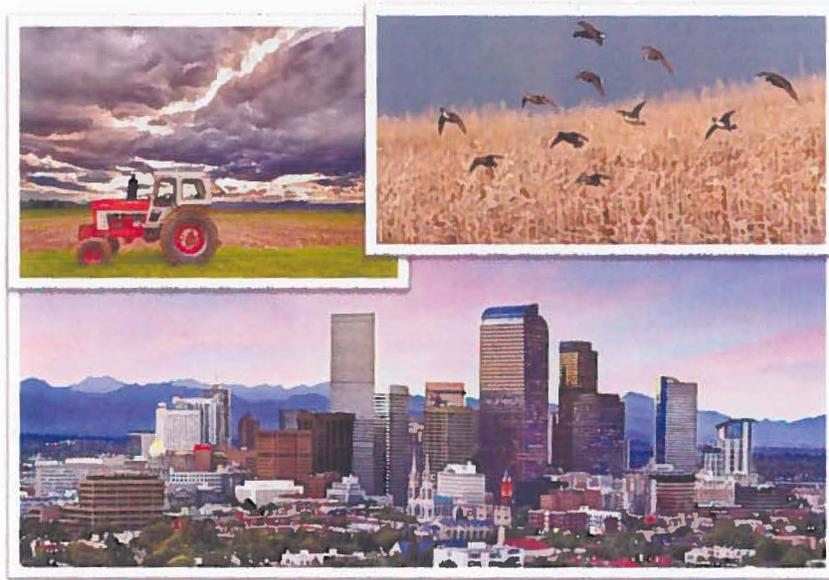




Funding Opportunity Announcement No. BOR-DO-17-F014

New Cache la Poudre Irrigating Company: Water Marketing Strategy



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New Cache la Poudre Irrigating Company





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SF424, SF424A, SF424B

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Technical Proposal

Executive Summary

Date: April 19, 2017

Applicant: New Cache la Poudre Irrigating Company

Location: Lucerne, Weld and Larimer Counties, Colorado

Following nearly a decade of research and study on flexible water markets, Colorado is currently experiencing a void in actual water lease transactions which are promoted in the state water plan. Specificity is now needed to replace generalizations. This project intends to fill the void, by building and implementing a water marketing strategy through the New Cache la Poudre Irrigating Company (New Cache) ditch system which will provide wet-water leases through flexible market frameworks. The New Cache is an authorized water provider in northern Colorado's Front Range responsible for delivering water for irrigation to more than 32,000 acres of agriculture for 330 shareholders. The primary crop is corn. New Cache wishes to develop a water marketing strategy as a new business plan that may diversify income streams for its shareholders, who remain primarily agricultural producers. It is our goal to use the New Cache ditch system, reservoirs, water rights and existing legal mechanisms to provide temporary water to non-agricultural needs through a strategy that sustains agriculture while sharing water with municipalities, supports rural economic development, and helps wildlife habitat. The Bureau of Reclamation (Reclamation) grant will be used to support outreach and partnership building with municipal and industrial stakeholders to educate and encourage participation in a water market strategy and use of available water market studies from Colorado and the western United States to structure a water market strategy. Our goal is to have a structure that includes long-term operating, management, and monitoring rules and bylaws and contracts that will be used to execute trades. Our team including New Cache staff, Ducks Unlimited, and WestWater Research, along with New Cache's contract attorneys and engineers, who are knowledgeable about the New Cache system and water rights, are very experienced in studying water market structures and executing water trades and transactions. With a clear vision and an experienced team, funds from Reclamation will assure a successful project.

Proposal is for Funding Group II

Project Timeframe: 24 months

Estimated Completion Date: November 2019

Reclamation Projects in the Basin: Colorado-Big Thompson Planning Area, Includes Horsetooth Reservoir, Carter Lake Afterbay, Flatiron Afterbay



Project Background

To address growing water shortages in Colorado, Ducks Unlimited (DU), Colorado State University, Colorado Water Conservation Board (CWCB), WestWater Research, and many others have been studying water marketing strategies for several years, including strategies that allow farmers to temporarily trade water to municipal and industrial entities while maintaining ownership of the water right in agriculture. In this way, flexible water leasing markets help sustain agriculture by permitting temporary transfers of water to municipal, industrial, and environmental water uses during times of shortage and allowing water to return to agricultural productivity when market demand is low. Our program will build on the tremendous volume of studies and the experience of established sale markets and water transfer policies to develop the first flexible water leasing market in Colorado's Northern Front Range.

Surveys of Agricultural Water Users

Through various meetings and then a final summit, the FLEX study team determined that willingness to pay depended on market structure, price point, and firm yield. The study concluded that farmers with irrigation water to supply markets wanted to own the asset, manage water and infrastructure, and manage the market. Surprisingly, municipalities agreed. If municipalities had access to a market capable of providing firm water yields at a reasonable price, then municipalities, in theory, would participate. However, farmers along the Front Range of Colorado, replied that they would seek between \$500 and \$1,000 per acre-foot to lease water and although agriculture would still own the water rights, expected shared (cost) responsibility with municipalities and industry for adjudicating water rights through water court and developing needed infrastructure. Of note, most of the survey respondents said that a market of 3-5 participants was most attractive. It also needs to be noted that overwhelmingly 90% of participants identified transaction costs associated with water court as one of the biggest barriers to market development (Lindburg, 2013).

A similar survey of potential market participants conducted by the Ag Water Network for Colorado Cattlemen's Association and the Colorado Ag Water Alliance (CAWA), revealed similar interest from the agricultural community to lease water. Overall, about 50% of respondents (n=249) from across the state including Weld County, were moderately to strongly interested in water lease agreements, especially in situations where the farmer's leasable water was derived from reduced deliveries to the farm and allowed the farmer to determine how to manage the farm under reduced water. Farmers interested in lease programs are not too concerned about how the leased water is used, but they are very concerned that changes in water management will not negatively impact wildlife habitat (Ag Water Network, 2016).

For farmers interested in leasing opportunities, diversifying and increasing income is a driving factor. Farmers want to have alternative income choices to maximize their land and water assets. However, price point for leasing water is an important consideration. Like lease rates reported by WestWater (EDF, 2016), the Ag Water Network determined that 40% of respondents would lease water from between less than \$100 per acre-foot to \$500 per acre foot with only 20% of respondents seeking more than \$500 per acre-foot. However, a considerable number (40%) didn't know what price would be appealing (Ag Water Network, 2016).



Finally, the market structure is important to farmers. When asked, who should administer an ag water market, respondents overwhelmingly supported irrigation companies, individuals, or state agencies, with little support for private companies, trade associations, or farm cooperatives. When asked who, they trust for advice, respondents supported attorneys/consultants, irrigation company, and agricultural organizations (Ag Water Network, 2016).

Recent Study Supporting Flexible Water Leasing Markets

A recent report prepared by WestWater, a partner to this grant, concluded that one type of flexible water marketing strategy could provide cost savings over traditional buy and dry and save some agricultural land from permanent transfers. The report found that municipalities often acquire sufficient water to cover all their projected needs, including enough water to carry the maximum needed to endure short-term drought periods. Buying water rights to cover temporary dry-year needs alleviates pressure of the water provider to curb water use during dry times, but also results in the water right portfolio being surplus to municipal needs in many years. Using the City of Windsor as a case study, the WestWater study estimated that the city likely would need to buy 1,723 acre-feet of agricultural water rights to satisfy growing demand through 2045, permanently drying up about a thousand acres of agriculture to address growth in municipal demand. Considering that greater than 50% of the acquired water rights may only be needed during a few years in a decade, cities are compensating for water-supply shortage at the risk of local agriculture (EDF, 2016).

The WestWater study suggests that cities could potentially save money by permanently acquiring only the water rights needed to meet a baseline demand in most years, and lease water to cover shortages in dry years. In the Windsor case study, the town could purchase 941 acre-feet of water rights, barely 50% of the amount needed under buy and dry to meet most needs. During shortage years, occurring in 3 out of 10 years, cities could lease the additional supply need from a water lease market. Ultimately, at least 50% of irrigated farms would be conserved in the short-term and productive around 70% of the time. Additionally, participating farms would remain economically productive due to water lease income (EDF, 2016).

The report estimated that this type of flexible water acquisition framework could be less expensive for the municipality than buy and dry. Purchasing water rights to meet water supply needs during dry-year shortages, either as a lump sum in 2016 or incrementally over a 30-year period, would provide 1,723 acre-feet in firm yield at a cost of about \$1.3 million. Utilizing the more flexible water acquisition framework, by purchasing water rights to meet a baseline demand and leasing water during drought years was estimated to cost about \$1 million, possibly saving money for the municipality over buy and dry and leaving the agricultural landscape more intact (EDF, 2016). If we extrapolate the findings for Windsor to seven other municipalities that we are targeting to participate in this market strategy the savings to municipalities would be substantial and clearly would benefit agriculture (Bovee, 2017).

Although a more flexible water acquisition framework might make more economic sense than permanent buy and dry in some situations, the WestWater study recognized that municipalities place a premium on the certainty of firm yield and water supply availability. The report states that “Water supply risk is believed to be a significant roadblock to municipal acceptance of water markets”. This



desire to fulfill the maximum need during shortages, rather than acquire sufficient water to cover most needs, is an obstacle that will need to be overcome. WestWater recommends that efforts focus on encouraging and educating the market demand-side, consisting of municipalities, industrial water users, and environmental organizations, and to motivate parties through incentives and programs that reduce demand-side cost (EDF, 2016).

New Cache Water Marketing Strategy

New Cache is located very close to the fastest growing populations in Colorado and wishes to cooperate with municipalities to assure that their water needs are met without permanently removing water from agriculture. Permanent water right sales from New Cache shareholders to municipalities have largely been limited to units in Reclamation's Colorado-Big Thompson (CBT) Project. Municipalities now own more than 70% of the 310,000 CBT units and at average transfer rates, individually-owned CBT units will likely be largely in municipal hands in 8-12 years (EDF, 2016). Although, New Cache has not experienced significant interest from municipalities to purchase direct ditch shares, recent purchases of land for New Cache water rights by East Cherry Creek Valley Water and Sanitation District, Arapaho County Water and Wastewater Authority, and the City of Greeley indicate that the municipal "take over" already undergone by many other ditch and irrigating companies in the area is now targeting the New Cache system.

Presently, New Cache provides agricultural water to approximately 32,000 acres and 330 stockholders. A map of the service area has been provided in Figure 1. Corn is the primary irrigated crop in most years. Several water sources are used to satisfy irrigation demand including direct flow rights, the Cache La Poudre Reservoir Company, Fossil Creek Reservoir preferred rights, CBT units (Reclamation Project), and other minor sources derived from exchanges, rental water, and deliveries passed through the canal for other uses. Although much of the water being considered for this marketing strategy is used for irrigation, municipal purchases have been made, particularly for CBT units.

New Cache operates the Greeley Canal No. 2 system based on daily water requests from individual farms and conducts deliveries utilizing multiple sources to best manage deliveries and reservoir operations. Individual farms are assessed deliveries against their share accounts for the various river and reservoir rights, although on a given day the actual water delivered may be from one or several different sources. Since 1950, combined water deliveries averaged 44,062 acre-feet annually or about 17.62 acre-feet per share average. An additional 16,685 acre-feet are delivered from Windsor and Timnath and Fossil Creek reservoirs on average. Other New Cache water sources are not anticipated to be included as part of the marketing strategy, as they are mostly made up of CBT units that are quickly transferring to municipal ownership.

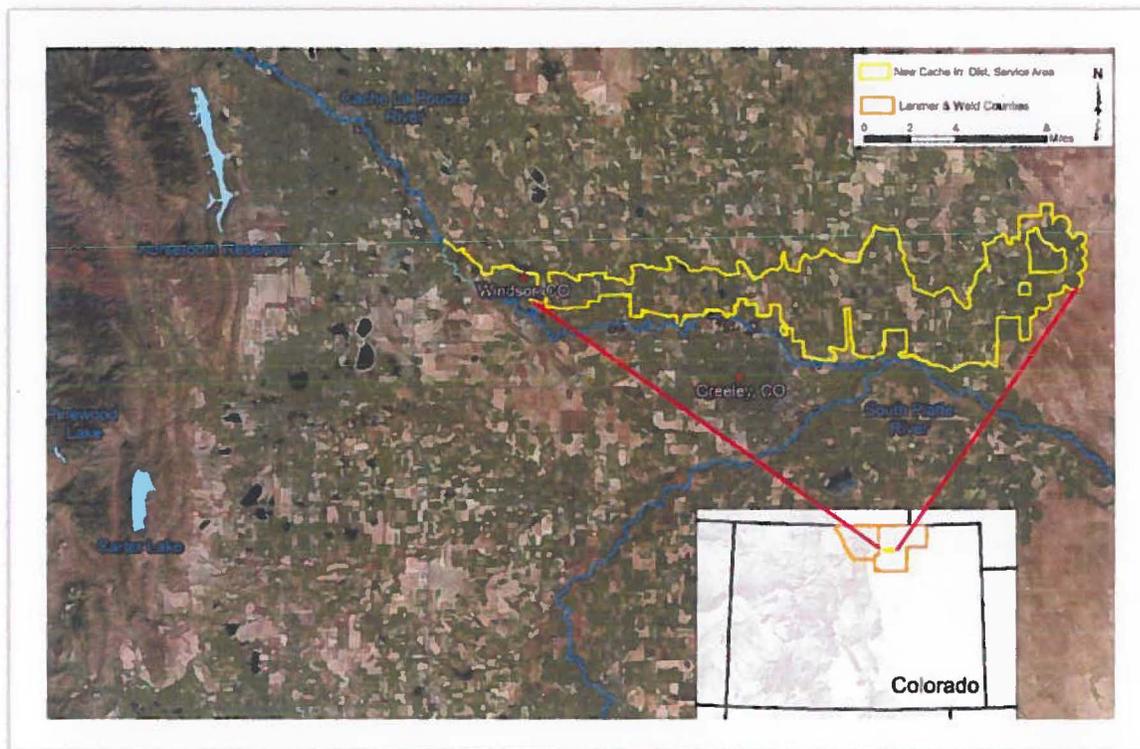
New Cache also operates an augmentation plan, whereby several New Cache water rights were changed through a water court process and decreed to be used to augment wells pumping alluvial groundwater out of priority. In Case No. 06CW295, New Cache formed the Lower Poudre Augmentation Company (LPAC) and changed 34.5 shares of the total 2,499.69 shares of New Cache direct flow rights and 205.5 shares of the 3,000 shares in Timnath Reservoir for augmentation and

replacement. The changed shares may now only be used for augmentation, but can be stored in several different reservoirs or recharge the South Platte's alluvial aquifer for augmentation purposes.

Augmentation allows for the replacement of out-of-priority groundwater pumping or surface water diversions through a complex system of aquifer recharge and water replacement processes. Water stored in reservoirs may be released to the South Platte River to replace injuries caused to other senior water rights owners by out-of-priority depletions. However, the South Platte also permits augmentation and replacement of water through a complex system of aquifer recharge. Water recharged to the aquifer returns to the river over several months to years. As water returns to the river, augmentation credits are generated and can be used to cover out-of-priority depletions. Both strategies will play an important role in developing marketable credits.

Plainly, New Cache exhibits all the hallmarks of a workable water marketing program. Given the juxtaposition to large cities, pressure is ever increasing to purchase water, but the location of the New Cache system along with the established exchanges, storage facilities, recharge and augmentation plans provide a unique opportunity to market temporary water supplies to non-agricultural water users as an offset to historical buy and dry practices. New Cache's far-sighted board has expressed a willingness to develop new strategies that bring economic value to our shareholders, sustains agriculture, and supports our local communities, and supports wildlife habitat. A water marketing strategy would successfully demonstrate our ability to deliver on those goals.

Figure 1: Planning Area Map





Project Description (Scope of Work)

Work Plan

New Cache will work with Ducks Unlimited to develop a work plan that specifies how the three required Project elements will be performed, along with a detailed work schedule, responsibilities of the recipient and other stakeholders.

Communication and Outreach Plan

As part of the Project work plan, the recipient will develop a communication and outreach plan that explains how shareholders and other stakeholders and the public as appropriate, will be involved in the planning process, including input on the drafting of the water marketing strategy and providing feedback to the recipient and any Project partners.

Element 1 – Outreach and Partnership Building

We will use the body of information included in the cited documents to educate and remind stakeholders of the looming threats to irrigated agriculture caused by growth and development and use the information, including responses to surveys, and other relevant information to develop grassroots support for engagement in water marketing strategies.

Presentation Material and Media

As described in the background data, several studies have convened stakeholders to survey their understanding of water markets, to educate the public about potential, and gauge interest in further developing these programs. We believe the tremendous work has established a system whereby the project team can access stakeholders and better educate and increase enthusiasm for flexible water markets. Our team will develop presentations for several established venues such as conferences and meetings as well as conduct several one-on-one meetings with non-agricultural water lessees to encourage participation. We will publish articles regarding the project in local newspapers and publish an article in Ducks Unlimited's national magazine and other media outlets.

Municipal Outreach and Relationship Building

As identified in the West Water study recommendations, water markets require increased interest and participation from the demand side (non-agricultural lessees). A significant portion of the budget will focus on regularly meeting with identified municipalities and industries to communicate the advantages of flexible water marketing strategies and improve demand for water market solutions. Target participants currently include the Town of Windsor, and their many regionally important partner municipal and water conservancy districts of the Northern Integrated Supply Project. Through one-on-one meetings and presentations to the NISP participants we will seek to build trusting relationships that lead to successful partnerships and programs. As such, New Cache will work with Ducks Unlimited to organize and facilitate quarterly meetings. Meetings will include a mix of presentations to senior management and field staff managing municipal water portfolios and providing tours of the New Cache system.

South Platte Basin Roundtable

Fortunately, stakeholders from around Colorado's Northern Front Range have been involved with several forums where water marketing strategies have been discussed and funded. One of the most effective water stakeholder forums is the South Platte Basin Roundtable. The basin roundtables were



created through Colorado Water for the 21st Century Act to assist the CWCB in thinking through water supply needs in relation to growth and development. The roundtables bring more than 300 citizens from across the state into broad-based, collaborative water management discussions. Legislatively designated, each roundtable membership consists of a representative from each county and a municipality from each county, a member from each water conservation and conservancy district, two legislative appointees, and 10 at large members representing national environmental organizations, agriculture, industry.

The South Platte Basin Roundtable is populated by 56 members from around the region that are directly impacted by this marketing strategy. In fact, three team members are committee members on the roundtable. By far, the South Platte Roundtable is the most efficient way to access the water policy and development stakeholders across the basin. Our team will organize and facilitate regular semi-annual presentations to the roundtable and consider incorporating volunteers to contribute to technical documents on a bi-monthly basis. The roundtable regularly convenes subcommittees to assist with water shortage related strategic planning.

Colorado Ag Water Alliance

We will also present to CAWA at their annual Ag Water Summit and encourage feedback and participation through the South Platte Basin Roundtable.

Colorado Water Congress

Finally, we will pursue opportunities to present to the Colorado Water Congress at their annual summer conference and annual convention. The Colorado Water Congress is the leading voice for initiating and advancing programs for the conservation, development, administration, and protection of water resources in Colorado. Many members are attorneys and engineers that are relied upon to provide dependable advice to potential water marketing participants. Project team members are all members of the Water Congress.

Element 2 – Scoping and Planning

Financial or Economic Analysis

The WestWater report presents a thorough examination of the Town of Windsor’s water needs through 2045 and offers sound economic justifications for pursuing several water acquisition strategies. However, the report also identifies a pool of municipalities with the potential to be candidates for water marketing strategies due to their water supply positions and their possible use of temporary water supplies. Through Element 1, Outreach and Partnership Building, the project team will identify a subset of additional market participants and further analyze the water supply and demand positions of these select municipalities for water marketing potential. The project team will also evaluate non-municipal opportunities, such as water for the oil and gas development within the New Cache service area, as well as environmental flow markets.

Team member, WestWater Research, brings significant experience developing water market strategies and will be an asset in developing the best framework for operating a New Cache water marketing project. The WestWater report provides significant summaries of water transfer and marketing efforts from within Colorado and across the western United States. As such, the project should enjoy some cost savings by utilizing an experienced team member and building on past work efforts. Additionally, several water marketing support tools have been developed in Colorado to help facilitate and track



transactions including software, databases, registries, dashboards, and others. WestWater will investigate these tools to help identify any resources that may increase efficiency and transparency of the market. WestWater will provide a section of the final technical report summarizing different marketing approaches.

Analyzing Water Rights Issues or Legal Requirements

Team member Dan Brown has been New Cache's water attorney for nearly 20 years and is very familiar with New Cache water right holdings and is uniquely capable of analyzing water rights mechanisms for transferring water and the legal constraints on existing water rights. Mr. Brown will assist the team in evaluating time and place of use requirements, title conflicts, and other constraints.

Quantifying Water Rights

Most ditch and irrigation companies are reluctant to complete ditch-wide consumptive use analysis due to the high costs, as well as concerns that such an analysis may expose water rights to unnecessary scrutiny and risks. In this regard, New Cache is an unusual and fortunate exception because New Cache completed a ditch-wide consumptive use analysis in 2010. The ditch-wide analysis is a detailed, farm-by-farm analysis that allows New Cache to readily identify water rights available for the marketing project. The identified farms and appurtenant water rights will be analyzed for legal requirements and constraints and specific plans will be developed to avoid impacts to downstream water users. Obviously, having the consumptive use analysis completed is a huge time and cost savings. Any additional work required will be conducted by New Cache staff and consultants.

PESTELI Analysis

An important component of alleviating concerns over new product or program development and policies is to conduct an analysis of the product or program's impact on political factors, economic influences, social trends, technological innovations, environmental factors, legislative requirements, and industrial factors (PESTELI). This analysis can be conducted under a simple framework to facilitate an understanding of the wider business environment that encourages the development of external and strategic thinking. The analysis can help New Cache anticipate future business threats and take action to avoid or minimize their impact as well as help identify business opportunities. In this case, New Cache will analyze the potential impact of water marketing strategies. Ducks Unlimited can lead discussions with stakeholder groups, likely the South Platte Basin Roundtable, to complete the PESTELI analysis.

Hydrologic and Engineering Studies

As water rights for the planned lease market are identified, New Cache water engineers, White Sands Engineering, will investigate the use of existing infrastructure and new infrastructure requirements and the hydrologic impacts of water marketing. Additionally, New Cache has more than 43 recharge sites decreed for augmentation. Ducks Unlimited, an expert in designing and developing recharge sites, will investigate sites to identify which sites may be priority for development in implementation phases. There will be no field activities conducted that would trigger environmental and cultural resources compliance.

Element 3 – Development of a Water Marketing Strategy (Funding Group II)

Based on the results of Elements 1 and 2, the team will develop a written strategy document that describes the approach to establish a new water market. The documents will include:



Implementation Plan

A draft implementation plan will be developed that describes water market operations, address long-term management and financial sustainability, the administrative structure, and institutional components, participants, water rights, and infrastructure needed, and transaction accounting.

Rules and by-laws

The entity responsible for managing the market will need to develop by-laws and rules governing water marketing activities.

Contracts and Agreements

Specific contracts and agreements supporting water marketing development and transfers will be developed. The FLEX Market Model Study developed several templates to provide a foundation.

Monitoring Plan

New Cache will develop a transaction accounting system to monitor water marketing activities.

Water Marketing Support Tools

Based on work conducted in Element 2, New Cache will determine which if any existing tools provide more reliability than a custom designed tracking system.

Final Technical Report

Ducks Unlimited will develop a final technical report as required by the FOA that summarizes all work and provides findings and conclusions of the project results and benefits. The report will include descriptions of all planning and outreach activities, lessons learned, and any other findings and conclusions. We will also include any outstanding issues to be resolved before the market can be implemented and steps to resolve. The draft technical report will be submitted to Reclamation at least 60 days prior to contract expiration.

Evaluation Criteria

Evaluation Criteria A – Water Marketing Benefits

Describe how the proposed water market or water marketing activities are anticipated to benefit water supply sustainability after implementation of the strategy. Describe the benefits that are anticipated to result from the water marketing strategy, addressing each of the following:

Water marketing strategy will address a specific water supply shortfall

Yes, the water marketing strategy will specifically communicate opportunities for leasing water and provide a mechanism for transferring water to at least eight Front Range municipalities. The South Platte Basin Implementation Plan estimates a water supply shortfall of 75,000 acre-feet will occur in the M&I sector by the year 2050 in Weld and Larimer Counties, both served by the New Cache system (HDR, 2015). The project is somewhat unique because it is targeting a water supply shortfall that exists because of Colorado's intent to preserve the agricultural heritage and economy of Northern Colorado. In the absence of developing flexible water leasing strategies, such as the one proposed by this project, a continuation of historical buy and dry water transactions promises to threaten irrigation ditch companies and systems.



The project team has identified several buy-side entities that will likely be interested in, and benefit from, the proposed project. These include: Town of Windsor, Fort Collins-Loveland Water District, East Larimer County Water District, Town of Severance, City of Evans, City of Greeley, and North Weld Water County Water District, and Central Weld County Water District. Combined, these municipal entities have a projected additional water demand of over 23,000 acre-feet by the year 2030. Many (but not all) of these specific municipalities are participating in the Northern Integrated Supply Project (NISP) which would meet most of their projected water demands over the next several decades. But the Project will likely not come online until 2030 and these rapidly-growing municipalities will need temporary supplies much sooner (Bovee, 2017). Agricultural water leasing agreements, such as those proposed under the New Cache water marketing strategy, are sensible short-term solutions for many of these municipalities.

Nature and severity of the shortfall and which sectors are affected

Urban population growth and associated development drives the anticipated water shortage gap. The population in Colorado is expected to double, adding between 3.5 and 5.5 million people (CWCB, 2015). Colorado's Front Range, established along the South Platte River, will experience most of the population increase, expecting between 2.3 and 3.1 million people by 2050. Specifically, the greatest growth will occur in Weld and Larimer counties, which expect a combined population growth of nearly 1.5 million people (HDR, 2015).

Recent studies identified "buy and dry" as the most cost effective method for non-agricultural entities to acquire firm yields of water (EDF, 2016). Buy and dry is the common term to describe buying agricultural land and water rights to move the rights off the land to non-agricultural uses. Population growth increases municipal and industrial water demand and in the water-short area of Colorado, water must be acquired and moved to accommodate shifting demands. Impending population growth is expected to cause a deficit of approximately 75,000 acre-feet in Weld and Larimer Counties (HDR, 2015). Considering that most water in the state is owned by agriculture for irrigation, it is expected that water transfers will come from agriculture and greatly impact the sector. Much of the agricultural water needed to meet future gaps will come from Weld and Larimer Counties, both served in part by New Cache Irrigating Company, as nearly 50% of all irrigated land on the South Platte River is in these counties (HDR, 2015). Additionally, New Cache is juxtaposed near some of the fastest growing cities in the country. Considering these two counties account for nearly \$2 billion in market value of agricultural products, over 25% of total state value, the loss of irrigated agriculture will be catastrophic (Bernardo, 2016).

In addition to the agricultural sector, buy and dry activities threaten wildlife habitat as the transfer of water from irrigation reduces return flows and tail-water that supports and enhances 90% of established wetlands developed around century-old ditch systems and farmsteads. A study by Colorado State University concluded that increasing on-farm water application efficiency resulted in an estimated loss of total wetlands between 26% and 48% of the total irrigation dependent wetlands.



This loss of wetland area results in an economic loss of between \$880,000 and \$1.62 million (Smith, 2012).

How and to what extent will the marketing activities, once implemented, address the shortfall?

The proposed water marketing strategy will address the shortfall by providing an alternative water source for municipal needs, and targeting specific municipal needs in certain dry year situations. Past research suggests that cities could reduce their permanent water acquisitions by roughly 50% if they instead utilize short-term lease agreements to fill their water supply portfolio (EDF, 2016). The exact scale of our proposed water marketing strategy will be determined during the project, but the project team has identified municipalities who could benefit from entering lease agreements with New Cache. Finding willing lessees will be a challenge, but we expect the strategy that is developed under the proposed project will eventually lead to new water marketing in the range of 1,000 to 2,000 acre-feet per year and establish a strategy that will be adopted by others in the future. As stated above, several fast-growing municipal entities which we have identified as potential market participants are estimated to have an additional water demand of 23,000 acre-feet by the year 2030, without a clear source of water supply to meet this demand besides continued buy and dry of agriculture (Bovee, 2017). Our project will target 5% to 10% of this projected water demand as a minimum objective.

Benefit of water market/activities for multiple sectors/types of water uses?

Much of the “buy and dry” strategy is being conducted by municipalities or water conservancy districts providing water for municipal and industrial needs. Under current water transfer mechanisms, water may only transfer from one beneficial use to another for very specific needs. Most transfers are permanent changes that remove water from the agricultural sector and land in perpetuity. Very few mechanisms are available to transfer water temporarily to other sectors and provide the long-term certainty in water availability to the lessee. Therefore, the water marketing strategy will be designed to provide long-term certainty to other sectors.

Even considering water savings from conservation measures, municipal and industrial usage is expected to double by 2050 requiring an additional 357,000 acre-feet annually in the South Platte. In Larimer and Weld Counties, municipal and industrial water usage will more than double from 2008 levels, requiring an additional 137,000 acre-feet annually. Only a portion of this need will be provided through identified projects, leaving a 75,000-acre-foot shortage (HDR, 2015). As previously discussed, the impact on rural landscapes could be tremendous. However, a successful water marketing strategy, adopted at a large scale could cut the amount of water permanently transferred in half and therefore benefit agriculture, municipal, and industrial sectors.

Agricultural products, such as corn, provide an important forage base for over-wintering migratory birds. In fact, recharge facilities provide migratory and over-wintering habitat for waterfowl. The Playa Lakes Joint Venture’s HABS model determined that a single recharge wetland provides 0.5 -1% of habitat toward landscape level habitat goals (PLJV, 2003). A report published in “Land”, determined the total value of wetlands from recreation, water quality services, water supply, and commercial fishing are highly valued services and in Colorado, the average aggregated value is \$12,737 per acre (Adusumilli, 2015). Considering the average sale value of irrigated agriculture in Weld and Larimer



County is between \$6,500 and \$8,500 per acre, adding wetlands and recharge could significantly increase or at least maintain current values while sharing water with other sectors (Weaver,2016).

Explain how and to what extent the proposed water market or water marketing activities will improve water supply sustainability in general in the area upon implementation of the strategy

Drought resiliency – In years of drought and subsequent drought recovery, it is expected that little to no water would be available to new water rights anywhere in the South Platte. In 2012, the State Engineer’s Office presented a compelling overview of how markets can address drought resiliency that would be included in a water marketing such as interruptible supply agreements, substitute water supply plans, and administrative exchanges (Rein).

Instream Flows – Enhancing stream flows is another possible market for flexible water leasing. In the South Platte Basin, and the Cache La Poudre River particularly, which is the source of New Cache’s water supplies, innovative efforts are underway to improve streamflow utilizing leased/temporary water supplies. These and other efforts like them create additional needs for temporary water markets and offer a ‘win-win’ for both efforts (Brown, 2017).

Sustaining Agricultural Communities – The purpose of the water marketing strategy is to help sustain agricultural communities. Surveys conducted by the Ag Water Network for Colorado Cattlemen’s Association and the Colorado Ag Water Alliance (CAWA), revealed similar interest from the agricultural community to lease water. Overall, about 50% of respondents (n=249) from across the state including Weld County, were moderately to strongly interested in lease water agreements, especially in situations where the farmer’s leasable water was derived from reduced deliveries to the farm and allowed the farmer to determine how to manage the farm under reduced water (Ag Water Network, 2016). As stated, the work completed by WestWater suggests that roughly 50% of farms could be conserved in the area under a successful water marketing strategy.

Reducing Conflict over Water – We may never eliminate conflict over water allocation, but negotiated water management agreements, such as water marketing strategies may reduce conflict over water. Water marketing provides an alternative to forced reallocation of water and has the potential to provide water to growing cities, manage drought, provide environmental and recreational needs, promote efficient water use, encourage conservation, provide a supplement to new reservoir construction, and promote political and social harmony (Kaiser, 1998). Our proposed project supports these goals. Relying on studies that have introduced stakeholders in Colorado to water markets and exploring water markets elsewhere, we should be able to identify pitfalls and improve on previous efforts to accomplish many of the goals expected of a water market to reduce conflict.

Innovation - Although many studies have been conducted, very few flexible water leasing markets have been established and almost no water trades executed. Part of the issue affecting flexible water lease markets is lack of interest by non-agricultural water users due to increased cost of leasing water and uncertainty of water availability. Our strategy focuses on outreach and partnership building with several municipalities included in the NISP project, starting with the eight previously identified



municipalities. As we build relationships and educate non-agricultural stakeholders, the template should be adopted by others.

Extent to which the water market/activity will be ready for implementation completion

Implementation Timeline – Our goal for this project is to have an implementable marketing strategy. Our hope would be to execute a water trade with identified non-agricultural entities within a few months of completing the strategy. Of course, our timeline depends on the legal and infrastructure barriers that may delay implementation. However, the reason we focus on a short-list of municipal water providers is due to the probability that a market trade could be conducted relatively efficiently.

Complex Issues – Overall, we do not expect many issues to impede our ability to implement a water marketing strategy. New Cache is a very well-studied irrigation system that is probably best capable of quickly implementing a water strategy. The FLEX Market Model study developed several contract and agreement templates to execute water markets in Colorado, which provide a foundation for implementing trades. Usually, the lack of a ditch-wide consumptive use analysis is a major barrier, but New Cache has a very comprehensive farm-by-farm analysis completed.

Previous Planning Efforts – Several previous studies have been completed and will be used to help develop the water marketing strategy and help avoid or resolve complex issues. Specifically, the FLEX Market Model study, studies of other market development programs in and around Colorado, the ditch-wide consumptive use analysis, and the Ag Water Network’s survey with the Colorado Cattlemen’s Association will all provide valuable guidance in developing outreach and partnership networks. Several studies provide valuable economic and financial insight to guide willingness to pay and gauge risk within project development and transaction costs.

Evaluation Criteria B – Level of Stakeholder Support and Involvement

Identify Committed Stakeholders

New Cache Irrigating Company – (Agricultural) New Cache is committed to sponsoring the water marketing strategy as an avenue of developing new business strategies and opportunities for its shareholders that sustain agriculture in the face of growing pressure to sell water rights permanently to non-agricultural stakeholders.

Ducks Unlimited – (Environmental/Recreational) Ducks Unlimited is a national conservation organization dedicated to the conservation of waterfowl habitat. In the South Platte River, waterfowl and other migratory species depend on the wetlands and agricultural forage provided by agricultural water. The prospect of permanently removing 20% to 50% of the irrigated landscape will have significant negative impacts on wildlife habitat and the supporting economies needed to perpetuate the rural lifestyle. Ducks Unlimited has been a trusted partner of agriculture on the South Platte River for 30 years and is a leader in delivering innovative solutions to complex water problems. Supported by nearly 1 million members consisting of hunters and wildlife enthusiasts across the United States, DU is one of the biggest non-profit recreational organizations as well.

Colorado Water Conservation Board (CWCB) – (Governmental) The Colorado Water Conservation Board is a committed leader in funding and guiding innovative development of water market



approaches to complex water issues. The CWCB will participate in supporting the project team through support of the South Platte Basin Roundtable. Unfortunately, grant deadlines are not aligned for CWCB to provide matching funds now, but they do expect an application from the project team to assist DU with their matching contribution.

Identify Supportive Stakeholders

Colorado Corn Growers Association (Agricultural) – Colorado Corn Growers Association is a member organization founded in 1979, with its dues-paying farmer and agricultural representatives focusing on policy at the local, state, and national levels that impacts the ag industry. CCGA has been the primary sponsor of several flexible water market studies in Colorado including the FLEX Market Model study. CCGA is aware of the pressures on corn producers in the New Cache area and fully supports producer’s efforts to find new diverse revenue streams that help sustain agriculture.

Northern Water Conservancy District (Municipal/Agricultural) – Northern Water is a public agency created in 1937 to build and operate the Colorado-Big Thompson Project, which collects water west of the Continental Divide and delivers it to North-eastern Colorado for agricultural, municipal, domestic, and industrial uses. Northern is also the lead agency developing the Northern Integrated Supply project with the purpose of distributing native basin water from the Poudre River to 15 Northern Front Range partners.

Colorado State University (Academic) – The Colorado Water Institute at CSU has been deeply involved with studying water supplies, water markets, and supporting organizations interested in innovative solutions. As a land grant university steeped in agricultural and natural resources study, CSU is interested in seeing alternative market solutions succeed.

City of Fort Collins (Municipal)– The City recognizes the importance of preserving agriculture in the region while trying to meet future municipal water demands, as well as preserving environmental values of the Poudre River and other watersheds. The City has several policies related to these issues in Plan Fort Collins and the Water Supply and Demand Management Policy. Fort Collins has participated in several local efforts that have tried to address these types of issues, including participation in the Poudre Water Sharing Group and Poudre Runs Through It Study/Action Work Group.

Project Opposition

There is no known opposition to the project.

Supportive Planning Documents

Colorado supports water market development. The Colorado Water Plan requires 50,000 acre-feet of water come from alternative agricultural transfers, including water markets (CWCB, 2015). The South Platte Basin Implementation Plan identifies that a certain amount of agricultural dry-up is inevitable, but alternative transfer mechanisms, such as water markets, should be maximized. Water markets are meant to minimize the impact on local economy, provide other funding sources to the agricultural producer, and optimize both the agricultural and non-agricultural benefits of the remaining lands” (SWSI, 2010). Through water markets, agricultural producers can view their water rights as a “crop” and cities may view the producer’s fields as “reservoirs” holding water supplies for times of shortage.



Diverse Stakeholder Participation

The South Platte Basin Roundtable is populated by 56 members from around the region that are directly impacted by this marketing strategy. We will make at least four semi-annual presentations to the roundtable and seek voluntary participation from a subcommittee that reviews project progress. The only stakeholder, not mentioned previously and holds a seat on the roundtable is oil and gas representatives. Oil and gas is a growing industry in the New Cache system with substantial water needs. We will reach out to oil and gas as a potential market participant and include them in outreach and partnership building activities. Our communication and outreach plan will include strategies to meet and present to municipalities, agricultural organizations, and water conservancy districts not captured in presentations and meetings to the roundtable.

Evaluation Criteria C – Ability to Meet Program Requirements

Timeframe

As required by the FOA, a Work Plan will be developed that specifies how the three project elements will be performed with a detailed work schedule that identifies the responsibilities of the grant recipient and other participants and stakeholders. A communication and outreach plan will be included with the Work Plan as required by the FOA. The plan will explain how stakeholders and the public will be involved in the planning process, including input on the drafting of the water marketing strategy and feedback processes. As stated elsewhere, we think the roundtable process provides an exceptional opportunity to include the public in this process.

Immediately after Reclamation approves the Work Plan with Communication and Outreach Plan, DU will begin developing materials for outreach and media, and will begin meeting with municipalities. The schedule, attached as part of the budget narrative (Table 3.), indicates the frequency of meetings with the roundtable, Colorado Ag Water Alliance, and Colorado Water Congress.

Scoping and Planning Activities will also commence after the Work Plan is approved and will take at least nine months. Thankfully, much of the data and legal templates needed to execute water trades have been completed, so much of the time is reviewing data and applying information to a water marketing strategy. Once outreach and partnership building is well established and scoping activities are mostly complete, Ducks Unlimited will commence a PESTELI analysis with roundtable volunteers. Following the PESTELI analysis, the team will begin consolidating information into market strategy documents needed to structure the market.

Availability and Quality of Existing Data

The South Platte River is one of the most intensively managed rivers in the western United States. The Division of Water Resources (DWR) provides web-access to real-time streamflow, diversion records, water rights searches, aquifer determination tools, climate stations, groundwater data, and streamflow stations. Many ditch structures are measured through real-time digital mechanisms capable of communicating wirelessly to DWR to provide hourly data.

Technical Expertise

Dale Trowbridge, General Manager. Mr. Trowbridge is the general manager of New Cache la Poudre Irrigating Company / Cache la Poudre Reservoir Company and Lower Poudre Augmentation Company.



Dale is a director with Northern Water Conservancy District, Cache la Poudre Water Users Association and a member of the Poudre Runs Through it. He has 20 years of experience managing irrigation and reservoir facilities and has been a farmer and cattle feeder in the region for many years and was instrumental in developing and constructing New Cache's Cornish Plains Reservoir and the Lower Poudre Augmentation Company plan. For this project, Mr. Trowbridge will provide technical expertise related to New Cache water management and operations and supervise water market strategy structure, supervise all legal and engineering review, and participate in all meetings with municipalities, roundtables, and organizations.

Greg Kernohan, Director of Ecosystem Services. Mr. Kernohan has worked in wetland conservation for over 20 years throughout Canada and the United States. Trained as a wetland ecologist with specialization in waterfowl biology, Mr. Kernohan has developed wetland restoration, enhancement, and creation projects in various climates and geographies. In recent years, he managed DU's Colorado/Wyoming conservation programs where he pioneered innovative water resource management strategies using wetlands to recharge aquifers and augment river flows. Mr. Kernohan supervises regional programs in wetland mitigation banking and other ecosystem service markets. With a Master's in Environmental Law and Policy, Mr. Kernohan is highly proficient in environmental law, contract law, water law, and policy. For this project, Mr. Kernohan will be the project manager organizing outreach and partnership building strategies, managing project timeframes and budgets, and supervising project elements.

Brett Bovee, Market Specialist/Engineer. Mr. Bovee is a Regional Director at WestWater Research, and brings over 12 years of experience conducting a variety of engineering, economic, and water rights studies across the Western states. Many of these projects have been focused on water resources management and water development concepts in the pursuit, protection, and utilization of water rights. Since joining WestWater, Mr. Bovee has performed dozens of focused water right valuation studies and broader economic and water market analyses. Mr. Bovee brings a unique perspective to projects, combining a background in water resources engineering with a developed knowledge of water rights and economics. Mr. Bovee holds B.S. and M.Eng. degrees in biological and environmental engineering from Cornell University, with a focus in water resources. He is a P.E. in five western states, and is also a recognized hydrologist. For this project, Mr. Bovee will manage the scoping and strategy development elements of the project.

Daniel K. Brown, Water Attorney. Mr. Brown is New Cache's water attorney and will provide trusted guidance to New Cache related to this project. Mr. Brown has practiced with Fischer, Brown, Bartlett & Gunn, P.C. since 1999. Since joining the firm, he has worked extensively on water quantity, water quality and real property matters. Prior to joining the firm, Mr. Brown clerked for the Honorable Walter Stauffacher in the District Court of Washington State. In this capacity, he served as the lead clerk on the original adjudication of water rights on the Yakima River Basin in Washington State (which is the equivalent of the Water Referee in the Colorado court system). Mr. Brown also served as a member of "Dividing the Waters" an organization of judges, masters and referees involved in the adjudication of water in the western United States. Mr. Brown interned for the Bureau of Reclamation's Western Water Policy Review Advisory Commission. Mr. Brown received his Juris



Doctorate, with an emphasis in Environmental Law, from the University of Oregon School of Law in 1997. He also received a Bachelor of Science in Economics from the University of Colorado at Boulder in 1990, and his Masters of Science in Applied Economics, with an emphasis in Natural Resources, from Montana State University in 1994.

Evaluation Criteria D – Nexus to Reclamation

Reclamation Project, Facility, Activity in Planning Area

The Colorado-Big Thompson (CBT) Project is within the planning area for identifying demand sectors under the water marketing strategy. The CBT project is a critical water supply resource for the municipalities that will be participating in the water marketing strategy and is an important factor in developing the strategy. Also, New Cache is an owner of CBT units where Reclamation water from that project has historically been applied to agricultural lands.

Reclamation Project, Facility, Activity in Basin

There are several Reclamation Projects in the South Platte Basin and near the proposed project. Horsetooth Reservoir, Carter Lake, and the Flatiron/Pinewood Afterbay Dams are between 12 and 17 miles from New Cache's western service area. Additionally, Ducks Unlimited is under contract with Reclamation to determine the feasibility of using Reclamation land purchased as part of the former Narrows Reservoir project for water market purposes related to river augmentation. That project is located approximately 30 miles east of New Cache's eastern service area.

Benefits to Basin

The above-mentioned projects operate as storage facilities to aid in the distribution of CBT water, which was originally developed to irrigate more than 640,000 acres of irrigated farmlands and provide clean water to communities supporting agriculture. Now, 70% of CBT water is owned by municipalities and is expected to be largely owned by municipalities in the next 8 to 12 years. Water marketing strategies provide a tool that sustains agriculture into the future by sharing water in times of shortage, which should only occur 3 out of 10 years or less. As Reclamation recognizes, water markets provide an alternative to irrigators for alternative income sources that continue to support rural communities and the wildlife that has adapted to depend on the irrigated landscapes originally achieved through historic Reclamation projects.

Meet Trust Responsibilities to Tribes

The proposed water marketing strategy will not help Reclamation address trust responsibilities.

Support for Department of Interior (DOI) Initiatives

The project does not have any direct influence or support for DOI initiatives.

Environmental and Cultural Resources Compliance

The applicant is *not* proposing to conduct activities involving measurement, monitoring, or field work that would require National Environmental Policy Act (NEPA), Endangered Species Act (ESA), or National Historic Preservation Act (NHPA) review and permitting. We understand that "under no circumstances may an applicant begin ground-disturbing activities (including grading, clearing, and other preliminary activities) on a project before environmental compliance is complete and



Reclamation explicitly authorizes work to proceed. This pertains to all components of the proposed project, including those that are part of the applicant's non-federal cost share" (FOA, Pg. 20).

Required Permits or Approvals

At this time, the applicant is unaware of any permits or approvals that would be required to complete the water marketing strategy.

Funding Plan

Contribution Type

New Cache and Ducks Unlimited will share responsibility for providing match funds. All match will be cash funds. New Cache is an assessment-based organization and will assess our 330 stockholders the appropriate amount to cover our \$64,080 contribution. New Cache match will cover manager's time and contributed as costs are incurred.

In-kind Contributions

None.

Funding Partners

At this time, DU is the only funding partner providing non-federal match. All match will be provided as cash match through non-federal sources such as private philanthropy, corporate partnerships, state and local grants. DU will contribute DU's personnel costs, indirect costs, and direct expenses as well as WestWater's assistant and analyst. Match will be provided as costs are incurred. A contribution statement has been attached to the appendix.

Federal Funding Partners

There are no federal funding partners for the proposed project.

Pending Funding Requests

We are working with Ducks Unlimited and other team members to identify other non-federal cash contribution from the CWCB and we are working with the Community Foundation of Northern Colorado to provide other cash match funds. The CWCB has dedicated funding to assist with alternative transfer mechanism development such as flexible water markets. The applicant has inquired as to the availability of funds and likelihood of securing funds for to match this project with non-federal funds. The CWCB is interested and supportive of the project. However, their application timeframe does not line with this FOA, so an official application for funding has not been submitted at this time.

Additionally, team members applied for a Gates Foundation grant to accomplish similar project elements through the Community Foundation of Northern Colorado. Team members are talking with the foundation to determine if funds could be released as non-federal match for the water market strategy.



Timeframe

As required under Evaluation Criteria C please see Table 3 for proposed timeframe.

Table 3. Timeframe

Task	Sub-Task	Months from date of Contract																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Work Plan	Work Plan	■	■																						
	Comm. Plan	■	■																						
2. Outreach and Partnership Building	Materials and Media			■	■	■																			
	Municipal Outreach			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Roundtable Meetings				■					■								■					■		
	Ag Water Alliance										■	■										■		■	
	Colorado Water Congress											■						■						■	
3. Scoping and Planning	Financial/Economic Analysis			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Water Market Approaches			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Water Rights Research			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Quantifying Water Rights			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	PESTEL Analysis										■	■	■	■	■	■	■	■	■	■	■	■			
4. Implementation	Hydrologic Studies			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Implementation Plan																	■	■	■	■	■	■	■	
	Rules Development																	■	■	■	■	■	■	■	
	Contracts																	■	■	■	■	■	■	■	
	Monitoring Plan																	■	■	■	■	■	■	■	
5. Final Report	Marketing Tools																■	■	■	■	■	■	■	■	
	Final Technical Report																					■	■	■	



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Appendices

Official Resolution

Commitment Letter (DU)DU

Indirect Rate Agreement (DU)

SF424

SF424A

SF424B

Letters of Support

**RESOLUTION OF THE BOARD OF DIRECTORS OF
THE NEW CACHE LA POUDE IRRIGATING COMPANY**

At a meeting of the Board of Directors (“Board”) of the New Cache La Poudre Irrigating Company (“Company”), held on April 12, 2017, which meeting was duly and properly called and at which a quorum was present, the following resolution was made and adopted by affirmative vote of all of the directors present, as follows:

WHEREAS, the Company has responsibility for budget approvals and the oversight of Company funds, as well as funds awarded through grants; and

WHEREAS, the Company is responsible for administering a complex system of water rights (“New Cache Water Rights”), for operating an irrigation delivery system that supports approximately 32,000 acres in the Cache La Poudre Basin in Northern Colorado (“New Cache System”) and administering the New Cache Systems, and all uses thereof, for the benefit of its shareholders; and

WHEREAS, the Colorado Front Range continues to be develop at a rapid pace, including the lands within the New Cache System, and this growth is likely to have implications that threaten the long-term viability of the operation of the New Cache System, its shareholders, neighboring irrigators and irrigation companies in the area more broadly; and

WHEREAS, because of the threats to the future operation of the New Cache System posed by development, as well and other external factors, and with an eye toward the long-term operation of the New Cache System and agricultural operations within the New Cache System, the Board has determined that it is in the best interest of the Company and its shareholders to explore, evaluate, and potentially implement, methods that will reduce the outright sale of New Cache Water Rights from the New Cache System and the permanent retirement of historically irrigated lands within the New Cache System; and

WHEREAS, the Board has determined that such methods include exploration, evaluation and potential implementation of “water marketing agreements” to facilitate the shared use of New Cache Water Rights that does not result in the permanent removal New Cache Water from the New Cache System or the permanent dry-up of historically irrigated lands within the New Cache System.

RESOLUTION

NOW, THEREFORE, BE IT RESOLVED that for the foregoing reasons, the Board hereby authorizes and directs that the Company shall participate in an application requesting funding from the U.S. Bureau of Reclamation (Reclamation) under the Fiscal Year 2017 Water Marketing Strategy Grant (CFDA#15.507) under the WaterSMART program in the amount of \$192,950.00 to conduct investigations, studies and outreach, as appropriate, targeted at developing water leasing and sharing methodologies, including potentially water sharing agreements with other water users outside the New Cache System aimed at preventing the

permanent sale of New Cache Water Rights and the dry-up of historically irrigated lands within the New Cache System, and potentially creating an alternative revenue source for shareholders. If this funding request is awarded, the Company shall authorize the expenditure of required matching funds for the grant in an amount not to exceed \$64,080.00, which amount is in the present year's annual budget and which shall be allocated from the Company's budget upon approval of the grant. The Company reserves the right to solicit matching funds from other third-party sources.

BE IT FURTHER RESOLVED, that the Company and its designees will work with Reclamation to meet established deadlines for entering a grant or cooperative agreement.

BE IT FURTHER RESOLVED, that the General Manager of the Company, Dale Trowbridge, is and shall be authorized to sign the grant application and all associated documents required for submittal of the application.

The Directors of the New Cache La Poudre Irrigating Company present at the meeting where the above resolution was adopted are as follows:

President, Michael Hungenberg
Vice Pres: Robert Wardlaw
Secretary: Kenton Brunner
Treasurer: James Koehler
Director: Melvin Buxman

I hereby certify that the foregoing resolution of the Board of Directors of the New Cache La Poudre Irrigating Company was duly adopted by said Board, as above set forth.

Dated this 18th day of April, 2017



Michael Hungenberg
President of the New Cache La Poudre Irrigating
Company

ATTEST:



James R. Koehler
Treasurer of the New Cache La Poudre Irrigating Company



Great Plains Regional Office
2525 River Road
Bismarck, ND 58503-9011
(701) 355-3500 • Fax (701) 355-3575
www.ducks.org

April 18, 2017

Mr. Dale Trowbridge
General Manager
The New Cache La Poudre Irrigating Company, Inc.
33040 Railroad Avenue
Lucerne, CO 80646

Re: WaterSMART Grants: Water Marketing Strategy Grants for Fiscal Year 2017
New Cache La Poudre Water Marketing Strategy – Letter of Commitment

Dear Mr. Trowbridge:

Ducks Unlimited, Inc., is pleased to partner with New Cache La Poudre Irrigating Company in committing funds for the development of a water marketing strategy associated with Colorado's Northern Front Range. As you know, DU and others have been analyzing water market strategies for several years, which we believe is important to the long-term sustainability of one of Colorado's most important resources, its water supply. The amount of our funding commitment is \$140,675 from non-federal sources, which is contingent on the acceptance of the referenced WaterSMART grant. Funds would be available immediately, in their entirety, upon acceptance by the Bureau of Reclamation of this grant.

DU's contribution will take the form of cash and will span all facets of the project, with the DU team working collaboratively with New Cache and others toward the development of a comprehensive water market strategy. As always, DU reserves the right to provide our contribution through several non-federal sources.

Sincerely,

DUCKS UNLIMITED, INC.

Stephen E. Adair
Director – Great Plains Region



United States Department of the Interior

INTERIOR BUSINESS CENTER
Indirect Cost Services
2180 Harvard Street, Suite 430
Sacramento, CA 95815



November 29, 2016

Mr. Earl Grochau, Chief Financial Officer/Chief Administrative Officer
Ducks Unlimited, Inc.
One Waterfowl Way
Memphis, TN 38120-2351

Dear Mr. Grochau:

Enclosed is the signed original Negotiated Indirect Cost Rate Agreement that was processed by our office. If you have any questions concerning this agreement, please refer to the signature page for the name and contact number of the negotiator.

As a recipient of federal funds, the regulations require you to maintain a current indirect cost rate agreement. For provisional/final indirect cost rates, Indirect Cost Proposals should be submitted on an annual basis, and they are due within six (6) months after the close of your fiscal year. For predetermined rates and approved rate extensions, proposals are due in our office six (6) months prior to the expiration of your current rate agreement. Please note that proposals are processed on a first-in, first-out basis.

Common fiscal year end dates and proposal due dates are listed below:

Fiscal Year End Date	Proposal Due Date
September 30 th	March 31 st
December 31 st	June 30 th
June 30 th	December 31 st

Please visit our website for guidance and updates on submitting future indirect cost proposals. The website includes helpful tools such as a completeness checklist, indirect cost and lobbying certificates, sample proposals, Excel worksheet templates, and links to other websites.

Sincerely,

for Mark W. Stort
Deborah A. Moberly
Office Chief

Enclosure

Ref: J:\Other (Non-Profit, For Profit)\Nonprofit\Ducks Unlimited, Inc. (Duckh679)\FY 17\Issue.ltr.docx

Phone: (916) 566-7111
Fax: (916) 566-7110

Website: <http://www.doi.gov/ibc/services/finance/Indirect-Cost-Services> Email: ICS@ibc.doi.gov

**Nonprofit Organization
Indirect Cost Negotiation Agreement**

EIN: 13-5643799

Organization:

Ducks Unlimited, Inc.
One Waterfowl Way
Memphis, TN 38120-2351

Date: November 29, 2016

Report No(s) : 17-A-0222

Filing Ref.:
Last Negotiation Agreement
dated August 13, 2015

The indirect cost rate contained herein is for use on grants, contracts, and other agreements with the Federal Government to which 2 CFR Part 200 apply for fiscal years beginning on or after December 26, 2014 subject to the limitations contained in Section II.A. of this agreement. Applicable OMB Circulars and the regulations at 2 CFR 230 will continue to apply to federal funds awarded prior to December 26, 2014. The rate was negotiated by the U.S. Department of the Interior, Interior Business Center, and the subject organization in accordance with the authority contained in applicable regulations.

Section I: Rate

Type	Effective Period		Rate*	Locations	Applicable To
	From	To			
Fixed Carryforward	07/01/16	06/30/17	14.02%	All	All Programs

***Base:** Modified total direct costs - Total direct costs, excluding capital expenditures and other distorting items such as passthrough expenses, conservation easements, land purchases, and subawards/subgrants/subcontracts/vendor payments in excess of the first \$100,000 of each award.

Treatment of fringe benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs; fringe benefits applicable to indirect salaries and wages are treated as indirect costs.

Treatment of paid absences: Vacation, holiday, sick leave, and other paid absences are included in salaries and wages and are claimed on grants, contracts, and other agreements as part of the normal cost for the salaries and wages. Separate claims for the costs of these paid absences are not made.

Section II: General

Page 1 of 3

A. Limitations: Use of the rate(s) contained in this agreement is subject to any applicable statutory limitations. Acceptance of the rate(s) agreed to herein is predicated upon these conditions: (1) no costs other than those incurred by the subject organization were included in its indirect cost rate proposal, (2) all such costs are the legal obligations of the grantee/contractor, (3) similar types of costs have been accorded consistent treatment, and (4) the same costs that have been treated as indirect costs have not been claimed as direct costs (for example, supplies can be charged directly to a program or activity as long as these costs are not part of the supply costs included in the indirect cost pool for central administration).

B. Audit: All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based will be compensated for in a subsequent negotiation.

C. Changes: The rate(s) contained in this agreement are based on the organizational structure and the accounting system in effect at the time the proposal was submitted. Changes in organizational structure, or changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rate(s) in this agreement, require the prior approval of the responsible negotiation agency. Failure to obtain such approval may result in subsequent audit disallowance.

D. Rate Type:

1. **Fixed Carryforward Rate:** The fixed carryforward rate is based on an estimate of the costs that will be incurred during the period for which the rate applies. When the actual costs for such period have been determined, an adjustment will be made to the rate for a future period, if necessary, to compensate for the difference between the costs used to establish the fixed rate and the actual costs.

2. **Provisional/Final Rate:** Within six (6) months after year end, a final indirect cost rate proposal must be submitted based on actual costs. Billings and charges to contracts and grants must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate is less than the provisional rate, the organization will be required to pay back the difference to the funding agency.

3. **Predetermined Rate:** A predetermined rate is an indirect cost rate applicable to a specified current or future period, usually the organization's fiscal year. The rate is based on an estimate of the costs to be incurred during the period. A predetermined rate is not subject to adjustment. (Because of legal constraints, predetermined rates are not permitted for Federal contracts; they may, however, be used for grants or cooperative agreements.)

4. **Rate Extension:** Only final and predetermined rates may be eligible for consideration of rate extensions. Requests for rate extensions of a current rate will be reviewed on a case-by-case basis. If an extension is granted, the non-Federal entity may not request a rate review until the extension period ends. In the last year of a rate extension period, the non-Federal entity must submit a new rate proposal for the next fiscal period.

E. Agency Notification: Copies of this document may be provided to other federal offices as a means of notifying them of the agreement contained herein.

F. Record Keeping: Organizations must maintain accounting records that demonstrate that each type of cost has been treated consistently either as a direct cost or an indirect cost. Records pertaining to the costs of program administration, such as salaries, travel, and related costs, should be kept on an annual basis.

G. Reimbursement Ceilings: Grantee/contractor program agreements providing for ceilings on indirect cost rates or reimbursement amounts are subject to the ceilings stipulated in the contract or grant agreements. If the ceiling rate is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.

H. Use of Other Rates: If any federal programs are reimbursing indirect costs to this grantee/contractor by a measure other than the approved rate(s) in this agreement, the grantee/contractor should credit such costs to the affected programs, and the approved rate(s) should be used to identify the maximum amount of indirect cost allocable to these programs.

I. Other:

1. The purpose of an indirect cost rate is to facilitate the allocation and billing of indirect costs. Approval of the indirect cost rate does not mean that an organization can recover more than the actual costs of a particular program or activity.

2. Programs received or initiated by the organization subsequent to the negotiation of this agreement are subject to the approved indirect cost rate(s) if the programs receive administrative support from the indirect cost pool. It should be noted that this could result in an adjustment to a future rate.

3. This Negotiation Agreement is entered into under the terms of an Interagency Agreement between the U.S. Department of the Interior and the cognizant agency. No presumption of federal cognizance over audits or indirect cost negotiations arises as a result of this Agreement.

4. Organizations that have previously established indirect cost rates—exclusive of the 10% *de minimis* rate—must submit a new indirect cost proposal to the cognizant agency for indirect costs within six (6) months after the close of each fiscal year.

Section III: Acceptance

Listed below are the signatures of acceptance for this agreement:

By the Nonprofit Organization:

By the Cognizant Federal Government Agency:

Ducks Unlimited, Inc.
Grantee/Contractor

U.S. Department of the Interior
Cognizant Agency

Earl H Grochan /s/

Mark W. Stout /s/

Signature
Earl H Grochan

Signature
Deborah A. Moberly

Name (Type or Print)

Name

CAO/CFO

Office Chief
Office of Indirect Cost Services

Title

Title
U.S. Department of the Interior

Date

Agency
Interior Business Center

10/25/16

Date
NOV 29 2016

Negotiated by Sujoy Mukhopadhyay
Telephone (916) 566-7009



April 19, 2017

U.S. Bureau of Reclamation

Re: Support for New Cache Irrigating Company WaterSMART Water Marketing Strategy Project

Dear Reclamation:

On behalf of the Northern Colorado Water Conservancy District (Northern Water) we support the New Cache Irrigating Company WaterSMART Water Marketing Strategy Project to develop an alternate water transfer framework utilizing the New Cache Company.

The Northern Colorado Front Range continues to grapple with the effects of rapid urban growth and land development on the region's agricultural heritage and economy. Water demands for municipal and industrial growth have had a significant impact on irrigated lands and are projected to continue to pose a threat to the operations and viability of agricultural operations. The Colorado Water Plan sets out an objective to restrict such negative impacts by promoting alternative water transfer frameworks, in which flexible water transfers allow for water to be maintained in irrigated agriculture instead of being permanently transferred off the land through buy and dry sales. A significant amount of research and analysis has already been done on alternative water transfer methods in Colorado, and what is needed more than anything is for ideas to be implemented. That is why this project is so important, because it comes at a critical time when water leaders are anxious to see if state policy goals can actually be achieved through voluntary, market-based water leases and sharing agreements.

The proposed project has the potential to make a significant impact on regional water perspectives. The New Cache ditch system is currently at risk from surrounding municipal growth pressures, but they have also developed unique water transfer tools through their augmentation plans and small reservoir storage. The New Cache system, and the project team, are well-positioned to execute long-standing ideas about flexible water markets in Northern Colorado.

Northern Water sees an immediate need for such water transfer tool both in the short-term and long-term. In the short-term, Northern Water is aware of entities that are part of Northern Integrated Supply Project (NISP) who are searching for "bridge" water to accommodate their growing communities while NISP is fully implemented. These entities all presently receive much of their water supply from Reclamation's Colorado-Big Thompson (C-BT) Project. Through creative and innovative exchanges within the Cache la Poudre River basin and the C-

U.S. Bureau of Reclamation

Page 2

April 19, 2017

Through creative and innovative exchanges within the Cache la Poudre River basin and the C-BT Project, water could be made available. Over the long-term, Northern Water recognizes that additional supplies will be required for the growing northern Colorado front range. Alternative transfer methods would provide a method to maintain a viable agricultural economy while providing water supplies to growing municipal needs.

Northern Water expresses support for the WaterSMART Water Marketing Strategy Grant project being proposed by the New Cache Irrigating Company, and encourages Reclamation to fund this important study.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric Wilkinson".

Eric Wilkinson, P.E.

General Manager

Northern Colorado Water Conservancy District

CC: Greg Kernohan, Ducks Unlimited, Inc.

eal



Utilities
electric · stormwater · wastewater · water
700 Wood Street
PO Box 580
Fort Collins, CO 80522
970.221.6700
970.221.6619 – fax
970.224.6003 – TDD
utilities@fcgov.com
fcgov.com/utilities

DATE: April 19, 2017
TO: U.S. Bureau of Reclamation
RE: **Support for New Cache Irrigating Company WaterSMART Water Marketing Strategy Project**

Dear Reclamation,

The Northern Colorado Front Range continues to grapple with the effects of rapid urban growth and land development on the region's agricultural heritage and economy. Water demands for municipal and industrial growth have had a significant impact on irrigated lands and are projected to continue to pose a threat to the operations and viability of agricultural operations. The Colorado Water Plan sets out an objective to restrict such negative impacts by promoting alternative water transfer frameworks, in which flexible water transfers allow for water to be maintained in irrigated agriculture instead of being permanently transferred off the land through buy and dry sales. A significant amount of research and analysis has already been done on alternative water transfer methods in Colorado, and what is needed more than anything is for ideas to be implemented. That is why this project is so important, because it comes at a critical time when water leaders are anxious to see if state policy goals can actually be achieved through voluntary, market-based water leases and sharing agreements.

The proposed project has the potential to make a significant impact on regional water perspectives. The New Cache Irrigating Company ditch system is currently at risk from surrounding municipal growth pressures, but they have also developed unique water transfer tools through their augmentation plans and small reservoir storage. The New Cache system and the project team are well-positioned to execute long-standing ideas about flexible water markets in Northern Colorado.

The City of Fort Collins recognizes the importance of preserving agriculture in the region while trying to meet future municipal water demands, as well as preserving environmental values of the Poudre River and other watersheds. The City has several policies related to these issues in Plan Fort Collins and the Water Supply and Demand Management Policy. Fort Collins has participated in several local efforts that have tried to address these types of issues, including participation in the Poudre Water Sharing Group and Poudre Runs Through It Study/Action Work Group. These groups have actively explored potential alternative transfer methods (ATMs) and ways to improve flows in the Poudre River.

The City of Fort Collins expresses support for the WaterSMART Water Marketing Strategy Grant project being proposed by the New Cache Irrigating Company, and encourages Reclamation to fund this important study. The City supports ATMs as a means of providing future water supplies in this region. Although Fort Collins Utilities would likely not benefit from this particular project for treated water needs (because of the downstream location of the New Cache diversion from the Utilities' treated water diversions), there are other water districts that will serve growing portions of the City that may benefit and there may be other opportunities for the City to explore from such a project.

Sincerely,

A handwritten signature in blue ink that reads "Donnie Dustin".

Donnie Dustin, P.E.
Water Resources Manager
City of Fort Collins Utilities



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

1313 Sherman Street, Room 718
Denver, CO 80203

April 18, 2017

To: U.S. Bureau of Reclamation

Re: Support for New Cache Irrigating Company WaterSMART Water Marketing Strategy Project

Dear Reclamation,

The agricultural heritage and economy of Colorado's Front Range has been strongly impacted by rapid urban growth and land development. This is especially true in the region surrounding Fort Collins. The need to supply growing municipal and industrial water demands has resulted in the purchase and transfer (or "buy-and-dry") of agricultural water rights which in turn reduces irrigated acreage and threatens the viability of remaining agricultural operations.

To address this issue, the Colorado Water Conservation Board (CWCB) has promoted alternative transfer mechanisms (ATMs) for many years with funding and policy support. ATMs seek to maintain ongoing production and agricultural ownership of water rights, while enabling flexible temporary leasing of water to other uses. As such, they can provide alternative supplies for municipal needs while preserving agriculture and providing agricultural producers with another source of income. Colorado's Water Plan sets forth a measurable objective of achieving 50,000 acre-feet of voluntary ATMs by 2030.

The CWCB has already funded a significant amount of research and analysis on ATMs, and now seeks to focus future funding on projects that put the findings into practice to deliver water. Therefore, the proposed New Cache Marketing Strategy Project is a timely effort to address state policy goals through voluntary, market-based water leases and sharing agreements. The proposed project has the potential to make a significant impact at a local level while providing a good example for further regional implementation. To address the risk from the pressure of municipal growth, the New Cache ditch system has already developed unique water transfer tools through their augmentation plans and small reservoir storage. Given this experience, the New Cache system, and the project team, are well-positioned to execute a functional, flexible water market in Northern Colorado.

The CWCB expresses support for the WaterSMART Water Marketing Strategy Grant project being proposed by the New Cache Irrigating Company, and encourages Reclamation to fund this important study.

Sincerely,

Greg Johnson
Program Manager





Colorado Water Institute
1033 Campus Delivery
Fort Collins, Colorado 80523-1033

April 14, 2017

To: U.S. Bureau of Reclamation
Re: **Support for New Cache Irrigating Company's WaterSMART
Water Marketing Strategy Project**

Dear Reclamation,

Urban growth on the northern Front Range of Colorado is increasing demand for water—and the target for acquiring that water is agriculture, posing a threat to the operations and viability of agricultural operations.

The Colorado Water Plan sets out an objective to restrict such negative impacts by promoting alternative water transfer frameworks, in which flexible water transfers allow for water to be maintained in irrigated agriculture instead of being permanently transferred off the land through buy and dry sales.

A significant amount of research and analysis has already been done on alternative water transfer methods in Colorado. What is needed now is for ideas researched to be implemented. The proposed project comes at a critical time when water leaders are anxious to see if state policy goals can actually be achieved through voluntary, market-based water leases and sharing agreements. This project has the potential to make a significant impact on regional water perspectives.

The New Cache ditch system is currently at risk from surrounding municipal growth pressures, but they have also developed unique water transfer tools through their augmentation plans and small reservoir storage. The New Cache system, and the project team, are well-positioned to execute long-standing ideas about flexible water markets in Northern Colorado.

We here at CSU's Colorado Water Institute are actively involved in research, education, and outreach regarding alternative Ag water transfer methods to increase Ag security over the long haul. Our projects on this topic in the Colorado River Basin, throughout Colorado, and here in the Poudre basin have been funded by the USDA and private foundations, with the intent to support agricultural producers and their water providing organizations as they strategize how to address the challenge to their water in creative ways that can meet multiple objectives.

One of our projects, funded by the Colorado Water Conservation Board, convened and facilitated municipal and agricultural water stakeholders to strategize how water sharing might occur on the Poudre River and to identify related obstacles/opportunities. New Cache Irrigating Company was one of the instrumental stakeholders in that work.

We would like to register our whole-hearted support for the WaterSMART Water Marketing Strategy Grant project being proposed by the New Cache Irrigating Company. We encourage Reclamation to fund this important study.

Sincerely,

A handwritten signature in cursive script that reads "Reagan Waskom".

Reagan Waskom, Director

A handwritten signature in cursive script that reads "MaryLou Smith".

MaryLou Smith, Policy and Collaboration Specialist