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:

Water Storage Projects	Anna.Mauss@state.co.us
Conservation, Land Use Planning	Kevin.Reidy@state.co.us
Engagement & Innovation Activities	Ben.Wade@state.co.us
Agricultural Projects	Alexander.Funk@state.co.us
Environmental & Recreation Projects	Chris.Sturm@state.co.us

FINAL SUBMISSION: Submit all application materials in one email to
waterplan.grants@state.co.us
in the original file formats [Application (word); Statement of Work (word); Budget/Schedule (excel)]. Please do not combine documents. In the subject line, please include the funding category and name of the project.

Water Project Summary	
Name of Applicant	City of Louisville, Department of Public Works
Name of Water Project	City of Louisville Dropcountr-Rachio Program for Customer Engagement and Analytics
CWP Grant Request Amount	$158,250
Other Funding Sources _____	$
Other Funding Sources _____	$
Other Funding Sources _____	$
Applicant Funding Contribution	$158,250
Total Project Cost	$316,500

Applicant & Grantee Information	
Name of Grantee(s)	City of Louisville
Mailing Address	749 Main Street Louisville CO 80027
FEIN	84-6000689
Organization Contact	Kurt Kowar
Position/Title	Director of Public Works
Email	kurtk@louisvilleco.gov
Phone	(303) 335-4601
Grant Management Contact	Kurt Kowar
Position/Title	Director of Public Works
Email	kurtk@louisvilleco.gov
Phone	(303) 335-4601
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	

Description of Grantee/Applicant

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

The City of Louisville (City) is a Colorado municipality covering a service area of 8.50 square miles with an estimated population of 20,801 in 2016 (the population estimated from the 2010 US Census was 18,376). The City, incorporated in 1878, lies in Boulder County roughly 6 miles east of Boulder and 25 miles northwest of Denver. The residential size of the City is not likely to grow significantly, with an estimated population of 22,145 at full occupation. There is the potential for significant commercial and industrial growth at three main business centers: Centennial Valley, the Colorado Technology Center, and the Phillips 66 campus.

The City has two water treatment facilities with capacity to produce up to 12.1 million gallons per day (mgd) of potable water, The City has a treatment plant to reuse wastewater for irrigation; the treatment capacity of the reuse plant is 2 mgd, although the amount available for reuse varies depending on water rights operations.

In 2013, the City developed its Drought Management Plan and in 2015 the City updated its Water Efficiency Plan. Both documents recognize the City's supply size limitations and promote conservation via demand management. Therefore, the City's drought management strategy is based upon a series of demand side activities and voluntary and mandatory conservation represent key elements of the overall strategy. The goals from the City's Water Efficiency Plan (2015) are presented below:

- Total annual water savings of 10 percent below baseline forecast at build out (600 acre-feet).
- Account for all water
- Decreased peak-day demand at buildout to less than 13 million gallons per day (mgd)

Type of Eligible Entity (check one)

X	**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.
	Private Incorporated: Mutual ditch companies, homeowners 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)

x	Study
	Construction
	Identified Projects and Processes (IPP)
x	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. *Applicable Exhibit A Task(s):*
	Water Storage - Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity. *Applicable Exhibit A Task(s):*
X	Conservation and Land Use Planning - Activities and projects that implement long-term strategies for conservation, land use, and drought planning. *Applicable Exhibit A Task(s):*
	Engagement & Innovation - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website. *Applicable Exhibit A Task(s):*
	Agricultural - Projects that provide technical assistance and improve agricultural efficiency. *Applicable Exhibit A Task(s):*
	Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. *Applicable Exhibit A Task(s):*

	Other	Explain:

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	Boulder County
Latitude	39.9778° N
Longitude	105.1319° W

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.

In the City of Louisville's (City) 2013 Drought Management Plan, the City identifies conservation activities as one of the two levers to combat the threat of drought. The City notes that increasing water supply during a drought is challenging due to the intense competition for the supply resources during the drought. Therefore, the City's drought management strategy is based upon a series of demand side activities and voluntary and mandatory conservation represent key elements of the overall strategy. The goals from the City's Water Efficiency Plan (2015) are presented below:

- Total annual water savings of 10 percent below baseline forecast at build out (600 acre-feet).
- Account for all Water
- Decreased peak-day demand at buildout to less than 13 million gallons per day (mgd)

While the City's per-capita water use has declined over the past decade, it is difficult to quantitatively attribute water savings to an individual program. In order to demonstrate to the public that water conservation programs and measures are paying off, the City plans to accumulate accurate data, analyze trends between demand and conservation measures, evaluate the effectiveness of individual conservation programs and share the results with the public.

The City plans to work with Dropcountr, a customer engagement platform and Rachio, a smart sprinkler controller and flow meter, to develop capabilities that will allow its customers to disaggregate their total water use and better understand their indoor and outdoor water use. While the total amount of water used in a household is available from metered data, indoor and outdoor water use are typically estimated. Providing disaggregated data to the helps the customers to better understand their water use.

The City seeks grant funding to achieve the following objectives:

- Implement demand-side conservation measures consistent with the goals of the 2013 Drought Management Plan
- Deploy Rachio's smart sprinklers and flow meters to control and measure outdoor water use
- Promote water conservation by making water consumption data easily accessible to its customers via digital channels (native mobile app and web portal)
- Integrate and display the data collected by Rachio's smart sprinklers and flow meters within Droprcountr's customer engagement platform
- Increase customer engagement in areas of water use (indoor and outdoor), water rate tiers, leak detection, and rebates and tips to improve conservation. Making water use data accessible to the customers and notifying them about behind the meter leaks or unusually high water use promotes water efficiency and reduces costs for the customer.
- Track the effectiveness of the Dropcountr-Rachio program relative to traditional methods of conservation adopted by the City such as turf replacement, fixture replacement, public education etc.

Funds procured through the grant will be utilized for:
- Deploying 200 units of Rachio's smart sprinklers and flow meters
- Deploying Dropcountr's HOME platform for all customers within the City's service area
- Deploying Dropcountr's CLEAR platform for the City's water utility staff
- Collecting and displaying outdoor water use data for customers enrolled in the Dropcountr-Rachio program
- Collecting demographic and appliance/fixture data for customers enrolling in the Dropcountr-Rachio program to assist the City with targeted and effective outreach on water conservation rebates and tips
- Developing personalized water use goals for each residential home in the City
- Evaluating program performance and submitting to the CWCB a report that documents recommendations, obstacles encountered, lessons learned and steps forward for the Dropcountr-Rachio program

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)
Expected Conservation: 25.2 AFY in Year 1 increasing to 72 AFY in Year 5	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
	Existing Storage Preserved or Enhanced (acre-feet)
	Length of Stream Restored or Protected (linear feet)
25.2 AFY in Year 1 increasing to 72 AFY in Year 5	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
20,801 (estimated population for Louisville)	Number of Coloradans Impacted by Engagement Activity
	Other	Explain:

Water Project Justification

Provide a description of how this water project supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the applicable Roundtable Basin Implementation Plan and Education Action Plan. 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;)

The City of Louisville's Dropcountr-Rachio Customer Engagement and Analytics Program supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the applicable Roundtable Basin Implementation Plan and Education Action Plan. This is demonstrated in the following responses to the grant criteria questions:

Does the project reduce overall future water needs through cost-effective water efficiency measures?
Assuming a program adoption rate of 20 percent among the City's customers, conservation savings within the first 12 months are estimated to range between 25.2 and 36 acre-feet. These savings are only expected to increase as user adoption increases over time. It is expected that the conservation savings will increase to approximately 72 AFY during year 5 of the program. It should be noted that these are conservative estimates and the potential for savings can be increased by effective marketing and outreach efforts by the City to drive platform adoption. In addition, these savings are several magnitudes higher than conservation savings from traditional conservation techniques that involve turf and fixture replacement.

The expected conservation savings by implementing Dropcountr present the following benefits. These benefits are consistent with some of the benefits identified in the *Colorado Water Plan, Chapter 6.3, Page 6-61*.
● Conservation savings reduce the City's future supply needs by an equal amount
● Reduces wastewater discharges by indoor water conservation which benefits water quality and aquatic life
● Defer the construction of capital facilities resulting in cost savings for the City's rate payers
● Reduce the size of the capital facilities required to meet peak demands resulting in capital and energy savings for the City's rate payers

Does the project integrate water efficiency planning and projects into overall water resource management?
Yes, the Dropcountr-Rachio program is a water efficiency planning project for the City of Louisville. The program is unique relative to traditional water efficiency projects because it cost-effectively engages customers via digital media and guides them towards a water conscious behavior. Unlike traditional water efficiency projects that are capital intensive and do not offer mechanisms to actively track water use and savings on a regular basis, the Dropcountr-Rachio program offers a cost-effective mechanism to deploy, engage, and track the success of the program.

Water savings via Dropcountr are verifiable and researchers at the University of Kentucky may be engaged to track the effectiveness of the program. **Section 7.2 of the 2010 Statewide Water Supply Initiative** identifies water conservation as a key strategy element of Colorado's Water Supply Portfolio. **Table 7-2 (page 7-9)** identifies systemwide conservation measures with potential to impact all customer; the Dropcountr-Rachio program will be consistent with the measures identified in **Table 7-2**.

Does the project promote a water efficiency ethic throughout Colorado?
Unlike traditional methods of conservation that rely on turf, appliance, fixture replacements etc. and are often localized approaches to solving a global problem, the Dropcountr-Rachio program promotes water efficiency by actively engaging with the customers on their water use and the associated costs. The project provides a unique opportunity to educate the customers on their indoor and outdoor water use.

Most importantly, the water conservation savings can be tracked. For other programs, Dropcountr has engaged with researchers with the University of Kentucky to quantify and validate water conservation savings. Findings from the research are published here:
● City of Folsom, California: https://goo.gl/sbVt9C
● City of Austin, Texas: https://goo.gl/Sq2YZB

It is expected that the water savings and tracking mechanisms associated with the Dropcountr-Rachio program can be scaled and replicated throughout Colorado.

Does the project advance conservation planning efforts?
Section 8 of the 2010 Statewide Water Supply Initiative recommends 16 initiatives to meet Colorado's overall water needs. The proposed Dropcountr-Rachio program for the City of Louisville is consistent with **"Recommendation 10" (page 8-2 of the SWSI)** which requires the State to support, encourage, and incentivize water providers in planning for and implementing M&I active conservation best management practices and other demand management strategies. Deployment of Dropcountr allows the City to advance its conservation planning efforts by leveraging demographic information and data analytics.

Dropcountr-Rachio program collects demographic information from the users during the registration process. Information collected consists of:
- the number of people in the household
- the footprint of the house
- the number of bathrooms
- the types of appliances (dishwasher, washing machine, evaporative cooler etc.)
- the footprint of the lawn including the area that is irrigated
- the presence of a sprinkler/sprinkler weather station
- the presence of drip irrigation
- the presence of a pool

These data are not generally available at a household level. Having access to these data points enables Dropcountr to develop a personalized water goal for each household. Having a personalized goal for each household allows customers to track their water consumption against their goals and promotes water conservation.

It also allows the City of Louisville to tailor their conservation outreach programs effectively. For example, the City can send information about a rebate on sprinkler nozzles to only the households that have a lawn. Catering the content of communication to the characteristics of the household strengthens the voice of the utility and trust with the customer – improving program participation and engagement. This also results in cost savings for the City in printing/postage.

Does the project advance drought mitigation planning efforts? Does the project reduce impacts and prepare for the impacts of climate change?
As discussed previously, assuming a 20 percent adoption rate, the water savings via the City's proposed Dropcountr-Rachio program are expected to range between 25.2 and 36 acre-feet within the first 12 months of deployment. It is expected that the conservation savings will increase to approximately 72 AFY during year 5 of the program. These savings are several magnitudes higher relative to other conservation measures being considered by the City. These water savings translate into surplus supplies being available to the City during a drought. By attempting to create a water conservation ethic among the citizens of Louisville, the program prepares them for impacts of climate change such as an extended drought.

Is the project collaborative? Does it engage a diverse group of stakeholders? Does it involve and engage the community?
The project is unique because it involves **all** the citizens of Louisville and is representative of a collaborative partnership between the City's Public Works Department and its customers. Engagement and education is achieved via Dropcountr's native mobile app and web portal.

Does the project contain a plan to measure and evaluate its success and impact?
Yes, the City of Louisville and Dropcountr will evaluate program performance and send the CWCB a full program report with recommendations, obstacles, lessons learned and steps forward. In addition,

the University of Kentucky researchers may to be engaged to perform additional statistical analysis and estimate the impact of conservation.

Is the project supported by research, evidence, and data? Does it apply best practices? Studies have shown that technologies such as Dropcountr and Rachio promote a water efficiency ethic in regions where they are deployed. Researchers from the University of Kentucky have analyzed the influence of Dropcountr among homeowners and found significant reductions in monthly usage.

- City of Folsom Dropcountr users, on aggregate, used 7% less than their non-Dropcountr peers and those in the highest quintile of baseline consumption reduce water usage by an estimated 13% – these results looked at 44 months of usage data and that academic paper can be found here: https://goo.gl/sbVt9C
- City of Austin Dropcountr users, on aggregate, used 9% less than their non-Dropcountr peers and those in the highest quintile of baseline consumption reduce water usage by an estimated 17% – these results are pulled from 60 months of data and that academic paper can be found here: https://goo.gl/Sq2YZB
- Similarly, initial water savings estimates by Denver Water indicate that water reduction for Dropcountr users within Denver Water's service area was approximately 7.5 percent. The water savings and tracking mechanisms associated with the Dropcountr program can be scaled and replicated throughout Colorado.

Does the project strive to improve the level of public awareness and engagement regarding water issues?
As discussed before, the Dropcountr-Rachio program for the City of Louisville is unique because it attempts to engage all the citizens regarding water issues such as consumption volumes and trends, tiers and costs associated with water use, and rebates and tips for achieving conservation.

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.
Water Efficiency Plan – 2015 Water Management Plan - 2016 Drought Management Plan – 2017

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.

1) City of Louisville
2) Water Efficiency Grant Program
3) Metro
4)
5) PO#: OE PDA 14-75
6) 25% (in kind)

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.

Not Applicable

	Submittal Checklist
x	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.
Exhibit A	
x	Statement of Work[1]
x	Budget & Schedule[1]
x	Letters of Matching and/or Pending 3rd Party Commitments[1]
Exhibit C	
x	Map (if applicable)[1]
	Photos/Drawings/Reports
	Letters of Support (Support letter from Basin Roundtable encouraged)
x	Certificate of Insurance (General, Auto, & Workers' Comp.) [2]
	Certificate of Good Standing with Colorado Secretary of State[2]
x	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:	**August 1, 2018**
Name of Applicant:	**City of Louisville**
Name of Water Project:	**City of Louisville: Dropcountr-Rachio Program for Customer Engagement and Analytics**
Funding Source:	**Conservation CWP Grant**

Water Project Overview: Please provide a summary of the proposed water project (200 words or less). The same summary can be used from Page 5 of the CWP Grant Application.

In the City of Louisville's (City) 2013 Drought Management Plan, the City identifies conservation activities as one of the two levers to combat the threat of drought. The City notes that increasing water supply during a drought is challenging due to the intense competition for the supply resources during the drought. Therefore, the City's drought management strategy is based upon a series of demand side activities and voluntary and mandatory conservation represent key elements of the overall strategy. The goals from the City's Water Efficiency Plan (2015) are presented below:

- Total annual water savings of 10 percent below baseline forecast at build out (600 acre-feet).
- Account for all water
- Decreased peak-day demand at buildout to less than 13 million gallons per day (mgd)

While the City's per-capita water use has declined over the past decade, it is difficult to quantitatively attribute water savings to an individual program. In order to demonstrate to the public that water conservation programs and measures are paying off, the City plans to accumulate accurate data, analyze trends between demand and conservation measures, evaluate the effectiveness of individual conservation programs and share the results with the public.

The City plans to work with Dropcountr, a customer engagement platform and Rachio, a smart sprinkler controller and flow meter, to develop capabilities that will allow its customers to disaggregate their total water use and better understand their indoor and outdoor water use.

Funds procured through the grant will be utilized for:
- Deploying 200 units of Rachio's smart sprinklers and flow meters
- Deploying Dropcountr's HOME platform for all customers within the City's service area
- Deploying Dropcountr's CLEAR platform for the City's water utility staff
- Collecting and displaying outdoor water use data within Dropcountr's customer engagement platform
- Collecting demographic and appliance/fixture data for customers enrolled in the Dropcountr-Rachio program to assist the City with targeted and effective outreach on water conservation rebates and tips
- Developing personalized water use goals for each residential home in the City
- Evaluating program performance and submitting to the CWCB a report that documents recommendations, obstacles encountered, lessons learned and steps forward for the Dropcountr-Rachio program

Objectives: List the objectives of the project.

The overarching goal of the project is to promote water conservation and improve customer engagement on water issues. This goal will be achieved by meeting the following objectives:

- Implement demand-side conservation measures consistent with the goals of the 2013 Drought Management Plan
- Deploy Rachio's smart sprinklers and flow meters to control and measure outdoor water use
- Promote water conservation by making water consumption data easily accessible to its customers via digital channels (native mobile app and web portal)
- Integrate and display the data collected by Rachio's smart sprinklers and flow meters within Droprcountr's customer engagement platform
- Increase customer engagement in areas of water use (indoor and outdoor), water rate tiers, leak detection, and rebates and tips to improve conservation. Make water use data accessible to customers and notify them about leaks or unusually high-water use to promote water efficiency and reduce costs for customers.
- Track the effectiveness of the Dropcountr-Rachio program relative to traditional methods of conservation adopted by the City such as turf replacement, fixture replacement, public education etc.

At the completion of this program, the City expects to have realized the following benefits in the areas of water conservation and customer engagement and education.

Water Efficiency and Conservation:
- Plan to achieve 25.2 AF water savings in the initial 12 months of the program.
- Reduce aggregate water use by 7-10% among participating customers
- Improve customers' understanding of their total water use by disaggregating total water use into indoor and outdoor water use
- Capture demographic data for advanced conservation planning
- Understand customers' irrigation habits

Customer Engagement & Education:
- Increase frequency of customer communication regarding water issues such as consumption trends, outdoor water use, rate tiers, rebates and tips for water conservation etc.
- Increase the number of customer communication channels to reflect customer preference
- Promote a water efficiency ethic throughout the City

Tasks
Provide a detailed description of each project task using the following format:
Task 1 – Technology Integration, Testing, and Deployment
Description of Task:
The City seeks a digital customer engagement portal that empowers conservation and customer service staff to quickly and efficiently parse through customer data and communicate with the customer in a personalized way on their device of choice. The City plans to accomplish its conservation goals via the proposed Dropcountr-Rachio program. This task will consist of the following sub-tasks: • Dropcountr-Rachio Integration: The Dropcountr and Rachio platforms will be integrated such that Dropcountr can receive and display outdoor water use data from Rachio • Data Transfer and Testing: Meter consumption data and other account attributes will be transferred from the City to Dropcountr • Rachio Deployment: 200 units of Rachio's smart sprinkler and controller units will be deployed as part of this task.
Method/Procedure:
Dropcountr-Rachio Integration: • Import and store Rachio outdoor usage data as available via API (preferred) or via secure FTP • Design UX and display outdoor usage alongside overall usage to users on Dropcountr's customer facing platform (HOME) • Display outdoor usage to managers in Dropcountr's utility facing platform (CLEAR) in a chart • Make outdoor usage available to managers in CLEAR user / email / notification via searching, sorting, and filtering • Update HOME monthly reports to include outdoor usage data **Transfer of data for Dropcountr Deployment:** ● City IT staff and Dropcountr engineering staff will coordinate on a secure method for transferring customer data to the Dropcountr importer. This will include historical usage data, parcel information, account details and contact information. These initial customer data form the starting point for profile development; historical usage data contributes to the development of historical trends; and a broad regional dataset supports a robust spatial comparison of water usage. ● Dropcountr integrates with third party services and vendors using REST API based protocols and best practices. In the event REST API integration is not offered by the CIS vendor, Dropcountr will share our standard data ingestion specification for monthly (or more frequent) flat file transfer and ingestion. The latter approach is most common among our existing partners. Best practices suggest a daily ingestion interval to capture staggered meter reads or updates and corrections to these data. Dropcountr is experienced in working with staff to create data export processes via secure FTP. **Set up the platform:** ● Dropcountr will ingest and present the City's data on the Dropcountr CLEAR platform. Dropcountr staff will confirm data is formatted, properly ingested, checked for errors and available. **Training:** ● Dropcountr staff will train appropriate City staff, including conservation and customer service staff, as well as Rachio installers and staff, on how to navigate and use the software, on-site and via online webinars. Detailed training materials will also be provided to the City staff and are accessible online at any

time. These materials include product guides, interactive exercises, and answers to frequently asked questions.

Rachio Unit Deployment:
- Rachio will market their smart sprinkler controller to ratepayers in the City's service area. Examples of the marketing mechanisms that will be employed include Facebook, NextDoor and customer referral programs.
- Interested individuals will be directed to a landing page hosted by Rachio. Rachio will verify the user's eligibility for the program using either their Louisville account number or physical address.
- Eligible users will be presented with the option of selecting the number of irrigation zones in their yard, and whether they require an outdoor enclosure. They will then be presented with an electronic calendar displaying available installation times; installations will be completed by an irrigation professional certified by Rachio.
- A professional installer will install the Rachio controller and flow meter at the participant's home and will also provide instructions on how to use the Rachio and Dropcountr applications.
- Each controller installed in the City's service area as part of this program will be serialized. This means that Rachio has noted which controller has been distributed to any given participant. At the time of the unit's activation, The City will receive an email notification, and will have the ability to audit the controller's configuration through a web-based Rachio app.
- At the end of every month, Rachio will bill the City for the units distributed and provide the City with participant names, addresses, email addresses, and their specific controller serial numbers.

Grantee Deliverable: Describe the deliverable the grantee expects from this task
The following deliverables will be provided as part of this task: • Integration between Dropcountr and Rachio to allow the display of outdoor water use within Dropcountr's HOME and CLEAR platforms. • 200 Rachio smart sprinkler and controller units will be deployed in the field. It is expected that these 200 deployments will occur over a two-year period. • Access to the Dropcountr tools, including the utility dashboard, CLEAR, which provides: analytics of metered accounts; the ability to send an unlimited number of email messages and mobile push notifications to all customers; water-use trends; details about outdoor irrigation users and inefficient users. As a small organization with limited customer and data analytic tools, this task will improve staff workflow and communication efficiency.
CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task
As part of the required reporting process, the City will send a summary of completion when this task is concluded. This summary will include the number of Rachio units deployed over time, number of City staff members with access to CLEAR, and initial program observations. At the end of this grant period, the City will provide CWCB with metrics that demonstrate explicit avoided cost of communication and estimated avoided staff resources (time and budget)

Tasks
Provide a detailed description of each task using the following format:
Task 2 – Launch customer portal for the City's water customers
Description of Task:

The City will provide customers with the Dropcountr HOME customer portal - a native-mobile and web application that customers can use to access information about their usage, price tiers, messages from the City, available rebates and conservation tips.

Customers will be guided through an intuitive onboarding process using their account number and name. During this process customers will populate information about their house to develop a personalized water use "goal" that is appropriate for their specific household. The equation for the goal is developed with guidance from the City.

Upon completion of the onboarding process, a City's customer will have access to their personal (and historical) water usage, put into context with:

- Visual cues of the recommended goal
- Visual cues of their usage in relation to City's specific water tier rate structure
- Disaggregation of their water use between indoor and outdoor use
- Visual comparisons about how much water "similar and efficient homes" are using – leaning on well-developed behavioral-norming practices to drive conservation.

This digital customer portal will build upon the City's efforts to better inform and educate their customers regarding their water use and the associated costs. In addition to providing a highly visible and supportive goal for the City's customers to observe, the utility will have access to the household characteristics populated by customers – valuable information for systems planning and communication.

Method/Procedure:

Dropcountr staff will work with the City to develop a comprehensive "Marketing & Outreach Plan" that will inform and prompt customers to register for the Dropcountr-Rachio program. This plan will include several forms of communication:
- email prompts, paper reports, conversations over social media;
- bill announcements, bill stuffers or posters;
- local events, incentives and word-of-mouth.

Email Marketing Campaign
Using email and other contact information provided by the City, Dropcountr will conduct three (3) email campaigns. Based on industry averages, we expect approximately 30% of accounts selected for this project to be affiliated with a valid customer email address.

These campaigns will consist of account-specific emails that summarize monthly water use, provide a social norms-based comparison, present a call to action to sign up for the program, and legitimize the City's partnership with Dropcountr and Rachio. Each email will include account name and account number, and a direct link to the Dropcountr sign up page.

Paper Marketing Campaign
Dropcountr will create and send paper collateral, similar in style and content to the email marketing outreach as described above and send to accounts that didn't register with Dropcountr. The paper collateral will include instructions on how to sign up on Dropcountr. The City is responsible for the printing and mailing costs associated with the paper marketing campaign.

Optional High User Paper Engagement
If desired by the City, high user accounts can be selected to receive additional paper engagement: a report encouraging enrollment in Dropcountr sent monthly during irrigation season (April-September). Dropcountr will create and send the paper collateral; the City is responsible for the printing and mailing costs.

In a 2017 portal launch with Denver Water, Dropcountr saw impressive adoption rates that exceeded

industry standards. This is a reflection of the mobile-friendly availability of the portal and consumer-friendly aesthetics our customers have grown to expect out of services. The City has reason to believe similar, above-industry-standard adoption rates can be expected.

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

Conservation:
Researchers from the University of Kentucky analyzed the influence of Dropcountr among registered users and non-registered users and found significant reductions in monthly usage.

- City of Folsom Dropcountr users, on aggregate, used 7% less than their non-Dropcountr peers, and those in the highest quintile of baseline consumption reduce water usage by an estimated 13%; these results looked at 44 months of usage data - details can be found here: https://goo.gl/sbVt9C
- City of Austin Dropcountr users, on aggregate, used 9% less than their non-Dropcountr peers and those in the highest quintile of baseline consumption reduce water usage by an estimated 17%; these results are pulled from 60 months of data and details can be found here: https://goo.gl/Sq2YZB
- The timeframe of the Denver Water and Dropcountr project is currently too short, but initial (6-month) data suggests a similar 7-9% aggregate effect among Dropcountr users. Results from this program will be published in later 2018.

Based on the observed conservation impact in three unique service areas with three unique customer profiles, the City expects a similar conservation influence among their Dropcountr users. Should the University of Kentucky research staff be available to participate in this project, then by using regression analysis, Dropcountr and the University of Kentucky can tie water savings directly attributable to customer participation in the Dropcountr program. The City hopes to use this program to improve conservation reporting statistics.

Participation & Engagement
In addition to the latent conservation impact of knowing one's usage, having a goal and context about how much usage relates to price tiers, the Dropcountr customer portal, HOME, acts as a communication and information portal expected to drive more customers to existing conservation programs offered by the City.

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

The City will provide the CWCB with a bi-annual report in accordance with CWCB reporting requirements. This summary will include user adoption metrics, messages sent to customers and customer anecdotes. At the end of the 12-month program, The City and Dropcountr will evaluate program performance and send the CWCB a full program report with recommendations, obstacles, lessons learned and steps forward. At this point, the University of Kentucky could be engaged to measure conservation impact.

Tasks
Provide a detailed description of each task using the following format:
Task 3 – Ongoing support and program refinement
Description of Task:
Dropcountr will designate a Project Manager. The Project Manager will lead the initial project kickoff meeting, monitor the status of the program, and provide regular status updates to the City staff. In order to ensure the project remains on track the City will have regular status meetings, via phone, with the Dropcountr Project Manager, which will focus on: ● **New features**: The Dropcountr software regularly updates the utility dashboard (CLEAR) and customer portal (HOME) with new tools and features. Dropcountr will review any new features, their benefits, and how City staff can best utilize them. ● **Outreach efforts**: Dropcountr performs most of the digital outreach on behalf of the City and will use the meetings to review the performance and registrations rates, as a result of the outreach, as well as discuss any additional outreach to help the City achieve its goals. ● **End-user support requests**: Dropcountr addresses customers' questions about Dropcountr via email. The meetings will be used to review any recurring customer questions. ● **Other questions, feedback or additional training**: As necessary via online meetings.
Method/Procedure:
All meetings will be conducted via phone/online. The first meeting, the kick-off will be with appropriate staff, including conservation, customer service, IT, and public information. During the launch, meetings will be held weekly with the designated City contact and post-launch meetings will be conducted bi-monthly.
Grantee Deliverable: Describe the deliverable the grantee expects from this task
The City expects to see continued adoption by customers, as driven by Dropcountr marketing and outreach efforts. Similarly, due to the development of new features and tools, the City expects to use meetings as an opportunity to improve the application of the Dropcountr program and provide any necessary feedback.
CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task
Meeting notes and results can be provided to CWCB upon request.

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.
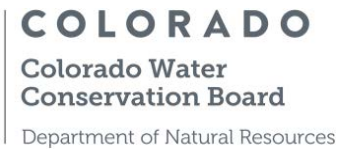
Reporting Requirements

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.

Colorado Water Conservation Board

Water Plan Grant - Exhibit B
Budget and Schedule

Date: August 1, 2018

Name of Applicant: City of Louisville

Name of Water Project: City of Louisville Dropcountr-Rachio Customer Engagement & Analytics Program

Task No.	Task Description	Start Date(1)	End Date	Grant Funding Request	Match Funding	Total
1	Technology Integration, Testing and Deployment	January, 2019	May 2019		$14,100	$14,100
2	Launch customer portal for Louisville water customers and Deploy Rachio meters	June 2019	Decemeber 2019	$100,300	$28,600	$128,900
3	Ongoing support and program refinement	January 2020	December 2023	$57,950	$115,550	$173,500
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
			Total	$158,250	$158,250	$316,500

WATER PLAN GRANT APPLICATION
EXHIBIT C - CITY BOUNDARIES

ERIE

BOULDER

LAFAYETTE

LOUISVILLE

SUPERIOR

BROOMFIELD

0 1 2 4 6 8 Miles

NORTH
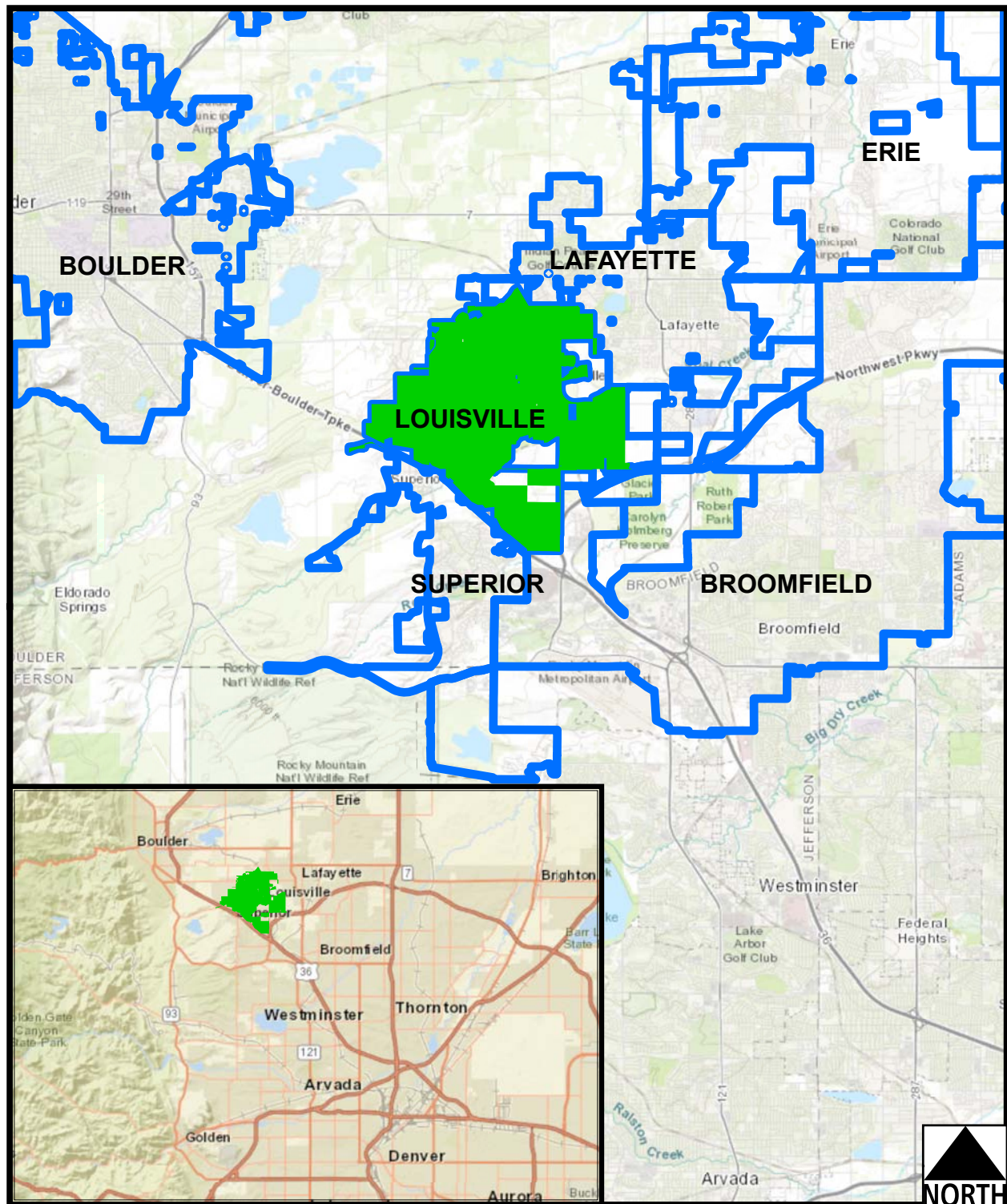
CITY of LOUISVILLE

749 MAIN STREET
LOUISVILLE, CO 80027
(303) 666-6565

July 30, 2018

Mr. Kevin Reidy
Colorado water Conservation Board
1313 Sherman Street, Suite 721
Denver, Colorado 80203

RE: Commitment to match Colorado Water Plan Grant funds/Dropcountr-Rachio Customer Engagement and Analytics Program

Dear Mr. Reidy,

On behalf of the City of Louisville, I am pleased to affirm our intent to promote water conservation efforts in our state and continue the work already initiated by the City in the areas of water conservation and education. To this end, the City of Louisville will commit $115,350 towards a cash contribution in matching funds for a Colorado Water Conservation Board grant application to complete this work. The cash contribution will occur over a 5-year period as shown in Exhibit B of the application.

Please note upon notification of any grant award that final approval of grant agreements are subject to final City Council approval and annual appropriation funding.

The City appreciates your guidance throughout the application process. If you need any additional information please feel free to contact me at cpeterson@louisvilleco.gov or by phone at 303-335-4610.

Sincerely,

Cory Peterson
Water Resources Engineer
City of Louisville