COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Efficiency Grant Fund
Grant Application

Instructions

All WEGF grant applications shall conform to Grant Guidelines. Please do not recycle previously used applications; download a current version directly from CWCB.

If you have questions, please contact CWCB staff:

Ben Wade
Ben.wade@state.co.us
303-866-3441 ext 3238

WEGF Submittal Checklist (Required)

X	I acknowledge I have read and understand the WEGF Criteria and Guidelines.
Attachments	
X	Scope of Work(1) *(Word – see Template)*
X	Budget & Schedule(1) *(Excel Spreadsheet – see Template)*
N/A	Letters of Support (For Public Education/Outreach Grants)
Contracting Documents (For Public Education/Outreach Grants)	
	W-9(2)
	Certificate of Insurance (2) (General, Auto, & Workers' Comp.)

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

Water Efficiency Project Summary

Name of Applicant	City of Westminster
Name of Grant Project	Residential Water Meter Replacement – Installation Phase
WEGF Grant Request Total	$49,500
In-Kind Match	$0
Cash Match	$2,083,665
Total Project Costs *(grant funded phase)*	$2,133,165 – Meter Installation Phase

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1. Applicant Information	
Name of Applicant	City of Westminster
Mailing Address	4800 West 92nd Avenue Westminster CO 80031
Applicant's Organization Contact(1)	Brad Bettale
Position/Title	Meter Department Foreman / Project Manager
Email	bbettale@cityofwestminster.us
Phone	303-658-2594
Grant Management Contact(2)	Brad Bettale
Position/Title	Meter Department Foreman / Project Manager
Email	bbettale@cityofwestminster.us
Phone	303-658-2594
Name of Consultant (if applicable)	J & T Consulting / Nicole Cantrell
Mailing Address	305 Denver Ave – Suite D, Fort Lupton, CO 80621
Position/Title	Consultant
Email	Nicolecantrell@j-tconsulting.com
Phone	303-857-6222

(1) Person with signatory authority
(2) Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.

2. Organizations & Individuals Assisting on the Project

A list of the organizations and/or individuals including those hired or otherwise retained by the entity that will assist in the project, and a written statement of their role and contributions

Project Manager - Brad Bettale
Mr. Bettale, Meter Department Foreman, is responsible for presiding over the project, making certain that the project is running according to schedule and within budget. He will also be involved in field supervision, assisting with installation questions or issues.

Grant Contact – Brad Bettale
Mr. Bettale will also serve as The City of Westminster's billing administrator and grant management point of contact for this project.

Contractor – Utility Metering Solutions (UMS)
UMS is a national installer and integrator of Sensus Advanced Metering Infrastructure, which is the equipment that will be installed in this project. The UMS bid package was selected through a competitive bid process and is inclusive of the installation of new meters, transmitters, and parts associated with the meters, which also includes the needed networking infrastructure.

Project Management and Construction Services - J & T Consulting
Project management and construction services will be provided by J & T Consulting. This firm has been significantly involved in the research and bid process for this project, giving it a clear understanding of the approved UMS contract and the city's expectations of UMS.

Type of Eligible Entity (check one)	
X	**Covered Entity:** as defined in Section 37-60-126 Colorado Revised Statutes
	Non-covered Entity/ State or Local Governmental Entity
	Public or Private Agency: entity whose primary purpose includes the promotion of water resource conservation. Please disclose your organizational structure and charter (or equivalent)

	Type of Project (check one)
	Drought Management Plan
	Drought Management Implementation
	Water Efficiency Plan
X	Water Efficiency Implementation
	Public Education & Outreach

Location of Entity	
Please provide the county and applicants (if needed) location identified by the Colorado Water Plan Technical Analysis (formerly known as SWSI)	
Basin	South Platte Basin

3. Retail Water Delivery over Past 5 Years

Please identify retail water delivery by the entity for each of the past five years (in acre feet) and additional information characterizing past water use by sector (e.g., residential, commercial, industrial, irrigation) and source (e.g., surface water, groundwater, etc.).

Metered water demand in acre-feet by sector, all surface water sourced (Standley Lake):

Category	2014	2015	2016	2017	2018
Residential	11,034	11,031	11,675	11,272	11,733
Commercial	1,905	1,888	1,907	1,916	2,016
Industrial	33	17	16	17	24
Wholesale	1,277	1,478	1,397	1,433	1,448
Municipal/Public	443	472	495	490	565
Potable Irrigation	1,781	1,636	1,854	1,680	1,968
Reclaimed Irrigation	1,524	1,539	1,820	1,611	1,829
Total	17,996	18,061	19,164	18,419	19,583

4. Projections of Future Annual Retail Demand

A reasonable estimate must be submitted with detailed projections of future annual retail demand for the next five years based on predicted population (provide source of data), building permits, expected new taps, and/or some other credible information

The City is currently adjusting its future demand projections based upon land use categories in a soon-to-be-updated comprehensive plan, however, that information is not available at this time. Based on projected population growth (from existing comprehensive plan) and an observed declining trend in per capita water use, total metered demand in acre-feet for the next five years may be:

2020	2021	2022	2023	2024
19,579	19,567	19,555	19,542	19,530

5a. Background Characterizing the Water System

Current and past system wide and single family residential per capita water use for the last five years, and the basis for those calculations.

Per capita water use based upon metered water demand and service area population (not weather-adjusted):

	2014	2015	2016	2017	2018
System-wide	124	123	130	125	132
Residential	76	75	79	76	79

5b. Potential Growth – Population

Provide population for the past five years, current year and 10 year population projection served by the entity and the source of this information

Historical Westminster population, plus Federal Heights, Shaw Heights, and unincorporated Jefferson County properties served by the city's utilities, from US Census. Population projection assumes straight-line average of current population to buildout population in current comprehensive plan.

2014	2015	2016	2017	2018	2019		2029
129,707	130,775	131,678	131,771	132,483	133,501		143,688

5c. Estimated Water Savings Goals

Estimate water savings goals to be achieved through implementation of the Plan in acre feet and as a percentage.

Westminster's complete water efficiency program is projected to reduce use by ~2,000 AF between 2019 and 2035, a 9.0% reduction in total water demands. Transitioning to AMI will support this reduction by creating a more direct price signal for customers between actual and billed use (due to increases in meter accuracy), and the launching of a customer water use online data portal for educational purposes.

5c. Estimated Water Savings Goals - Monitoring

Indicate how the activities will be monitored to estimate actual water savings during Project implementation (Implementation & Public Education/Outreach Projects)

Billed water demand is tracked for every account on a monthly basis. Post AMI installation, the City will adjust actual demand to account for the impacts of weather and broader water efficiency efforts to isolate the water savings impact of the new meters in particular.

Our AMI vendor estimates an average 3%-6% increase in water usage on each customer meter due to improved accuracy.

Drought Impacts (Drought Management Planning Grants Only)

Description of the impacts experienced by the covered entity, or state or local governmental entity, during the 2000-2003, 2012-2014 & 2018 droughts including a breakdown by water use sector (e.g. municipal, commercial, industrial, irrigation, etc.) of those adverse impacts and steps taken to address drought impacts to date. Include short term and long term impacts, as well as social and economic impacts where applicable and as feasible.

Not Applicable for this Water Efficiency Grant Fund Application

5d. Adequacy, Stability, and Reliability

Explain the adequacy, stability, and reliability of the entity's water system and provide the entities location with respect to areas of current and future water needs as identified by the Statewide Water Supply Initiative (SWSI).

The City currently owns and operates a water supply system centered on Standley Lake. Standley Lake receives water from a number of different sources including irrigation ditches that divert water from Clear Creek near Golden, water from Coal Creek, and water from Denver Water that is delivered from the West Slope through Denver's system into the City's water supply. The City's raw water system is designed to meet the full demand of the City in a drought equal to the most severe recorded drought that occurred during the years 1953 through 1956. This drought is estimated to have a recurrence interval of 75 - 100 years.

It is anticipated that at buildout, 87% of the City's water supply will come from the South Platte River Basin which has been identified as water short in the Statewide Water Supply Initiative (SWSI) recommendations and findings. *(Water Conservation Plan 4.4.13)*

Outreach Goals & Efforts

Identify the groups, individuals, organizations and/or institutions that will be included within the education and outreach efforts to be proposed as the Project.

Identify the specific goals of the Project (e.g., identify target audience(s) to reach, policy changes, outcomes of educational efforts, etc.) with respect to promoting the benefits of water resource conservation and water efficiency through education and outreach activities. Make note of how the goals of the Project tie to the mission and objectives of the CWCB and its programs (Colorado Water Plan/Basin Implementation Plans), as appropriate.

Identify in detail the specific activities and tasks to be funded with the Water Efficiency Grant Program monies, including all meetings, workshops, fairs, printings, mailings and all other tasks and activities that will be used to promote the benefits of water resource conservation and water efficiency.

The City's objectives for this project are to increase the accuracy of low-flow water meters to better capture water use and improve the data collection and analysis process. The AMI system can collect data more frequently and efficiently than the current system, putting more emphasis on data analysis. This captured data can be used to determine the actual demand, help with projected supply planning and water resource management, and improve budgeting, leading to water savings. The project will also allow Westminster water customers to monitor their water use in real time and increase water savings.

Specific goals of the project are:

1) Determine the low-flow accuracy of the new meters
2) Update and improve the infrastructure maintenance programs
3) Provide a water consumption data analysis program
4) Improve billing and rate structures
5) More effectively project water demand and related revenues
6) Make water management easier and more efficient for customers
7) Reach larger groups to increase customer education and involvement in consumption
8) Improve leak detection accuracy and efficiency
9) Reduce excessive irrigation
10) Promote sustainable use of water
11) Review improved system and potential application for other water utilities in Colorado
12) Provide information to other water utilities, providers, and CWCB

With a more responsive metering system and access to a customer portal, it will be easier for residents to track their own use and see a more accurate representation of their water conservation efforts.

This project will reach larger groups than typical outreach activities, and will continue on an on-going basis. Water customers of the City of Westminster will have access to the following capabilities through the customer portal:

- Compare residential water use to similar residences
- Track monthly water consumption and billing
- Set monthly use or budget goals with auto-generated email notifications if they are trending toward that goal
- Auto-generated emails to warn the user if they might be over-irrigating, if there is a potential leak, or if other issue detected

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Scope of Work - Water Efficiency Grant Project

Identify in detail the specific activities and tasks to be funded with the Water Efficiency Grant Program monies, including all meetings, workshops, fairs, printings, mailings and all other tasks and activities that will be used to promote the benefits of water resource conservation and water efficiency. A detailed Scope of Work has been provided on the Water Efficiency Grant Fund Scope of Work Form, but is briefly detailed below.

The City's hopes this Scope of Work will allow it to increase the nature and breadth of water conservation locally while meeting the City's goals and Objectives of the project which will have the following benefits for the City of Westminster:

- Reducing wastewater discharges through indoor water savings, which will improve water quality and aquatic habitat
- Reduce outdoor irrigation runoff due to over irrigation which can improve Westminster's water quality
- Reaffirm the City's commitment to water sustainability and conservation
- Demonstrate leadership within the community in terms of water sustainability

This project is a continuation of conservation efforts undertaken in 2013 with the creation and implementation of the City of Westminster's Water Conservation Plan.

The attached Scope of Work outlines the installation phase of this Meter Project, which is the only portion of the project for which Grant funding is being solicited.

Signature of an individual with the authority to commit the resources of the entity seeking Water Efficiency Grant program monies.

Name/Title Date

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Scope of Work - Water Efficiency Grant Project

Identify in detail the specific activities and tasks to be funded with the Water Efficiency Grant Program monies, including all meetings, workshops, fairs, printings, mailings and all other tasks and activities that will be used to promote the benefits of water resource conservation and water efficiency. A detailed Scope of Work has been provided on the Water Efficiency Grant Fund Scope of Work Form, but is briefly detailed below.

The City's hopes this Scope of Work will allow it to increase the nature and breadth of water conservation locally while meeting the City's goals and Objectives of the project which will have the following benefits for the City of Westminster:

- Reducing wastewater discharges through indoor water savings, which will improve water quality and aquatic habitat
- Reduce outdoor irrigation runoff due to over irrigation which can improve Westminster's water quality
- Reaffirm the City's commitment to water sustainability and conservation
- Demonstrate leadership within the community in terms of water sustainability

This project is a continuation of conservation efforts undertaken in 2013 with the creation and implementation of the City of Westminster's Water Conservation Plan.

The attached Scope of Work outlines the second phase of this Meter Project, which is the only portion of the project for which Grant funding is being solicited.

Signature of an individual with the authority to commit the resources of the entity seeking Water Efficiency Grant program monies.

Name/Title

12/30/19
Date

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Water Efficiency Grant Fund	
Scope of Work	
Date:	**12/30/2019**
Project Name:	**Westminster Residential Water Meter Replacement – Meter Installation phase**
Grant Applicant:	**City of Westminster**

The scope of work shall state the purpose and primary features of the project, end products to be delivered, clear timelines and provide a detailed narrative of all tasks to be performed for completion of plan. (Timelines must include 50 and 75% progress reports and final plan submission dates.) Each task within the scope of work must:

- Be numbered
- Contain a detailed description of work to be performed
- Identify those responsible for performing the task
- Identify funding sources, such as; grant monies, entity funds, in-kind services, and cash contributions, necessary to complete the task.
- Include estimated dates for progress reports and the final report.

Project Scope of Work Statement:

The purpose of this project is to purchase and install 30,500 residential water meters and an AMI system, which will become the primary water demand management tools for the City of Westminster, replacing outdated water metering mechanisms currently in place. The AMI system will collect the meter data and transmit the data wirelessly to one or more data collection units (DCU). The AMI system will collect all consumption data for the residents in the City of Westminster and will provide two-way communication from the host computer to the DCU and installed meter transceivers.

The customer portal and AMI system will provide a web-based water demand management and customer communications system, allowing the City to share the information with customers, and allowing customers to reduce their consumption and water waste through access to water use data. The data will also be used to improve processes, update water use policies, inform engineering design, and to improve the projected customer usage and characteristics.

The grant funded portion of the project will assist in the installation phase of the Westminster Water Meter project. Initial phases consisted of equipment purchase including all meters and additional equipment (lids, yokes, etc), the purchase and installation of 4 antenna towers, software and IT integration, project planning, filed testing and a soft installation of 1200 meters to verify software integration prior to February 2020.

The installation phase includes the bulk of meter installation and activation (approx. 29,300 meters).

Grant Project Budget

The installation phase is estimated at a cost of $2,133,165.

The City of Westminster is requesting a grant in the amount of $48,500, which is 2% of the installation phase projected costs. The grant would aid in the installation of 29,300 meters the AMI system. The City of Westminster will contribute the remainder of the project budget, totaling $2,083,665 for the grant funded portion of the meter installation project.

The total Westminster Meter Project cost is estimated at $13,550,689 and includes initial equipment purchases, set up and antenna installation phases, the grant funded installation phase, staff training, customer outreach, all additional close out requirements.

Project Objectives:

Specific objectives of the water meter replacement project are:

1) Determine the low-flow accuracy of the new meters
2) Update and improve the infrastructure maintenance programs
3) Provide a water consumption data analysis program
4) Improve billing and rate structures
5) More effectively project water demand and related revenues
6) Make water management easier and more efficient for customers
7) Reach larger groups to increase customer education and involvement in consumption
8) Improve leak detection accuracy and efficiency
9) Reduce excessive irrigation
10) Promote sustainable use of water
11) Review improved system and potential application for other water utilities in Colorado
12) Provide information to other water utilities, providers, and CWCB

With a more responsive metering system and access to a customer portal, it will be easier for residents to track their own use and see a more accurate representation of their water conservation efforts. This program will also reach larger groups than typical outreach activities, and will continue on an on-going basis. Water customers of the City of Westminster will have access to the following capabilities through the portal:

- Compare their water use to similar residences
- Track their monthly water consumption and billing
- Set monthly use or budget goals with auto-generated email notifications if they are trending toward that goal
- Auto-generated emails to warn the user if they might be over-irrigating, if there is a potential leak, or other issue detected

Specific objectives of the grant funded portion of the project are to:

A. Effectively manage the scheduled installation timeline and plan to minimize customer impacts
B. Provide efficient customer service to minimize customer complaints and service interruptions
C. Effectively upgrade the existing meter system to a new and more efficient system

Tasks

Task 1 - Project management services

Description of Task:
Contractor to manage meetings and communication/budgeting throughout all phases of the Meter project. Contractor to monitor and test network installations with reports issued upon completion. Contractor to test and update City's billing system weekly. Contractor to issue meeting minutes, budget updates, progress reports.
Method/Procedure:
Project Management procedures will be implemented to track project status and work completed
Applicant Deliverable: (Describe the deliverable the applicant expects from this task)
Project Management timeline Project Management task list
CWCB Deliverable: (Describe the deliverable the applicant will provide CWCB documenting the completion of this task)
Project Management timeline and completed work shall be provided in CWCB progress reports

Tasks
Task 2 - Meter and transmitter installation services
Description of Task:
Contractor to complete meter replacement and configuration, and old meter salvage and disposal. Contractor to replace each meter and transmitter with the new model. Contractor to recycle meters and transmitters where applicable, and dispose of all items properly. 20 of every 500 old meters will be returned to the City as salvage.
Method/Procedure:
Contractor to work with designated routes of installation as drafted by the City and install each meter following appropriate procedures
Applicant Deliverable: (Describe the deliverable the applicant expects from this task)
Report shall be compiled by contractor with every installed meter location, and continue to update locations until all meters have been installed
CWCB Deliverable: (Describe the deliverable the applicant will provide CWCB documenting the completion of this task)
Contractor report of all installed meter locations upon completion of all installations.

Reporting Requirements

Reporting: The applicant shall provide the CWCB a Progress Report at 50% & 75% completion of the project. The Progress Report shall address the following:

- the success of meeting previously identified goals and objectives
- obstacles encountered
- preliminary findings or accomplishments
- potential need for revisions to the scope of work and timelines

City of Westminster anticipated reporting dates:
50% progress report submission anticipated **April 2020**
75% progress report submission anticipated **July 2020**
Final progress report submission anticipated **August 2020**

(The CWCB may withhold reimbursement until satisfactory Progress Reports have been submitted.)

Final Deliverable: At the completion of the project, the applicant shall provide the CWCB a final report on the applicant's letterhead including a review of the activities completed, an estimate of actual water savings realized (for covered entities), and other information that is relevant to the Board's record of the Project and future use of the Project outcomes.

The CWCB will withhold the last 10% of the grant request 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 contract will be closed without any further payment.

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Water Efficiency Grant Fund

BUDGET & SCHEDULE

Date: 12/30/2019

Project Name: Residential Water Meter Replacement - Installation Phase

Applicant: City of Westminster

Task No.	Description	Start Date[1]	End Date	Consultant (Provide hours & hourly rate)2				WEGF Grant Request	Total
				Hours	Sub Total	Cash	In-Kind		
1	**Project Management Services**	~ Feb, 2020	Aug, 2020			$25,000			$25,000
2	**Meter / Transmitter Installation**								
	Install 29,300 meter (Install cost = $49.14 / each)					$1,439,802.00		$49,500.00	$1,390,302.00
	Install miscellaneous broken equipment as identified in the field (meter pits, yokes, etc)	~ Feb, 2020	Aug, 2020			$37,462.50			$37,463
	AMI transmitter setup 29,300 (Set up cost= $13.00/each)					$380,900.00			$380,900
	Owner controlled allowance for miscellaneous filed work					$250,000.00			$250,000
									$0
									$0
									$0
			Total			$2,133,165	$0	$49,500	$2,083,665

(1) Start Date for funding under $50K ~ 30 Days from Application Submittal; Start Date for funding over $50K ~ 30 Days from Board Approval. - Understood, start dates listed are contingent upon contract and purchase order

(2) Please insert additional columns if needed for additional staff working on project.

Project may begin as soon as the grantee enters contract/purchase Order

CWCB will withhold the last 10% of the entire grant budget until the Final Report (Deliverable) is completed and accepted (per the WEGF Criteria & Guidelines).