, Colorado and is located about a half mile below the Petersen Ditch. The Petersen Ditch would be utilized to fill the proposed Ovid Reservoir during times of excess supply and ditch capacity and during times when water can't be delivered for other uses due to weather and other operational constraints. Ovid Reservoir is currently decreed for replacement obligations to the South Platte compact and for wildlife and wildlife recovery uses. It has a junior (1998) fill and refill right of 5,772 ac-ft with a fill rate of 184 cfs through the Petersen Ditch. Recent planning and water supply studies (including the Ovid Reservoir Comprehensive Feasibility Study and the South Platte Storage Study) have identified Ovid Reservoir as a potential project to meet portions of the municipal and industrial water supply gap in the basin. In 2012 and 2013 Ovid Reservoir was identified as a favorable potential site to meet industrial water supply needs in the South Platte basin. The District 64 Reservoir Company owns the assets and water right for the Ovid Reservoir and views the rehabilitation of the Petersen diversion structure as Phase I in the development of Ovid Reservoir due to the inability to reliably deliver water to Ovid Reservoir without a new Petersen diversion structure.

Finally, this project aligns very well with the values and criteria outlined under Section 9.4 (pages 9-43 and 9-44) of the Colorado Water Plan) for State support of projects.

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.

1) http://southplattebasin.com/wp-content/uploads/2016/06/South-Platte-Basin-Implementation-Plan-April-17-2015.pdf

2) http://southplattebasin.com/wp-content/uploads/2016/04/South-Platte-Storage-Study_FINAL-REPORT.pdf

3) Ovid Reservoir Comprehensive Feasibility Study – SB-05-179 Analysis – December, 2011

4) Feasibility Study for the Julesburg Irrigation District Petersen Ditch Diversion Structure Replacement Project, Division 1, Water District 64, Structure ID 504, Sedgwick County, Colorado – March 30, 2018

5) https://platteriverprogram.org/document/prrip-final-environmental-impact-statement-volume-1

6) https://platteriverprogram.org/document/platte-river-recovery-implementation-program-final-environmental-impact-statement-volume-2

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.

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The Julesburg Irrigation District (JID) has not received any CWCB grants to date. However; JID currently has four active loans through CWCB: 1) Julesburg Reservoir (Harmony No. 1) inlet diversion structure – Loan Amt. $510,469, 2) Julesburg Reservoir outlet structure – Loan Amt. $372,950, 3) Petersen / Lodgepole Creek structure – Loan Amt. $100,000, and 4) Harmony No. 1 measurement weir – Loan Amt. $203,616.

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.

The Julesburg Irrigation District does not have any relevant TABOR issues.

Last Updated: November 2018

Submittal Checklist	
x	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.
Exhibit A	
x	Statement of Work(1)
x	Budget & Schedule(1)
x	Engineer's statement of probable cost (projects over $100,000)
x	Letters of Matching and/or Pending 3rd Party Commitments(1)
Exhibit C	
x	Map (if applicable)(1)
x	Photos/Drawings/Reports
x	Letters of Support (Optional)
	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	
N/A	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.

Last Updated: November 2018

Colorado Water Conservation Board
Water Plan Grant - Exhibit A

Statement Of Work	
Date:	**February 1st 2019**
Name of Grantee:	**Julesburg Irrigation District (JID)**
Name of Water Project:	**Petersen Ditch Diversion - Integrated Rehabilitation Project**
Funding Source:	**Multiple Sources (Including Colorado Water Plan Grant – Agriculture, Water Storage, and Environmental and Recreation categories).**

Water Project Overview:

The Julesburg Irrigation District's (JID) diversions from the South Platte River through the Petersen Ditch are up to 164 cubic feet per second from the South Platte River providing water to 8,925.64 acres. The diversion of water is accomplished with a concrete diversion dam across the South Platte and a canal regulating head gate structure. The diversion dam is approximately 320 feet wide and the head gate structure is approximately 30 feet wide. The existing diversion structure was originally built in 1956. JID also owns and operates three high capacity wells (average pumping rate of approximately 2500 gpm each) adjacent to the ditch and within 1000 feet of the South Platte River. These wells are an additional source of water supply for irrigation and recharge in the Petersen Ditch and provide warmer groundwater to the ditch for wintertime operations. The diverted water from both the river and wells is delivered to the shareholders through approximately 27.5 miles of canal. The water is used to irrigate corn, alfalfa, beans, sugar beets and wheat. JID manages and maintains the Petersen Ditch as the majority owner. JID also delivers recharge water via the Petersen Ditch for the augmentation of wells irrigation and municipal in the Sedgwick County Well Users and Lower South Platte Water Conservancy District augmentation plans, including wells in the service area of JID. In addition, the Petersen Ditch is the planned conveyance ditch for the proposed Ovid Reservoir site. Both the diversion structure and well field are in need of rehabilitation for continued and future demands under the Petersen Ditch system.

The existing Petersen Ditch river diversion structure was built in 1956 out of wood and concrete. The existing concrete is eroded and needs replacement. The wooden check board diversion structure is difficult to operate and requires personnel to enter the river during flowing conditions to adjust flow thus creating a potentially dangerous condition for operations personnel. The existing structure was built to operate during the normal irrigation season. In the last several years winter season operation has become necessary to satisfy winter flow requirements for recharge water deliveries for well augmentation, shallow wetland habitat, and water supplies for Colorado's obligation to the Platte River Recovery Implementation Program. Adjusting the existing river diversion structure during the winter is not practical or safe. In addition to the expenses

and difficulties in maintaining and operating the structure, which is nearing the end of its useful life, the existing design of the diversion dam promotes the accumulation of sand on the upstream side of the dam. This buildup of sand causes diversion problems and maintenance problems within the canal system. Replacement of the existing diversion dam provides the opportunity to utilize an improved design which would greatly alleviate the sand accumulation problem as well as greatly improve the safety and operability of the diversion structure and ditch gate.

Project Objectives:

Construct the Rehabilitated Petersen Ditch Diversion Structure and Rehabilitate the Petersen Ditch Well Field.

JID wants to completely rebuild the diversion dam and ditch head gate during the 2019-2020 winter months prior to the 2020 irrigation season.

JID would like to rehabilitate the wells during the summer of the 2019 irrigation season. No CWCB funds will be utilized for the well field project.

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Tasks
Task 1 – Diversion Structure Rehabilitation
Description of Task:
Task 1 includes the rehabilitation of the river diversion dam using 100 feet of a 5-foot high pneumatically actuated stainless-steel bladder gate and 220-foot concrete weir. The pneumatically actuated gate would be installed on a monolithic reinforced concrete slab. Stability will be provided by a pile foundation and steel sheet piling will provide seepage cutoff and protection from erosion. This combination weir structure will be installed on a monolithic steel reinforced concrete slab in the riverbed and have wing walls of steel reinforced concrete. The ditch head gate will be rehabilitated with a new concrete structure and a 30-foot wide by 3-foot high pneumatically actuated stainless-steel bladder gate. The new ditch head gate structure will have a gated bypass that can be used during winter ice conditions. A preliminary design showing critical elevations was developed by the engineer and required flows were determined. An additional feature of this alternative is improved fish passage. An easement from the electric service provider is required. All other easements and rights of way have been arranged. The District expects to be exempt from 404 permitting by Statutory Exemption, 33 CFR Section 323.4(a)3, addressing construction and maintenance projects not requiring permits. The current opinion of probable cost is estimated at $3,308,250 as provided by the *Feasibility Study for the Julesburg Irrigation District, Petersen Ditch Diversion Structure Replacement Project, Division 1, Water District 64, Structure ID 504, Sedgwick County, Colorado,* prepared by Gauthiere Engineering, Inc. JID is currently in the process of obtaining a second opinion of probable cost from Harris Engineering Consultants, Inc. and a third opinion of probable cost from Applegate Group, Inc. Preliminary second and third opinions point to slightly lower overall costs for Task 1, but the current cost estimate is being used until a final cost estimate is determined.

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Tasks
Method/Procedure:
Standard construction procedures will be followed for this project. See Exhibits A and C for further detail.
Deliverable:
JID will provide a final report to CWCB with: 1) a summary of the project and how the project was completed, 2) a description of any obstacles encountered and how the obstacles were overcome, 3) a confirmation that all matching commitments were fulfilled and 4) photographs, summaries of meeting and engineering reports / final designs. JID will also provide CWCB with progress reports every 6 months beginning from the date of contract execution. The progress reports will describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address such issues.

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Tasks
Task 2 – Well Field Rehabilitation
Description of Task:
Task 2 includes the pulling, inspection and repair of all pumps and motors for the three existing Petersen wells. Currently there is no design or cost estimate for this work as the work under this task involves the use of a local well or pump contractor to 1) pull the pumps and motors, 2) to inspect and assess the amount of repair work needed, 3) do the necessary pump and motor repair work and 4) reinstall new or repaired pumps and motors. Based on previous work in similar cases it is estimated that the total cost (including contingency, project management and administration) will not exceed $199,980. Ducks Unlimited is taking the lead role on project management, design and procurement. Updated cost estimates will be provided as this work advances. Even though no CWCB funds will be used for this task, Tasks 1 and 2 are integrated and rely on each other. Task 2 is anticipated to begin during the summer of 2019 in order to be completed prior to Task 1 so that some reliable supply of water can be supplied to the Petersen Ditch during Task 1 construction.
Method/Procedure:
Standard well pump and motor repair procedures will be followed for this project.
Deliverable:
The deliverables for Task 2 will be the same as for Task 1 and will be incorporated in integrated progress reports and the final report to CWCB.

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Budget and Schedule

This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format.

Reporting Requirements

Progress Reports: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Report: At completion of the project, the applicant shall provide the CWCB a Final Report on the applicant's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

The CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

Payment

Payment will be made based on actual expenditures and must include invoices for all work completed. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

Costs incurred prior to the effective date of this contract are not reimbursable. The last 10% of the entire grant will be paid out when the final deliverable has been received. All products, data and information developed as a result of this contract must be provided to CWCB in hard copy and electronic format as part of the project documentation.

Performance Measures

Performance measures for this contract shall include the following:
(a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget in Exhibit B. Per Water Plan Grant Guidelines, the CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.
(b) Accountability: Per Water Plan Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per Water Plan Grant Guidelines, Progress Reports must be

Performance Measures
submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment. (c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary. (d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Detailed Budget Estimate
Fair and Reasonable Estimate

Prepared Date: January 31st, 2019
Name of Applicant: Julesburg Irrigation District
Name of Water Project: Petersen Ditch Diversion - Integrated Rehabilitation Project

EXAMPLE C: Construction

Task 1 - Diversion Structure Rehabilitation

Item	*Sub-task*	Unit	Quantity	Unit Cost	Total Cost	CWCB Grant Funds	Matching Funds
1	Mobilization & Demobilization	LS	1	$ 70,000	$ 70,000	$ 12,696	$ 57,304
2	Control of Water & De-watering	LS	1	$ 147,000	$ 147,000	$ 26,661	$ 120,339
3	Demolition & Proce6ss Existing Concrete	CY	550	$ 30	$ 16,500	$ 2,993	$ 13,507
4	Excavation	CY	2,250	$ 6	$ 13,500	$ 2,448	$ 11,052
5	Structural Fill	CY	2,500	$ 15	$ 37,500	$ 6,801	$ 30,699
6	Low Flow Bypass and Gate	LS	1	$ 45,000	$ 45,000	$ 8,161	$ 36,839
7	Steel Sheet Piling	SF	29,700	$ 19	$ 564,300	$ 102,344	$ 461,956
8	Pipe Piling 8" OD	LF	5,075	$ 35	$ 177,625	$ 32,215	$ 145,410
9	Furnish Obermeyer Bladder Gate 100' by 5' Stainless Steel Complete with all Equipment, Embeds, Piping and Hardware	LS	1	$ 360,390	$ 360,390	$ 65,362	$ 295,028
10	Installation of Item #9	LS	1	$ 45,000	$ 45,000	$ 8,161	$ 36,839
11	Furnish Obermeyer Bladder Gate 30' by 3' Stainless Steel Complete with all Equipment, Embeds, Piping and Hardware	LS	1	$ 79,110	$ 79,110	$ 14,348	$ 64,762
12	Installation of Item #11	LS	1	$ 25,000	$ 25,000	$ 4,534	$ 20,466
13	Control Building 15' by 15'	LS	1	$ 60,000	$ 60,000	$ 10,882	$ 49,118
14	Cast in Place Concrete	CY	1,152	$ 850	$ 979,200	$ 177,592	$ 801,608
15	New Electric Service Underground Electric Service from Meter Drop West of Diversion to Gate Control House (based on 900' of 1 awg copper in conduit with pull boxes to	LS	1	$ 75,000	$ 75,000	$ 13,602	$ 61,398
16	Pedestrian Bridge and Upper Gate Seal Beam	LS	1	$ 30,000	$ 30,000	$ 5,441	$ 24,559
17	Erosion Control BMP	LS	1	$ 3,000	$ 3,000	$ 544	$ 2,456
18	Gravel Surfacing - Service Roads	LS	1	$ 2,000	$ 2,000	$ 363	$ 1,637
19	Concrete Washout Structure	LS	1	$ 500	$ 500	$ 91	$ 409
20	Final Cleanup and Restoration	LS	1	$ 5,000	$ 5,000	$ 907	$ 4,093
21	Hand Rail	LF	250	$ 85	$ 21,250	$ 3,854	$ 17,396
	Sub-Total Estimated Construction Cost				**$ 2,756,875.00**	**$ 500,000**	**$ 2,256,875**
				Contingency @ 10%	$ 275,688		$ 275,688
				Total Estimated Construction Cost	**$ 3,032,563**		**$ 3,032,563**
				Planning, Design and Legal @ 5%	$ 137,844		$ 137,844
				Project Management & Admin @ 5%	$ 137,844		$ 137,844
				Total Estimated Project Cost - Task 1	**$ 3,308,250**		**$ 3,308,250**

Task 2 - Well Field Rehabilitation

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Grant Funds	Matching Funds
Pull and Repair Well Pumps and Motors	LS	3	$ 60,600	$ 181,800	$ -	$ 181,800
			Contingency @ 10%	$ 18,180.0	$ -	$ 18,180
			Planning, Design and Legal @ 5%	$ 9,090.00	$ -	$ 9,090
			Project Management & Admin @ 5%	$ 9,090.00	$ -	$ 9,090
Sub-Total				**$ 199,980**	$ -	**$ 199,980**
TOTAL				**$ 3,508,230**	**$ 500,000**	**$ 3,508,230**

Project Funding Summary

Funding Organization	Project Contribution	Funding %
CWCB CWP Grant (Diversion)	$ 500,000	14.25%
SPWRAP (Diversion + Wells)	$ 600,000	17.10%
District 64 Reservoir Company (Diversion)	$ 330,000	9.41%
Ducks Unlimited (Wells)	$ 100,000	2.85%
Julesburg Irrigation District (Diversion) via CWCB Loan	$ 1,978,230	56.39%
Total	$ 3,508,230	100.00%

South Platte Water Related Activities Program, Inc.
220 Water Avenue, Berthoud, Colorado, 80513

SPWRAP

January 23, 2019

Ms. Anna Mauss
Water Storage & Supply Projects
Colorado Water Conservation Board
1313 Sherman St., Room 718
Denver, CO 80203

RE: Letter of Commitment: Petersen Ditch Diversion Reconstruction Project

Dear Ms. Mauss;

The purpose of is letter is to confirm that SPWRAP is committing to contribute Five Hundred Thousand Dollars to the Julesburg Irrigation District / Petersen Canal & Reservoir Company, subject to completion of an agreement now being negotiated, to help fund the reconstruction of the Petersen Ditch diversion dam and river headgate.

As you may be aware, pursuant to a Memorandum of Agreement between SPWRAP and the Colorado Department of Natural Resources, SPWRAP has assumed responsibility for meeting Colorado's obligation to re-time South Platte River flows in accordance with the Platte River Recovery Implementation Program Cooperative Agreement. Recharge credits from water carried through the Petersen Ditch that accrue to the South Platte River during periods of no river call play an important role in SPWRAP's efforts to meet that responsibility.

Please contact me if you have questions in connection with this letter.

Sincerely,

Kim Hutton
President

cc: Larry Frame, JID
Joe Frank, LSPWCD