

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 <u>CWCB</u>.

If you have questions, please contact CWCB staff:

Ben Wade

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

	WEGF Submittal Checklist (Required)					
~	I acknowledge I have read and understand the WEGF Criteria and Guidelines.					
Attach	nments					
~	Scope of Work ⁽¹⁾ (Word – see Template)					
~	Budget & Schedule ⁽¹⁾ (Excel Spreadsheet – see Template)					
	Letters of Support (For Public Education/Outreach Grants)					
Contra	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.

CWCB Board Meeting Schedule (only <u>IF</u> grant request is \$50,000 or more):				
CWCB Meeting Application Submittal Dates				
January	December 1			
March	February 1			
Мау	April 1			
July	June 1			
September	August 1			
November	October 1			



Water Efficiency Project Summary					
Name of Applicant	Town of Fireston	Town of Firestone, Colorado			
Name of Grant Project	Firestone Drought Management Plan Update 2018				
WEGF Grant Request Total		\$30,000.00			
In-Kind Match		\$30,225.14			
Cash Match		\$14,793.05			
Total Project Costs		\$75,018.19			

Applicant Information					
Name of Applicant	Town of Firestone, Colorado				
Mailing Address	151 Grant Avenue, P.O. Box 100, Firestone, CO 80520				
Applicant's Organization Contact ⁽¹⁾	AJ Krieger				
Position/Title	Interim Town Manager				
Email	AKrieger@firestoneco.gov				
Phone	303-833-3291				
Grant Management Contact ⁽²⁾	Julie Pasillas				
Position/Title	Director of Community Resources				
Email	JPasillas@firestoneco.gov				
Phone	303-833-3291				
Name of Consultant (if applicable)	Clear Water Solutions, Inc.				
Mailing Address	8010 South County Road 5, Suite 105, Windsor, CO 80528				
Position/Title	Michelle Hatcher, Water Resource Specialist				
Email	michelle@clearwatercolorado.com				
Phone	970-223-3706				

(1) Person with signatory authority

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



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

Clear Water Solutions, Inc. (CWS) will help complete a Drought Management Plan Update for the Town of Firestone (Town). Individuals from CWS that will be involved in the project include Michelle Hatcher, Sira Sartori, P.H. and Steve Nguyen, P.E.

Michelle Hatcher has worked on numerous CWCB-approved water efficiency plans and drought plans and has over ten years of experience in water resources planning and management. Michelle will serve as Project Manager for this Plan.

Sira Sartori is a Professional Hydrologist through the American Institute of Hydrology with nearly ten years of experience in water resources planning and management. Sira will aid the Project Manager in the development of this Plan.

Steve Nguyen is a Professional Engineer registered in the State of Colorado. He has over twenty years of experience in the water rights and water planning arena. He has helped many clients manage their water resources including water supply, water acquisition, water usage, water efficiency, and drought management. Steve will serve as a Technical Advisor on all portions of the Plan.

Individuals from the Town that will be involved in the project are as follows:

A.J. Krieger is the Interim Town Manager and will serve as the primary contact for the Town on this project. A.J. will provide general direction on all aspects of the plan including profiling the existing system, stakeholder development, historical assessment, drought vulnerability assessment, development of drought mitigation and response strategies along with the drought stages and trigger points, plan implementation and monitoring as well as plan review and updates.

Dave Lindsay is a Professional Engineer and serves as the Town Engineer. He will provide insight concerning drought impacts, including water use habits, general performance of the Town's infrastructure during droughts, history of droughts and Town response, and system limitations during drought. Dave has been with the Town since 1991 and will provide valuable insight to historical operations.

Theo Abkes is the Director of Public Works and will provide detailed knowledge of the Town's infrastructure and water delivery system. His knowledge of operations and maintenance will be useful when planning potential water restriction scenarios.

The Town Finance Director will assess the financial impacts regarding potential revenue declines from drought management and provide an overview of cost for implementation. The Finance Director will participate in the stakeholder committee process and development of the staged drought response.

Julie Pasillas is the Director of Community Resources and is in charge of utility billing for the Town. Julie will be paramount in the development of these water implementation programs including gathering information on prior water use for targeted participations, cost estimates for contractors, and insight as to how the Town would like these programs to be structured. Julie will serve as one of the primary contacts for the Town on this project.

Jen Weinberger is the Assistant Town Manager and will serve as the communications



coordinator for the Town. Jen will provide input and direction regarding the public drought campaign for Firestone. She will participate in the stakeholder committee process and development of the staged drought response.

	Type of Eligible Entity (check one)
~	Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes Public
	Non-covered Entity
\checkmark	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				
	Water Efficiency Implementation				
	Public Education & Outreach				

Location of Entity						
Please provide the county a Supply Initiative)	Please provide the county and applicants (if needed) location identified by SWSI (Statewide Water Supply Initiative)					
Basin South Platte River Basin						

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.).



Retail Water Delivery over Past 5 Years

The following table includes the retail water delivery in acre-feet within Firestone. The total water delivery by tap is metered for the customer classes. Firestone's raw water supply is surface water from the Colorado-Big Thompson project (C-BT). Firestone has an agreement with Central Weld County Water District to treat its water at its treatment facility at Carter Lake. Carter Lake is one reservoir where the Town's C-BT water is collected and treated prior to delivery to the Town.

Customer Class	2013	2014	2015	2016	2017	Average	Source
Residential	1,301	1,355	1,486	1,528	1,547	1,443	C-BT units (surface)
Multi Family	9	8	7	13	16	11	C-BT units (surface)
Commercial	177	192	191	206	211	195	C-BT units (surface)
Industrial	12	14	15	18	15	15	C-BT units (surface)
Parks	179	166	179	198	176	180	C-BT units (surface)
Open Space	121	134	135	136	147	135	C-BT units (surface)
Total	1,799	1,869	2,013	2,099	2,112	1,979	
Population	10,699	11,078	11,905	12,866	13,702	12,050	

Past Five Years Water Delivery (acre-feet)

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 following table has the water use projections for the next five years. These projections were based on the current population and the population projections for the Town. The basis for the growth projections is a study previously done for the Town by a market research firm with some adjustments made by the Town staff to account for new developments. The water demand is assumed to increase at the same rate as the population since the greatest water use is residential. The percentage of water use for each category is expected to remain approximately the same.

Customer Class	2018	2019	2020	2021	2022
Residential	1,655	1,771	1,860	1,943	2,026
Commercial	226	242	254	265	276
Industrial	16	17	18	19	20
Irrigation	157	168	177	185	193
Multi Family	17	18	19	20	21
Government (Parks)	188	201	212	221	230
Total	2,260	2,418	2,539	2,653	2,766

Estimated Future Demand (acre-feet)



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.

The following table has the per capita use for both system-wide and residential use. Residential gallons per capita per day (GPCD) is calculated as the residential water use in acre-feet (AF), converted to gallons, divided by 365 days per year and divided by the population. Total GPCD is calculated as the total water use (all categories) in AF, converted to gallons, divided by 365 days per year and divided by the population.

Per Capita Water Use

ltem	2013	2014	2015	2016	2017	Average
Residential Water Use (AF)	1,301	1,355	1,486	1,528	1,547	1,443
Total Water Use (AF)	1,799	1,869	2,013	2,099	2,112	1,978
Population	10,699	11,078	11,905	12,866	13,702	12,050
Residential (GPCD)	109	109	111	106	101	107
Total (GPCD)	150	151	151	145	138	147

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

The following table provides the previous five years, the current estimate for 2018 and the 10 year population projection. The Town Staff provided the population projections and past population data. The basis for the growth projections is a study previously done for the Town by a market research firm. The Town staff made adjustments to the projections to reflect recent developments, including the surge in apartments the Town experienced.



Potential Growth – Population Town and Water Service Area Population (Past, Present and Future) **Total Town** Population (also Change in Population Year Water Service Growth Population Area) 10,699 2.12% 2013 222 11.078 3.54% 2014 379 2015 11.905 827 7.47% 8.07% 2016 12,866 961 2017 13.702 836 6.50% 2018 14,661 959 7.00% 2019 15,687 1,026 7.00% 2020 16,472 785 5.00% 17,213 2021 741 4.50% 2022 17,944 731 4.25% 2023 18,662 718 4.00% 19.409 747 4.00% 2024 2025 20,185 776 4.00% 2026 20,992 807 4.00% 2027 21,832 840 4.00% 2028 22,705 873 4.00%

Estimated Water Savings Goals

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

The estimated water savings goal for this Plan will be to lower the total water use by 5% to 60% during a drought, depending upon the drought stage. This can be done with a combination of short-term drought mitigation strategies and long-term water conservation measures already addressed in the Town's Water Efficiency Plan. The Town will revisit and revise this goal, as necessary, as it further analyzes the potential water savings that corresponds to the drought stages through development of this Plan update.

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)



Estimated Water Savings Goals - Monitoring

Feedback from the Town Staff, Town Board, and community members will be solicited to determine the public perception of the Town's drought response program. Where possible, lessons learned during the implementation of the staged drought response plan and other feedback will be recorded such as documenting comments from public meetings or emails to the Town.

The success of the stated water savings goals will be measured through the review of meter readings, billing, and other data. For efforts that are more difficult to quantify (e.g. public education programs), overall and per capita demand data will be used to estimate water reductions during drought conditions. Additional monitoring data may include reservoir levels in the C-BT system, groundwater pumping and historical water demands versus during drought conditions, as time and funds allow the staff to review this data. The Town may also chose to monitor the number of citations given or emails/phone calls received regarding ordinances/regulations or drought-related questions.

Town staff will monitor money spent on implementing the staged drought response program and the level of staff effort in the Plan's implementation and public education programs. The Town staff will provide reports summarizing the information to the Town Board on a basis acceptable to the Town Board, so they can evaluate the success of the program.

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 drought including a breakdown by water use sector (e.g. municipal, commercial, industrial, irrigation, etc.), adverse impacts and steps taken to address 2002-2003 drought impacts to date. Include short-term and long-term impacts, as well as social and economic impacts where applicable and as feasible.

The Town's C-BT water supplies provided adequate water during the drought from 2000 through 2003 and 2012 through 2014. Firestone's water dedication policy is such that developers dedicate water to the Town before the actual development occurs. Consequently, the Town has water ahead of the demand and this "cushion" helped immensely during the drought. In 2003, Northern Colorado Water Conservancy District originally issued a 30% quota, but later issued a supplemental quota of 20%. At the 50% total quota, Firestone was able to supply all of its potable water needs. However, if the quota had remained at 30%, Firestone likely would have experienced supply issues, especially if a low quota would be issued for several consecutive years.

The average water use during the drought years in 2002-2003 was 954 acre-feet, which is much less than the average for the last five years (1,984 acre-feet). However, it is difficult to compare the 2002-2003 data with the last five years because of the increase in population that has consequently driven up demand. Firestone experienced a significant growth spurt that has brought its population to 13,702 in 2017. The Town requested voluntary water conservation of no outside watering between 10 A.M. and 6 P.M. during the drought, except in May 2003 when the Town established mandatory restrictions.

Since the adoption of the current plan, Firestone has used the Water Supply Index established therein. However, the Town Board still elected to adopt voluntary and not mandatory restrictions. In 2013, the Town enacted Resolution No. 13-18 that encouraged residents and HOAs to voluntarily restrict watering of residential and commercial lawns/landscapes to certain days of the week and lawn/landscape irrigation watering between the hours of 6 P.M. to 10 A.M. The C-BT quota was 100% in 2012 and 60% in both 2013 and 2014 which provided sufficient water to meet the Town's demands.



Drought Impacts (Drought Management Planning Grants Only)

Firestone Water Usage During Drought Years

Customer	2002	2003	2013	2014
Residential	723	720	1,301	1,355
Multi-Family	8	7	9	8
Commercial	112	158	177	192
Industrial	6	6	12	14
Parks	22	33	179	166
Open Space	55	59	121	134
Total	926	983	1,799	1,869
Population	4,159	5,034	10,699	11,078

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).

Potential issues related to the adequacy and reliability of Firestone's water system is that the Town's water supply is solely derived from Colorado-Big Thompson project (C-BT) units that are treated and delivered to the Town by the Central Weld County Water District (CWCWD). C-BT facilities divert water from the western slope of Colorado to the Front Range to supplement the region's native water supplies. The yield of the C-BT units is established each year by Northern Colorado Water Conservancy District's Board and can range from 50% (0.5 acre-feet/unit) to 100% (1.0 acre-feet/unit); therefore, the Town's available raw water supply changes from year-to-year based on the quota. In dry years, the quota is typically higher to meet the higher demand for water. However, the Town must consider population growth and extended drought periods when evaluating the adequacy of its future water supply. The Town's proposed Northern Integrated Supply Project (NISP) participation will help provide adequate future supply to support Firestone's growth. The Town has also purchased some Windy Gap units and looking into the treatment of local water supplies.

Contamination of the transmission or storage facilities delivering the C-BT units or failure of the CWCWD treatment facility would also greatly impact the Town's system-wide water supply. This is another reason why an additional supply, such as treating local water supplies, is needed to provide long-term stability.

Firestone is located in the South Platte River Basin where the Statewide Water Supply Initiative (SWSI) 2010 identified a 58 percent gap between water needs and water supplies in the Basin by 2050.



Outreach Goals & Efforts

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

Firestone will re-evaluate the current plan to determine where improvements may be made to their drought public information campaign. Improvements may include adding information to the Town's website or including information in billing about conservation and/or drought activities and programs. New ordinances/regulations developed in this Plan will be conveyed to the public as well. Staff will reflect on any lessons learned since the implementation of the 2012 Drought Mitigation Plan and update response strategies as necessary.

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

Interim Town Manager 9/20/18 Name/Title



Water Efficiency Grant Fund				
Scope of Work				
Date: November 7, 2018				
Project Name: Firestone Drought Management Plan Update 2018				
Grant Applicant: Town of Firestone, Colorado				

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.) 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.

The main purpose of this Plan is to guide the effective and responsible uses of the Town's water resources and provide recommended drought mitigation and response planning steps. A secondary purpose of this effort is to develop a Plan that meets the Colorado Water Conservation Board (CWCB) requirements enabling Firestone to apply for State financial assistance for subsequent projects, further empowering the Town to establish drought mitigation programs that might not be possible otherwise.

The primary features or sections of this Plan will include the following:

- 1. Stakeholders, Plan Objectives and Principles
- 2. Historical Drought and Impact Assessment
- 3. Drought Vulnerability Assessment
- 4. Drought Mitigation and Response Strategies
- 5. Drought Stages Trigger Points and Response Targets
- 6. Staged Drought Response Program
- 7. Implementation and Monitoring
- 8. Plan Review and Updates

Each of these sections and the steps to accomplish them is described in more detail within the Task sections within the Scope of Work.

During the course of the Plan, Firestone will provide 25%, 50% and 75% progress reports as well as a final Plan. The Colorado Water Conservation Board will receive an electronic pdf version of the final Plan.

Timelines are listed within the Task sections within this Scope of Work as well as in the included Excel spreadsheet.

Objectives: (List the objectives of the project)



- 1. Provide an overall view of Firestone's water supply system and water supply reliability.
- 2. Evaluate previous drought mitigation and response strategies, benefits from those strategies, and lessons learned.
- 3. Develop steps within the Plan that will help Firestone achieve lasting, long-term improvements in drought mitigation and response planning, including developing drought stages, trigger points and response targets.
- 4. Develop strategies that will compliment other planning efforts and goals of Firestone, its Town Board, Staff, businesses, residents and other stakeholders.

Tasks

Task 1 – Introduction and Stakeholders, Plan Objectives and Principles

Description of Task:

Town Staff Meeting #1 - Kickoff meeting with consultant to discuss overall project and gather data (estimated date: November 30, 2018).

<u>1.1 – Drought Planning Committee</u>

- 1.1.1 Define the role of the drought committee in developing the overall Plan.
- 1.1.2 Select members that will be involved as stakeholders through the development of this Plan. A list of these members will be developed including their job titles and description of expertise.

<u>1.2 – Objectives of the Drought Management Plan</u>

- 1.2.1 Discuss the major objectives for this Plan, how these objectives fit within broader water planning efforts and operating principles.
- 1.2.2 Discuss how the objectives for the Plan reflect the water use priorities during a drought.
- 1.2.3 Develop a list of water use priorities for the Plan.

Drought Planning Committee Meeting #1 - Kickoff meeting with planning committee to discuss overall project and gather data (estimated date: January 3, 2019).

Budget for Task 1:			
Total	Matching Funds	Grant Request	Total



Tasks									
(in-kind)	(cash)								
\$4,174.26	\$1,867.56	\$3787.42	\$7,264.26						
Estimated timeline for Task 1: Start Date: November 9, 2018 End Date: January 7, 2019 (with ongoing revisions as information becomes available or is clarified)									
Method/Procedure:									
will be established, and inf body of the Plan. Town Sta will also help establish rela	ormation will begin to be in aff Meeting #1 (Kickoff me tionships as well as gathe prmation needed during th	ges for data and other inform oput into spreadsheets, tab eting) and Drought Plannin r additional needed data ar is task may have already b	les, charts, and the main g Committee Meeting #1 nd other information. A						
Applicant Deliverable: (Des	scribe the deliverable the a	applicant expects from this	task)						
 Applicant Deliverable: (Describe the deliverable the applicant expects from this task) No specific deliverable. Town participation includes: Firestone will participate in the Town Staff Meeting #1. Firestone will participate in the Drought Planning Committee Meeting #1. Firestone will provide consultant with various data and information. 									
CWCB Deliverable: (Descr completion of this task)	ibe the deliverable the ap	plicant will provide CWCB o	documenting the						
		an is progressing significan 3 with an updated schedule							



Tasks

Task 2 – Historical Drought Impact and Assessment

Description of Task:

2.1 – Historical Assessment of Drought, Available Supplies and Demands

- 2.1.1 Collect historical information that may include streamflow data, reservoir levels, precipitation, groundwater levels, wholesale supplies, water quality issues, etc. to identify significant previous/current droughts and how they affected the Town's water supplies.
- 2.1.2 Describe the existing operational factors, concepts, and terms essential to public communication (i.e., firm and safe yield, drought reserves, water rights, etc.)

2.1.3 Outline the water demands during previous droughts, which may include per capita water demands (gpcd), demands by customer type, indoor and outdoor water usage, etc.

2.2 - Historical Drought Impact, Mitigation and Response Assessment

- 2.2.1 Utilize *Worksheet A* from the guidance document to provide a list of historical and current drought related impacts.
- 2.2.2 Utilize *Worksheets B and C* to provide a list of demand- and supply-side mitigation measures that were taken to minimize impacts during previous/current droughts.
- 2.2.3 Utilize *Worksheets B and C* to show the overall effectiveness of drought response measures taken during previous/current droughts.

Budget for Task 2:

Total (in-kind)	Matching Funds (cash)	Grant Request	Total
\$2,292.56	\$2,437.27	\$4,942.73	\$9,672.56

Estimated timeline for Task 2:

Start Date: November 9, 2018

End Date: February 18, 2019 (with ongoing revisions as information becomes available or is clarified)

Method/Procedure:

Much of this task will be done through email exchanges for data and other information. Information will continue to be input into the Plan. Town Staff Meeting #1 (Kickoff meeting) and Drought Planning Committee Meeting #1 will have provided some of this information needed for this task. Data will be filtered, analyzed, and incorporated into tables and charts to illustrate the various elements of Task 2. Other methods and procedures are discussed within the descriptions of Task 2 descriptions above. Firestone will prepare a 25% Progress Report to submit to the CWCB and Town describing the status of the Plan elements to be completed under Tasks 1 and 2 in this Scope of Work (SOW).



Tasks

CWCB Deliverable: (Describe the deliverable the applicant will provide CWCB documenting the completion of this task)

Deliverable:

- Firestone will send CWCB a progress report email. That email will have a 25% Progress Report attached to it indicating the Plan has reached the 25% completion stage. The Progress Report will included some of the information, data, and illustrations that will also be part of the Plan.
- The 25% Progress Report will indicate the "essential" elements for Tasks 1 and 2 (requested by CWCB in the Municipal Drought Management Plan Guidance Document) that have been completed, such as:
 - Role of the drought committee in the development of the Plan
 - List of objectives and operating principles
 - o Discussion of significant historical droughts and how they affected water supplies
 - o Impacts experienced during historical droughts or current drought
 - Mitigation measures historically implemented to minimize drought impacts
 - Drought response measures implemented during previous drought(s) and overall effectiveness of these measures
- If at the end of Task 2, it appears that the timing of the Plan is progressing significantly different than originally estimated, then Firestone will provide CWCB with an updated schedule that will be attached to the Progress Report.

Tasks

Task 3 – Drought Vulnerability Assessment

Description of Task:

- <u>3.1 Water Supply Reliability and Drought Management Planning</u>
- 3.1.1 Provide a summary of other water supply reliability documents, which may include raw water master plans, forecasting models, etc.
- 3.1.2 Define key terms used to define water supply reliability, which may include firm yield, safe yield, etc.
- 3.1.3 Describe how water supply reliability is related to drought planning.
- 3.1.4 Describe other factors that could affect water quality and/or quality of water supplies or demands that are not directly incorporated into water reliability studies, such as Colorado compact call, sequential years of drought, water quality, etc.

<u>3.2 – Drought Impact Assessment</u>

- 3.2.1 Identify potential impacts that could occur during future droughts. *Worksheet A* may be utilized as an outline.
- 3.2.2 Show the relative priority of the potential impacts. *Worksheet A* may be utilized as an outline.

Budget for Task 3:



	Tas	sks								
Total	Matching Funds	Grant Request	Total							
(in-kind)	(cash)									
\$2,021.92	\$587.85	\$1,192.15	\$3,801.92							
Estimated timeline for Task 3: Start Date: November 9, 2018 End Date: March 11, 2019 (with ongoing revisions as information becomes available or is clarified)										
Method/Procedure:										
Method/Procedure: Much of this task will be done through email exchanges for additional data and other information. Information will continue to be input. Town Staff Meeting #1 (Kickoff meeting) and Drought Planning Committee Meeting #1 will have provided some of this information needed for this task. Data will continue be filtered, analyzed, and incorporated into tables and charts to illustrate the various elements of Task 3. Other methods and procedures are discussed within the descriptions of Task 3 Descriptions above.										
CWCB Deliverable: (Desci completion of this task)	ribe the deliverable the app	blicant will provide CWCB o	locumenting the							
3.If at the end of Tas	sk 3, it appears that the Pla	e CWCB the progress of th an is progressing significan with an updated schedule	tly different than originally							



Tasks

Task 4 – Drought Mitigation and Response Strategies

Description of Task:

4.1 – Drought Mitigation Measures

- 4.1.1 Develop a list of drought mitigation measures.
- 4.1.2 Utilize *Worksheets B and C* to select and screen supply and demand side response strategies. *Worksheet A* may be used to develop new mitigation action steps.
- 4.1.3 Describe the criteria used to select the mitigation measures.
- 4.1.4 If water conservation measures are a component of drought mitigation measures, Firestone will provide a discussion of how the existing conservation measures provide drought mitigation.

4.2 – Supply-Side Response Strategies

- 4.2.1 Utilize *Worksheet B* to develop a list of supply-side response strategies and specific measures that will be taken.
- 4.2.2 Describe the criteria used to select the mitigation measures.

4.3 – Demand-Side Response Strategies

- 4.3.1 Utilize *Worksheet C* to develop a list of demand-side response strategies and specific measures that will be taken.
- 4.3.2 Describe the criteria used to select the mitigation measures.

4.4 – Drought Public Information Campaign

- 4.4.1 Utilize *Worksheet D* to outline the information for the public drought campaign such as: target audience, communication tools for relaying information, specific key information to convey and opportunities for future synergies.
- 4.4.2 Firestone staff may develop prescript messages to be delivered to the public throughout the various stages of drought, if a public information campaign is selected.

Budget for Task 4:

Total (in-kind)	Matching Funds (cash)	Grant Request	Total
\$3,409.04	\$1,380.46	\$2,799.54	\$7,589.04

Estimated timeline for Task 4: Start Date: November 9, 2018 End Date: March 11, 2019 (with ongoing revisions as information becomes available or is clarified)



Tasks

Method/Procedure:

Much of this task will be done through email exchanges for additional data and other information. Information will continue to be input. Town Staff Meeting #1 (Kickoff meeting) and Drought Planning Committee Meeting #1 will have provided some of this information needed for this task. Data will continue be filtered, analyzed, and incorporated into tables and charts to illustrate the various elements of Task 4. Other methods and procedures are discussed within the descriptions of Task 4 Descriptions above. CWS will prepare a 50% Progress Report to submit to the CWCB and Town describing the status of the Plan elements to be completed under Tasks 1 through 4 in this SOW.

CWCB Deliverable: (Describe the deliverable the applicant will provide CWCB documenting the completion of this task)

Deliverable:

- Firestone will send CWCB a progress report via email indicating the Plan has reached the 50% completion stage. The Progress Report will included some of the information, data, and illustrations that will also be part of the Plan.
- The 50% Progress Report will indicate the "essential" elements for Tasks 3 and 4 (requested by CWCB in the Municipal Drought Management Plan Guidance Document) that have been completed, such as:
 - Potential impacts that could occur during future droughts 0
 - List of drought mitigation measures 0
 - Discussion of how existing conservation measures provide drought mitigation (if 0 applicable)
 - List of the selected supply-side response strategies 0
 - List of selected demand-side response strategies
 - General components of the public drought campaign 0
 - And the completed elements under Tasks 1 and 2 outlined in the 25% Progress Report 0
- If at the end of Task 4, it appears that the timing of the Plan is progressing significantly different than originally estimated, then Firestone will provide CWCB with an updated schedule that will be attached to the Progress Report.

Tasks

Task 5 – Drought Stages, Trigger Points and Response Targets

Description of Task:



Tasks

- 5.1 Drought Stages, Trigger points and Response Targets
- 5.1.1 Present the drought stages and, if applicable, corresponding drought trigger points and response targets. *Worksheet E* may be used to present this information.
- 5.1.2 Explain how each drought stage corresponds to the severity of the drought and the amount of water that needs to be saved, if applicable.

5.2 - Drought Declaration and Predictability

- 5.2.1 Discuss the nature of weather in Colorado and the challenges for detecting drought early.
- 5.2.2 Develop a final list of drought indicators and how they reflect current water supply conditions.
- 5.2.3 Describe why the drought triggers were selected as opposed to other possible triggers.
- 5.2.4 Discuss how drought indicators, triggers and other pertinent data are incorporated into the decision making process.
- 5.2.5 Provide a summary of how the drought indicators should be monitored and the Frequency, as well as other critical times to monitor.

Drought Planning Committee Meeting #2 – present proposed drought stages to get feedback (estimated date: March 18, 2019).

Budget for Task 5:

Total (in-kind)	Matching Funds (cash)	Grant Request	Total
\$3,477.26	\$3,153.92	\$6,396.08	\$13,027.26

Estimated timeline for Task 5:

Start Date: November 9, 2018

End Date: March 18, 2019 (with ongoing revisions as information becomes available or is clarified)

Method/Procedure:



Tasks

Much of this task will continue be done through email exchanges for any additional data and other information needed. Information will continue to be input into Plan. Other sections may be updated as new information is received. Town Staff Meeting #1 (Kickoff meeting) and Drought Planning Committee Meeting #1 will have provided some of this information needed for this task. Drought Planning Committee Meeting #2 will provide CWS with feedback on the proposed drought stages. Implementation and monitoring plans will also be discussed. Data will continue be filtered, analyzed, and incorporated into tables and charts to illustrate the various elements of Task 5. Other methods and procedures are discussed within the descriptions of Task 5 Descriptions above.

CWCB Deliverable: (Describe the deliverable the applicant will provide CWCB documenting the completion of this task)

No specific deliverable.

- If needed or requested, CWS can provide CWCB the progress of the Plan at the end of Task 5.
- If at the end of Task 5, it appears that the Plan is progressing significantly different than originally estimated, then Firestone will provide CWCB with an updated schedule.

Tasks

Task 6 – Staged Drought Response Program

Description of Task:

6.1 - Watch Drought Stage

- 6.0.1 Present the supply- and demand-side response measures by drought stage and may utilize *Worksheets F and G*.
- 6.0.2 Present a summary table of the drought response measures including the drought stages, trigger points and response targets. *Worksheet H* may be utilized for this task.
- 6.0.3 Present the staged public drought campaign along with the drought stages, if the provider decides to do a public drought campaign. This may be included in an appendix if appropriate.
- 6.0.4 Develop a staged drought program with input from Town staff and Board along with the drought planning committee.

Budget for Task 6:

Total	Matching Funds	Grant Request	Total
(in-kind)	(cash)		
\$3,107.04	\$1,651.27	\$3,348.73	\$8,107.04

Estimated timeline for Task 6:

Start Date: November 9, 2018

End Date: April 17, 2019 (with ongoing revisions as information becomes available or is clarified)

Method/Procedure:



Tasks

Much of this task will continue be done through email exchanges for any additional data and other information needed. Information will continue to be input into Plan. Other sections may be updated as new information is received. Town Staff Meeting #1 and Drought Planning Committee Meetings #1 and #2 will have provided some of this information. Data will continue be filtered, analyzed, and incorporated into tables and charts to illustrate the various elements of Task 6. Other methods and procedures are discussed within the descriptions of Task 6 Descriptions above. CWS will prepare a 75% Progress Report to submit to the CWCB and Town describing the status of the Plan elements to be completed under Tasks 1 through 6 in this SOW.

CWCB Deliverable: (Describe the deliverable the applicant will provide CWCB documenting the completion of this task)

Deliverable:

- Firestone will send CWCB a progress report via email indicating the Plan has reached the 75% completion stage. The Progress Report will included some of the information, data, and illustrations that will also be part of the Plan. The Progress report will also indicate the tasks that are completed.
- The 75% Progress Report will indicate the "essential" elements for Tasks 5 and 6 (requested by CWCB in the Municipal Drought Management Plan Guidance Document) that have been completed, such as:
 - Presentation of the drought stages and corresponding trigger points and response targets (if applicable)
 - List of selected drought indicators and description of how these indicators are reflective of conditions
 - Discussion of how the drought indicators, triggers and other data are incorporated into the decision-making process of declaring a drought
 - Summary of how drought indicators will be monitored and frequency of monitoring
 - Supply- and demand-side response measures by drought stage
 - Summary table that highlights stages, trigger points, response targets and measures
 - And the completed elements under Tasks 1 through 4 outlined in the 50% Progress Report
- If at the end of Task 6, it appears that the timing of the Plan is progressing significantly different than originally estimated, then Firestone will provide CWCB with an updated schedule that will be attached to the Progress Report.

Tasks

Task 7 – Implementation and Monitoring

Description of Task:



Tasks

7.1 – Mitigation Action Plan

- 7.1.1 List the drought mitigation actions to be performed. *Worksheet I* may be utilized.
- 7.1.2 Outline the steps necessary to implement each mitigation action. *Worksheet I* may be utilized.
- 7.1.3 Set milestone deadlines for the Plan. *Worksheet I* may be utilized.
- 7.1.4 Outline the staff responsible for administrating the mitigation action. *Worksheet I* may be utilized.

7.2 - Monitoring of Drought Indicators

- 7.2.1 Outline the drought data that is to be monitored on an annual and seasonal basis.
- 7.2.2 Detail the frequency of the monitoring schedule and address how efforts may increase during drought periods.
- 7.2.3 Outline the entities and/or staff responsible for drought monitoring.

7.3 – Drought Declarations

- 7.3.1 Present the guidelines (trigger points and/or drought indicator data) to be used by staff to evaluate drought conditions.
- 7.3.2 Outline the decision makers responsible for declaring a drought and corresponding drought stages where applicable.
- 7.3.3 Discuss the importance of identifying and declaring a drought in a timely manner as well as addressing the timing of when the decision makers and the general public will be informed.
- 7.3.4 Outline the entities and/or staff responsible for announcing drought declaration to the public.
- 7.4 Implementation of the Staged Drought Response Program
- 7.4.1 Outline the entities and/or staff responsible for administering the staged drought response program.
- 7.4.2 Outline the staff responsible for administering the public drought campaign.
- 7.4.3 Outline the coordination and communication between various entities and Town staff.
- 7.5 Implementation of the Staged Drought Response Program
- 7.5.1 Decide what enforcement policies are appropriate for each stage of drought. *Worksheet G and H* may be used to present this information.
- 7.5.2 Decide the level of monitoring/patrolling necessary for each stage of drought.
- 7.5.3 Outline how the enforcement information will be conveyed to the public if deemed appropriate.



Tasks

7.5.4 Decide who is responsible for the administration effort and approving exceptions to the enforcement policy.

7.6 – Revenue Implications and a Financial Budgeting Plan

7.6.1 Discuss how the reduction of water use can lead to loss of revenue and provide financial hardship.

7.6.2 Analyze what financial resources may be necessary to implement the response programs such as the public drought campaign or stated drought response program.

7.6.3 Develop strategies to address potential revenue losses and determine the general timing for implementing these strategies relative to the declaration of a drought.

7.7 – Monitoring of Plan Effectiveness

7.7.1 Outline the data to be collected during a drought such as: demand data, lessons learned, conditions of the water supply system during the drought (e.g., reservoir levels), public perceptions and the general response to a drought, and the administrative staged drought response program (e.g., number of citations issued).

7.7.2 Outline the staff responsible for data collection, evaluation and recommendations on Plan improvements.

Drought Planning Committee Meeting #3 – Committee reviews draft plan and provides comments (estimated date: May 22, 2019).

Budget for Task 7:

Total (in-kind)	Matching Funds (cash)	Grant Request	Total
\$8,424.08	\$1,803.18	\$3,656.82	\$12,932.81

Estimated timeline for Task 7:

Start Date: November 9, 2018

End Date: May 22, 2019 (with ongoing revisions as information becomes available or is clarified)

Method/Procedure:

At this point the Plan will be getting close to the final stages and a draft Plan will be completed for review by the Town Staff and Drought Planning Committee. Remaining details will be clarified through emails and phone calls. Town Staff Meeting #1 and Drought Planning Committee Meetings #1 and #2 will have provided much of the information in the Plan. Drought Planning Committee Meeting #3 will provide CWS with final feedback on the proposed draft Plan. Comments and feedback from the Drought Planning Committee will be incorporated into the Plan. Remaining data and information will continue be filtered, analyzed, and incorporated into tables and charts to illustrate the various elements of Task 7. Other methods and procedures are discussed within the descriptions of Task 7 Descriptions above.

CWCB Deliverable: (Describe the deliverable the applicant will provide CWCB documenting the



Tasks

completion of this task)

No specific deliverable.

- If needed or requested, CWS can provide CWCB the progress of the Plan at the end of Task 7.
- If at the end of Task 7, it appears that the Plan is progressing significantly different than originally estimated, then Firestone will provide CWCB with an updated schedule.

Tasks

Task 8 – Plan Review and Updates and Suggested Appendices

Description of Task:

8.1 – Public Review Process

- 8.1.1 Describe the public review process and how the public accessed the Plan. Additionally, summarize the public comments received, how the comments were addressed, and details of the meetings held during the Plan development process.
- 8.1.2 If members of the community are involved in the drought committee, a description of their involvement will be provided.
- 8.1.3 The public review process is as follows:
 - Town Board and staff will review a draft of the Plan and provide comments.
 - Incorporate the Town's comments prior to the public review process.
 - The public will be notified that the Plan is available for review. The public will have at least 60 days to review and comment on the Plan.
 - Comments will be solicited and incorporated into the Plan as necessary.
 - The Town will formally adopt the final Plan.
 - Submit the final Plan to CWCB.
 - CWCB will review the final Plan and provide written notification of approval, conditional approval (with minor changes), or disapproval with modifications.

8.2 – Adoption of Ordinances and Official Agreements

- 8.2.1 Summarize the ordinances or policies necessary to implement this Plan and may include policy changes in order to facilitate the formal declaration of a drought; implement and enforce the staged drought response program and public drought campaign; and adopt revenue changes.
- 8.2.2 Provide official agreements with other entities for drought-related coordination, if needed.
- 8.2.3 Provide copies of official Ordinances or Agreements if they are developed.
- 8.2.4 Discuss the formal process for Plan adoptions.
- 8.3 Drought Management Plan Approval



Tasks

8.3.1 Briefly summarize the formal process for the Plan adoption including the government body that approved or adopted the Plan and the date of approval/adoption.

8.4 - Periodic Review and Update

Budget for Task 8:

Item	Total (in-kind)	Matching Funds (cash)	Grant Request	Total
Task 8	\$4,270.25	\$1,459.72	\$2,960.28	\$8,690.25
General Expenses	-	\$451.80	\$916.25	\$1,368.05
TOTAL	\$4,270.25	\$1,911.52	\$3,876.53	\$10,058.30

Estimated timeline for Task 8:

Start Date: November 9, 2018

End Date: September 24, 2019 (with ongoing revisions as information becomes available or is clarified)

Method/Procedure:

The Plan will nearly be finished and a draft will be provided to the Town Board. If anything remains, details will be clarified through emails and phone calls. Feedback and comments may be received during Town Board Meeting #1. Firestone will incorporate this feedback into the draft Plan. The public will also have an opportunity to give feedback during the 60-day public review period. Comments and feedback received by the Town during that time will be incorporated into the Plan. Other methods and procedures are discussed within the descriptions of Task 8 Descriptions above. Once completed, the Plan will be submitted to the CWCB for review and finalization.

CWCB Deliverable: (Describe the deliverable the applicant will provide CWCB documenting the completion of this task)

Deliverable:

- Firestone will send CWCB the final Plan that the Town Board has approved and adopted.
 - The Plan will include a cover letter with Town of Firestone's letterhead and also include:
 - Name and contact information
 - Organizations and individuals assisting with the Plan
 - Profile of the existing water supply system and service area
 - Profile of the drought mitigation and response planning efforts
 - "Essential" elements requested by the CWCB in the Municipal Drought Management Plan Guidance Document for Tasks 1 through 8
 - Additional "beneficial", "public" and "document" elements incorporated into the Plan for Tasks 1 through 8
 - Any other information that is relevant to the CWCB's record of the Project and future use of the Project outcomes
 - Dates of public comment period
 - Signature with authority to commit resources of submitting entity



Tasks

- Note: Several of the above items will also be included within the main body of the Plan.
- The Plan will not be completely finalized until CWCB has reviewed it. If any components
 of the Plan need to be added or modified, those will be addressed, and CWCB will review
 the changes and updates.

Budget and Schedule

<u>Budget:</u> This Scope of Work and Schedule shall be accompanied by a Budget that reflects the Tasks identified in the Scope of Work and Schedule and shall be submitted to CWCB in an excel format.

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

Reporting Requirements

<u>Reporting</u>: 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

(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.



Water Efficiency Grant Fund

BUDGET & SCHEDULE

Date: November 7, 2018

Project Name: Firestone Drought Management Plan Update 2018

Applicant:	licant: Town of Firestone																						
Task No. Description	Start Date ⁽¹⁾	Start Date ⁽¹⁾	End Date	Miche	nsultant - elle Hatcher 60/hour)2		ultant - Sira Sartori 35/hour)2	P	ltant - Steve Nguyen 90/hour)2	-	lanager - In-kind)2	Town Er (Cash &	ngineer - In-kind)2	Public Wor (Cash &	ks Director - In-kind)2	Finance I (Cash &	Director - In-kind)2	Community Direc (Cash & I	ctor -	Commu Coordi (Cash &		WEGF Grant Request	Total
				Hours	Sub Total	Hours	Sub Total	Hours	Sub Total	Cash	In-Kind	Cash	In-Kind	Cash	In-Kind	Cash	In-Kind	Cash	In-Kind	Cash	In-Kind		
1	Stakeholders, Plan Objectives and Principles	11/30/2018	1/28/2019	11	\$1,760.00	19	\$2,565.00	7	\$1,330.00	\$311.26	\$1,031.36	\$311.26	\$1,375.00	\$311.26	\$397.80	\$311.26	\$442.86	\$311.26	\$346.20	\$311.26	\$581.04	\$3,787.42	\$9,829.26
2	Historical Drought and Impact Assessment	11/30/2018	3/11/2019	10	\$1,600.00	40	\$5,400.00	2	\$380.00	\$406.21	\$750.08	\$406.21	\$500.00	\$406.21	\$318.24	\$406.21	\$295.24	\$406.21	\$138.48	\$406.21	\$290.52	\$4,942.73	\$9,672.56
3	Drought Vulnerability Assessment	11/30/2018	4/1/2019	2	\$320.00	8	\$1,080.00	2	\$380.00	\$97.98	\$750.08	\$97.98	\$250.00	\$97.98	\$159.12	\$97.98	\$295.24	\$97.98	\$276.96	\$97.98	\$290.52	\$1,192.15	\$3,801.92
4	Drought Mitigation and Response Strategies	11/30/2018	4/1/2019	5	\$800.00	18	\$2,430.00	5	\$950.00	\$230.08	\$1,312.64	\$230.08	\$500.00	\$230.08	\$318.24	\$230.08	\$295.24	\$230.08	\$692.40	\$230.08	\$290.52	\$2,799.54	\$7,589.04
5	Drought Stages, Trigger Points and Response Targets	11/30/2018	4/8/2019	20	\$3,200.00	40	\$5,400.00	5	\$950.00	\$525.65	\$937.60	\$525.65	\$1,250.00	\$525.65	\$159.12	\$525.65	\$147.62	\$525.65	\$692.40	\$525.65	\$290.52	\$6,396.08	\$13,027.26
6	Staged Drought Response Program	11/30/2018	5/29/2019	12	\$1,920.00	20	\$2,700.00	2	\$380.00	\$275.21	\$1,125.12	\$275.21	\$750.00	\$275.21	\$238.68	\$275.21	\$221.43	\$275.21	\$553.92	\$275.21	\$217.89	\$3,348.73	\$8,107.04
7	Implementation and Monitoring	11/30/2018	6/12/2019	12	\$1,920.00	22	\$2,970.00	3	\$570.00	\$300.53	\$1,875.20	\$300.53	\$2,125.00	\$300.53	\$875.16	\$300.53	\$1,254.77	\$300.53	\$761.64	\$300.53	\$581.04	\$3,656.82	\$12,932.81
8	Plan Review and Updates and Suggested Appendices	11/30/2018	10/14/2020	6	\$960.00	20	\$2,700.00	4	\$760.00	\$243.29	\$1,687.68	\$243.29	\$750.00	\$243.29	\$397.80	\$243.29	\$369.05	\$243.29	\$484.68	\$243.29	\$581.04	\$2,960.28	\$8,690.25
	General Project Expenses	11/30/2018	10/14/2020	-	\$1,368.05	-	-	-	-	\$75.30	\$0.00	\$75.30	\$0.00	\$75.30	\$0.00	\$75.30	\$0.00	\$75.30	\$0.00	\$75.30	\$0.00	\$916.25	\$1,368.05
			Total	78	\$13,848.05	187	\$25,245.00	30	\$5,700.00	\$2,465.51	\$9,469.76	\$2,465.51	\$7,500.00	\$2,465.51	\$2,864.16	\$2,465.51	\$3,321.45	\$2,465.51	\$3,946.68	\$2,465.51	\$3,123.09	\$30,000.00	\$75,018.19

(1) Start Date for funding under \$50K ~ 30 Days from Application Submittal; Start Date for funding over \$50K ~ 30 Days from Board Approval.

(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).