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: Rebecca.Mitchell@state.co.us

Water Storage Projects: Anna.Mauss@state.co.us

Conservation, Land Use Planning: Kevin.Reidy@state.co.us

Education & Innovation Activities: Mara.MacKillop@state.co.us

Agricultural Projects: Gregory.Johnson@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 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 deadlines required.

Water Project Summary

Name of Applicant	Treanor Enterprise Ditch Company
Name of Water Project	Treanor Ditch Lining Project

CWP Grant Request Amount	$17,000
Other Funding Sources Other Local Funding	$5,000
Other Funding Sources _____	
Applicant Funding Contribution	$8,000
Total Project Cost	$30,000

Last Updated: July 2017

Applicant & Grantee Information	
Name of Grantee(s)	Treanor Enterprise Ditch Company
Mailing Address	PO Box 93 Marvel, CO 81326
FEIN	84-1076126
Organization Contact	Barbara Hubbs
Position/Title	Secretary Treasurer
Email	barbarahubbs@gmail.com
Phone	(970) 588-3309
Grant Management Contact	Terry Meador
Position/Title	Project Manager
Email	barbarahubbs@gmail.com
Phone	417-594-1886
Name of Applicant (if different than grantee)	Daniel Murphy
Mailing Address	PO Box 96 Marvel, CO 81326
Position/Title	President, Treanor Enterprise Ditch Company
Email	danny.murphy.horseshoeing@gmail.com
Phone	970-749-0881

Last Updated: July 2017

Description of Grantee/Applicant
Provide a brief description of the grantee's organization (100 words or less).
The Treanor Enterprise Ditch Company is located in the La Plata River Basin and was incorporated in 1968. The Treanor Ditch owns three surface water rights totaling 67.00 cfs of diversions from the La Plata River, which are junior to the 1922 La Plata River Compact. The La Plata River is over appropriated, and under strict administration by the Division of Water Resources. Therefore the Treanor Ditch rarely receives a fully irrigation supply. The Treanor Ditch is a participant in the La Plata Water Conservancy District (LPWCD) and its Bobby K. Taylor (BKT) Reservoir exchange.

Last Updated: July 2017

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
X	Identified Process or Program
	Other

Category of Water Project (check all that apply)		
X	Supply and Demand Gap Projects - Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap. (Applicable Exhibit A Task(s) _1___)	
	Water Storage Projects - Projects that facilitate the development of additional storage, artificial recharge into aquifers, and dredging existing reservoirs to restore the reservoirs' full decreed storage capacity. (Applicable Exhibit A Task(s) _____)	
	Conservation and Land Use Planning Projects - Activities and projects that implement long-term strategies for conservation, land use, and drought planning. (Applicable Exhibit A Task(s) _____)	
	Engagement & Innovation Projects - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application available on the website. (Applicable Exhibit A Task(s) _____)	
X	Agricultural Projects - Projects that provide technical assistance and improve agricultural efficiency. (Applicable Exhibit A Task(s) _1____)	
	Environmental & Recreation Projects – Projects that promote watershed health, environmental health, and recreation. (Applicable Exhibit A Task(s) _____)	
	Other	Explain:

Last Updated: July 2017

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	La Plata County
Latitude	37.191°
Longitude	-108.081°

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.
The Treanor Ditch diverts irrigation supplies from the La Plata River approximately 6.5 miles to the southwest of the Hesperus Gage. A recent ditch loss study estimated this earthen ditch loses as much as 40 percent of river diversions due to seepage. This project will line a 1,000-foot section of this ditch where seepage losses are greatest. The ditch will be lined with soil amendments (bentonite and lime) and mixed with existing soils. Bentonite is commonly used during well construction forming a seal between the casing and the native formation, and has proven to be a cost-effective ditch lining solution to reduce seepage in the La Plata River Basin with measured water savings of up to 25 percent per mile. This work will increase irrigation water supplies to individual farmers under the Treanor Ditch who irrigate approximately 2,832 acres to grow alfalfa, brome grass, and other pasture grasses. In addition, the Treanor Ditch can also be used to indirectly convey non-irrigation season deliveries to BKT Reservoir, which once stored in the reservoir increases irrigation exchange supplies, provides Compact storage water, and provides bypass flows below the reservoir for the support of the native fish species (roundtail chub, bluemouth sucker, and flannelmouth sucker).

Last Updated: July 2017

Measurable Results		
To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:		
N/A	New Storage Created (acre-feet)	
N/A	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)	
385 AF	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
N/A	Area of Restored or Preserved Habitat (acres)	
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	
1,000 L.F.	Other	Explain: Ditch lining of 1,000 linear feet

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 Treanor Ditch lining project will reduce ditch losses and is estimated to increase agricultural deliveries by 385 AF each year in an over-appropriated river basin governed by the La Plata River Compact. The project will result in the conservation of ditch losses for increased agricultural supplies, and will not result in additional diversions above historical operations. The Southwest Basin Roundtable specifically addressed the irrigation water supply gap in its Basin Implementation Plan and identified irrigation efficiency projects through its Appendix A Identified Projects and Processes (IPP) List generally in ID No. 4-MB and more specifically in ID No. 15-LaP. The project will result in a more sustainable irrigation water supply for Treanor Ditch users who historically have not had a sufficient amount of irrigation supply. The project will be conducted on private lands, within an existing ditch, will not negatively impact the environment, and will not require permitting to complete. This project will bolster the quality of life for agricultural users within the La Plata River Basin. In addition, the reduction of ditch seepage will also help to reduce a small amount of sodium from being mobilized within the sediments and then leached into the La Plata River prior to reaching the Colorado River. The Treanor Ditch is in the process of securing additional local funding from key shareholders within the La Plata River Basin, and will employ a local contractor who has completed several successful ditch lining projects within the area. We know this type of project to be technically and fiscally feasible.

Last Updated: July 2017

Water Project Justification

This project will more efficiently convey diverted supplies, and will not create any additional burden on the Division Engineer as he administers diversions in compliance with the La Plata River Compact. On the contrary, the reduction of seepage losses will improve ditch deliveries, and may improve Compact operations.

Any water supplies delivered through the Treanor Ditch to the BKT Reservoir during the non-Compact season will result in the storage of water that can be used for additional irrigation supplies, meeting Compact requirements, as well as to provide water during low flows to support the native fisheries in the La Plata River, per the 2007 Memorandum of Understanding with the LPWCD, Colorado Department of Natural Resources, Colorado Division of Parks and Wildlife, and the Division of Water Resources.

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.

The LPWCD conducted a study in 2016, and SGM measured a transit loss of 44 percent per mile along the 1,000-foot section of the Treanor Ditch that will be lined for this project. LPWCD also conducted interviews with local stakeholders who also reported significant losses of 40 percent along the Treanor Ditch.

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.

Last Updated: July 2017

Previous CWCB Grants, Loans or Other Funding
No previous or current CWCB grants have been awarding to the Treanor Enterprise Ditch Company.

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.
Applicant is not aware of any issues.

Last Updated: July 2017

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) *(Spreadsheet)*
X	Letters of Matching and/or Pending 3rd Party Commitments(1)
Exhibit C	
X	Map(1)
	Photos/Drawings/Reports
	Letters of Support (Support letter from Basin Roundtable encouraged)
	Certificate of Insurance (General, Auto, & Workers' Comp.)
	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.

Last Updated: July 5, 2017

Colorado Water Conservation Board
Water Plan Grant - Exhibit A

Statement Of Work	
Date:	**July 31, 2017**
Name of Applicant:	**Treanor Enterprise Ditch Company**
Name of Water Project:	**Treanor Ditch Lining Project**
Funding Source:	**CWCB**

Water Project Overview: Please provide a summary of the proposed water project (200 words or less). The same summary can be used from Page 5 of the CWP Grant Application.

The Treanor Ditch diverts irrigation supplies from the La Plata River approximately 6.5 miles to the southwest of the Hesperus Gage. A recent ditch loss study estimated this earthen ditch loses as much as 40 percent of river diversions due to seepage through the native porous soils. The Treanor Ditch project will line a 1,000-foot section of this ditch where seepage losses are greatest. The ditch will be lined with soil amendments (bentonite and lime) and mixed with existing soils on the ditch bottom and sides. Bentonite is commonly used during well construction forming a seal between the casing and the native formation, and has proven to be a cost-effective ditch lining solution to reduce seepage in the La Plata River Basin.

This work will increase irrigation water supplies to individual farmers under the Treanor Ditch who irrigate approximately 2,832 acres to grow alfalfa, brome grass, and other pasture grasses. In addition, the Treanor Ditch can also be used to indirectly convey non-irrigation season deliveries to BKT Reservoir, which once stored in the reservoir increases irrigation exchange supplies, provides Compact storage water, and provides bypass flows below the reservoir for the support of the native fish species (roundtail chub, bluemouth sucker, and flannelmouth sucker).

Objectives: List the objectives of the project.

Objectives of the proposed work:

- Increase agricultural water supplies by reducing ditch losses.
- Improve overall La Plata River management of water supplies.
- Improve La Plata River operations for Compact compliance.
- Help support native fish species.
- Minor reduction in transport of sodium.

Last Updated: July 5, 2017

Tasks
Provide a detailed description of each project task using the following format:
Task 1 – Line approximately 1,000 feet of the Treanor Ditch
Description of Task:
Use soil amendments of bentonite, lime, and clay to line approximately 1,000 feet of the Treanor Ditch, to more efficiently convey irrigation water supplies to agricultural users. The Treanor Ditch may also be used to convey water supplies indirectly to BKT Reservoir outside of the Compact period.
Method/Procedure:

• Treanor Ditch contractor will use a dozer, backhoe, and excavator to grade and shape area of ditch that will be lined.
• The heavy equipment will be used to loosen the soils to incorporate the bentonite and lime.
  ○ The natural moisture will help bind and hydrate the bentonite to the lime and clayey soil to help reduce leakage in the ditch.
  ○ The lime will help to reduce rodents from burrowing in and along the ditch which will also help to reduce seepage in the ditch.

Grantee Deliverable: Describe the deliverable the grantee expects from this task
Complete 1,000 feet of dich lining.
CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task
A final report will be submitted documenting work performed including photographs and any issues that may have occurred.

Last Updated: July 5, 2017

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. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.

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 withhold disbursement the last 10% of the budget until 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.

Last Updated: July 5, 2017

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Exhibit A
Budget and Schedule

Date: July 31, 2017

Name of Applicant: Treanor Enterprise Ditch Company

Name of Water Project: Treaner Ditch Lining Project

Task No.	Task Description	Start Date(1)	End Date	Water Project Funding Category	Grant Funding Request	Match Funding	Total
1	Line approximately 1,000 feet of Treanor Ditch.	1/15/2018	5/1/2018	Agricultural	$17,000	$13,000	$30,000
				Total	$17,000	$13,000	$30,000

(1) Start Date for funding under $100K, minimum 45 Days from Board Approval; Start Date for funding over $100K, minimum 90 Days from Board Approval.

·Round values up to the nearest hundred dollars.

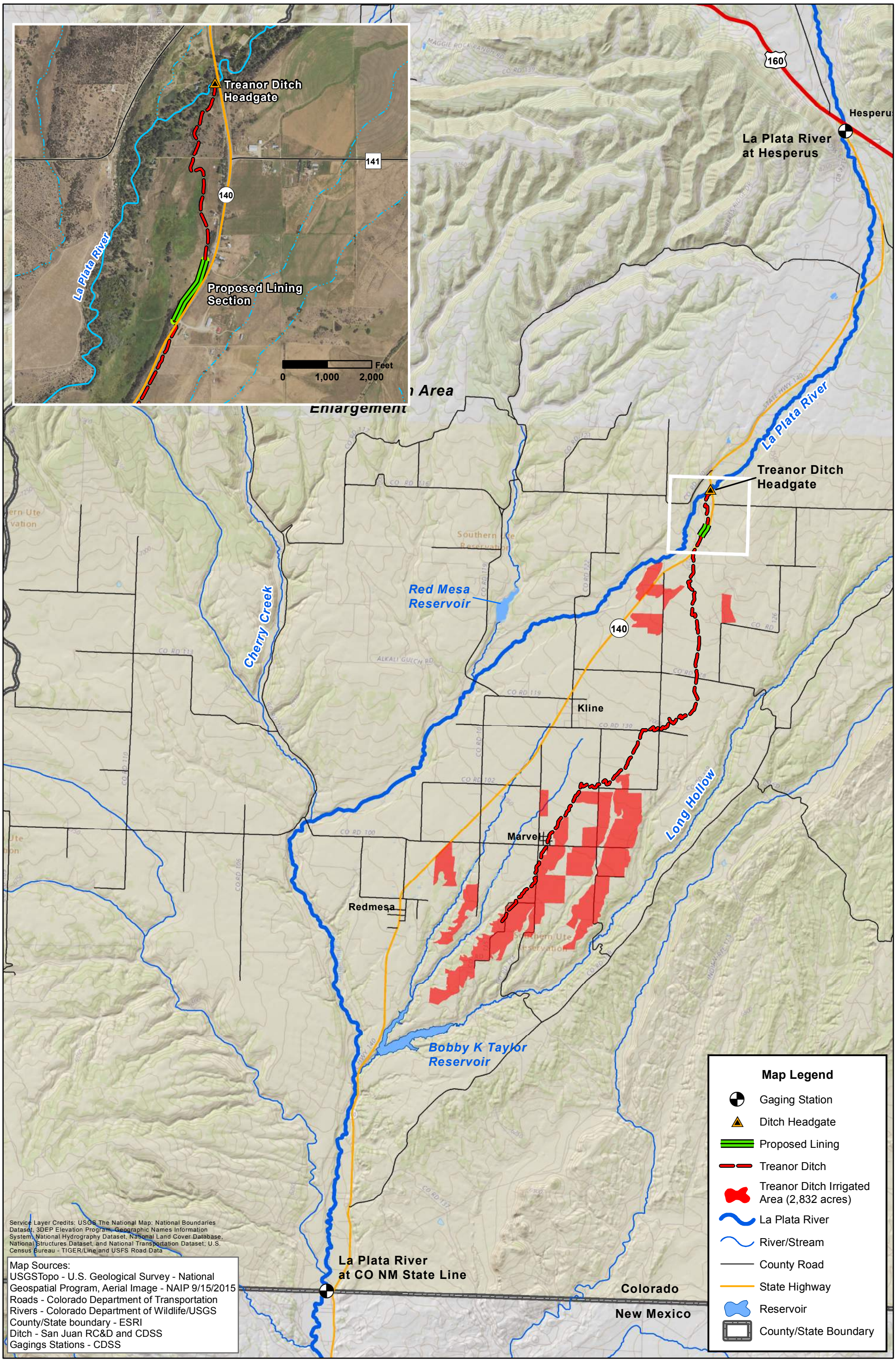
·Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)

·NTP will not be accepted as a start date. Project activities may commence as soon as grantee enters contract and receives formal NTP if prior to the listed "Start Date".

·The applicant shall provide a progress repost every 6 months, beginning from the date of contract execution.

·CWCB will withhold disbursement of the last 10% of the total grant amount until a Final Report is completed to the satisfaction of CWCB staff (2017 CWP Grant Guidelines).

Enlargement



Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line and USFS Road Data

Map Sources:
USGSTopo - U.S. Geological Survey - National Geospatial Program, Aerial Image - NAIP 9/15/2015
Roads - Colorado Department of Transportation
Rivers - Colorado Department of Wildlife/USGS
County/State boundary - ESRI
Ditch - San Juan RC&D and CDSS
Gagings Stations - CDSS

SGM
555 RiverGate Lane, Suite B4-82
Durango, CO 81301
(970) 385-2340ph 385-2341fx
www.sgm-inc.com

Feet
0 4,000 8,000 16,000

1 inch = 7,990.012484 feet

Designed by: RZM
Checked by: KCH
Date: 7/25/2017
Scale: 1:95,880

Treanor-Enterprise Ditch Company Proposed Lining Project

DRAFT

Figure 1

F:\Project Files\002-06 LPWCD\Mapping\ArcMap_files\2017\Fig1-TreanorLining.mxd

THE TREANOR-ENTERPRISE DITCH COMPANY
PO BOX 93
MARVEL, COLORADO 81329
treanorditch@gmail.com

July 26, 2017

Mr. Gregory Johnson
Colorado Water Conversation Board

Dear Mr. Johnson,

We are very excited about the available Colorado Water Plan Grant funding. The Treanor Enterprise Ditch Company, in coordination with our consultant, has prepared the Treanor Ditch Lining Project application. The Treanor Ditch currently has 64 shareholders and irrigates more than 2,800 acres within the over-appropriated La Plata River Basin in southwest Colorado.

We have reserved $8,000 for capital improvement projects, namely to reduce our ditch losses throughout our system. We commit to allocating the full $8,000 in conjunction with the Colorado Water Plan Grant funds available as sought for by the Treanor Ditch's application. In addition, we are working with the La Plata Water Conservancy District to receive additional local funding.

We will utilize a local contractor who has had success lining ditches with bentonite and lime to reduce losses by up to 25 percent. After the completion of this project we anticipate the additional water supply available to our irrigators in this water short system will be 385 AF. The water conserved will decrease our agricultural water supply gap need, without additional diversions and will reduce the amount of sodium leached into the La Plata River and subsequently the Colorado River.

We appreciate your consideration of this application and look forward to working with the Colorado Water Conservation Board. Please contact me if you have any questions.

Sincerely,

Dan Murphy

President

LA PLATA WATER CONSERVANCY DISTRICT
PO Box 71
Marvel, CO 81329-0071

July 31, 2017

Email: Gregory.johnson@state.co.us

Mr. Gregory Johnson
Colorado Water Conversation Board
1313 Sherman St, Room 718
Denver, CO 80203

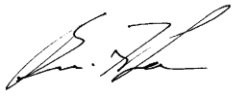
Re: Colorado Water Plan Grant Fund Application – Treanor Ditch Lining Project

Dear Mr. Johnson,

The Treanor Enterprise Ditch Company is within the La Plata Water Conservancy District (LPWCD) and completed a ditch loss study in 2016 to find the portions of most seepage within its canal. The Treanor Ditch has applied for a Colorado Water Plan Grant to line approximately 1,000 feet of the ditch to decrease losses. The completion of this project will increase agricultural water supplies, improve overall La Plata River management of water supplies, improve La Plata River operations for Compact compliance, and reduce the transport of sodium. The Treanor Ditch is a participant in the Bobby K. Taylor Reservoir project and exchanged its allocation for irrigation uses which will be more fully used after the completion of this project.

We are very supportive of this project and are seeking board approval of a $5,000 grant for the Treanor Ditch Lining Project for its Colorado Water Plan Grant Fund Application at the upcoming LPWCD board meeting to be held on August 8th, 2017, which is our first opportunity to considered this issue. We anticipate the Board will fully endorse and approve of a grant for the Treanor Ditch Lining Project. We request the CWCB also support this important project in the La Plata River Basin. Please contact me if you have any questions.

LA PLATA WATER CONSERVANCY DISTRICT



Brice F. Lee, President

LA PLATA WATER CONSERVANCY DISTRICT

PO Box 71
Marvel, CO 81329-0071

August 10, 2017

Email: Gregory.johnson@state.co.us

Mr. Gregory Johnson
Colorado Water Conversation Board
1313 Sherman St, Room 718
Denver, CO 80203

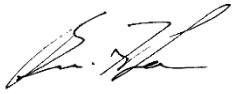
Re: Colorado Water Plan Grant Fund Application – Treanor Ditch Lining Project

Dear Mr. Johnson,

The Treanor Enterprise Ditch Company has submitted a Colorado Water Plan Grant Application request of $17,000 to line approximately 1,000 linear feet of the main ditch to decrease ditch loss. Since the submittal of that application on July 31st, the LPWCD Board has approved $5,000 funding for this project at the August 8th LPWCD board meeting. The Board fully endorses and approves of this use of LPWCD funds for the Treanor Ditch Lining Project.

Please contact me if you have any questions or need additional information.

LA PLATA WATER CONSERVANCY DISTRICT



Brice F. Lee, President

COLORADO
Division of Water Resources
Department of Natural Resources

Water Division 7 – Main Office
160 Rockpoint Drive, Suite E
Durango, CO 81301

September 1, 2017

Brent Newman
1313 Sherman St., Room 718
Denver, CO 80203
Sent via email: Brent.newman@state.co.us

RE: La Plata Water Conservancy District Grant Applications

Dear Mr. Newman,

I am writing you in response to your inquiry into the La Plata Water Conservancy District's two Colorado Water Plan Grant applications, the first being the Red Mesa Aquifer Recharge Project and the second being the Treanor Enterprise Ditch Company's Ditch Lining Project. As you know the La Plata River is over-appropriated in Colorado and is legally bound under a 1922 interstate compact to deliver water to New Mexico. Under my supervision, staff strictly administers water rights within the La Plata River Basin and delivers compact water to the state line every year. Even during wet years (such as 2017) there is not enough water available for all water users within the basin. Both projects were identified in the Southwest Basin Implementation Plan IPP list, and could benefit water users, the La Plata River and the Compact.

The La Plata Water Conservancy District's (LPWCD) Bobby K. Taylor (BKT) Reservoir has been operational for three years now, and has provided additional water supplies to a diverse set of stakeholders including more than 20 ditch companies, and has provided me and my staff with an additional tool to meet the needs of Colorado water users while helping fulfill our obligation to New Mexico. Specifically, at the end of each November, the La Plata River Compact period ends, and LPWCD can store available inflows for all the mentioned uses. However, the first 300 AF of all storage supplies are dedicated to the DWR for La Plata River Compact compliance. We have a Memorandum of Agreement that was executed in 2007 between the DWR and LPWCD that specifies these operations for the BKT Reservoir.

LPWCD obtained a decree that allows them to divert water in priority (when available) to recharge the Red Mesa Aquifer. This effectively allows LPWCD to retime and redirect runoff to increase baseflows into Long Hollow and Government Draw which fill the BKT Reservoir. The hydrology within the La Plata River varies significantly between wet and dry years, and retiming and redirecting surplus supplies to increase baseflows will result in additional BKT Reservoir storage, including the DWR's Compact Pool for subsequent release. LPWCD's engineers are working with DWR staff in Denver to quantify the timing of these recharge rights. My staff will oversee the measurement and recording of future diversions for the benefit of multiple stakeholders in the BKT Reservoir. After three years of overseeing BKT Reservoir operations, we have seen direct benefits in our operations and administration of the La Plata River and

our Compact with New Mexico, and can confirm that water has been passed through the reservoir for native fish during times of the year.

Regarding the Treanor Ditch, the ditch owners have quantified significant ditch losses through the upper portion of their ditch, and are seeking to leverage their maintenance funds to line a greater distance of the ditch. This project will allow them to more fully utilize their water rights by reducing ditch losses. The lining project will allow for the Treanor Ditch to achieve a greater water supply without additional diversions from the La Plata River. The majority of the surface water and irrigation groundwater return flows from the Treanor Ditch accrues to Long Hollow and may be stored in BKT Reservoir when in-priority or may be passed through to meet native fish flow requirements. Further, the Treanor Ditch is one of the supply ditches that will convey supplies to the LPWCD Red Mesa Recharge Pits.

Please contact me if you have any questions.

Sincerely,

/s/ Robert B. Genualdi

Robert B. Genualdi
Division Engineer
Division 7

MEMORANDUM OF AGREEMENT BETWEEN THE COLORADO DIVISION OF WATER RESOURCES AND THE LA PLATA WATER CONSERVANCY DISTRICT ON THE OPERATION OF LONG HOLLOW RESERVOIR

I. Purpose

This Memorandum of Agreement (MOA) sets out the agreement between the Colorado Division of Water Resources ("CDWR") and the La Plata Water Conservancy District ("LPWCD") regarding the operation of the proposed Long Hollow Reservoir ("the Reservoir"), including both the District and Compact Pools of the Reservoir. The Reservoir is to assist in fulfilling Colorado's obligations under the La Plata River Compact ("Compact") while providing at least two major incidental benefits: supplemental irrigation water by exchange to Colorado water users diverting from the La Plata River and improved base flow conditions on the La Plata River.

This MOA does not change or expand agency authorities or supersede, abrogate or impair, the Compact, well permits, the authority of the District Court, Water Division 7 ("Water Court") or Water Court decrees. The State Engineer remains responsible for all Colorado water rights administration, including, but not limited to, operation of Long Hollow Reservoir in priority, as described below.

II. Reservoir Operations

LPWCD shall operate the Reservoir under the direction of the State Engineer to capture and store water that is legally and physically available without adverse impact to Colorado's compliance with its Compact water delivery obligations to New Mexico, or injury to other Colorado water rights and in compliance with the Piscatorial Agreement between LPWCD and the Colorado Department of Natural Resources, dated May 31, 2007, and available from LPWCD

for review, for the protection of the roundtail chub in the Lower La Plata River. The storage of water in the Reservoir shall be controlled by the priority system and the terms and conditions of LPWCD's decreed water rights for the Reservoir.

III. Reservoir Pools

The Reservoir shall have two designated pools for annual Reservoir operations and accounting:

1. A Compact Pool of 300 acre-feet. The Compact Pool is to fill first, to a maximum of 300 acre-feet, and be used to help meet Compact obligations when River conditions are such that an attempt to deliver water for Compact purposes from the upper La Plata River to the lower River would be futile. During periods of futile conditions as determined by the Division 7 Engineer, Colorado ditches will be entitled to divert and utilize water in the upper La Plata River as has been the historic practice. The Compact pool will be used to supplement the flows in the lower La Plata River and its tributaries to assist in meeting New Mexico's Compact entitlement.

2. A District Pool, defined as the annual volume difference between the maximum amount of water in physical storage in the Reservoir and the Compact Pool. The District Pool is to fill second to the Compact Pool and is to be used to provide supplemental irrigation water to La Plata River water rights in priority by exchange, water banking, direct delivery or augmentation, and by delivering water to the Lower Index Gage in lieu of curtailing existing water rights.

3. No volume of water in the Reservoir is designated for piscatorial releases to the stream. The Piscatorial Agreement requires only that inflow into the Reservoir be bypassed under certain conditions.

IV. Operating Principles and Reservoir Release Schedule During a Compact Call

LPWCD agrees to the following principles regarding reservoir operations when a New Mexico Compact call is in effect:

1. The parties agree that Colorado's obligations under Article II.2 of the Compact are not affected by the existence or operation of the Reservoir or this Agreement or whether the Compact Pool is empty, and the CDWR retains authority to take actions necessary to fulfill such obligations.

2. Compact Pool. The parties agree that if the flow at the Interstate Station, as described in Article I of the Compact, is less than one-half the flow at the Hesperus Station, as described in Article I of the Compact, and the La Plata River is being administered such that an attempt to deliver water for Compact purposes from the upper La Plata River to the lower River would be futile as determined by the Division Engineer, the Division Engineer may call for the release of water from the Compact Pool to satisfy the requirements of Article II.2 of the Compact.

3. District Pool. Water shall be released from the District Pool at the sole direction of the LPWCD and in compliance with Colorado law. The LPWCD may rely on such releases to support in priority exchanges to provide supplemental irrigation water supply for La Plata ditches, and such releases from the District Pool shall, at the direction of the LPWCD, be accounted for as exchanges for that purpose.

V. Operating Principles and Reservoir Release Schedule Without a Compact Call

At times when there is no call from New Mexico under the Compact, releases may be made from the District Pool for beneficial use in accordance with the Doctrine of Prior Appropriation and Colorado law.

VI. Reservoir Storage, Management, Accounting, and Reporting

1. Prior to beginning storage of any water in the Reservoir, LPWCD shall complete the following:

   a. install a permanent Reservoir elevation gage with a satellite relay monitoring system at a location approved by the Division 7 Engineer;

   b. provide a Reservoir surface area-capacity-elevation table approved by a Licensed Professional Engineer in a format acceptable to the Division 7 Engineer;

   c. install a gage with a satellite relay monitoring station to measure inflow to the reservoir on Government Draw, above the Reservoir, at a location acceptable to the Division 7 Engineer and install a gage with satellite monitoring to measure inflow to the reservoir on Long Hollow Creek above the Reservoir at a location acceptable to the Division 7 Engineer; and,

   d. install a gage with a satellite relay monitoring station to measure releases from the reservoir, on Long Hollow just below the reservoir outlet at a location acceptable to the Division 7 Engineer, and,

e. install a gage with a satellite relay monitoring station on the La Plata River below the confluence of Long Hollow and the La Plata River at a location acceptable to the Division 7 Engineer;

2. After storage of water begins in the Reservoir, and within a time acceptable to the Division 7 Engineer, the LPWCD shall complete the following:

a. provide daily to the Division 7 Engineer, and/or his representative, Reservoir elevations and a release schedule, during the period February 15 through November 30 and weekly reports during the period December 1 through February 14; and,

b. provide a plan of operations, acceptable to the Division 7 Engineer, prior to the annual meeting required by paragraph VI below, for the subsequent year's Reservoir operations.

3. Evaporation Accounting. Evaporation shall be assessed to the Compact Pool and District Pool in proportion to each Pool's percentage of the overall active Reservoir Pool capacity.

VI. Performance Review and Coordination

The Colorado State Engineer, or the State Engineer's designee, and the LPWCD Board of Directors, and/or their representatives, shall meet annually, no later than February 1 of each year, unless all parties to this agreement consent to a later date in writing, regarding the effectiveness and progress of activities identified in this MOA.

VII. Effective Date

This agreement is effective upon the date of signature of all parties below and will continue in force until modified by mutual consent or mutually terminated.

Approved:

COLORADO DIVISION OF WATER RESOURCES

Hal D. Simpson
State Engineer

Date: 5/31/07

LA PLATA WATER CONSERVANCY DISTRICT

Bruce F. Lee, President

Date: 4/30/07

MEMORANDUM OF UNDERSTANDING REGARDING
LONG HOLLOW RESERVOIR OPERATIONS
TO BENEFIT THE NATIVE FISHERY IN THE LA PLATA RIVER

This Agreement, effective on the date of the last party to sign, is executed by the La Plata Water Conservancy District ("LP District"), a Colorado quasi-municipal public entity established under and subject to C.R.S. §37-45-101, et seq., the Colorado Department of Natural Resources ("CDNR"), The Colorado Division of Water Resources ("CDWR") and the Colorado Division of Wildlife ("CDOW")

A. Pass Through of Flows entering Long Hollow Reservoir to Help Sustain Native Fish Habitat.

1. The LP District intends to construct Long Hollow Reservoir ("LHR"), an on-stream Reservoir, with a planned capacity of 5,400 acre-feet, on Long Hollow, a tributary to the La Plata River, to be located approximately 22 miles southwest of Durango, Colorado, in Sections 29, 32, and 33, Township 33 North, Range 12 West, N.M.P.M.

2. In order to maintain habitat for Colorado-listed native aquatic species of concern, primarily the roundtail chub, a New Mexico endangered fish, in the La Plata River below its confluence with Long Hollow ("Confluence"), a flow of 4 cfs at the Confluence has been determined by the CDOW to be appropriate. Therefore, as part of operating LHR, the LP District, or the operator of LHR ("LHR Operator"), will help to provide fishery flows during the La Plata River Compact Non-Compact period (December 1 through February 14) ("Non-Compact Period") when the flow at the Confluence, measured as the "Lower La Plata Gauge Index Flow," see Paragraph 3 below, is less than 4 cfs.

To seek to maintain the 4 cfs flow during the Non-Compact period the inflow into LHR, as measured as described in Paragraph 5 below, will be compared to the "Five Year Average Daily Flow" in Long Hollow. For the day of each week ("Administration Date") that the CDWR checks the LHR inflow and level of the bypass through LHR ("Pass Through"), the LHR Operator will Pass Through LHR native inflow according to the following provisions:

a. If the LHR inflow is greater than 90% of the Five Year Average Daily Flow for the Administration Date, as measured as described in Paragraph 5 below, the LHR Operator will Pass Through LHR 2.0 cfs or the amount of natural inflow into LHR, whichever is less.

b. If the LHR inflow is less than or equal to 90% but greater than 80% of Five Year Average Daily Flow for the Administration Date, as measured as described in Paragraph 5 below, the 2.0 cfs LHR Pass Through requirement will be reduced to 1.5 cfs or the amount of natural inflow into LHR, whichever is less.

c. If the LHR inflow is less than or equal to 80% of Five Year Average Daily Flow, as measured for the Administration Date as described in Paragraph 5 below, the maximum LHR Pass Through requirement will be reduced to 1.0 cfs or the amount of natural inflow into LHR, whichever is less.

d. In no case shall the Pass Through exceed the amount of water necessary to meet the 4 cfs Lower La Plata Gauge Index Flow.

e. At the end of the non-compact period, CDWR shall provide a report to CDOW summarizing the amounts and dates of water passed through the reservoir under the terms and conditions of this section A(2).

3. The "Lower La Plata River Gauge Index Flow" is the measured flow at a gauge located on the La Plata River immediately below the Confluence, the "Lower La Plata Gauge," see Paragraph 4 below, plus any diversions into the Morgan & Stambaugh Ditch, with a headgate located on the La Plata River approximately 50 to 100 feet above the Confluence.

4. Three new stream gauging stations will be operating on or before LHR construction is complete, as follows: 1) on the La Plata River immediately below the Confluence (Lower La Plata Gauge), 2) in Long Hollow immediately above the LHR full pool elevation (Long Hollow Inflow Gauge), and 3) in Government Draw immediately above the LHR full pool elevation (Government Draw Inflow Gauge). Because the LHR embankment will be built at or on the existing Long Hollow Gauge prior to the completion of LHR, the existing Long Hollow Gauge, located approximately 2,000 feet above the Confluence will be moved downstream a sufficient distance to measure the outflow from LHR (Long Hollow Outflow Gauge).

5. a. The "Average Daily Flow" in Long Hollow will be based on the five-year running average of the daily flow measured at the existing Long Hollow Gauge. After installation of the Long Hollow and Government Draw Inflow Gauges, the sum of the Long Hollow and the Government Draw Inflow Gauges will replace the readings at the Long Hollow Gauge. The five-year daily running average will be calculated using daily flow data for the previous five years of record, as described in Paragraph 5(b) below. Flow records have been recorded at the Long Hollow Gauge, constructed in 1988, for irrigation years 1989 to 2006.

b. To determine the "Five Year Average Daily Flow," the Long Hollow and Government Draw Inflow Gauges will be used, in conjunction with the Long Hollow Outflow Gauge, for the first four years of measurement after completion of filling LHR. During year five, only the Inflow Gauges will be used. For example, during the first year, four years of data from the Outflow Gauge and one year of data from the Inflow Gauges will be used to calculate the five-year running daily average. During the fourth year, four years of Inflow Gauge data and one year of Outflow Gauge data will be used to calculate the five-year running average. During and after the fifth year, the "Five Year Average Daily Flow" will be calculated using data from only the Inflow Gauges.

6. No water previously stored in LHR will be released from storage to help to meet the 4 cfs fishery goal. Rather native inflow will be by-passed (or passed through LHR) to help to meet the 4 cfs fishery goal.

7. In order assist in meeting the goals of this Memorandum of Understanding, during the Non-Compact Period the CDWR shall give the CDOW prior notification of any proposed diversion from the La Plata River below the confluence of Long Hollow, or in the Morgan Stambaugh Ditch immediately upstream of the confluence, that may reduce the quantity of water in

the La Plata River to an amount lower than the CDOW desired flow of 4 cfs from the confluence downstream to the Colorado/New Mexico state line. The CDWR shall determine that such diversions are a reasonable beneficial use of water prior to allowing such diversion.

B. Mitigation related to non-native fish species.

The following requirements, related to preventing the establishment of a non-native fishery in LHR and below LHR in the La Plata River, are deemed acceptable and prudent: the LP District 1) shall have installed a screen in the LHR outlet works; 2) shall not stock non-native fish in LHR; and, 3) shall restrict public access to LHR.

LA PLATA WATER CONSERVANCY DISTRICT

by:_____ 4/30/07

Brice F. Lee, President Date

COLORADO DEPARTMENT OF NATURAL RESOURCES

by:_____ 5/10/07

Date

COLORADO DIVISION OF WILDLIFE

by:_____ 5/31/07

Date

COLORADO DIVISION OF WATER RESOURCES

by:_____ 5/5/07

Harold (Hal) D. Simpson, State Engineer Date

STATE OF COLORADO)
)ss
County of La Plata)

The foregoing Memorandum of Understanding Regarding Long Hollow Reservoir Operations to Benefit the Native Fishery in the La Plata River was subscribed before me this ____ day of _____, 20___, by Brice F. Lee, President, La Plata Water Conservancy District

My Commission Expires: _____ _____

Notary Public

STATE OF COLORADO)
)ss
County of La Plata)

The foregoing Memorandum of Understanding Regarding Long Hollow Reservoir Operations to Benefit the Native Fishery in the La Plata River was subscribed before me this 10th day of May, 2007, by Mike King, as Deputy Director Colorado Department of Natural Resources.

My Commission Expires: April 18, 2011 Susan E. Evans
Notary Public

SUSAN E. EVANS
NOTARY PUBLIC
STATE OF COLORADO

STATE OF COLORADO)
)ss
County of La Plata)

The foregoing Memorandum of Understanding Regarding Long Hollow Reservoir Operations to Benefit the Native Fishery in the La Plata River was subscribed before me this 21st day of May, 2007, by Bruce McCloskey, as Director, Colorado Division of Wildlife.

My Commission Expires: 9/17/2010 Notary Public

STATE OF COLORADO)
)ss
County of La Plata)

The foregoing Memorandum of Understanding Regarding Long Hollow Reservoir Operations to Benefit the Native Fishery in the La Plata River was subscribed before me this 5th day of May, 2007, by Hal Simpson, as State Engineer Colorado Division of Water Resources.

My Commission Expires: 1-29-2010 Notary Public

MARTA AHRENS
STATE OF COLORADO
NOTARY PUBLIC