

Colorado Water Conservation Board

Water Plan Grant Application

Instructions

To receive funding for a Water Plan Grant, applicant must demonstrate how the project, activity, or process (collectively referred to as "project") funded by the CWCB will help meet the measurable objectives and critical actions in the Water Plan. Grant guidelines are available on the CWCB website.

If you have questions, please contact CWCB at (303) 866-3441 or email the following staff to assist you with applications in the following areas:

Supply and Demand Gap Projects Water Storage Projects Conservation, Land Use Planning Engagement & Innovation Activities Agricultural Projects Environmental & Recreation Projects Gregory.Johnson@state.co.us Anna.Mauss@state.co.us Kevin.Reidy@state.co.us Mara.MacKillop@state.co.us Brent.Newman@state.co.us Linda.Bassi@state.co.us

Applicants interested in submitting an 'Intent to Apply' in the future are encouraged to check here and fill in all sections with the best information available at the time. Exhibits may be excluded.

This "Intent to Apply" will help CWCB prioritize Projects that are not ready for fully completed Water Plan Grant Application due to the initial timeframe and required deadlines.

FINAL SUBMISSION: Submit all application materials to <u>waterplan.grants@state.co.us</u> in the original file formats [Application (word); Statement of Work (word); Budget/Schedule (excel)]. Please do not combine documents.

Water Project Summary					
Name of Applicant	The Meadows	Neighborhood Company			
Name of Water Project		grated Irrigation Efficiency Improvements and and Turf Conversion for Reduced Water Use			
CWP Grant Request Amount	•	\$66,700			
Other Funding Sources Town of C	Castle Rock	\$4,000			
Other Funding Sources Irrigation	Analysis	\$5,800			
Other Funding Sources MNC in K	lind	\$9,450			
Applicant Funding Contribution		\$76,850			
Total Project Cost		\$162,800			



Applicant & Grantee Information					
Name of Grantee(s)	The Meadows Neighborhood Company				
Mailing Address	3570 Celestial Avenue, Castle Rock, CO 80109				
FEIN	84-1531190				
Organization Contact	Michele Ray-Brethower				
Position/Title	Executive Director				
Email	mray-brethower@meadowslink.com				
Phone	303-814-3952				
Grant Management Contact	Bob Howey				
Position/Title	Principal				
Email	bhowey@irrigationanalysis.com				
Phone	303-792-1952				
Name of Applicant (if different than grantee)	- same -				
Mailing Address					
Position/Title					
Email					
Phone					

Description of Grantee/Applicant

Provide a brief description of the grantee's organization (100 words or less).

The Meadows Neighborhood Company is a 4,000-acre, large-scale master planned community located 30 miles from both Denver and Colorado Springs. The community is zoned for 10,869 single-family and multi-family homes, and offers municipal type services such as trash services, snow removal, common area maintenance, open space and streetscape landscaping, parks and tot lots, as well as recreational opportunities for residents, with two community centers with swimming pools within the association. The Meadows has more than 1,100 acres of planned public land and open space dedicated to parks, trails and schools.



	Type of Eligible Entity (check one)					
	Public (Government): Municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.					
	Public (Districts): Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises.					
Х	Private Incorporated: Mutual ditch companies, homeowner's associations, corporations.					
	Private Individuals, Partnerships, and Sole Proprietors: Private parties may be eligible for funding.					
	Non-governmental organizations (NGO): Organization that is not part of the government and is non-profit in nature.					
	Covered Entity: As defined in Section 37-60-126 Colorado Revised Statutes.					

Type of Water Project (check all that apply)				
Х	Study			
Х	Construction (implementation of efficient products)			
	Identified Projects and Processes (IPP)			
	Other			

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



COLORADO Colorado Water Conservation Board Department of Natural Resources

Last Updated: July 2017

	Other	Explain:
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Location of Water Project Please provide the general county and coordinates of the proposed project below in decimal degrees. The Applicant shall also provide, in Exhibit C, a site map if applicable. County/Counties Douglas County Latitude 39.4 Longitude 104.9

Water Project Overview

Please provide a summary of the proposed water project (200 words or less). Include a description of the project and what the CWP Grant funding will be used for specifically (e.g., studies, permitting process, construction). Provide a description of the water supply source to be utilized or the water body affected by the project, where applicable. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, and area of habitat improvements, where applicable. If this project addresses multiple purposes or spans multiple basins, please explain.

The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.

The intent is to significantly reduce the annual water consumption of MNC, one of the largest water users in the Town of Castle Rock. This efficiency and conservation project directly impacts the Town of Castle Rocks' domestic, potable water supply and targets five larger, high use water meters and targeted areas of high water use landscaping. This projects' integrated water savings approach will identify and correct landscape irrigation inefficiencies to reduce water use by a minimum of 20%. This will be accomplished through a combined integration of often disparate, but essential irrigation aspects: first evaluating and documenting the system efficiency issues, implementing the necessary efficiency repairs and upgrading to higher efficiency products as needed, and then to optimize the ongoing water use with improved system management and oversight. The conversion of turfgrass to lower water use plant materials in targeted areas is also included as part of this program to reduce MNC's water need and use significantly.

Measurable Results					
To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:					
New Storage Created (acre-feet)					
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive				
	Existing Storage Preserved or Enhanced (acre-feet)				



Measurable Results						
	Length of Stream Restored or Protected (linear feet)					
7.13 Acre-feet	Efficiency Savings (indicate acre-feet/year OR dollars/year)					
	Area of Restored or Preserved Habitat (acres)					
	Quantity of Water Shared through Alternative Transfer Mechanisms					
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning					
20,000~55,000	Number of Coloradans Impacted by Engagement Activity					
	Other	Explain:				

Water Project Justification

Provide a description of how this water project supports the goals of <u>Colorado's Water Plan</u>, the most recent <u>Statewide Water Supply Initiative</u>, and the applicable Roundtable <u>Basin Implementation Plan</u> and <u>Education Action Plan</u>. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).

The proposed water project shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan Framework for State of Colorado Support for a Water Project (CWP, Section 9.4, pp. 9-43 to 9-44;)

This Grant request addresses the CWP values of an efficient and effective water infrastructure (at the end user level in this case) and the critical goal to increase Municipal Conservation and Efficiency. This Grant request encompasses an integrated and comprehensive approach for improved irrigation efficiency and reduced water use with measurable and expected water savings. The Grant also intends to provide education and outreach in sharing of the results and findings with water providers and the greater Colorado landscape community

Additionally, This MNC integrated Irrigation Efficiency and Turf Conversion Project grant request to CWCB falls within the Municipal and Industrial - Conservation and Reuse as well as the Education and Outreach priorities within keeping with Plan Element #2 of the SP-BIP to maintain leadership in Conservation and Reuse and implement additional measures to reduce water consumption rates. This project should serve to refine and normalize projected water conservation savings through both passive and active savings. There will be a final report with the documentation of the project water savings results and other projects findings provided to the primary as well as other interested parties. There is also an intention to provide education and outreach to the Meadows and Castle Rock communities and specifically within the greater Colorado landscape industry through the Associated Landscape Contractors of Colorado (ALCC) as well as other possible interested venues and avenues.

Similar to and as mentioned above in the MRT Priorities, this grant will serve to fulfill: Plan Element #2 Maintain leadership in conservation and re-use as well as #9 Utilize effective communications and outreach to the local and regional water providers, larger water users, and the landscaping industry.



Related Studies

Please provide a list of any related studies, including if the water project is complementary to or assists in the implementation of other CWCB programs. None at this time

Previous CWCB Grants, Loans or Other Funding

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order; 6) Percentage of other CWCB funding for your overall project. None prior by Grantee/Applicant

Taxpayer Bill of Rights

The Taxpayer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect your application.

None



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Submittal Checklist

I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.				
Exhibit A				
Statement of Work ⁽¹⁾				
Budget & Schedule ⁽¹⁾				
Letters of Matching and/or Pending 3 rd Party Commitments ⁽¹⁾				
xhibit C				
Map (if applicable) ⁽¹⁾				
Photos/Drawings/Reports				
Letters of Support (Support letter from Basin Roundtable encouraged)				
Certificate of Insurance (General, Auto, & Workers' Comp.) ⁽²⁾				
Certificate of Good Standing with Colorado Secretary of State ⁽²⁾				
W-9 ⁽²⁾				
Independent Contractor Form ⁽²⁾ (If applicant is individual, not company/organization)				
Engagement & Innovation Grant Applicants ONLY				
Engagement & Innovation Supplemental Application ⁽¹⁾				

(1) Required with application.

(2) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.



Colorado Water Conservation Board

Water Plan Grant - Exhibit A

	Statement Of Work
Date:	February 01, 2018
Name of Applicant:	The Meadows Neighborhood Company
Name of Water Project:	Targeted, Integrated Irrigation Efficiency Improvements and Management and Turf Conversion for Reduced Water Use
Funding Source:	Collaboration of Private funds and Grant funds
	ease provide a summary of the proposed water project (200 words or less). sed from Page 5 of the CWP Grant Application.
consumption of MNC, one inefficient landscape irrigat plan to reduce water use by integration of often dispara issues, implementing the n products as needed, and th system management and of materials in targeted areas of this program. To be of va possible, the project inform	rs of 2" size or larger. The intent is to reduce the annual water of the largest water users in the Town of Castle Rock, by identifying ion issues and creating and implementing a cohesive, cost effective y a minimum of 20%. This will be accomplished through a combined te aspects: first evaluating and documenting the system efficiency ecessary efficiency repairs and upgrading to higher efficiency nen to improve on and optimize the ongoing water use with improved oversight. The conversion of turfgrass to lower water use plant to reduce the overall water use significantly is also included as part alue to as many interested Colorado stakeholders and parties as nation, water savings results and analysis' will be shared via a as reports and a final project report as well as through planned
Objectives: List the objectiv	es of the project.
7.13 acre feet annually	ter use in the Meadows Neighborhood HOA by a minimum of 20% or y in targeted neighborhoods. cessible data confirming methodology for reducing outdoor water use.



Tasks

Provide a detailed description of each project task using the following format:

Task 1 - [Name] Efficiency Evaluation Audit and Implementation

Description of Task:

Task 1 includes a detailed efficiency evaluation audit of up to 250 stations/zones and data collection for recommended efficiency upgrades and implementation. The installation of flow sensors and master valves will be provided for five individual meters.

Method/Procedure:

- Provide a detailed Efficiency Evaluation Report for each controller.
- Identify and communicate any deferred, pre-existing repairs
- Installation of flow sensors and master valves at five meter locations
- Identifying and repair/replace lateral line leaks and broken heads
- Identifying sprinkler head and nozzle types.
- Identifying plant materials type for each zone
- Retrofitting all traditional spray nozzles to new High Efficiency nozzles
- Install pressure regulation if/as necessary
- Raising existing heads to proper grade
- Track and quantify water usage and savings before and after implementation

Grantee Deliverable: Describe the deliverable the grantee expects from this task

The Grantee will receive a more efficient operating irrigation system resulting in significant water savings

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

The Grantee will provide documentation of water use history prior the efficiency upgrade implementation, and comparison with post installation water use indicating the water use reduction.



Tasks

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

Task 2 – Remote System Monitoring and Water Management

Description of Task:

This Task includes regular, frequent management and oversight of the irrigation schedule programming, and 2) ongoing remote monitoring of any systems alarms and alerts and communication with the company that is already responsible for managing and maintaining the system.

Method/Procedure:

Provide: 1) regular, frequent management and oversight of the irrigation schedule programming, and 2) ongoing remote monitoring of any systems alarms and alerts and communication with the company that is already responsible for managing and maintaining the system. The oversight management of the programming includes: a one time scheduling review and modifications of the defined controller station data, verification of zone type and specifics related to the run times of the zones for each irrigation station/zone, based on data collected in Task 1, the weekly review of the irrigation schedule and making adjustments based on weather conditions for each non-smart, traditional controller.

Grantee Deliverable: Describe the deliverable the grantee expects from this task

The deliverables for Task #2 include:

- Daily review of smart controller status and alerts with response, as needed.
- Initial review and programming of six targeted controllers
- Weekly scheduling review of controllers
- Bi-weekly site review and verification of targeted areas
- Tracking of water use, a minimum of twice monthly during the season
- Co-Management with the Landscape Maintenance Company for a cohesive Management plan

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

The CWCB will receive periodic qualitative reports indicating what successes and/or obstacles were encountered during the Remote System Management and the responses that were administered to enhance and achieve the targeted water savings.



Tasks

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

Task 3 – Turf Conversion Program

Description of Task:

In this task, the MNC will define approximately 50,000 square feet of high water use turf for conversion to low water use native grass or to mulched low water use shrub beds. We are currently figuring on 50% (25,000 sq.ft. of each - native and mulched shrub area). These targeted turf conversion areas are expected to be in both high profile, high visibility areas as well as in lesser used or seen areas, though the final areas will be selected by MNC. The irrigation systems in these areas will be retrofitted for the new mulch and shrub landscaping and will likely be completely shut off to the native grass areas following establishment (or possibly sooner)

Method/Procedure:

MNC and Irrigation Analysis, in coordination with the Town of Castle Rock, will create a method and specification detail for the proper replacement and/or conversion of turfgrass. The contractor for the turf conversion will be educated and informed on the proper and expected methods per the approved plans and the Town of Castle Rock Standards.

Grantee Deliverable: Describe the deliverable the grantee expects from this task

The deliverables for Task #3 include:

- Provide Design templates for typical areas of shrub beds and native grass areas
- Confirm approved methods for Turf Conversion with the Town of Castle Rock
- Project Management and Inspections of Turf and Irrigation Conversion Work
- Public outreach, communication, and explanation of the plan and program for Turf Conversion to the residents of MNC and the Town of Castle Rock.

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

The CWCB will receive supporting documentation regarding the water savings from the turf conversion program, describing the type of conversion (to native seeded areas or shrub beds with rock mulch) and comparison to historical use.



Tasks

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

Task 4 – Quantitative Water Use Reduction Reporting

Description of Task:

- Gather the current water allocation and prior water usage information for each targeted MNC irrigation meter and turf reduction areas.
- Track and document current water usage for all of the targeted work areas: Highest Usage Meters and Turf Reduction areas.
- Prepare comparison charts for analysis of water
- Project Updates twice per season, i.e. mid season and end of season-TBD. Report on the Project with data, analysis, findings, and comments in each of the five (5) targeted, high use meters and meters with turf reductions.
- Provide a Final Project Report with cumulative project data, reporting, and analysis

Method/Procedure:

Create a water use tracking mechanism and input water use data as it is collected monthly as provided by the MNC and the Town of Castle Rock.

Grantee Deliverable: Describe the deliverable the grantee expects from this task

Task 4's deliverable for the Grantee includes improved areas of landscape with significantly reduced water use and documentation regarding the cost per square foot of converted turf along with water savings.

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

The deliverable for the CWCB includes water meter data collection and reporting. The MNC anticipates that this task will include one project update in 2018, two project updates in 2019, and one project update in 2020 with a Final Project report to be completed by December 31, 2020.



Budget and Schedule

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

Reporting Requirements

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

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

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

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

The Meadows 2018 Irrigation Efficiency Evaluation/Upgrade and Turf Reduction Grant Request Table 1 Task 1 - Efficiency Evaluation Audit and Implementation in Targerted Areas

Line	T	Grantee/MNC			Grantee/MNC In-		T000/ 1/2 1	
Item Description of Task Provide Efficiency Evaluation Audits for 6 controllers on 5 meters and up to	Total	Funds	Request	Funds	Kind*	IA In-Kind	TOCR/In-Kind	Project Totals
1.1 250 total stations/zones	\$6,375.00)						
1.2 Prepare report and action plan from audit results	\$2,250.00							
1.3 Review historical water use data and compile into comparison charts	\$1,500.00							
 1.4 Implementation-Efficiency Upgrades (projected upgrade work per zone) 1.5 Inspections & Management of Efficiency Upgrades 	\$41,750.00 \$1,800.00							
1.6 Install new master valve and flow sensors on all 5 existing meters	\$6,750.00							
1.7 Install new master valve and flow sensors on all 5 existing meters - wireless								
Task 1 Tota	I \$70,775.00) \$32,000.00	\$27,200.00	\$2,000.00	\$3,775.00	\$4,300.00	\$1,500.00	\$70,775.00
Task 2 - Water Management and Remote Monitoring: 6 controllers - 26	weeks for Targe		. ,	. ,	. ,	. ,	. ,	. ,
Line								
Item Description of Task	\$075 0							
2.1 Initial Programming Review 2.2 Daily Alert Monitoring & Communication with Contractor(May to Oct)180x	\$675.00 \$3,375.00							
2.3 Weekly Programming Oversight & Communication with Contractor (May to Cct) 100X								
2.4 Every Other Week Site Visits - Visual Inspections (May to Oct)	\$1,950.00							
Task 2 Tota		¢2 450 00	¢2 000 00		\$500.00	¢500.00	\$500.00	¢7.050.00
Task 3 - Targeted Turf Conversion Program (+/- 50,000 sq.ft.)	I \$7,950.00	\$3,450.00	\$3,000.00		\$500.00	\$500.00	\$500.00	\$7,950.00
Line								
Item Description of Task								
3.1 Design: Templates (4-5) for Repeatable Shrub Beds & Native Area	\$6,000.00							
3.2 Spray out existing turf - 2x, leave sod in place	\$5,000.00)						
Turf conversion: Rock/Shrub/Irrigation for 50% and Native turf 50% of area 3.3 Installation of typical rock mulch with weed barrier and prep edges	\$27,500.00	`						
3.4 Installation of shrubs - #5 deciduous, 1 per 100 sq.ft. in rock areas	\$13,750.00							
3.5 Modification of irrigation for shrubs/drip	\$12,500.00							
3.6 Installation of native seed mix - drill seed or hydroseed, ltd. sod removal	\$5,000.00)						
3.7 Inspections & Management of Turf Conversion: Design/RFP/Project	\$5,550.00)						
Task 3 Tota	I \$75,300.00	\$37,400.00	\$33,000.00		\$4,400.00	\$500.00		\$75,300.00
Task 4 - Monitoring, Data Collection, Reporting, and Outreach - 2 Yr								
Line Item Description of Task								
4.1 Tasks-Water use data collection, tracking&update comparison charts-2Yrs	\$2,700.00)						
4.2 Tasks-Efficiency Upgrade Reporting, 4x = twice yearly + Final Report	\$3,150.00							
4.3 Tasks- Outreach - 4 Presentations/Publication - Powerpoint	\$2,925.00)						
Task 4 Tota	I \$8,775.00	\$4,000.00	\$3,500.00		\$775.00	\$500.00		\$8,775.00
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							\$162,800.00	
		Grantee/MNC	CWCB	•	Cost Summary Grantee/MNCIn-			Total Project
		Funds	Request	Funds	Kind*	IA In-Kind	TOCR/In-Kind	Cost
Task 1 Totals	\$70,775.00		\$27,200.00	\$2,000.00			\$1,500.00	
Task 2 Totals					\$500.00		\$500.00	
Task 3 Totals			\$33,000.00		\$4,400.00			\$75,300.00
Task 4 Totals Combined Tasks 1-4 Totals	+ - /	. ,	\$3,500.00 \$66,700.00	\$2,000.00	\$775.00 \$9,450.00		\$2,000.00	\$8,775.00 \$162,800.00
	φτο2,000.00	στ0,000.00			reduced maintenan		. ,	. ,

*inc. \$4,400/yr (for 1 year) reduced maintenance, does not include reduced water cost savings *inc. \$5,050 of direct project related admin/mgmt support and time





Information depicted is conceptual only and subject to change

COMMUNITY PLAN

Not To Scale

