COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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**TO:** Colorado Water Conservation Board Members

**FROM:** Craig Godbout, Program Manager
Alternative Agricultural Water Transfer Methods Grant Program (ATM)
Water Supply Planning Section

**DATE:** January 3, 2018

**AGENDA ITEM:** 24(a)

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**Staff Recommendation/Action Items: ATM Grant Request**

Applicant: Heart J Center for Experiential Learning at Sylvan Ranch
Project Name: Sylvan Dale Ranch Agricultural Water Conservation & ATM Project
Amount: $197,250

If this request is approved, it will constitute the 30th ATM Grant approved by the CWCB. Of the previous 29 projects, 12 are in-progress, and 18 have been completed or closed-out.

The current ATM balance is $543,041. If this grant requests is approved and comes under contract, the remaining balance will be $345,791.

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

1) Applications are reviewed for completeness based on the information requirements, which are primarily outlined in the 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, Budget and Schedule are attached.

**Staff recommendation:**
Staff recommends approval of up to $197,250 from the Alternative Agricultural Water Transfer Methods Grant Program to help fund the "Sylvan Dale Ranch Agricultural Water Conservation & ATM Project".

**Alternative Agricultural Water Transfer Methods – Competitive Grant Program**
**Water Activity Summary Sheet**
**January 22-23, 2018**
**Agenda Item 24(a)**

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|---|---|
| **Applicant & Grantee:** | Heart J Center for Experiential Learning at Sylvan Dale Ranch |
| **Water Activity Name:** | Sylvan Dale Ranch Agricultural Water Conservation & ATM Project |
| **Water Activity Purpose:** | Implementation of agricultural water irrigation efficiency measures and an ATM agreement with a local municipal/industrial water provider |
| **Drainage Basin:** | South Platte |
| **Water Source:** | Colorado-Big Thompson |
| **Amount Requested:** | $197,250 |
| **Matching Funds:** | **$210,000** total cash match ($180,000 cash match from applicant, and $30,000 cash match from anonymous donor) |

| **Staff Recommendation** |
|---|
| Staff recommends approval of up to $197,250 from the Alternative Agricultural Water Transfer Methods Program to help fund the "Sylvan Dale Ranch Agricultural Water Conservation & ATM Project." |

**Water Activity Summary:** The project seeks to implement two types of water transfers (1) interruptible water supply agreements and (2) reduced consumptive use through efficiency measures. The ranch has a total of 259 Colorado-Big Thompson (C-BT) units and 2.5 Handy Ditch shares to irrigate approximately 206 acres of pasture grass and alfalfa and raises 100% grass-fed and grass-finished cattle for local consumption. Considering the high value of C-BT (upward of $30,000/unit) and that they are exempt from return flow obligations that native ditch water is subject to, this project seeks to maximize the agricultural efficiencies to capitalize on this asset while maintaining a productive agricultural operation and protecting the agricultural heritage and community of Sylvan Dale Ranch (SDR). The two efficiency measures being contemplated for this project include subsurface drip and/or precision mobile drip irrigation. Without return flow obligations with C-BT, water savings due to efficiency measures can be used to increase yields on existing acreage, expand the overall irrigated acreage and/or market to others.

The project team will perform a feasibility analysis of the SDR's water needs and provide recommendations on the most appropriate type of water sharing agreement to explore with potential municipal partners. The agreement could include an interruptible water supply (i.e. 3 out of 10 years), partial year irrigation and/or deficit irrigation.

In addition, the project team will be looking for strategies that improve flows in the Big Thompson River (i.e. downstream deliveries to a municipal partner) as well as opportunities for public education through the Heart J Center for Experiential Learning and/or the Big Thompson Watershed Coalition.

It should be noted that since this project primarily involves C-BT units, no water court proceedings are expected in the development and execution of the agricultural-municipal agreement.

**Discussion:** Given the project team's background and experience with ATM's and related studies, CWCB staff expects this effort has a high probability of success. With that success, 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:** Craig Godbout

# COLORADO WATER CONSERVATION BOARD

## ALERNATIVE AGRICULTURAL WATER TRANSFER METHODS COMPETITIVE GRANT PROGRAM

## GRANT APPLICATION FORM

| | |
|---|---|
| Sylvan Dale Ranch Agricultural Water Conservation & ATM Project | South Platte River Basin |
| **Program/Project Name** | **River Basin Name** |

| | |
|---|---|
| Grant Request: $197,250 | Cash Match: $210,000 |
| 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.

**Alternative Agricultural Water Transfer Methods – Grant Application Form**
**October 2010**

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

1. Applicant Name(s): Heart J Center for Experimental Learning at Sylvan Dale Ranch

Mailing address: 2939 North County Road 31D, Loveland, Colorado 80538

Taxpayer ID#: 46-4993961 Email address: laura@heartjcenter.org

Phone Numbers: Business: 970-690-4221

Home:

Fax:

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

Name: n/a

Position/Title

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

Not Applicable.

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.

        Heart J Center for Experiential Learning launched in 2014 to offer hands-on learning for all ages at Sylvan Dale Ranch and make the most of the Ranch's setting as an extraordinary 3,200-acre outdoor classroom and living laboratory, with a variety of habitats, unique geologic formations, Native American sites and a mile of river frontage. Through workshops, field trips and research projects, Heart J Center gives participants the chance to immerse themselves in activities that embrace science, agriculture, art, writing, leadership training, horses and outdoor skills. In its first four years, Heart J Center has given more than 6,000 people the chance to explore and learn at Sylvan Dale. HJC draws participants from schools and universities, community organizations, and the general public.

        The contact for this application is Laura Armstrong, Executive Director for the Heart J Center for Experimental Learning. Her contact information is:

        Laura Armstrong, Executive Director
        Heart J Center for Experiential Learning
        970.690.4221
        www.heartjcenter.org

        Historic Sylvan Dale Ranch is a 3200-acre working and guest ranch located at the mouth of the Big Thompson Canyon west of Loveland, Colorado. Owned and operated since 1946 by the Jessup family, Sylvan Dale hosts guests from around the world for family dude ranch vacations, weddings, retreats, holiday events, business meetings, horseback riding and trophy trout fly fishing. The ranch raises 100% grass-fed and grass-finished cattle for local consumption on pastures that include 206-acres of irrigated land.

    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.

        Not applicable.

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

        Western Water Partnerships (WWP) will be leading and managing the ATM component of this project. WWP is a Colorado Public Benefit Corporation with the mission of preserving irrigated

agricultural lands by facilitating water sharing agreements between farmers, ranchers, municipal water providers, land trusts, open space departments, and local governments. Using market-based approaches, WWP provides a vehicle for entities to help create a West where cities and farms/ranches coexist while supporting local agricultural production and sustainable communities. WWP will lead a highly qualified project team that has many decades of collective experience working on ATM project issues. In August 2017, the WWP team successfully implemented the Larimer County-Broomfield ATM project, which includes a water agreement which allows Larimer County to conserve a working farm in perpetuity and Broomfield to bolster the water supply for its citizens without drying up a farm for its water. This project was supported by the CWCB and is Colorado's first perpetual agricultural-to-municipal Alternative Transfer Methods project. The proposed project is similar in many regards to the Larimer County-Broomfield ATM project, including the ownership of Handy Ditch and Colorado-Big Thompson (C-BT) water rights.

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

See 4.a. above.

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

Heart J Center does not have TABOR limits on revenue.

**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.

Farms and ranches along the Front Range are facing ever increasing pressure from municipalities seeking agricultural properties with water rights for conversion to municipal and industrial uses. This practice of "buying and drying" farms has consumed thousands of acres of farmland in the last 30 years, leaving barren and unproductive land with far reaching ramifications for soil erosion, water recharge into aquatic ecosystems, wildlife habitat, local agricultural economies and food security. Alternative transfer mechanisms (ATMs) have been touted as a solution to keep productive lands in irrigated agriculture while allow for some of the water to be used for municipal and industrial purposes. The Colorado Water Plan calls for the development of 50,000 acre-feet of ATM water by the year 2030.

The Heart J Center is requesting support from the CWCB to provide crucial funding to implement agricultural water efficiency measures and an ATM water agreement with a local municipal/industrial water provider involving the Sylvan Dale Ranch and its water rights.

Considering the high value of C-BT (upward of $30,000/unit) and that they are exempt from return flow obligations that native ditch water is subject to, this project seeks to maximize the agricultural efficiencies to capitalize on this asset while maintaining a productive agricultural operation and protecting the agricultural heritage and community of Sylvan Dale Ranch. The two efficiency measures being contemplated for this project include subsurface drip and/or precision mobile drip irrigation. Without return flow obligations with C-BT, water savings due to efficiency measures can be used to increase yields on existing acreage, expand the overall irrigated acreage and/or market to others.

The project team will perform a feasibility analysis of the SDRs water needs and provide recommendations on the most appropriate type of water sharing agreement to explore with potential municipal partners. The agreement could include an interruptible water supply (i.e. 3 out of 10 years), partial year irrigation and/or deficit irrigation.

In addition, the project team will be looking for strategies that improve flows in the Big Thompson River (i.e. downstream deliveries to a municipal partner) as well as opportunities for public education through the Heart J Center for Experimental Learning (a non-profit organization housed at the SDR) and/or the Big Thompson Watershed Coalition.

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 project team has extensive experience working on ATM issues and projects in Colorado and are well versed on the various ATM efforts, studies, and investigations that have occurred to date. There are several key reports and efforts that will provide guidance to this project. The project team successfully implemented the Larimer County—Broomfield ATM project which is Colorado's first perpetual agricultural-municipal water agreement and provided many lessons regarding what M&I water providers are willing to consider as well as considerations of the agricultural producer/irrigator. In addition, the project team will look to several other key documents throughout the project including:

- Colorado Water Plan
- South Platte Basin Implementation Plan
- Alternative Agricultural Water Transfer Methods Grant Program Summary and Status Update from 2012
- Development of Practical Alternative Agricultural Water Transfer Methods
- Feasibility Study for the Northeast Colorado Water Cooperative
- Larimer County ATM Final Report
- Meeting Colorado's Future Water Supply Needs Opportunities and Challenges Associated with Potential Agricultural Water Conservation Measures (CWCB and CSU, 2008)

2. Study Area/Service Area Description

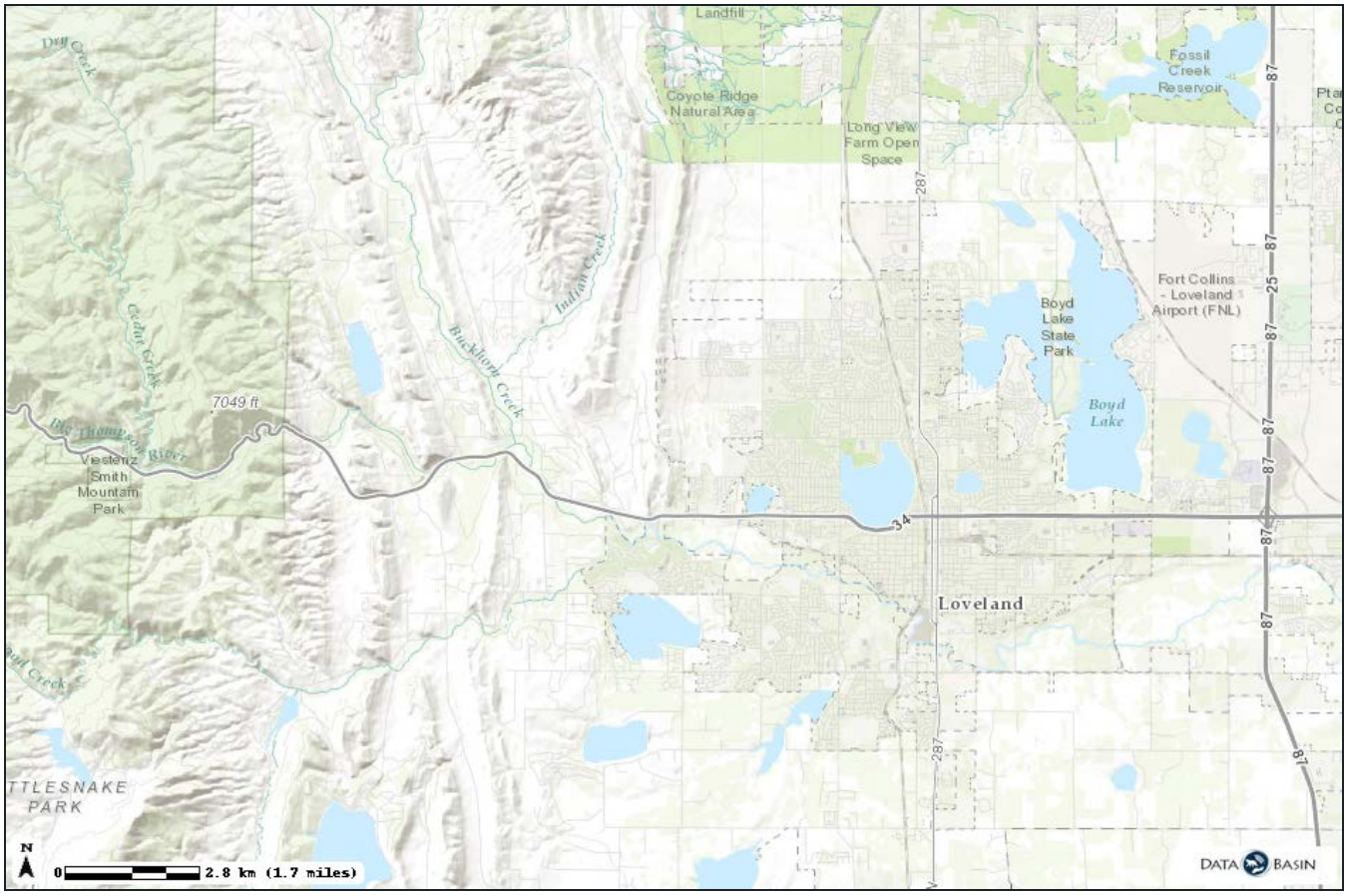
The study area/service area is generally the geographic area that is the subject of the proposed program/project (include both the source of supply and location and type of new use). The description should include the following items:

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.

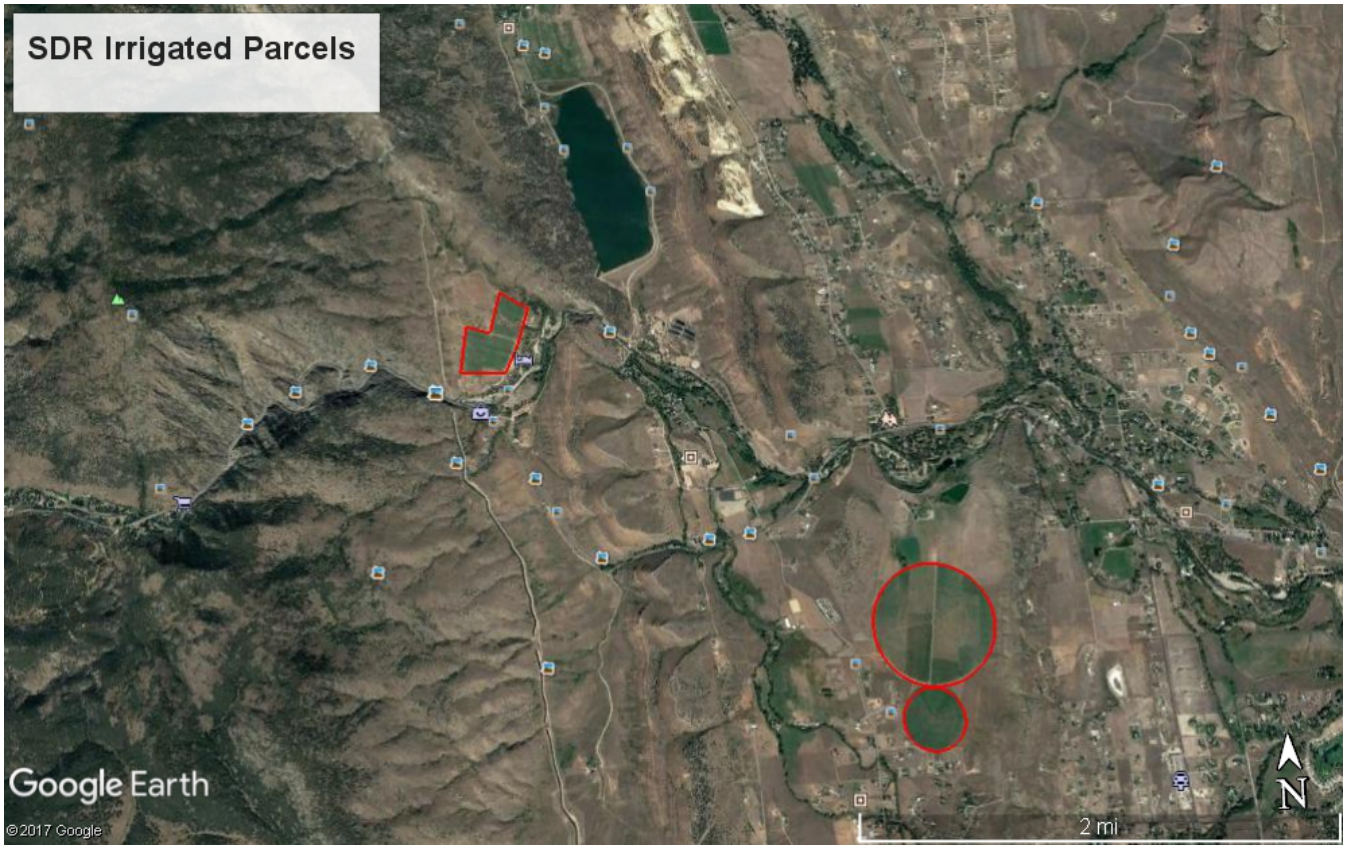
The supply area of water rights for this project are in Water District 4 of Division 1 (South Platte River Basin). However, potential municipal and industrial end users of water are located within most areas of the district boundaries of Northern Colorado Water Conservancy District.

The specific source of the water rights, consists of 206 acres of irrigated pasture lands with 259 C-BT units and 2.5 shares of Handy Ditch water. The Sylvan Dale Ranch is located at the mouth of the Big Thompson River canyon off Highway 34 just west of Loveland, Colorado.

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.



Vicinity Map of the Sylvan Dale Ranch




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.

Sylvan Dale Ranch has two (2) center pivot sprinklers that irrigate approximately 164 acres and a manually moved lateral sprinkler irrigating approximately 42 acres of a mixture of alfalfa and pasture grass.

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.

In Task 4 (Exploration of Municipal and Industrial Partners), the project team will explore interest from municipal and/or industrial partners in the water rights associated with the property. Once the team has an interested party(ies) willing to negotiate, we will begin the development of specific terms of the agreement.

e) Socio-economic characteristics of the area such as population, employment and land use.

The Colorado State Demographer's Office provides that 315,728 people reside in Larimer County as of 2013. According to the U.S. Census Bureau, the county has a total area of 2,634 square miles. The latest data shows that the Cities of Fort Collins and Greeley (Weld County) were two of the fastest growing metropolitan areas in the country in 2014. The data shows that more than 14,000 residents moved into the region in the recent 12 month span. The Fort Collins-Loveland metro area

has grown 2.4 percent year over year, which resulted in a gain of 7,628 people. This places Fort Collins as the 12th fastest growing area in the Country. Greeley's ranking is 8th after adding 7,110 residents when comparing year after year. This is an increase of 2.6 percent for the region.

Agriculture is a cultural and economic cornerstone of Larimer County. Much of the county's landscape is dominated by expanses of farm and ranch lands. Approximately 1,760 farms and ranches cover nearly a half-million acres or 30 percent of the county's total land area. While the number of farms in the county has increased, these farms have become considerably smaller. The average farm size decreased by nearly 100 acres between 1997 and 2007. Overall the county is losing farmland due to residential and commercial development and the purchase and transfer of valuable water rights from agricultural to urban uses. This loss not only threatens a way of life in Larimer County, but also threatens a major component of the local economy.

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 project seeks to implement at least two of the water transfers listed above (1) interruptible water supply agreements and (2) reduced consumptive use through efficiency measures. The ranch has a total of 259 Colorado-Big Thompson (C-BT) units and 2.5 Handy Ditch shares to irrigate approximately 206 acres of pasture grass and alfalfa and raises 100% grass-fed and grass-finished cattle for local consumption. Considering the high value of C-BT (upward of $30,000/unit) and that they are exempt from return flow obligations that native ditch water is subject to, this project seeks to maximize the agricultural efficiencies to capitalize on this asset while maintaining a productive agricultural operation and protecting the agricultural heritage and community of Sylvan Dale Ranch (SDR). The two efficiency measures being contemplated for this project include subsurface drip and/or precision mobile drip irrigation. Without return flow obligations with C-BT, water savings due to efficiency measures can be used to increase yields on existing acreage, expand the overall irrigated acreage and/or market to others.

The project team will perform a feasibility analysis of the SDRs water needs and provide recommendations on the most appropriate type of water sharing agreement to explore with potential municipal partners. The agreement could include an interruptible water supply (i.e. 3 out of 10 years), partial year irrigation and/or deficit irrigation.

In addition, the project team will be looking for strategies that improve flows in the Big Thompson River (i.e. downstream deliveries to a municipal partner) as well as opportunities for public education through the Heart J Center for Experimental Learning and/or the Big Thompson Watershed Coalition.

***It should be noted that since this project primarily involves C-BT units, no water court proceedings are expected in the development and execution of the agricultural-municipal agreement.***

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.

Given that the water being put into the ATM is C-BT water, a water court case is not needed to change the type and place of use of the water. Northern Water approval of the agreement will be necessary. Due to C-BT not requiring the continuation of historic return flow patterns, there will be no legal injury to any water rights. Even so, the project team expects most of the water savings to be derived through the reduction of evaporation and replenishing the soil profile as opposed to runoff losses or infiltration to the alluvium aquifer. Further, since the base water supply is Handy Ditch water, the project team will work with the Handy Ditch Board of Directors to minimize the impacts to other users on the ditch system.

As with Larimer County-Broomfield ATM project, it is imperative that this project provide a positive impact to the agricultural community and the environment. Through the Heart J Center and the Big Thompson Watershed Coalition, the team hopes to demonstrate the project's outcomes to the public including the agricultural community and municipal interests. We hope this project will serve as a good template for other farmers to utilize instead of an outright sale of their water that can be replicated within Northern Water's district boundaries and beyond.

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.

Sylvan Dale Ranch owns the water rights subject to the ATM project and are identified above in paragraph 2.a. The identification of the M&I partner(s) will be part of the project in Task 4 (Exploration of Municipal and Industrial Partners) where WWP and the project team will explore interest from municipal and/or industrial partners in the water rights associated with the property. As part of these discussions, the feasibility and potential costs for implementing an alternative transfer mechanism will be investigated and gauged.

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.

This project has the unique opportunity to advance key technical, institutional, and legal elements associated with ATMs.

Technical
By monitoring the water use on the farm combined with the implementation of the irrigation efficiency improvements, the project team will demonstrate the technical feasibility of such a project. Further, the team expects that the economic benefits of the system improvements will far outweigh the installation and operation and maintenance (O&M) costs. The benefits can be in the form of increased crop yields and/or water available to market to other users. Despite being C-BT water and not subject to return flow obligations, the project team expects to demonstrate how efficiency measures can reduced water use by reducing (and estimating) evaporative losses. Additionally, the installation of Subsurface Drip Irrigation and Precision Mobile Drip Irrigation for pasture grass/alfalfa is still relatively novel in Colorado, especially for forage crops as opposed to higher-value crops such as fruits and vegetables.

Institutional: Demonstration of Impact Investment and Public-Private Partnership (P3)
The costs associated with the purchase and installation of the irrigation improvements (approximately $200,000) will be financed primarily through an impact investor(s). This public-private partnership will help demonstrate opportunities for private impact investors seeking to make a positive impact by investing in agricultural water infrastructure and ATM projects while achieving a modest return of their investment. Public-Private Partnerships are identified in the Colorado Water Plan as tool to help accelerate the implementation of water resources projects.

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.

Grant funds will not be used for the preparation of a specific water court case. The grant funds for legal services will be applied to the interruptible supply agreements, assistance with negotiating between the parties and helping to address issues and concerns the parties may have regarding these specific pilot projects and/or alternative water transfers.

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).

A minimum of 10 percent cash match of the total project cost is committed for this project. Heart J Center is only asking for approximately 48% of total project costs. The cash match exceeds 52% of total project cost. See attached Budget.

5. Program/Project Evaluation Criteria

**Alternative Agricultural Water Transfer Methods – Grant Application Form**
**October 2010**

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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.

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.

   The report summarizes the past ATM funded projects and provides a list of findings and recommendations based on this work. Many of the studies that have been funded by the CWCB through the ATM program have identified several barriers to successful implementation. This project seeks to directly address three of the four major barriers to successful implementation of ATMs: permanency issues, high transaction costs associated with water transfers, water right administration uncertainties, and water rights accounting questions associated with ATMs. By developing a water agreement with a municipality, the agreement can address these concerns, especially regarding the length/term of the agreement. While the exact terms are yet to be determined, the ATM agreement could be permanent in nature allowing for the municipality to rely on this supply for its long-term planning purposes. Through this pilot and the farm and water management plans, specific water rights administration and accounting questions will be addressed, and a description will be included in the final report to the CWCB.

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.

   We believe this project directly address multiple key recommendations in the report.

   Recommendations #1 and 2: Recognizing that each municipal water system and each ditch company are unique, the CWCB should continue to promote and facilitate agreements between irrigators and municipal water providers and should continue to support demonstration/pilot projects to determine the feasibility of new concepts or techniques as needed.

   Considering that this project will provide a demonstration ATM and agricultural efficiency improvement, this project will test many of the key areas that are discussed in the CWCB's 2012 ATM report. By having these on-the-ground pilots, we will learn the considerations from ranch/water operations and the municipal water provider.

   In addition, certainty of water supplies (i.e. permanency) is also an issue identified from the municipal perspective. Considering the SDR lands are prohibited from development via conservation easements and/or deed restrictions, an agreement with a municipality can be structured to provide water for extended periods of time, including in perpetuity.

The Colorado Water Plan (CWP) addresses the barriers to irrigation efficiencies (Section 6.3.4.), especially in regard to the challenges associated with Colorado Water Law. The CWP states: "The transfer of salvaged water has not yet been tested in water court or addressed by the legislature. The volume of water resulting from any individual efficiency improvement is relatively small, and it is difficult to precisely quantify since it cannot be measured directly. This makes reliable management and administration of exchanges and transfers of salvaged water extremely complex and time-consuming for DWR personnel." Through this project, particularly by monitoring the water usage, the team hopes to advance this important technical and legal issue. Lastly, every Basin Roundtable Implementation Plan (BIP) includes goals to modernize water infrastructure or improve agricultural efficiencies.

The remaining barrier to implementation that we have been unable to entirely overcome is the risk of implementing ATM projects where they are largely untested, between partners who have not historically worked together, on a timely basis with an active market for buying C-BT units outright. Part of overcoming this barrier is both entities having a shared conservation ethic – prioritizing an alternative to buy-and-dry over strict lowest-price, and developing the least-hassle water acquisitions by M&I providers.

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.

Total cash match for this grant is $210,000 which equals 52%, far exceeding the required 10% match. Of this $210,000, $30,000 is a grant from the Gates Family Foundation and $180,000 will be in the form of a loan to assist in paying for the irrigation upgrades.

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.

Considering the water that will be subject to an agreement is C-BT water, there will likely be no administrative requirements from the Colorado's Division of Water Resources. If the project involves any of the native ditch water, Handy Ditch shares, the project team will ensure that operations are administered in accordance with the 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).

Yes, the intent of these pilots is to demonstrate that ATMs can work under existing law and can provide a municipal water provider an interruptible water supply (i.e. dry year water) while preserving irrigated agricultural lands. We will document all aspects of the project including the legal, technical, and institutional constraints and opportunities in the final report that will be submitted to the CWCB. We believe that this approach can be replicated in other areas of the State. Further, through the Heart J Center and the Big Thompson Watershed Coalition, the project team hopes to educate agricultural producers, municipalities, and the general public on the benefits of the project.

f. The proposed project/program addresses key water needs identified in SWSI 2010 or as identified in a basin's needs assessment.

SWSI 2010 Key Findings and Recommendations identified significant pressures on irrigated agriculture in the State and forecast that as much as 700,000 acres of irrigated land could be dried up if the status quo continues. The South Platte Basin Implementation Plan clearly states a desire to minimize traditional agricultural "buy and dry" and maximize the use of alternative water transfer methods (ATMs) to the extent practical and reliable. Further, Chapter 6.4 of the draft Colorado Water Plan stated a goal of achieving water sharing of 50,000 acre feet annually. This project seeks to implement an ATM project that will contribute to meeting these goals.

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.

Sylvan Dale Ranch is a 3,200-acre heritage ranch located at the mouth of the Big Thompson River canyon. The proposed project advances the preservation of high value agricultural lands in a very fast-growing County in Colorado. The property has approximately one-mile of river frontage of the Big Thompson River and offers aquatic and terrestrial habitat for a variety of species.

h. The proposed project/program addresses water quality, or provides other environmental benefits to rivers, streams and wetlands.

The property's close proximity to the South Platte River enables the farm to provide important recharge water to the river through its irrigation practices. By conserving this farm and keeping the water in productive use on the farm in most years, the farmer is helping to ensure a continued source of instream flow in the river and thus contributing to both the habitat on the farm as well as the habitat along and in the river.

In addition, the project team will be looking for strategies that improve flows in the Big Thompson River (i.e. downstream deliveries to a municipal partner) as well as opportunities for public education through the Heart J Center for Experimental Learning (a non-profit organization housed at the SDR) and/or the Big Thompson Watershed Coalition.

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.

Yes, this project will provide valuable information on program/project costs including the legal and technical costs as well as third party impacts. As further described in the Statement of Work, there will be an economic analysis as part of the farm and water plan to determine the options for compensation to the farmer and/or continued farming with less water during the years the municipal water provider uses the water.

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.

Since the water is C-BT water, there are no return flow obligations (as opposed to native ditch water). Based on the location of the SDR and the historic water use, it is unlikely that any one water user has been reliant on SDRs return flows, even if they weren't legally entitled to use the water. Regardless, the project team is sensitive to this issue and the water monitoring will provide a detailed understanding of the farm's water budget, including return flows.

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.

The project team develop a pilot projects that may provide an M&I water provider a perpetual, interruptible water supply. This will be accomplished through a contractual agreement between SDR and an M&I water provider where a portion of the water rights (i.e. dry year supplies and/or water savings through irrigation improvements) will be available to the M&I water provider and a portion available for irrigation of the farm. This ownership will be established through a negotiated contract between SDR and the M&I water provider. The farm parcels will also be preserved in perpetuity via a conservation easement or deed restrictions with the water rights perpetually available to the farm, ensured by the water contract.

l. The quantity of water produced by the proposed project/program. Preference will be given to programs that can address larger water supply needs.

This program will implement one ATM pilot project involving up to 259 C-BT units (up to 259 acre-feet). If this project is successful and proves to be a model, other farms in the region will hopefully implement additional ATM projects.

m. Applicants are encouraged to develop projects demonstrating participation and/or support from a diverse set of stakeholders and interests.

This project involves the agricultural producer, Larimer County (holder of conservation easement), a M&I water provider, Natural Resources Conservation Service (NRCS), the Heart J Center for Experimental Learning, the Big Thompson Watershed Coalition and a private family foundation.

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.

# Exhibit A

## Statement of Work

**WATER ACTIVITY NAME -** Sylvan Dale Ranch Agricultural Water Conservation and ATM Project

**GRANT RECIPIENT –** Heart J Center for Experiential Learning at Sylvan Dale Ranch

**FUNDING SOURCE -** The Alternative Agricultural Water Transfer Methods Competitive Grant Program

**INTRODUCTION AND BACKGROUND**
The project team will work with the owners of the historic Sylvan Dale Ranch (SDR), a 3,200-acre working guest ranch located at the mouth of the Big Thompson Canyon west of Loveland, Colorado, to implement agricultural water efficiency measures and an ATM water agreement with a local municipal/industrial water provider. The ranch has a total of 259 Colorado-Big Thompson (C-BT) units and 2.5 Handy Ditch shares to irrigate approximately 206 acres of pasture grass and alfalfa and raise 100% grass-fed and grass-finished cattle for local consumption.

Considering the high value of C-BT (upward of $30,000/unit) and that they are exempt from return flow obligations that native ditch water is subject to, this project seeks to maximize the agricultural efficiencies, thereby capitalizing on this asset while maintaining a productive agricultural operation and protecting the agricultural heritage and community of Sylvan Dale Ranch. The two efficiency measures being contemplated for this project include subsurface drip and/or precision mobile drip irrigation. Without return flow obligations with C-BT, water savings due to efficiency measures can be used to increase yields on existing acreage, expand the overall irrigated acreage and/or market to others.

The project team will perform a feasibility analysis of the SDRs water needs and provide recommendations on the most appropriate type of water sharing agreement to explore with potential municipal partners. The agreement could include an interruptible water supply (i.e. 3 out of 10 years), partial year irrigation, and/or deficit irrigation.

In addition, the project team will be looking for strategies that improve flows in the Big Thompson River (i.e. downstream deliveries to a municipal partner) as well as opportunities for public education through the Heart J Center for Experiential Learning (a non-profit organization housed at the SDR) and/or the Big Thompson Watershed Coalition.

**OBJECTIVES**
List the objectives of the project

The objectives of this project consist of 2 primary components:

1) Implement agricultural water efficiency measures (e.g. subsurface drip irrigation), and
2) Implement an agricultural-municipal water agreement (i.e. ATM) involving some or all the C-BT units.

## TASKS

### TASK 1 – Farmland Viability Analysis

Description of Task
Western Water Partnerships and team will analyze the baseline conditions on the ranch and examine opportunities for water efficiency improvements and for a water sharing agreement with a municipal partner involving various strategies including interruptible water supply agreements, deficit irrigation, and/or partial season irrigation. This analysis will also include an analysis of the existing conservation easements and/or deed restrictions to ensure each water management option is accordance with the terms. The project team will provide finding and recommendations for both agricultural water efficiency measures and ATM strategies to pursue.

Deliverable
Write-up on the Final Farmland Viability Analysis

### TASK 2 – Agricultural Water Efficiency Measures

Description of Task
Building off the findings and recommendations in the Land and Water Analysis in Task 1, the team will determine the most appropriate agricultural water efficiency measure(s) for each irrigated parcel and implement the improvements. SDR has approximately 206 acres of farm land irrigated either through a lateral moved sprinkler system or center pivot sprinklers.

Considering the high value of C-BT and that they are exempt from return flow obligations that native ditch water is subject to, this project seeks to maximize the agricultural efficiencies to capitalize on this asset while maintaining a productive agricultural operation and protecting the agricultural heritage and community of Sylvan Dale Ranch. The two efficiency measures being contemplated for this project include subsurface drip and/or precision mobile drip irrigation. Without return flow obligations with C-BT, water savings due to efficiency measures can be used to increase yields on existing acreage, expand the overall irrigated acreage, and/or market to others.

It is understood that the irrigated lands located on the upper bench (to the west of SDR's main lodge and river) is irrigated with a labor intensive, lateral moved sprinkler system, which will offer the largest water savings due to the inefficiencies inherent with this type of irrigation. While less water savings may be realized with the 'Big Valley' water as these lands are currently irrigated with two center pivot sprinklers, opportunities do exist (i.e. Precision Mobile Drip Irrigation) and estimated savings could be in the 10%-20% range. WWP proposes the following tasks related to agricultural water efficiency measures.

1. Analyze existing irrigation systems, crops and water rights portfolio, and recommend agricultural water efficiency measures;
2. Choose appropriate efficiency measures (e.g. subsurface irrigation, precision mobile drip irrigation) and implement;
3. Recommend changes in crop types and/or scheduling as appropriate (e.g. pasture grass to alfalfa);
4. Monitor water use after efficiency measures have been implemented (including associated crop yields); and
5. Determine options for SDR use of the 'saved water.' Options may include selling or leasing saved water to municipalities or to increase agricultural production on SDR.

The costs associated with the purchase and installation of the irrigation improvements (approximately $200,000) will be financed primarily through an impact investor(s). This public-private partnership will help demonstrate opportunities for private impact investors seeking to make a positive impact by investing in agricultural water infrastructure and ATM projects while achieving a modest return on their investment.

Deliverable
Write-up on the recommendations for efficiency measures and documentation of installation of systems/equipment.

**TASK 3 – Installation of SWIIM System and Monitoring for a 3-Year Term**

Description of Task
The team will oversee the installation of the SWIIM System (Sustainable Water and Innovative Irrigation Management) and associated monitoring and reporting of water deliveries and use. SWIIM System is a full turn-key system for crop planning, optimization, water management, monitoring and reporting toolset. SWIIM System allows users to optimize water use and tracks savings within all elements of the crop water budget on an aggregated (system-wide) basis. SWIIM enables agricultural water rights owners to capture the economic benefits of managing water application with peak efficiency.

By installing this system, SDR will be able to precisely determine the water use and savings to make the most informed water management decisions for agricultural operations (i.e. maximizing/optimizing yields) and determining how much water is available for an interruptible water supply agreement with a municipal partner.

Deliverable:
In this task, the following will be installed and/or performed:

1. Installation of two (2) telemetry sites for two (2) existing McCrometer water meters: one at each center pivot location.
2. Installation of one (1) telemetry site for an existing Seametrics meter for the 42-acre parcel irrigated with Aluminum Handset Sprinkler pipe (Possible Drip Irrigation Conversion).
3. Installation of one (1) Campbell Scientific Climate sensor station near or between the three (3) irrigated field sites.
4. Monitoring and reporting of a complete water balance and Crop Consumptive water use for three (3) irrigated fields for the term of 36 months.

**TASK 4 – Exploration of Municipal and Industrial Partners**

Description of Task
Building off the findings and recommendations in the Land and Water Analysis in Task 1, the team will determine the most appropriate water agreement for SDR. The team will meet with potential municipal partners with the objective of developing a water agreement with SDR. As part of these discussions, the feasibility and potential costs for implementing an alternative transfer mechanism will be investigated and gauged. Legal services, including the review of the term sheet and development of a Letter of Intent, will also be part of this task.

1. Determine the type(s) of water agreement to be pursued (e.g. interruptible water supply agreement, rotational fallowing, and/or partial supply).
2. Explore interest from municipal and/or industrial partners in the water rights associated with the property. As part of these discussions, the feasibility and potential costs for implementing an alternative transfer mechanism will be investigated and gauged.
3. Ensure that the water agreement is compatible with the conservation easement and deed restrictions.
4. Develop the general terms of the water agreement including each party's costs, purchase/lease price, and other responsibilities for each party.

Deliverable
Letter of Intent from municipal or industrial partner expressing interest in negotiating a water sharing agreement with the farmer.

**TASK 5 – Execute Water Sharing Agreement**

Description of Task
The purpose of this task is to work with the parties to develop a mutually acceptable water supply agreement or contract between the owner of the land and the M&I water provider. In this task, the project team will negotiate with the participating M&I water provider to determine the specific terms of the water supply contract. This will include:

1. Develop a contractual agreement between Sylvan Dale Ranch and the municipal partner describing in detail the terms agreed upon in the Letter of Intent (Task 3).
2. Request approval from Northern Water on the agricultural-municipal water agreement.
3. Close and execute the water agreement.

Deliverable
Fully Executed Water Sharing Agreement

**TASK 6 – Farm & Water Operations Plan**

Description of Task
A Farm and Water Operations Plan will be developed to inform strategies for maintaining the viability of the farm into the future. It will provide operational recommendations from a water supply and irrigation perspective so that combined farming sales revenues and water lease/sales revenues will sustain the operational costs of the farm in the long term. The plan will also provide recommendations for operations for multiple water supply scenarios, including years with a full water supply and years that the municipality uses some of the water for off-farm uses pursuant to the ATM. The plan should be used as a guide for the management of the water and land with the ATM water agreement. The intent of the plan is to provide guidance on how to maximize the use and management of the water and land in such a way that benefits all parties and fulfills the multiple purposes for which the land and water were conserved.

Deliverable
Farm and Water Operations Plan

**Task 7 – Education and Public Outreach**

Description of Task
Heart J Center will offer field trips and research days to spread the word about the agricultural water conservation solutions implemented at the Sylvan Dale Ranch, to inform community members, organizations, local schools, and faculty and students from relevant university departments about the importance of water conservation and to monitor and share results from the project. Audiences for the workshops and research include high school agriculture students, university faculty and students, landowners and agency representatives.

Deliverable
Heart J Center will host a symposium for landowners, practitioners, stakeholders, and researchers from across Colorado. Participants at the symposium will explore the Sylvan Dale Ranch project as a tangible example of agricultural water efficiency solutions in action and explore the conservation savings from both environmental and economic perspectives.

Heart J Center will also conduct at least five (5) field trips and research days exploring different facets of the efficiency systems, including the design, application, and monitoring the results. Data, photos and technical information from the project, including the results of discussions and analysis from the symposium, will be compiled online and shared broadly.

**Task 8- Project Management**

Description of Task
This task involves the management of the project, including conducting team meetings, calls and grant management responsibilities including submitting regular progress reports and invoicing. This task also includes directing sub-contractor efforts to complete the deliverables of the project.

Deliverable
Regular progress reports and invoicing.

**Task 9: Final report to the CWCB**

Description of Task:
The purpose of this task is to compose a final report to the CWCB describing the implementation of an ATM project, including any legal, political, financial, or other obstacles that we encounter along the way, lessons learned, and also templates for agreements and road maps that other communities or conservation organizations could use to implement ATMs and accomplish irrigated farmland conservation.

Final Deliverable
A final report (electronic and hardcopies) describing the ATM project.

**REPORTING AND FINAL DELIVERABLE**
Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that occur and any corrective actions taken to address them.

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.

Last Updated: July 5, 2017

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

# Colorado Water Conservation Board

## Alternative Agricultural Water Transfer Methods Competitive Grant Program - Exhibit A

## Budget and Schedule

**Date: December 5, 2017**

**Name of Applicant: Heart J Center for Experiential Learning**

**Name of Water Project: Sylvan Dale Ranch Water Agricultural Water Conservation and ATM Project**

| Task No. | Task Description | Project Cost by Task | Matching Funds | CWCB Grant Request |
|---|---|---|---|---|
| TASK 1 – Farmland Viability Analysis | Analyze the ATM and develop scenarios on how the farm would operate during normal years, ATM years and recovery years. Provide recommendations on farm/watermanagement with ATM. Determination of the type of ATM to be pursued (e.g. Interruptible water supply agreement, rotational fallowing, partial supply). The task will explore ag water efficiency improvements and provide recommendations. | $ 23,500.00 | $ 15,000.00 | $ 8,500.00 |
| TASK 2 – Agricultural Water Efficiency Measures | Analyze existing irrigation systems, crops and water rights portfolio, and recommend agricultural water efficiency measures to implement. | $ 215,000.00 | $ 180,000.00 | $ 35,000.00 |
| TASK 3 – Installation of SWIIM System and Monitoring for a 3-Year Term | Monitoring and reporting of a complete water balance and Crop Consumptive water via the installation of SWIIM System. | $ 39,000.00 | $ - | $ 39,000.00 |
| TASK 4 – Exploration of Municipal and Industrial Partners | Meet with potential Municipal & Industrial end users. Develop a draft report outlining the options. | $ 24,000.00 | $ 15,000.00 | $ 8,500.00 |
| TASK 5 – Execute Water Sharing Agreement | Develop a termsheet between farmer & municipal or industrial user. Draft and execute water sharing agreement between SDR and municipal partner. | $ 32,000.00 | $ - | $ 35,000.00 |
| TASK 6 – Farm & Water Operations Plan | Develop document to provide guidance for the farmer on operational options during ATM years and recovery years. Guidance may include water rights operations strategies, recommendations for specific farm improvements and cropping options for certain years. | $ 21,000.00 | $ - | $ 20,000.00 |
| TASK 7 – Education and Public Outreach | Heart J Center to provide public education on agricultural water conservation solutions implemented at the Sylvan Dale Ranch and the water sharing agreement with a municipal partner. Coordinate and facilitate conference at SDR on the project. | $ 11,000.00 | $ - | $ 11,000.00 |
| TASK 8- Project Management | Coordinate team efforts including meetings, calls and ensuring that project is on-task and on-schedule. | $ 5,000.00 | $ - | $ 5,000.00 |
| TASK 9: Final report to the CWCB | Develop electronic and hardcopy versions of a final report detailing the process of developing the ATM project and ag water conservation measures, lessons learned and recommendations for improvement. | $ 15,750.00 | $ - | $ 13,250.00 |
| Indirect Costs | Mileage, Copies and administration costs | $ 21,000.00 | $ - | $ 21,000.00 |
| | **Total** | **$ 407,250.00** | **$ 210,000.00** | **$ 196,250.00** |

| Project Personnel: | Project Manager (WWP) | Engineering | Agronomist | Economist/ Financial Analyst | Legal | Heart J Center | Total Labor Costs | CWCB Grant Request | Matching Funds |
|---|---|---|---|---|---|---|---|---|---|
| Hourly Rate: | $150 | $175 | $125 | $225 | $250 | $150 | $150 | | |
| TASK 1 – Farmland Viability Analysis | $7,000 | $11,000 | $1,000 | $2,500 | $2,000 | $0 | $23,500 | $8,500 | $15,000 |
| TASK 2 – Agricultural Water Efficiency Measures | $7,000 | $4,000 | $1,000 | $1,000 | $2,000 | $0 | $15,000 | $15,000 | |
| TASK 3 – Installation of SWIIM System and Monitoring for a 3-Year Term | $2,500 | $2,000 | $1,000 | $0 | $500 | $0 | $6,000 | $6,000 | |
| TASK 4 – Exploration of Municipal and Industrial Partners | $10,000 | $5,000 | $500 | $2,000 | $6,500 | $0 | $24,000 | $9,000 | $15,000 |
| TASK 5 – Execute Water Sharing Agreement | $5,000 | $3,000 | $500 | $1,000 | $22,500 | $0 | $32,000 | $32,000 | |
| TASK 6 – Farm & Water Operations Plan | $5,500 | $10,000 | $1,500 | $1,500 | $2,500 | $0 | $21,000 | $21,000 | |
| TASK 7 – Education and Public Outreach | $1,000 | $0 | $0 | $0 | $0 | $5,250 | $6,250 | $6,250 | |
| TASK 8- Project Management | $5,000 | $0 | $0 | $0 | $0 | $0 | $5,000 | $5,000 | |
| TASK 9: Final report to the CWCB | $6,500 | $5,000 | $500 | $1,000 | $1,500 | $1,250 | $15,750 | $15,750 | |
| Total Hours: | 330 | 229 | 48 | 40 | 150 | 43 | | | |
| Total Labor Costs: | $49,500 | $40,000 | $6,000 | $9,000 | $37,500 | $6,500 | $148,500 | | |
| Direct Costs: | | | | | | | | | |
| SWIIM Systems | | | | | | | $ 33,000 | $33,000 | |
| Irrigation Improvements | | | | | | | $ 200,000 | $20,000 | $180,000 |
| Mileage | | | | | | | $ 2,500 | $2,500 | |
| Copies (including final report) | | | | | | | $ 1,000 | $1,000 | |
| Conference at SDR | | | | | | | $ 4,750 | $4,750 | |
| Subtotal | | | | | | | | $ 175,000 | |
| 10% Administration | | | | | | | | $ 17,500 | |
| | | | | | | | | | |
| **Total CWCB Grant Request** | | | | | | | **$ 407,250** | **$ 197,250** | **$210,000** |
| | | | | | | | **Total project costs** | **CWCB grant request** | **Matching Funds** |

| Task | Q2-2018 | Q3-2018 | Q4-2018 | Q1-2019 | Q2-2019 | Q3-2019 | Q4-2019 | Q1-2020 | Q2-2020 | Q3-2020 | Q4-2020 | Q1-2021 | Q2-2021 | Q3-2021 | Q4-2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TASK 1 – Farmland Viability Analysis | | | | | | | | | | | | | | | |
| TASK 2 – Agricultural Efficiency | | | | | | | | | | | | | | | |
| TASK 3 – Installation of SWIIM System | | | | | | | | | | | | | | | |
| TASK 4 – Exploration of M&I Partners | | | | | | | | | | | | | | | |
| TASK 5 – Execute Water Sharing Agreement | | | | | | | | | | | | | | | |
| TASK 6 – Farm & Water Operations Plan | | | | | | | | | | | | | | | |
| TASK 7 – Education and Public Outreach | | | | | | | | | | | | | | | |
| TASK 8- Project Management | | | | | | | | | | | | | | | |
| TASK 9: Final report to the CWCB | | | | | | | | | | | | | | | |

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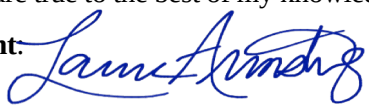
**PAYMENT**

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**: 

**Print Applicant's Name**: Laura Armstrong

**Project Title**: Sylvan Dale Ranch Water Conservation and ATM Project

**Return this application to**:

Mr. Craig Godbout
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman St., Room 721
Denver, CO 80203
craig.godbout@state.co.us