October 19, 2010

Mr. Benjamin Wade
Colorado Water Conservation Board
1313 Sherman Street, 7th Floor
Denver, CO 80203

RE: Town of Estes Park Water Conservation Planning Grant Application

Dear Ben:

The Town of Estes Park is interested in developing a Water Conservation Plan in an effort to ensure that it continues to use its water resources in a responsible manner. Preparation of a Water Conservation Plan will help the Town identify potential areas for water savings and provide framework for the Town to prioritize the measures to best meet the Towns goals and water needs.

The Town is requesting financial assistance from the Colorado Water Conservation Board to assist in the preparation of this plan. The attached grant application includes required background information on the Town and a scope and fee for completion of the plan. The total grant request for the Town of Estes Park is $34,075. Estes Park will provide the remaining cost of $11,358 through an in-kind contribution of $9,984 and a cash contribution of $1,374.

The Town of Estes Park is committed to identifying all possible measures to conserve water and implementing feasible programs to encourage more responsible water use. Completion of a Water Conservation Plan will allow the Town to move forward on this initiative. If you have any questions or would like to comment on the enclosed grant application, please contact me at 303-764-1560. Thank you for your time.

Sincerely,
HDR Engineering, Inc.

Sarah C Clark

Sarah Clark, P.E.
Senior Project Manager

Enclosures

Cc: Bob Goehring, Director of Utilities
Town of Estes Park

HDR Engineering, Inc.

303 E. 17th Avenue
Suite 700
Denver, CO 80208

CWCB APPLICATION SUBMITTAL REQUIREMENTS

1. **Contact information of entity seeking grant:**

Town of Estes Park
Bob Goehring, Director of Utilities
615 Elm Road
P.O. Box 1200
Estes Park, CO 80517

Telephone: 970-577-3580
Email: bgoehring@estes.org

2. **Organization selected to assist in development of the Water Conservation Plan:**

HDR Engineering, Inc.
Attn: Sarah Craig, P.E.
303 E. 17th Ave. Suite 700
Denver, CO 80203

Telephone: 303-318-6271
Email: sarah.craig@hdrinc.com

HDR Engineering, Inc. will complete the Water Conservation Plan for the Town of Estes Park. HDR has worked with the Town for several years and has a thorough understanding of the Town's water system, service area characteristics, and demand forecasts. Individuals that will be involved in the Water Conservation Plan include: Sarah Clark, Sarah Craig, and Kelly O'Rourke.

Sarah Clark is a Professional Engineer registered in the state of Colorado. She has over 27 years of experience in the field of water treatment and over four years working with the Town of Estes Park. The Town and HDR recently completed the construction of improvements to the existing Marys Lake WTP. The upgrades included improved water quality and an increase in plant capacity through the installation of low pressure membranes. Sarah was the project manager for the design and construction management services for this project. In previous years, Sarah has been the project manager for Water Demand Projection and Water Treatment Evaluation reports. Sarah will serve as the project manager and technical advisor for the Water Conservation Plan project as well as supervise efforts of the Project Team.

Sarah Craig is also a Professional Engineer registered in the state of Colorado, with over 8 years of experience in the field of water treatment. Ms. Craig will conduct data analysis, water conservation goal development and program identification, and work with the Town to identify conservation measures appropriate for them.

Kelly O'Rourke is a water resources planner with significant experience with water resource issues. Her primary working area is water system planning, with a focus on demand forecasting

and water conservation. Kelly has developed demand forecasts for dozens of cities and water districts. Her water conservation experience includes various types of conservation planning projects, as well as program implementation. Kelly will serve as a technical advisor and perform quality control for the project.

Town of Estes Park
Bob Goehring is the Director of Utilities for the Town of Estes Park and will serve as the primary contact for the Town on this project. Bob has extensive knowledge of the water distribution system, water treatment facilities and the daily operation of the water system as a whole.

Jeff Boles is the Water Superintendant for the Town. Jeff manages two water treatment plants and the distribution system. Jeff will provide information as needed for the Conservation Plan on water usage and current programs affecting water usage.

3. Retail Water Delivery (2004-2009 characterize by sector)

a. According to Town records, approximately 52% of water treated is supplied for residential use, 47% for commercial and 1% is used for bleeding. Bleeders are set to bleed water from the system during the winter to keep the distribution pipes from freezing. The total volume of water treated for the last six years and the proportions that were supplied to residential, commercial, and bleeders is shown in Table 1.

Table 1 - Water Delivery (2004-2009)

Usage Type	2004 AF	2005 AF	2006 AF	2007 AF	2008 AF	2009 AF
Residential	763.2	829.7	829.7	854.7	829.0	829.0
Commercial	689.9	749.9	749.9	772.5	749.3	749.3
Bleeder	14.7	16.0	16.0	16.4	15.9	15.9
Total Water Treated	1,467.8	1,595.6	1,595.6	1,643.7	1,594.2	1,594.2

b. Eligibility
   i. Does the Town qualify as a local government entity? – YES
   ii. Does the Town qualify as a covered entity? – NO, total water delivery is less than 2,000 AF per year. The Town is a participant in the Windy Gap project and as such has agreed to develop a water conservation plan as part of an effort to demonstrate conservation intentions to the Bureau of Reclamation.

4. Population and water demand projections

HDR assisted the Town in the preparation of a report to analyze the potable water demands for Estes Park. The Potable Water Demand Projection report was completed in July 2006 and is the basis for population and in turn water demand projections used in this application. A copy of this report can be provided upon request.

POPULATION

The Town of Estes Park is somewhat unique in that the population doubles and sometimes triples in the summer due to the large influx of visitors. In general, the population of the water service area can be divided into four categories: permanent, transient, non-transient, and wholesale. The permanent population is measureable and predictable based on census data and the total number of water accounts.

Tourists make up the transient population in the Town. This group is comprised of both day visitors and overnight visitors. During the summer of 2006, the Town completed a survey to examine the visitor profile (Estes Park Summer Visitor Survey 2006, November 2006, RRC Associates). The survey found that the primary attraction for visitors is still Rocky Mountain National Park (RMNP), although activities such as wildlife viewing and other outdoor recreation activities also have a high importance. The survey results support the assumption that the transient population in Town correlates closely with the total number of visitors to RMNP. Furthermore, the number of visitors to the Town is more influenced by national growth trends and trends in visitation to National Parks then it is by growth trends within Colorado.

To obtain reasonable projections for the number of RMNP visitors, historic data for visitor numbers were obtained. For this study, the future visitation trends of RMNP were estimated based on the Director's understanding of future visitation as well as historic visitation data. If the growth rate between 1984 and 1999 were to continue from 2006 forward, the projected annual visitors to RMNP would reach 4.5 million by approximately 2030.

The non-transient population is comprised largely of workers who commute into Town. The Town estimates the 2006 non-transient population to be 398 persons per day during the peak season. To simplify the analysis, it was assumed that the estimate developed by the Town is reasonable as it is based on interviews with major employers. Consequently, the peak season estimate of 398 people was used for the analysis.

The Town provides wholesale water to four bulk wholesale customers and to rural customers via a dispenser located in Town. The wholesale population is not a significant component of the total water service area population. To simplify the analysis, it was assumed that the estimate developed by the Town is reasonable and the peak season estimate of 796 people per day was used.

The probability of projected growth rates for the various populations served by the water system, as well as the basis for the projected growth is summarized below on Table 2. The 2006 peak season population for wholesale bulk and non-transient populations is based on the population analysis by the Town. The 2006 peak season population for transient visitors will be assigned a level of variability as part of the analysis.

Table 2 - Summary of Projected Population Growth Rates

Population Type	2006 Peak Season Population	Percent Annual Growth	Probability	Basis of Growth Projection
Permanent	10,369[1]	1.4	Low	Lowest annual growth rate for Town, Valley, and County since 1970 based on Census data.
		2.6	Most Likely	Average annual increase in number of water accounts between 2000 and 2006.
		4.0	High	Average annual growth rate for Town and Valley between 1990 and 2000 from Census data
Transient	10,789[2]	1.1	Low	Average annual growth rate for number of visitors to RMNP between 1990 and 2006.
		3.5	Most Likely	Average annual growth rate for number of visitors to RMNP between 1984 and 2006. Assumes balance of visitors who do not visit RMNP and visitors to RMNP that do not stop In Estes Park.
		6.6	High	Average annual growth rate for number of visitors to RMNP between 1984 and 1999, which is the period of maximum growth of RMNP visitors.
Wholesale Bulk	796[3]	0.7	Low	Primarily rural communities; assume growth rates will be half of the permanent population growth rate based on growth rates in the region.
		1.3	Most Likely	
		2.0	High	
Non-Transient	398[3]	1.4	Low	Primarily supports the permanent population; use same growth rates as permanent population growth rates.
		2.6	Most Likely	
		4.0	High	

Notes:

(1) Based on 2000 population of Estes Valley (8,889) and an average annual growth rate of 2.6 percent.

(2) For this study, the 2006 transient population will be varied as follows: low = 5,394, most likely = 10,789, and high = 15,377.

(3) Based on 2006 Population Fact Sheet and Projections, which is a statistical population analysis prepared by the Town for the State. (See Appendix)

WATER DEMAND PROJECTIONS

The standard for long-range forecasting is not certainty but reasonableness, because the likelihood of a forecast being precisely correct is near zero. Conditions change, often in ways that are unpredictable, and as one looks further into the future, more uncertainty is present. In response to this uncertainty, the peak day demand estimate can be examined in a risk analysis framework. The low, most likely, and high estimates developed in the previous sections of this report were incorporated into a Monte Carlo simulation. Monte Carlo simulation is a widely accepted risk assessment tool, which randomly samples from within the underlying distributions associated with demand parameters to generate a very large number of alternative combinations of these variables. The result is a joint frequency distribution for peak day demand consisting of 5,000 or more possible outcomes, with a probability associated with each.

Figure 1 illustrates the peak day demand projection curves resulting from the demand analysis. Each curve represents a peak day demand condition with a percent probability that the demand in a given year will exceed that demand condition. For example, in 2015, there is 25 percent probability that the 4.9 MGD demand will be exceeded based on the assumptions of this analysis.

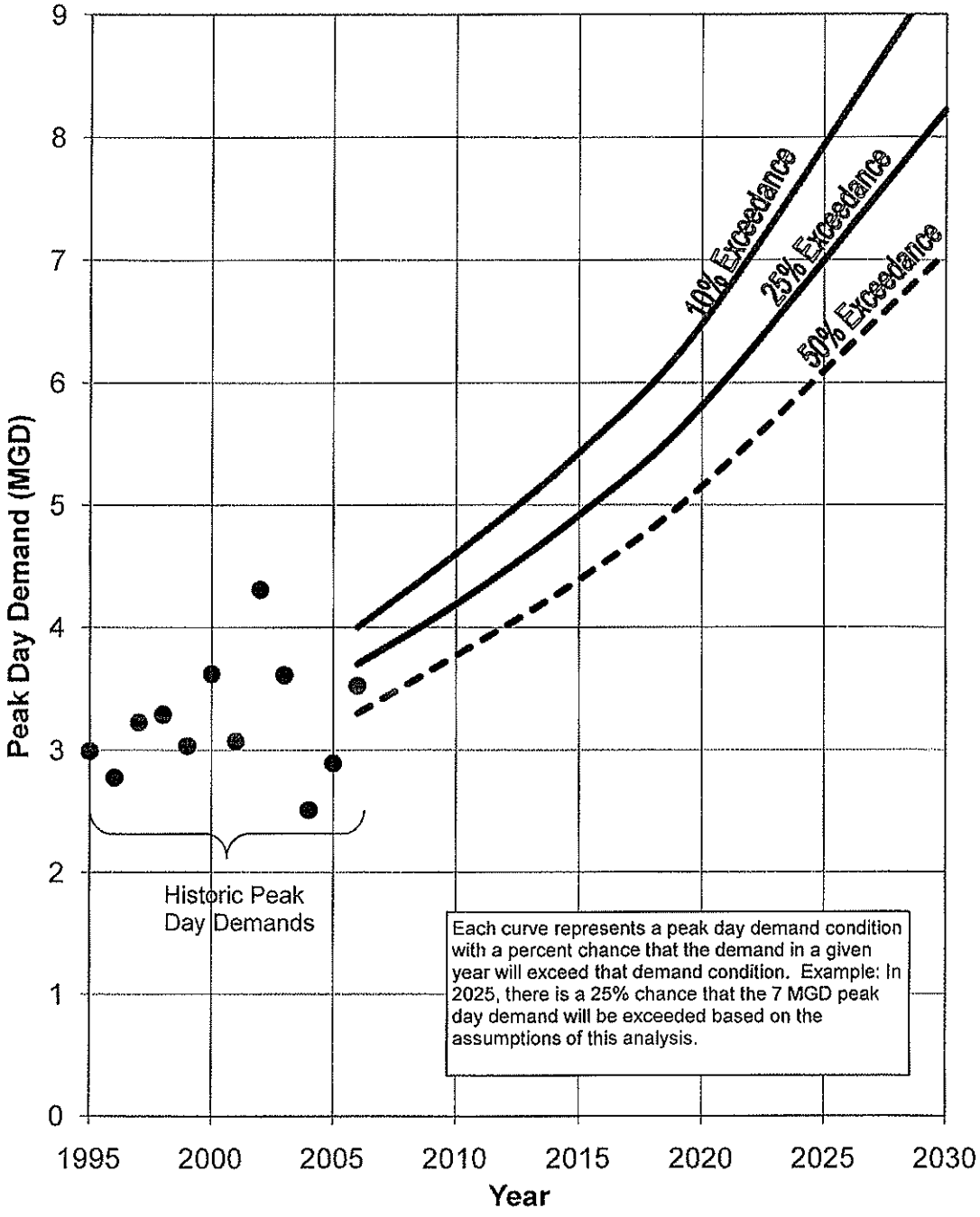

Figure 1 - Peak Day Demand Projections

The Most Likely Peak Day Demand curve represents an estimate of future demands with a 50 percent probability that the demands will be larger or smaller than the represented demand condition. In water system planning, decision makers typically do not use the most likely peak day demand because the risk of the demand being larger than planned is higher than is typically prudent. A more prudent planning curve is the 10 percent exceedance curve. Using the 10 percent curve for the Town, peak day demand is estimated at approximately 5.3 MGD in 2015 and 6.4 MGD in 2020.

5. Background Information

a. Current and past system wide SF per capita water use

Due to the unique nature of water use within the Town of Estes Park, per capita water use is very difficult to estimate. As described above, the population within the Town significantly varies over the course of the year due to the influx of tourism in the summer months. Total tourism within the Town varies from year to year, and is not easily documented. However, it is not expected that the per capita demand would change much from year to year. An estimate of per capita demand for 2006 is provided below.

Per capita water demand can be calculated by distributing the water treatment production over the population to arrive at a usage per customer. Using this method, each customer is allocated a portion of residential and commercial demand as well as system losses. For this analysis, the 2006 average water treatment plant production in the peak season (2,078,000 gal/day) was distributed over the peak season population (22,352) to arrive at a per capita usage rate of 93 gallon per capita per day (gpcd). To establish a low value for per capita usage, the average water plant production in the off-season (1,047,000 gal/day) was distributed over the off-season population (14,273) to arrive at a per capita usage rate of 73 gpcd. The high value for per capita usage was established by examining the ratio of peak day demand in a drought condition (2002) with the 2006 peak day demand (year that population data is available). The peak day demands were 4.31 MGD and 3.53 MGD, respectively, representing a 22% increase. This is considered a conservative estimate of the effects of a drought on average peak day usage. There is some impact from population growth between 2002 and 2006 that may have also caused the peak day usage to increase during this time period. However, the effect is considered minimal and counter-acted by potential voluntary conservation efforts following the drought of 2002. The 22% increase was applied to the most likely per capita usage rate of 93 gpcd to establish the upper limit of per capita usage at 113 gpcd. For comparison, the per capita usage of the Northern Colorado NISP communities is 177 gpcd and the average per capita usage for Denver Water is 180 gpcd. The Town's per capita usage is not as high as these other communities due to the transient population (who use less water than the permanent population), the low occupancy rate of the permanent population (many households are second homes), and the absence of

large irrigation demands. Table 3 provides a summary of per capita usage rates used in the analysis.

Table 3 - Per Capita Demands

Probability	Per Capita Demand (gpcd)
Low	73
Most Likely	93
High	113

The per capita demands listed in the table above include all four categories of population (permanent, transient, wholesale, and non-transient). A more detailed analysis could be performed if per capita demands could be developed for each of these population categories, specifically permanent and transient since they represent the majority of the population. However, the permanent and transient populations can not be specifically associated with the residential and commercial usage (billing records) for several reasons including:

- A portion of the transient population stays in rental condos, which have residential meters
- The permanent population has an impact on commercial usage, which cannot be separated from the impact of the transient population on commercial usage

In general, the transient population will use less water than the permanent population primarily because significant portions of the transient population are day visitors to Town and do not stay overnight. By applying the same per capita demand to both populations, we are assuming that the ratio of permanent and transient populations will remain the same in the future. In reality, it is more likely that the growth rate of the transient population will outpace the growth rate of the permanent population. However, the demand projection will still be conservative (on the high side) since it is based on the ratio of the permanent population to the transient population in 2006 and this ratio is expected to increase in the future.

b. Population for past 5 years, current year, and 10 year population projection served and source of info

As previously described, population data was compiled in 2006 for the Potable Water Demand Projection report. Table 4 is based on the results of that study, and shows the population growth projections for 2006 through 2020.

Table 4 - Population Projections

Year	Permanent	Transient	Wholesale Bulk	Non-Transient	Total
2006	10,369	10,789	796	398	22,352
2007	10,639	11,167	806	408	23,020
2008	10,915	11,557	817	419	23,708
2009	11,199	11,962	827	430	24,418
2010	11,490	12,381	838	441	25,150
2011	11,789	12,814	849	453	25,904
2012	12,095	13,262	860	464	26,682
2013	12,410	13,727	871	476	27,484
2014	12,733	14,207	883	489	28,311
2015	13,064	14,704	894	501	29,163
2016	13,403	15,219	906	514	30,042
2017	13,752	15,752	918	528	30,949
2018	14,109	16,303	929	542	31,883
2019	14,476	16,874	942	556	32,847
2020	14,853	17,464	954	570	33,840

c. Estimate water savings goals through implementation of the plan (AF and %)

A goal has not yet been established for the Town; establishment of a water savings goal is one of the key aspects of the Water Conservation Plan. The per capita water use in Estes Park is much lower than most communities in Colorado. Most residential areas in the Town have minimal irrigation requirements due to the natural landscape in the area. Typical water savings that most communities can realize by targeting irrigation demand may not be applicable in Estes Park. The Town needs to evaluate current water use patterns and areas of potential savings to set a realistic water saving goal.

Estimated water savings from this water conservation planning effort will be to lower the total per capita water use by 10% over a ten-year planning period from the current most likely per capita usage of 93 gpcd to a goal level of 83 gpcd. The Town will target a reduction of 253.38 acre-feet from the projected 2020 demand of 2533.77 acre-feet.

d. Adequacy stability and reliability of the entities water system and provide the entities location with respect to areas of current and future water needs as identified by the Statewide Water Supply Initiative (SWSI)

The Town of Estes Park is located in the South Platte basin, which has been identified by the Statewide Water Supply Initiative (SWSI) as having a water supply gap of 22% or 409,700 AF. The Town provides water to Rocky Mountain National Park, half of which is located in the South Platte basin and the other half

of the Park is located in the Colorado basin. The Colorado basin has been identified by the Statewide Water Supply Initiative (SWSI) as having a water supply gap of 5% or 61,900 AF.

Water conservation in Colorado is one method that water providers should use to help fill these gaps and similar gaps within the state. The Town of Estes Park is fortunate that it maintains adequate water supply to meet its current demands and foreseeable future demands.

6. **Water Conservation Plan Scope of Work and Schedule**
   See Attachments A and B

7. **Project Budget and in-kind Match**
   See Attachment C

8. **Signature of an individual with the authority to commit resources of the entity seeking the grant.**

   The Town of Estes Park is committed to water resource sustainability and water conservation. Conservation is imperative; especially in the semi arid state of Colorado. The staff of Estes Park understands the benefits of implementing long-term water conservation measures.

Bob Goehring, Director of Utilities, Town of Estes Park

Attachment A
Town of Estes Park
Water Conservation Plan Development
Scope of Services and Fee Schedule

BACKGROUND

The Town of Estes Park is undertaking a revision to their Water Conservation Plan for several reasons including: the importance to make efficient use of resources, as part of their obligations in association with their water rights, and to allow for future application for funding sources that require the utility to have an updated water conservation plan. The last Water Conservation Plan was developed in 2001 for Estes Park. Since that time Mary's Lake Water Treatment Plant has been upgraded and other water planning efforts have been completed. The revised Water Conservation Plan will include this updated information. The Plan must be submitted for review and approval to the State Office of Water Conservation and Drought Planning (Office).

SCOPE OF SERVICES

Worksheets provided by CWCB and identified in this scope will be used as appropriate. HDR has developed modeling tools to aid in the analysis of water conservation plans to predict potential cost and water savings of various conservation measures. HDR's tools will be used in lieu of the worksheets where deemed to provide a more accurate representation of system characteristics.

Task 1 - Project Management and QA/QC

Manage the scope, schedule, budget, and project team for the Water Conservation Plan preparation.

1.1 Kickoff Meeting

1.2 Project Management Plan

1.3 Project Coordination Conference Calls

1.4 Prepare Invoices/Project Monitoring

1.5 QA/QC Review

Task 2 – Develop Water Conservation Plan

The purpose of this task will be to develop a Water Conservation Plan for the Town of Estes Park. The Plan must follow State guidelines which delineate the framework of the Plan. Subtasks reflect State guidelines.

Step 2.1 – Profile the Existing Water System - provide information on the Town's existing water supply system.

2.1.1 Profile physical characteristics of the existing water supply system:
HDR will describe the physical characteristics of the water system using Worksheet 1-1 as a guide. Key system characteristics are expected to include: the geographic area served, population, number of connection, types of customers, types of key water users, key existing facilities, and water demand.

2.1.2 Identify all water sources - identify and describe all of the system's water supply sources including attributes, age, and conditions of its use. Estimates will be made for missing information.

2.1.3 Identify system limitations - system limitations on the Town's water supply will be discussed focusing on capacity and growth related issues using Worksheet 1-2 as a guide.

2.1.4 Characterize water costs and pricing structures - in coordination with Town staff, document past and current history of water sales, and current water pricing structures.

2.1.5 Summarize current water conservation activities - in coordination with Town staff, summarize current water conservation activities using Worksheet 1-3 as a guide.

Step 2.2 – Characterize Water Use and Forecast Demand - provide information on the Town's existing and projected water use.

2.2.1 Characterize current water use - in coordination with Town staff, review sales records, production and treatment records and billing records to summarize water use by segment. Included in the discussion will be quantifications of indoor and outdoor water use and potable and non-potable water use, as possible.

2.2.2 Future demands established in the 2006 Potable Water Demand Projection report will be used to forecast future water demands.

Step 2.3 – Profile Proposed Facilities

2.3.1 Identify potential facility needs - identify and describe options to improve and add capacity to the existing water system to meet the water demands outlined in Step 2.2. Options will include water rights and water storage acquisitions, expansions of water and wastewater treatment plants, treated water storage, major transmission lines, and pump station improvements. Worksheet 3-1 will be used as a guide for this subtask.

2.3.2 Develop budgetary total, annual and unit costs of improvements using Worksheet 3-2 as a guide.

2.3.3 Develop preliminary supply-capacity forecasts – Estimate the timing for new infrastructure construction based on demand projections and current infrastructure capacity. Develop a timeline estimating the capacity of the water supply system, describing new additions and replacements.

Step 2.4 – Identify Conservation Goals

2.4.1 Identify areas of key savings – identify water savings needs and opportunities by water use segment, based on recent growth and expected impacts of measures and programs.

2.4.2 Develop preliminary water conservation goals - working with Town staff, develop water conservation goals. Identify areas for water conservation, a specific water savings target, including percentage of water savings, timeframe during which water savings will occur, as well as how the savings will be measured.

Step 2.5 – Identify and Screen Conservation Measures and Programs for Implementation

2.5.1 Identify conservation measures and programs – identify candidate water conservation measures and programs using CRS 37.60.126 and Worksheets 5-1 and 5-2 as a guide.

2.5.2 Develop and define screening criteria - Describe the screening criteria used to eliminate inappropriate water conservation measures and programs from use or further consideration.

2.5.3 Screen conservation measures and programs – use the above-developed criteria to screen the full list of conservation measures and programs to determine which ones will be evaluated further.

Step 2.6 – Evaluate and Select Conservation Measures and Programs

2.6.1 Summarize final conservation package options aligning measures and programs with identified gaps and goals. Review all screened conservation measures and programs, develop groupings of complementary measures and programs to address the identified gaps, and develop overall packages of measures and programs for further evaluation.

2.6.2 Estimate costs and water saving of conservation options - Estimate the cost of each packet of conservation measures and programs, and the associated water savings using Worksheet 6-1 as a guide. A benefit/cost analysis will be included based on implementation cost and expected water savings.

2.6.3 Compare benefits and costs - summarize conservation measure costs and water savings, including a net benefit from all suggested measures using Worksheets 6-1 and 6-2 as a guide.

2.6.4 Select conservation measures and programs - summarize the evaluation of each measure/program and indicate which measures/programs will be implemented. The water savings from the implementation will be estimated using Worksheet 6-3 as a guide.

Step 2.7 – Integrate Resources and Modify Forecasts

The activities described under this task will modify the supply and demand forecasts to account for water savings from selected conservation measures and programs. The benefits of conservation as well as revenue effects will also be addressed.

2.7.1 Revise demand forecast - revise the demand forecast prepared in Step 2.2 to account for the water savings of the measures/programs from Step 6. Worksheet 7-1 will be used as a guide.

2.7.2 Summarize forecast modifications and benefits of conservation - develop a graph showing demand and supply with and without conservation.

2.7.3 Consider Impacts on Future Costs - quantify impacts on revenues from implementation of water conservation. Savings in capital improvement projects or delayed water acquisition will be presented against loss in sales revenue. Strategies to address this issue will be presented.

Step 2.8 – Develop Implementation Plan

2.8.1 Develop implementation schedule - identify significant implementation actions and challenges that may impact the implementation of the selected conservation measures. Develop reasonable implementation schedule and timetable for the Town to follow.

2.8.2 Develop plan for public participation in implementation - describe how to involve and educate the public in the implementation process.

2.8.3 Develop plan for monitoring and evaluation processes - describe how water conservation will be measured for effectiveness.

2.8.4 Develop plan for updating and revising the Plan - describe when and how the Plan will be updated, in part, in accordance with CRS 37.60.126.

2.8.5 Define plan adoption date/plan completed date/plan approved date - A copy of the approval resolution adopting the final water conservation plan will be included, to be executed after Town Board and public review.

Step 2.9 –Conservation Plan

2.9.1 Prepare Draft Plan – compile information, data and other content into Draft Plan for review and comment. Provide 2 copies total for the Town to review.

2.9.2 Draft Plan Review Meeting – Meet with Town to review comments on Draft Plan.

2.9.3 Prepare Final Plan - Incorporate Town comments and finalize report. Provide 5 copies to the Town. Send final plan to CWCB in electronic (pdf) format.

Deliverables

1. One meeting with the Town in Estes Park to discuss water conservation goals.
2. One workshop to select conservation measures and programs.
3. Draft Water Conservation Plan
4. One meeting to review Town comments on Draft Plan.
5. Final Water Conservation Plan

Task 3 – Provide Progress Reports to CWCB

The progress report will document the status at the defined points in the project.

3.1 Complete 50% progress reports for CWCB Board.

3.2 Complete 75% progress reports for CWCB Board.

3.3 Coordinate with State for final plan review and approval.

Deliverables

1. 50% progress report to CWCB
2. 75% progress report to CWCB
3. Coordinate with State Office to submit Water Conservation Plan for review and approval.

SCHEDULE

A proposed schedule is attached.

MANHOUR AND FEE ESTIMATE

A detailed man-hour and fee estimate for the project is attached.

Attachment B
Schedule for Estes Park Conservation Plan Development

Dates in schedule assume Notice to Proceed by January 10, 2011

Task		2011									
		January	February	March	April	May	June	July	August	September	October
1	Project Management										
2.1	Profile Existing Water System										
2.2	Characterize Water Use and Forecast Demand										
2.3	Profile Proposed Facilities										
2.4	Identify Conservation Goals										
2.5	Identify Conservation Measures and Programs										
2.6	Evaluate and Select Conservation Measures and Programs										
2.7	Integrate Resources and Modify Forecasts										
2.8	Develop Implementation Plan										
2.9	Conservation Plan										
3	Provide Progress Reports to CWCB										

Attachment C - Project Budget and In Kind Match

Town of Estes Park Water Conservation Plan Development		QA/QC - Kelly O'Rourke	Project Manager - Sarah Clark	Project Enginer - Melissa Marts	CAD - Robin Nelson	Clerical - Evans/ Valesquez	Hours	HDR Fee	Bob Goehring - Utilities Manager	Jeff Boles - Superintendant	Admin Assistant	Estes Park In Kind Services - TOTAL	Project Total	Estes Park Cash Contribution	CWBC Grant Request
		$ 126	$ 187	$ 89	$ 88	$ 80			$ 80	$ 64	$ 32				
Task Description															
1	**Project Management**														
1.1	Kickoff Meeting		8	8			16	$ 2,366	4	4		$ 576	$ 2,942		$ 2,206
1.2	Project Management Plan		1				1	$ 191				$ -	$ 191		$ 143
1.3	Project Coordination Conference Calls		8	8			16	$ 2,266	8	8	2	$ 1,216	$ 3,482		$ 2,611
1.4	Prepare Invoices/Project Monitoring		4			16	20	$ 2,102	2		2	$ 224	$ 2,326		$ 1,745
1.5	QA/QC Review	8					8	$ 1,034				$ -	$ 1,034		$ 776
	Sub-total	**8**	**21**	**16**	**0**	**16**	**61**	**$ 7,958**	**14**	**12**	**4**	**$ 2,016**	**$ 9,974**	**$ 100**	**$ 7,481**
2	**Develop Water Conservation Plan**														
2.1	**Profile Existing Water System**														
2.1.1	Profile Existing Water System			4	8		12	$ 1,107		2	2	$ 192	$ 1,299		$ 974
2.1.2	Identify Sources of Water			4			4	$ 370		4	2	$ 320	$ 690		$ 518
2.1.3	Identify System Limitations			2			2	$ 185		4		$ 256	$ 441		$ 331
2.1.4	Characterize Water Costs and Pricing			2			2	$ 185	2			$ 160	$ 345		$ 259
2.1.5	Summarize Current Water Conservation Activities			2			2	$ 185	2	2		$ 288	$ 473		$ 355
	Sub-total	**0**	**0**	**14**	**8**	**0**	**22**	**$ 2,032**	**4**	**12**	**4**	**$ 1,216**	**$ 3,248**	**$ 100**	**$ 2,436**
2.2	**Characterize Water Use and Forecast Demand**														
2.2.1	Characterize Current Water Use			2			2	$ 185		2	4	$ 256	$ 441		$ 331
2.2.2	Forecast Future Demands			2			2	$ 185				$ -	$ 185		$ 139
	Sub-total	**0**	**0**	**4**	**0**	**0**	**4**	**$ 370**	**0**	**2**	**4**	**$ 256**	**$ 626**	**$ 100**	**$ 470**
2.3	**Profile Proposed Facilities**														
2.3.1	Identify Potential Facility Needs			2			2	$ 185		1		$ 64	$ 249		$ 187
2.3.2	Prepare an Incremental Cost Analysis		1	4			5	$ 561				$ -	$ 561		$ 421
2.3.3	Develop Preliminary Capacity and Cost Forecasts			4			4	$ 370		1		$ 64	$ 434		$ 326
	Sub-total	**0**	**1**	**10**	**0**	**0**	**11**	**$ 1,116**	**0**	**2**	**0**	**$ 128**	**$ 1,244**	**$ 200**	**$ 933**
2.4	**Identify Conservation Goals**														
2.4.1	Identify Potential Areas for Water Savings		4	8			12	$ 1,503	2	4		$ 416	$ 1,919		$ 1,439
2.4.2	Develop Water Conservation Goals		8	10			18	$ 2,551	6	6		$ 864	$ 3,415		$ 2,561
	Sub-total	**0**	**12**	**18**	**0**	**0**	**30**	**$ 4,053**	**8**	**10**	**0**	**$ 1,280**	**$ 5,333**	**$ 50**	**$ 4,000**
2.5	**Identify Conservation Measures and Programs**														
2.5.1	Identify Conservation Measures and Programs	4		8			12	$ 1,257		2		$ 128	$ 1,385		$ 1,039
2.5.2	Develop and Define Screening Criteria			2			2	$ 185	4	4		$ 576	$ 761		$ 571
2.5.3	Screen Conservation Measures and Programs		8	8			16	$ 2,366	6	8		$ 992	$ 3,358		$ 2,518
	Sub-total	**4**	**8**	**18**	**0**	**0**	**30**	**$ 3,808**	**10**	**14**	**0**	**$ 1,696**	**$ 5,504**	**$ 50**	**$ 4,128**
2.6	**Evaluate and Select Conservation Measures and Programs**														
2.6.1	Summarize Conservation Plan Options			4			4	$ 370				$ -	$ 370		$ 278
2.6.2	Estimate Costs and Water Savings of Conservation Options			4			4	$ 370				$ -	$ 370		$ 278
2.6.3	Compare Benefits and Costs		4	6			10	$ 1,318	2	2		$ 288	$ 1,606		$ 1,204
2.6.4	Select Conservation Measures and Programs		4	6			10	$ 1,318	4	4		$ 576	$ 1,894		$ 1,420
	Sub-total	**0**	**8**	**20**	**0**	**0**	**28**	**$ 3,376**	**6**	**6**	**0**	**$ 864**	**$ 4,240**	**$ 200**	**$ 3,180**
2.7	**Integrate Resources and Modify Forecasts**														
2.7.1	Revise Demand Forecasts		2	6			8	$ 936	2			$ 160	$ 1,096		$ 822
2.7.2	Summarize Forecast Modifications and Benefits of Conservation			2			2	$ 185	2	2		$ 288	$ 473		$ 355
2.7.3	Consider Revenue Effects		2	4			6	$ 751	2	2		$ 288	$ 1,039		$ 780
	Sub-total	**0**	**4**	**12**	**0**	**0**	**16**	**$ 1,873**	**6**	**4**	**0**	**$ 736**	**$ 2,609**	**$ 100**	**$ 1,957**
2.8	**Develop Implementation Plan**														
2.8.1	Develop Implementation Schedule			4			4	$ 370				$ -	$ 370		$ 278
2.8.2	Develop Plan for Public Participation in Implementation			4			4	$ 370				$ -	$ 370		$ 278
2.8.3	Develop Plan for Monitoring and Evaluation Processes			4			4	$ 370				$ -	$ 370		$ 278
2.8.4	Develop Plan for Updating and Revising the Conservation Plan			2			2	$ 185				$ -	$ 185		$ 139
2.8.5	Define Plan Adoption Date/Plan Completed Date/Plan Approved Date			2			2	$ 185				$ -	$ 185		$ 139
	Sub-total	**0**	**0**	**16**	**0**	**0**	**16**	**$ 1,480**	**0**	**0**	**0**	$ -	**$ 1,480**	**$ 200**	**$ 1,110**
2.9	**Conservation Plan**														
2.9.1	Finalize Draft for Town Review		4	20	4	4	32	$ 3,416	4	4		$ 576	$ 3,992		$ 2,994
2.9.2	Meeting to discuss Town comments on Draft Plan		8	8			16	$ 2,366	6	6	2	$ 928	$ 3,294		$ 2,470
2.9.3	Incorporate Town comments and Finalize Plan		2	16	2	4	24	$ 2,480				$ -	$ 2,480		$ 1,860
	Sub-total	**0**	**14**	**44**	**6**	**8**	**72**	**$ 8,262**	**10**	**10**	**2**	**$ 1,504**	**$ 9,766**	**$ 200**	**$ 7,325**
3	**Provide Progress Reports to CWCB**														
3.1	Prepare 50% Progress Report			2			2	$ 185	1	1		$ 144	$ 329		$ 247
3.2	Prepare 75% Progress Report			2			2	$ 185	1	1		$ 144	$ 329		$ 247
3.3	Coordinate with State for Final Plan Review and Approval		2	4			6	$ 751				$ -	$ 751		$ 564
	Sub-total	**0**	**2**	**8**	**0**	**0**	**10**	**$ 1,121**	**2**	**2**	**0**	**$ 288**	**$ 1,409**	**$ 74**	**$ 1,057**
	Hours	**12**	**70**	**180**	**14**	**24**	**300**		**60**	**74**	**14**				
	Fee	**$1,507**	**$13,090**	**$15,984**	**$1,238**	**$1,920**		**$ 35,449**	**$4,800**	**$4,736**	**$448**	**$9,984**	**$ 45,433**	**$1,374**	**$ 34,075**