COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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Jared Polis, Governor

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TO: Colorado Water Conservation Board Members

FROM: Alexander Funk, Program Manager
Alternative Agricultural Water Transfer Methods Grant Program (ATM)
Interstate, Federal, and Water Information Section

DATE: November 21st, 2019

AGENDA ITEM: 22a. Alternative Agricultural Water Transfer Method Grant Program

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Staff Recommendation/Action Items: ATM Grant Request

Applicant: Lower Arkansas Valley Water Conservancy District (fiscal agent for Super Ditch Company)
Project Name: Super Ditch Operations and Administrative Program
Amount: $255,460

The Colorado Water Plan encourages alternatives to permanent dry-up of irrigated agriculture and to utilize alternative transfer methods (ATMs) to support a sustainable agricultural industry while addressing other water resource challenges. The CWCB's Alternative Water Transfer Methods Grant Program, established in 2007, provides resources to help develop and implement ATM projects, including research. The ATM grant program also provides resources for the "life cycle" costs of ATM projects, including project operations and infrastructure. The current focus of the ATM grant program is on implementing projects that will result in or facilitate actual wet-water transfers to support multiple uses, including municipal, industrial, agricultural, environmental, and recreational needs. ATM grants can also be utilized to explore alternative approaches to mandatory curtailment resulting from groundwater administration or compact compliance.

If this request is approved, it will constitute the 35th ATM Grant approved by the CWCB. Of the previous 34 projects, ten are in-progress, and 24 have been completed or closed-out.

The current ATM balance is $1,223,518. If this grant request is approved and comes under contract, the remaining balance will be $968,058.

Staff's review of ATM applications involves the following steps:

1) Applications are reviewed for completeness based on the information requirements, which are primarily outlined in the ATM Grant Criteria and Guidelines (C&G).
2) Applications are reviewed to verify that the water activity meets the eligibility requirements in the C&G.
3) Staff then prepares the Water Activity Summary Sheet, which documents the outcome of the review process and contains staff's recommendations.

Staff concludes these ATM Grant applications are complete, and the proposed activity meets the eligibility requirements in the C&G. The Water Activity Summary Sheet, ATM Grant Application, Statement of Work, and Budget and Schedule are attached.

Staff recommendation:
Staff recommends approval of up to $255,460 from the Alternative Agricultural Water Transfer Methods Grant Program to help fund the "Super Ditch Operations and Administration" project.

Alternative Agricultural Water Transfer Methods – Competitive Grant Program
Water Activity Summary Sheet
November 21, 2019
Agenda Item 22(a)

Applicant & Grantee:	Super Ditch Co./Lower Arkansas Valley Water Conservancy District
Water Activity Name:	Super Ditch Operations and Administration
Water Activity Purpose:	Demonstrate the use of a conservation easement on irrigated agricultural land for both preservation of agricultural irrigation practices and meeting municipal water supply needs
Drainage Basin:	Arkansas
Water Source:	Arkansas River
Amount Requested:	$255,460
Matching Funds:	**$128,300** total cash match (provided by the applicant)

Staff Recommendation
Staff recommends approval of up to $255,460 from the Alternative Agricultural Water Transfer Methods Program to help fund the "Super Ditch Operations and Administration."

Water Activity Summary: The Lower Arkansas Valley Super Ditch Company ("Super Ditch" was created to facilitate and coordinate the leasing of agricultural water to municipalities as an alternative to buy-and-dry through the power of collective negotiation. Altogether, the Super Ditch represents seven ditch companies in the Lower Arkansas Valley.

The Super Ditch, in operation, is responsible for seeking necessary approvals for temporary water leasing projects, developing the contractual arrangements between irrigators and end users, and working with regional stakeholders to ensure temporary water leasing projects are operated in accordance with state and local requirements. Current Super Ditch efforts include the Catlin Canal Fallow-Leasing Pilot Project, approved through the HB13-1248 process, and a recently approved Interruptible Water Supply Agreement (IWSA) between the Catlin Canal Company and the City of Fountain. The Super Ditch is also in the process of securing approval for a new HB13-1248 project involving Colorado Springs Utilities.

Temporary leasing projects involve substantial operational expenses, including the construction and installation of recharge facilities, monitoring of recharge facilities and deliveries, compiling and reviewing data on recharge and augmentation station deliveries, preparing both planning and accounting, monitoring fallowed acreage, and other issues. Pilot projects also require significant legal and technical costs to develop. To date, the Lower Arkansas River Valley Water Conservancy District has supported the majority of the expenses for Super Ditch project operations. The assumption of the operational duties is due in part to ongoing efforts by the Super Ditch Company, a separate legal entity, to secure additional resources to operate additional, more complex leasing projects.

Through this grant, funds will be used to assist the Super Ditch Company with developing internal capacity to facilitate larger, more complex temporary leasing projects in the Arkansas Basin. In particular, funds will be used by Super Ditch to develop better financial accounting procedures, creating operational protocols for project implementation, and tracking engineering activities. Also, grant funds will be used to design and construct two augmentation stations and delivery infrastructure that will allow for the maintenance of ditch deliveries and return flows during operation of a leasing project. Funds will also be used to develop a water quality monitoring protocol to measure water quality benefits associated with temporary fallowing. This information will be critical in coordinating efforts with the Colorado Department of Health and the Environment and the Environmental Protection Agency on exploring innovative solutions to addressing water quality concerns in the Lowe Arkansas Valley and provide CWCB with additional information on public benefits of alternative transfer method projects.

Discussion: Staff supports Super Ditch's application based on the following considerations: the project will provide the Super Ditch with the resources necessary to more effectively manage an increasing portfolio of alternative transfer method projects while ensuring operations are in compliance with state and local requirements; the project will provide valuable information to state decision-makers and stakeholders working to better understand the nexus between water quality and quantity; the project will help meet the Arkansas River Basin Implementation Plan's goal of managing water to sustain an optimal agricultural economy; and this effort will further Colorado's Water Plan's Measurable Objectives and Critical Goals and Actions with regard to ATMs.

Issues/Additional Needs: No issues or additional needs have been identified.

CWCB Project Manager: Alexander Funk

COLORADO
DEPARTMENT OF NATURAL RESOURCES

COLORADO WATER CONSERVATION BOARD

ALERNATIVE AGRICULTURAL WATER TRANSFER METHODS COMPETITIVE GRANT PROGRAM

GRANT APPLICATION FORM

Super Ditch Operations and Administrative Program	Arkansas River Basin
Program/Project Name	**River Basin Name**

$255,460	$128,300
Amount of Funds Requested	Amount of Matching Funds

Instructions: This application form must be submitted in electronic format (Microsoft Word or Original PDF). The application can be emailed, or a disc can be mailed to the address at the end of the application form. The Alternative Agricultural Water Transfer Methods Competitive Grant Program, Criteria and Guidelines can be found at http://cwcb.state.co.us/LoansGrants/alternative-agricultural-water-transfer-methods-grants/Pages/main.aspx. **The criteria and guidelines must be reviewed and followed when completing this application**. You may attach additional sheets as necessary to fully answer any question, or to provide additional information that you feel would be helpful in evaluating this application. Include with your application a cover letter summarizing your request for a grant. If you have difficulty with any part of the application, contact Craig Godbout of the Water Supply Planning Section (Colorado Water Conservation Board) for assistance, at (303) 866-3441 x3210 or email at craig.godbout@state.co.us.

Generally, the applicant is also the prospective owner and sponsor of the proposed program/project. If this is not the case, contact Craig before completing this application.

Part A. - Description of the Applicant(s) (Program/Project Sponsor);

1. Applicant Name(s): Lower Arkansas Valley Super Ditch; Attn: Gerry Knapp, Consultant

Mailing address: 801 Swink, Ave.
Rocky Ford, CO 81067

Taxpayer ID#: 27-0168393 Email address: lhancock@lowerark.com

Phone Numbers: Business: 719-254-5115
Home: 719-469-3597
Fax: 719-254-5150

2. Person to contact regarding this application if different from above:

Name:

Position/Title

3. If the Contracting Entity is different then the Applicant, please describe the Contracting Entity here.

Lower Arkansas Valley Water Conservancy District (District) will be contracting on behalf of the Super Ditch Company and helping with all fiscal responsibilities. Under current arrangements Super Ditch will be using the Districts help to execute the financial obligations of the contract.

Lower Arkansas Valley Water Conservancy District was formed in 2002 by a vote of the electorate of Pueblo, Otero, Crowley, Bent and Prowers Counties to conserve water resources for the greatest beneficial use within the District. The Lower Arkansas Valley Water Conservancy District encompasses most of the Lower Arkansas River Basin, from above Pueblo Reservoir to the Kansas state line, including Pueblo and John Martin Reservoirs.

The District has a general fund budget of approximately $1.7 million per year, funded primarily by a 1.5 mill levy on real property with the District. The budget is entirely utilized for water related activities such as conservation practices, water quality, alternate water transfer methods and water quantity type matters. Currently the District has five full time and five contracting employees.

4. Provide a brief description of your organization. The applicant may be a public or private entity. Given the diverse range of potential applicants, not all of the following information may be relevant. Where applicable and relevant the description should include the following:

    a) Type of organization, official name, the year formed, and the statutes under which the entity was formed, a contact person and that person's position or title, address and phone number. For private entities, a copy of the Articles of Incorporation and By-laws should be appended to the application.

    b) For waters suppliers, information regarding the number of customers, taps, service area, and current water usage, and future growth plans, water related facilities owned or used, funding/revenue sources (existing service charges, tap fees, share assessments, etc.), the number of members or shareholders and shares of stock outstanding or a description of other means of ownership.

    c) For other entities, background, organizational size, staffing and budget, and funding related to water that is relevant in determining whether the applicant can accomplish the program/project for which funding is sought.

    d) A brief history of the Applicant(s).

    e) Please include any relevant Tabor issues relating to the funding request that may affect the Contracting Entity.

The article of Incorporation of the Lower Arkansas Valley Super Ditch Company as filed by the Secretary of State of Colorado occurred on May 7, 2008. The purpose of the "Super Ditch" is to create an alternative to what has been historically "buy-and-dry" of irrigation water rights for M&I use. More specifically, the Super Ditch Company is to create a viable alternative to historical M&I purchases, permanent transfers, and dry-up of irrigated land that would both make irrigation water available for municipal use and preserve irrigated agriculture, economic stability and rural communities in the Lower Arkansas Valley. This is a critical mission of the Lower Arkansas Valley Water Conservancy District and the Lower Arkansas Valley Super Ditch Company. It is also central to the goals of the Colorado Water Plan, the CWCB, the Interbasin Compact Committee, and basin roundtables. The rights leased through the Super Ditch will be water rights that are diverted from or stored on the mainstream of the Arkansas River and its tributaries (exclusive of Fountain Creek) at or below Pueblo Dam and above John Martin Reservoir.

A board of directors corresponds with each of the Valley Ditch Companies, consisting of Catlin Canal Company, the Fort Lyon Canal Company, the High Line Canal Company, the Holbrook Mutual Irrigating Company, and the Oxford Farmers Ditch Company.

The Super Ditch Company is classified as a 501 (c)(12) mutual irrigation company and therefore is not required to comply with Tabor.

Part B. - Description of the Alternative Water Transfer Program/Project –

1. Purpose of the Program/Project

    Please provide a summary of the proposed program/project, including a statement of what the program/project is intended to accomplish, the need for the program/project, the problems and opportunities to be addressed, the expectations of the applicant(s), and why the program/project is important to the applicant(s). The summary must include a description of the technical, institutional (i.e., how the program/project will be organized and operated), and legal elements that will and/or have been addressed by the applicant and proposed program/project. The summary should also discuss relevant project history, if applicable, and any other relevant issues.

Previous Studies

To the maximum extent possible, the results of any previous studies and investigation should be utilized and incorporated into the proposed program/project. The application for funding should include a brief summary of the results of previous studies and how they will be utilized.

The purpose of the "Super Ditch Company" is to create an alternative to what has been historically "buy-and-dry" of irrigation water rights for M&I uses. More specifically, the Super Ditch has created a viable alternative to historical M&I purchases, permanent transfers, and dry-up of irrigated land that would both make irrigation water rights available for municipal use and also preserve irrigated agriculture, the economic lifeblood and future of rural communities in the Lower Arkansas Valley.

The Statewide Water Supply Initiative ("SWSI") estimates that by 2050, Colorado may lose 500,000 to 700,000 acres of currently irrigated farmland in order to meet municipal growth demands. The IBCC and basin roundtables conclude that the current status-quo path to buy-and-dry is not the best path for Colorado. Across the state, water stakeholders want to minimize buy-and-dry in a way that respects property rights, recognizes the importance of agriculture in Colorado, and supports a sustainable agriculture industry.

The Super Ditch, in conjunction with the LAVWCD, had previously initiated the Catlin Pilot Project, which is delivering leased water to Fountain and Security. This Program, described in this application, enables the Super Ditch to develop independently from the LAVWCD; at the same time, it demonstrates on a much larger scale the use of temporary leasing as a tool in meeting the identified water needs of the state water plan. The ramping up of temporary leasing as a reliable water supply requires the Super Ditch to significantly enlarge its capacity and ability to operate, manage and administer leases and water rights. The previous work with the Catlin Pilot Project has demonstrated on a small scale the usefulness of temporary leasing, both with the farmer and the municipality. This Program takes those practices and develops the large-scale leasing that will be most beneficial in meeting the needs of municipalities in the provision of water to their customers.

Water leasing is a method to meet consumptive needs identified by SWSI and the roundtables within the Arkansas Basin, including agricultural, municipal, wildlife, and recreational demands. In addition, it builds on the work of the SWSI Technical Review Team on Alternatives to Agricultural Transfers and the IBCC's Subcommittee on Agricultural Transfers by furthering the development of the most promising alternative identified: water leasing. A current water leasing project is the Catlin Pilot Project. The Catlin Pilot Project has been implemented over the past several years and spans over a ten-year period to facilitate the use of senior water rights for municipal needs through rotational fallowing of irrigated lands in the Lower Arkansas River Basin. The Catlin Pilot Project has provided up to 500 acre-feet of water per year since its inception to three municipal water providers – the Town of Fowler, The City of Fountain and the Security Water District. The project uses 1046.83 shares of the Catlin Canal Company that has historically irrigated over approximately 1,000 acres of land on six farms. The project was approved in 2015 by the Colorado Water Conservation Board. This project has identified methods to streamline operations and administration procedures for future rotational fallowing-leasing projects. This project is specifically intended to allow M&I water providers to meet their future demands through an alternative to historical acquisitionand transfer of agricultural water rights that will also maintain land in irrigation. Thus, water leasing will facilitate M&I water providers in meeting future needs identified by SWSI and the Roundtable, while fostering the continued irrigation of land in the

Arkansas River Basin, along with its associated agricultural productivity and economic activity.

Super Ditch has also identified a water quality benefit to leasing and fallowing. To date Super Ditch has not performed any water quality calculations on the current projects, but any future projects could show this benefit. Super Ditch would work through the District to collect and quantify the downstream water quality benefits of leasing fallowing. This is extremely important for the Arkansas Valley as the mainstem of the Arkansas River is impaired for selenium and it is the efforts of Colorado Department of Health and Environment to clean up the river. If load reduction can be quantified from the Super Ditch projects, then it gives an added benefit to leasing and fallowing to the valley.

2. Study Area/Service Area Description

The study area/service area is generally the geographic area that is the subject of the proposed program/project (include both the source of supply and location and type of new use). The description should include the following items:

a) A narrative description of the study area/service area including: the county, the location of towns or cities, topography, and locations of major surface and ground water features.
b) An area map showing each of the items above, as well as the locations of existing facilities, proposed project facilities and boundaries of lands involved in the proposed program/project.
c) Information regarding the irrigated lands that are involved in the program/project. This must include a tabulation of total irrigated acreage, description of cropping types, crop yields, and total average annual water diversions for existing agricultural lands.
d) Information regarding the location of the new water use(s) that will be served by transferred water including the estimated number of users/taps and/or uses served.
e) Socio-economic characteristics of the area such as population, employment and land use.

The Super Ditch currently operates the Catlin Canal Pilot project in providing water to two municipal water providers – the City of Fountain and the Security Water District. Also, the Super Ditch has developed an Interruptible Water Supply Agreement as a mechanism to provide additional water for a contract with the City of Fountain and has applied for pilot project with the City of Colorado Springs.

Source of supply. The study area for water leasing includes irrigated land in the Lower Arkansas Valley from diversions of the Arkansas River between the Pueblo Dam to John Martin Reservoir. The major surface water feature is the Arkansas River, and the major ground water feature is the alluvium associated with the River. The area includes irrigated portions of Pueblo, Otero, Bent, Crowley and Prowers counties. Principal cities and towns within the area include Manzanola, Fowler, Rocky Ford, Swink, La Junta, and Las Animas.

Service area. The major surface water features in the service area include, in addition to the main stem of the Lower Arkansas River, the confluence of Fountain Creek, Monument and Fountain Creeks, and the South Platte River basin. This includes South Platte's tributaries from the east, from the foothills to Sand Creek. The major ground water features of the service area are the Denver Basin aquifers and the Upper Black Squirrel Creek Designated Ground Water Basin. The service area includes portions of Pueblo, El Paso, Douglas, and Arapahoe counties, and the Cities and Towns of Colorado Springs, Aurora, Monument, Fountain, and Palmer Lake. It also contains developed, but unincorporated areas, served by metropolitan, water and developer districts, such as Academy Water and Sanitation District,

Cherokee Metropolitan District, Donala Water and Sanitation District, Triview Metropolitan District, Woodmoor Water and Sanitation District, and the Morley Companies.

A map of the irrigated acres under the Bessemer, Catlin, Fort Lyon, Holbrook, Otero, Oxford and Rocky Ford High Line ditches is attached as Map 1. These are the principal irrigated acres that would be the source of water for water leasing.

While the service area encompasses perhaps a quarter of the population of the state, the Super Ditch would serve only a portion. Target service locations include municipalities that have expressed an interest in leasing water to supplement their existing supplies, including Colorado Springs, Fountain, Security and Aurora. In addition, water providers dependent upon Denver Basin ground water are actively looking for water to recharge the aquifers to extend their life.

Because leased water is expected to be a supplemental supply during times of drought, for drought recovery, and for aquifer recharge, it is impossible to estimate the number of users or taps that would be served until leases are consummated. For example, municipal water use declines significantly during times of drought and water supplies serve more users than in average or wet years. Conversely, drought recovery supplies ultimately benefit all the service users of the provider if it prevents mandatory rationing during drought. Different still are Denver Basin ground water dependent providers who will lease water to recharge the aquifers. Recharge will extend the lives of the aquifers, benefiting not only their users but all users dependent upon the aquifers throughout the Denver Basin.

3. Description of the Alternative Water Transfer Method

Please describe the type(s) of water transfers that will be examined/utilized (i.e., conceived transfer methods include, but are not limited to: 1) interruptible water supply agreements; 2) long-term agricultural land fallowing; 3) water banks; 4) reduced consumptive use through efficiency or cropping changes while maintaining historic return flows; and 5) purchase by end users with leaseback under defined conditions). In addition, please describe how the transferable consumptive use will be calculated and quantified, and how return flow patterns will be addressed/maintained.

The rights to be leased through the Super Ditch will be water rights that are diverted from or stored on the mainstem of the Arkansas River and its tributaries (exclusive of Fountain Creek) at or below Pueblo Dam and above John Martin Reservoir and located so that the leased water can be delivered to municipalities and other water users without prohibitive transit losses. This proposed Program will primarily use Interruptible Water Supply Agreements and Pilot Project authorization in developing the short term and long-term agricultural land fallowing necessary to provide consumptive use water to the anticipated alternative uses. Review

4. Program/Project Eligibility

Please describe how the proposed program/project meets each of the following eligibility requirements (please see Criteria and Guidelines for additional information regarding the alternative water transfer methods/strategies that qualify for funding). Note: If these requirements are addressed in other parts of the application you may simply reference the applicable section(s).

a) A description of how, if implemented, the proposed program/project will protect property and water rights.

b) Identified group(s) of agricultural users that are or may be willing to transfer a portion of their water and identified entity(s), group(s) or area(s) where the transferred water could or would be put to the new use and a description of the new use.

c) The program/project must at a minimum conceptually describe the technical, institutional, and legal elements of the water transfer. Grant monies may be used to address one or more of these elements. If grant monies are not requested for all three elements, the grant applicant must describe how the applicant has or intends to address the elements, which are not included in the grant request, through other efforts.

d) If grant monies are proposed for use for legal assistance, then the use of those funds shall be oriented toward advancing the knowledge of alternative agricultural water transfer methods and techniques; not for preparation of a specific water court case. The total requested funds for legal assistance shall not exceed 40 percent of the total grant request. In addition, grant monies proposed for use for legal assistance must be used to collaboratively address issues and concerns related to agricultural water transfer. Funds shall not be used to solely advance the cause of the project proponents.

e) A minimum of a 10 percent cash match of total project cost (past expenditures and "in kind" can not be counted toward the 10 percent match).

This Program is specifically designed to provide the needed infrastructure to efficiently administer the water rights with individual diversion head gates and associated measuring devices. Additionally, the assistance provided through this grant allows for the Super Ditch Company to increase its capacity to administer these leases and temporary transfers at the large scale needed. With assistance in this initial upsizing, the leasing program can be expected to become efficient and viable for helping meet the identified statewide goals of the water plan.

The Super Ditch Company will not permanently transfer any water right from agriculture. On the contrary, it will administer temporary transfers to move consumptive use water to meet the municipal needs at specific times. The administration of this program requires extensive engineering as required by the legal mechanism to protect water users from potential injury. While not requesting grant monies specifically for legal activities, the request will cover the start-up costs of administration and engineering of the initial leasing activities.

The Super Ditch will provide a 33% cash match for grant request for this project.

5. Program/Project Evaluation Criteria

The following grant evaluation criteria will be used by the CWCB to evaluate and make recommendations to fund, partially fund or not fund a grant application. The criteria are aimed at advancing alternative transfer methods from the literature and studies to actual on the ground projects/programs that provide reliable water supply and sustain key elements of the agricultural area from which the water is transferred. The applicant should fully address and explain in detail in the application how, and the extent to which, the proposed project/program meets each of the criteria. However, it should be noted that the project does not have to meet all of the criteria to be eligible to receive funding and the criteria below are not listed in any order of important or priority.

meet all of the criteria to be eligible to receive funding and the criteria below are not listed in any order of important or priority.

a. The proposed project/program builds upon the work of former alternative water transfer methods efforts and addresses key areas that have been identified. For more detailed information on this work, please refer to the draft report: *Alternative Agricultural Water Transfer Methods Grant Program Summary and Status Update*, November 2012.

b. The proposed project addresses one or more key recommendation(s) in the report: *Alternative Agricultural Water Transfer Methods Grant Program Summary and Status Update*, November 2012.
c. Preference will be given to projects that provide additional matching resources in the form of cash, past expenditures and in-kind contributions that are in addition to the required 10% cash match.
d. The proposed project/program has the ability/potential to produce a reliable water supply that can be administered by the State of Colorado, Division of Water Resources.
e. The proposed project/program produces information that is transferable and transparent to other users and other areas of the state (i.e., would provide an example "template" or roadmap to others wishing to explore alternate transfer methods).
f. The proposed project/program addresses key water needs identified in SWSI 2010 or as identified in a basin's needs assessment.
g. The proposed project/program advances the preservation of high value agricultural lands. Value can be viewed as: the value of crops produced, the value the agriculture provides to the local community, and the value the agricultural area provides for open space and wildlife habitat.
h. The proposed project/program addresses water quality, or provides other environmental benefits to rivers, streams and wetlands.
i. The proposed project/program increases our understanding of and quantifies program/project costs. This could include: institutional, legal, technical costs, and third-party impacts.
j. The proposed project/program does not adversely affect access to other sources of water (not subject to/participating in the program) where owners of these water rights may wish to pursue traditional transfer of their rights to other users.
k. The proposed project/program provides a perpetual water supply for the new and/or alternate use and preserves agricultural production and/or helps sustain the area's economy from which the transfer is occurring.
l. The quantity of water produced by the proposed project/program. Preference will be given to programs that can address larger water supply needs.
m. Applicants are encouraged to develop projects demonstrating participation and/or support from a diverse set of stakeholders and interests.

This Program is an opportunity for the Super Ditch to take the previous work in small temporary leasing and develop it into large efficient leasing opportunities which benefit municipalities, the agricultural entities and the rural communities which rely upon a vibrant agricultural economy.

Within the Colorado Water Plan, the historical impacts from traditional "buy and dry" transfers of agricultural water rights to municipal water supplies are detailed. The Colorado Water Plan identifies the need for ATM projects to find alternatives which reduce the negative impacts from these traditional activities. Temporary leasing is a method to provide a farmer with an alternative income opportunity without the permanent sale and transfer of the water right. Through previous projects, including the Catlin Pilot Project, the effectiveness of these leases on a small scale has been demonstrated.

This Program starts with the lessons learned from these initial projects and builds leasing into a large-scale operation with the capacity to be an efficient and effective water supply tool. As with any developing organization, the ability to provide and commit the funds to the initial infrastructure development and operational activity is limited. This Program will reduce the pressure on agriculture to permanently sell water rights for transfer, therefore assisting in keeping the agricultural economy healthy by providing the option to each farmer to lease water as it fits his individual operation. Without the ability to build and operate the needed infrastructure, the physical operations of leasing would be limited.

The provision of effective and efficient operation and administration of multiple leasing arrangements is a significant portion of this Program. Scaling up from an initial pilot project, operated with the support of the LAVWCD, to multiple leasing programs requires development of additional resources and abilities which will be accomplished through this Program with the support of the CWCB. The templates developed to operate this program may be useful for other entities interested in significant leasing projects.

A secondary benefit of operating multiple leases concurrently will be the standardization of the operational terms and conditions associated with a temporary lease. This standardization reduces the impacts upon other water users and their need to spend significant time and energy in assessing these third-party leases. The overhead costs in developing and administering leases will be reduced as this standardization occurs, making them more desirable for the participating farmers.

The program will also provide water quality analysis to provide an additional benefit to temporarily fallowing land and then putting it back into production as an effort to help with nutrient loading the river.

6. Statement of Work

Provide the proposed statement of work. On the following page there is an example format for the statement of work. You can use the example format or your own format, provided that comparable information is included. The statement of work should outline by task how the proposed program/project will be accomplished. It is important that the statement of work detail the specific steps, activities/procedures that will be followed to accomplish each individual task and the overall program/project and the specific products/deliverables that will be accomplished. The statement of work must include but not be limited to task description, key personnel, budget, schedule and deliverables and the final report/project documentation upon completion of the water activity.

The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.

Please provide a detailed statement of work using the following template. Additional sections or modifications may be included as necessary. Please define all acronyms. If a grant is awarded an independent statement of work document will be required with correct page numbers.

Statement of Work

WATER ACTIVITY NAME – **Super Ditch Operations and Administrative Program**

GRANT RECIPIENT - Lower Arkansas Valley Super Ditch Company

FUNDING SOURCE - Statewide Account and Matching

INTRODUCTION AND BACKGROUND

The purpose of the "Super Ditch Company" is to create an alternative to what has been historically "buy-and-dry" of irrigation water rights for M&I uses. More specifically, the Super Ditch Company is creating a viable alternative to historical M&I purchases, permanent transfers, and dry-up of irrigated land that would both make irrigation water rights available for municipal use and also preserve irrigated agriculture, the economic lifeblood and future of rural communities in the Lower Arkansas Valley. Following the successful Catlin Pilot Project, a joint project between the Super Ditch and the LAVWCD, the Super Ditch is now expanding operations to service multiple water delivery contracts. This Program is to develop the infrastructure, administrative and operational abilities to accomplish this service.

OBJECTIVES

The objectives are as follows:

- Objective 1 – Developing Administration: The Super Ditch is a relatively new organization expanding in its need to operate leases for delivery to municipalities. The Super Ditch is in the process of developing and assigning administrative duties and operational costs associated with these duties. Such administrative duties are primarily associated with the financial accounting of the company and engineering tasks related to operating, recording and reporting activities associated with leased water delivery.

- Objective 2 – Infrastructure Development: Developing sound infrastructure strategically located on the canal for water delivery is necessary to satisfy all operational requirements. Implementing two new augmentation stations and two head gates is required for further operations of water delivery.

- Objective 3 – Water Quality: To quantify nutrient load reductions benefits from temporarily lease-fallowing projects and to implement a water quality monitoring network on lease fallow lands.

TASKS
Provide a detailed description of each task using the following format

TASK 1 – Developing Administration

This task entails implementing a financial accounting system to track and monitor current cash flow activities and projections to adequately oversee monetary decisions of the company. Engineering tasks and duties will be monitored though the financial accounting system.

Description of Task

This task outlines the process for monitoring administrative duties with the Super Ditch.

Method/Procedure

1) Installing a financial software program for the financial accounting and company management needs.
2) Creating financial statements to view the financial position of the company at a given point.
3) Creating operational protocols for monitoring diversions, water movements and water accounting.
4) Tracking engineering activities and costs allowing for the analysis of the operations.

Deliverable

This task includes the provision of two memos: First a memo detailing the financial operations and financial statements verifying the overall financial position of the company. Second a memo providing the operational protocols in administering and operating the water activities.

TASK 2 - Infrastructure Development

The development of the infrastructure for water delivery and return flow obligations is needed for the Super Ditch. The development of two augmentation stations and head gates is necessary for water delivery and adequate monitoring of the water delivery.

Description of Task

This task outlines the necessary steps to improve and develop infrastructure for water delivery, return flow obligations and the proper monitoring of each.

Method/Procedure

This task includes the design, location and construction of the two augmentation stations with canal head gates and delivery infrastructure for water delivery to and through the augmentation stations.

Deliverable

The results of this task would be a detailed memo describing the completion and utilization of the augmentation station and head gates.

TASK 3 – Water Quality Benefits

This task will incorporate methods to quantify nutrient load reductions benefits from temporarily lease-fallowing projects and to implement a water quality monitoring network on lease fallow lands.

Description of Task

Over the years there have been discussions of water quality and nutrient load reductions that occur when a piece of farmland is temporarily fallowed then put back into production without a real quantitative value. This task will be used to establish a baseline of current conditions from nutrients running off the end of the field and nutrient cycling through deep percolation and compare that to fallowing implementation during the project. The difference in the baseline and implementation data will identify the amount of load reduction savings that can occur during a lease fallowing project. The full analysis of this work will take at a minimum of four years with baseline data, fallowing data, and post-fallowing data.

Method/Procedure

Lower Arkansas Valley Water Conservancy District (Lower Ark) has developed, and will utilize, a water quality monitoring protocol for projects currently implemented from other funding sources and is accepted by Colorado Department of Health and Environment and Environmental Protective Agency. The protocol includes collection of baseline data using current conditions, during implementation and post-implementation. This will be followed by load reduction calculations comparing the baseline and post-improvement conditions. To collect data, there will be monitoring sites set up on each field. The sites will include irrigation water prior to entering the field, drain water as the water leaves the field, and artesian monitoring wells in the field to show the underground nutrient transport. Included in this will also be a soil moisture probe to show the soil absorption ratio of nutrient cycling in the plants. During the irrigation season (March 15 to November 15), the water quality sites will be sampled weekly for field data and monthly for water quality data. The soil probe will be on a 15-minute cycle for data collection and downloaded every other month. All the collected data will be housed on Lower Ark's servers until the data can be put through quality control and analyzed for nutrient reduction.

Deliverable

At the completion of this work, a report will be prepared outlining the nutrient reduction that can occur from lease fallowing and additional benefits that can occur from lease fallowing projects. Yearly reports will be developed outlining the work that was completed each given year.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress reports every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or pa11ial completion 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 Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, $/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

SCHEDULE

Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to the public and help promote the development of alternative agricultural transfer methods.

Additional Information – If you would like to add any additional pertinent information please feel free to do so here.

The above statements are true to the best of my knowledge:

Signature of Applicant: Gerald Knapp

Print Applicant's Name: Lower Arkansas Valley Super Ditch Company

Project Title: Super Ditch Operations and Administrative Program

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

ATM Grant - Detailed Budget Estimate
Fair and Reasonable Estimate

Prepared Date:09/04/2019
Name of Applicant: Lower Arkansas Valley Super Ditch Company
Name of Water Project: ATM Super Ditch Operations and Administrative Program

Program Description

Task 1 - Developing Administration

Sub-task	Item	Hourly Rate	# Hours	Sub-total	Item Cost	Item Quantity	Sub-total	Total	CWCB Funds	Matching Funds
Project Work										
Financial Accounting System	Financial Software			$ -	$ 500.00	1.00	$ 500.00	$ 500.00	$ 500.00	$ -
	Software Setup and Instruction	$ 50.00	80	$ 4,000.00	$ -		$ -	$ 4,000.00	$ 3,200.00	$ 800.00
	Financial Accounting	$ 50.00	200	$ 10,000.00	$ -		$ -	$ 10,000.00	$ 5,000.00	$ 5,000.00
				$ -				$ -	$ -	$ -
SD Administration	Lease Operations	$ 50.00	500	$ 25,000.00			$ -	$ 25,000.00	$ 5,000.00	$ 20,000.00
	Water Administration	$ 50.00	1000	$ 50,000.00			$ -	$ 50,000.00	$ 25,000.00	$ 25,000.00
	Engineering Activities	$ 150.00	1000	$ 150,000.00			$ -	$ 150,000.00	$ 110,000.00	$ 40,000.00
				$ -			$ -	$ -		
				$ -			$ -	$ -		
				$ -			$ -	$ -		
TOTAL								**$ 239,500.00**	**$ 148,700.00**	**$ 90,800.00**

Task 2 - Infrastructure Development

Sub-task	Item	Hourly Rate	# Hours	Sub-total	Item Cost	Item Quantity	Sub-total	Total	CWCB Funds	Matching Funds
Project Work										
Head Gates	Head Gate Equipment				$ 2,000.00	2.00	$ 4,000.00	$ 4,000.00	$ 3,000.00	$ 1,000.00
	Installation	$ 75.00	80	$ 6,000.00	$ -		$ -	$ 6,000.00	$ 4,000.00	$ 2,000.00
Measuring Flume	3' flume purchase				$ 3,500.00	2.00	$ 7,000.00	$ 7,000.00	$ 7,000.00	
	Stage Discharge Recorder & Supplies				$ 2,500.00	2.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	
	CDMALink & Supplies				$ 2,000.00	1.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	
	Hydromat Setup & Fee				$ 750.00	1.00	$ 750.00	$ 750.00	$ 750.00	
	Stilling Well Box, Pipe, Assembly			$ -	$ 800.00	2.00	$ 1,600.00	$ 1,600.00	$ 1,600.00	$ -
	Installation	$ 75.00		$ 7,500.00				$ 7,500.00	$ 5,000.00	$ 2,500.00
				$ -			$ -	$ -		
				$ -			$ -	$ -		
				$ -			$ -	$ -		
TOTAL								**$ 33,850.00**	**$ 28,350.00**	**$ 5,500.00**

Task 3 - Water Quality

Sub-task	Item	Hourly Rate	# Hours	Sub-total	Item Cost	Item Quantity	Sub-total	Total	CWCB Funds	Matching Funds
Project Work										
Project Manager		$ 100.00	100	$ 10,000.00			$ -	$ 10,000.00	$ 10,000.00	
Staff Engineer		$ 75.00	200	$ 15,000.00				$ 15,000.00	$ 15,000.00	
Data Collection		$ 30.00	400	$ 12,000.00			$ -	$ 12,000.00		$ 12,000.00
Clerical		$ 25.00	400	$ 10,000.00			$ -	$ 10,000.00		$ 10,000.00
Water Samples					$ 300.00	100.00	$ 30,000.00	$ 30,000.00	$ 30,000.00	
Well Implementation					$ 100.00	20.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	
Soil Samples				$ -	$ 100.00	100.00	$ 10,000.00	$ 10,000.00		$ 10,000.00
Soil Probes				$ -	$ 5,000.00	4.00	$ 20,000.00	$ 20,000.00	$ 20,000.00	
				$ -			$ -	$ -		
				$ -			$ -	$ -		
				$ -			$ -	$ -		
				$ -			$ -	$ -		
TOTAL								**$ 109,000.00**	**$ 77,000.00**	**$ 32,000.00**
Other Direct Costs (see below)								**$ 1,410.00**	**$ 1,410.00**	
OVERALL TOTAL								**$ 383,760.00**	**$ 255,460.00**	**$ 128,300.00**

Other Direct Costs

Item:	Copies & Printing (Black & White)	Copies & Printing (Color)	Materials and Final Report Production Lump Sum	Lodging and Meals	Travel Expenses (Airfare and Car Rental) Lump Sum	Mileage	Total
Units:	**No.**	**No.**		**Per Diem**		**Miles**	
Unit Cost:	**$0.10**	**$0.50**				**$0.535**	
Project Initiation	100	100				1,000	$595
Report, Conclusions and Recommendations	25	25	$ 800	0		0	$815
Total Units:	125	125	800	0	0	1,000	
Total Cost:	$13	$63	$800	$0	$0	$535	**$1,410**