January 18, 2012

Mr. Kevin Reidy
Colorado Water Conservation Board
Office of Water Conservation and Drought Planning
1313 Sherman Street, Room 721
Denver, CO 80203

RE: Water-Efficiency Grant Application for the City of Dacono 2012 Water Rate Study

Dear Mr. Reidy:

The City of Dacono completed a water conservation plan that was approved by the Colorado Water Conservation Board (CWCB) on December 20, 2011. This is the first water conservation plan for the City and a very important investment in wise water use for the community.

Dacono is dedicated to committing the necessary resources for completion of the proposed water rate study. The City has an existing three-tiered rate structure that has not been evaluated since 2005. The total cost for the rate study is $48,514. The City will meet its portion with both in-kind and monetary participation. The City will contribute $13,283 total, which consists of $2,000 cash and $11,283 of in-kind services. This is 27.4% of the total project. We are requesting a CWCB water-efficiency grant of $35,230. This grant will be used to cover a portion of the proposed 2012 water rate study.

We believe this project will help us to achieve the conservation goals outlined in our Water Conservation Plan. We truly appreciate your consideration and are excited to take this step in conserving water.

Sincerely,
City of Dacono

A.J. Euckert, *Assistant City Administrator*

Enclosures

CWCB WATER-EFFICIENCY GRANT APPLICATION SUBMITTAL REQUIREMENTS

PROJECT: 2012 Water Rate Study

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

   City of Dacono
   Attn: Kelly Stroh, Finance Director
   512 Cherry Street
   Dacono, CO 80514
   T: (303) 833-2317
   F: (303) 833-5528

2. **Selected firms (Consultants) and individuals (City Staff) to assist in development of the Project:**

   Clear Water Solutions, Inc.
   Steve Nguyen, P.E.
   8010 S. County Road 5, Suite 105
   Windsor, CO 80528
   T: (970) 223-3706
   F: (970) 223-3763

   Water Consulting Group, LLC
   Webb Jones, P.E.
   245 Hill St.
   Steamboat Springs, CO 80487
   T: (970) 219-1109
   F: (970) 223-6046

   Clear Water Solutions, Inc. completed the 2011 Water Conservation Plan for the City of Dacono (City). A water rate study was selected as a water conservation measure and identified in the implementation plan as part of the water conservation plan.

   Steve Nguyen is a Professional Engineer registered in the State of Colorado. He has over fifteen 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, and water conservation. Through previous planning efforts with Dacono, Steve has gained detailed knowledge of the City's water usage, revenue from water sales, and water infrastructure needs. He will help determine the revenue requirements for water acquisition and water conservation per the Water Master Plan, so rates can be established accordingly. Steve will participate in coordinating the public-review process and conduct meetings as needed. Steve will also handle presentations to the City Council at key milestones.

   Webb Jones, Water Consulting Group, LLC, was previously the rate analyst for the City of Fort Collins and served as the General Manager of East Larimer County Water District for 15 years. His experience with rate study modeling will be critical to the Project. Mr. Jones will assist with cost allocation and rate design. He will develop a spreadsheet model that will be specific to this Project,

which the City can use into the future. Mr. Jones will attend the meetings as necessary.

Kelly Stroh is the City's Finance Director and will serve as the primary contact for the Consultants. She will provide general direction on all aspects of the Project. Ms. Stroh will also provide financial perspective and guidance as the plan is developed.

AJ Euckert is the Dacono Assistant City Administrator and will serve as the primary liaison between staff and the City Council. He will insure this project is consistent with the City's overall goals. Mr. Euckert will be very involved with public communication and staff recommendations to City Council.

Jon Rabas is the City's Public Works Director and will provide input on the City's planned capital improvements. Mr. Rabas will provide planned and needed expenditures for the development of the City's revenue requirements. Expenditures will include repair and replacement costs over the foreseeable future.

3. a) **Identification of retail water delivery by covered entity for past five years**:

Table 1 – Past Five Years Water Use by Customer Category

	2006	2007	2008	2009	2010
Commercial	68	64	80	74	72
City	22	16	21	16	20
Residential	359	386	388	374	386
Hydrants	16	13	13	4	5
Total (ac-ft)	466	479	502	468	483
Population*	3,893	4,127	4,127	4,127	4,152
System Wide GPCD	107	104	108	101	104

* Data from City staff with updated 2010 Census Data from State Demography office

GPCD = Gallons per Capita per Day

The City's water supply consists of Colorado Big Thompson (CBT) units that are treated by Central Weld County Water District (CWCWD). Dacono and CWCWD have an agreement for CWCWD to treat and deliver treated water to the City. Every year, Dacono transfers its units of CBT to CWCWD for treatment and delivery.

b) **Background characterizing the local water system, potential growth and any other pertinent issues**.

i) **Current and past per capita water use for the last five years.** Table 1 includes water use from City records and population data from the Colorado Department of Local Affairs (CDOLA).

ii) **The past, current and predicted population served.** Table 2 below includes past and predicted population.

Table 2 – Population for City of Dacono

Year	Population	Growth Rate
2005	3,680	-
2006	3,893	5.8%
2007	4,127	6.0%
2008	4,127	0.0%
2009	4,127	0.0%
2010	4,152	0.6%
2011	4,235	2.0%
2012	4,320	2.0%
2013	4,406	2.0%
2014	4,494	2.0%
2015	4,629	3.0%
2016	4,768	3.0%
2017	4,911	3.0%
2018	5,058	3.0%
2019	5,210	3.0%
2020	5,366	3.0%
2021	5,527	3.0%
2022	5,693	3.0%

Population data was obtained from the City of Dacono's Water Master Plan and updated with the 2010 census data available from the State Demography Office. Future projections are based on the reasonable growth estimates for the City.

iii) **Estimated water-savings goals to be achieved.**

Estimated water-savings goals from Dacono's 2011 Water Conservation Plan over the ten-year planning horizon are as follows:

- Residential: 7%
- Commercial: 9%
- City: 2%
- Unaccounted-for-Losses: 3%

We anticipate this rate study will help the City achieve 2% savings in the residential and commercial categories. This equates to 110 ac-ft over a ten-year period. Rate studies, if completed properly, can have significant impact in water conservation. The City will target these savings and measure success through tracking residential per capita use and analyzing individual commercial accounts over the next five years.

iv) **Estimates of water savings realized in the past five years through water conservation.**

The 2011 Water Conservation Plan is Dacono's first conservation plan. Although the City has implemented some water conservation practices in the past, associated water savings have not been measured in detail. As proposed in the recently approved Water Conservation Plan, proper data will be collected to measure success.

v) **Adequacy, stability, and reliability of water system.**

The water service area for Dacono is approximately 22 square miles or 14,080 acres. The City's potable water supply comes from a water treatment plant located at the base of Carter Lake. CWCWD delivers this water to seven master meters located around the City. After the master meters, the City is responsible for operating and maintaining its distribution system to its customers. The current water distribution system was constructed prior to 1968 and has undergone some replacement since 2005. The distribution system includes over 30 miles of pipelines that range in size from 12-inch lines and 4-inch laterals. PVC pipelines have been used since 2000 in areas of new development and pipeline replacement. There are areas that have older asbestos pipe and ductile-iron pipes.

The City has storage facilities that consist of a one million gallon (MG) tank that was constructed in 1989 and services old town and the Sharpe Farms subdivision as necessary. CWCWD operates a 2-MG storage tank at the Sweetgrass Subdivision in Dacono and can also supply Dacono's 1-MG tank when its pump station is not operating.

c) **Description of the Project.**

Dacono's current rate structure is shown on Table 3.

Table 3 – Current Rate Structure

Metered Customers	Tiered Gallon Usage		Minimum charge	$/additional thousand gallons	Maximum Annual Consumption (metered gallons)
5/8" meter	0	7,000	$28.00		300,000
	7,001	10,000		$1.50	
	10,001	or more		$2.00	
3/4" meter	0	17,500	$61.00		750,000
	17,501	25,000		$1.50	
	25,001	or more		$2.00	
1" meter	0	40,000	$134.00		1,500,000
	40,001	55,000		$1.50	
	55,001	or more		$2.00	
1.5" meter (commercial)	0	73,500	$265.00		3,250,000
	73,501	100,000		$1.50	
	100,001	or more		$2.00	
1.5" meter (residential)	0	73,500	$182.50		3,250,000
	73,501	100,000		$1.50	
	100,001	or more		$2.00	
2" meter	0	140,000	$502.00		6,000,000
	140,001	200,000		$1.50	
	200,000	or more		$2.00	
3" meter	0	280,000	$1,001.00		12,000,000
	280,001	360,000		$1.50	
	360,001	or more		$2.00	

Dacono has never completed a formal rate study but has developed an existing three-tiered rate structure that was last evaluated in 2005. Dacono would like to study their current cost of service, anticipated project needs, and water conservation goals to establish new rates appropriate for the City that will encourage more water conservation.

The objective of the rate study is to determine water rates for all customer categories based on cost-of-service standards contained in AWWA Manual M1. The Base-Extra Capacity cost allocation methodology will be utilized. Rates will be developed to insure revenues are adequate to fund existing and anticipated water enterprise expenditures.

As recommended in the recently completed 2011 Dacono Water Conservation Plan, alternative rates that encourage conservation will be developed and presented for consideration by the staff and City Council.

Rate-making principles and alternative rate structures will be presented to the City Council. We will propose a maximum of three rate structures with one identified as the preferred alternative.

The tasks associated with the Project include:

Determine Revenue Requirements

In cooperation with Dacono City Staff, we will determine annual revenue requirements. Revenue requirements reflect the total costs anticipated by the water utility during the current budget year. Any anticipated changes in costs will also be included in the revenue requirements. The wholesale contract with CWCWD will be studied to determine existing and future cost implications and opportunities to limit costs.

Determine Customer Classes and Water Usage Characteristics

Dacono's utility billing system will be utilized to determine customer classifications and water use within each customer category. Customers will be analyzed by meter size and water usage characteristics. The potential to further differentiate customers will be considered. It may be beneficial to differentiate between single-family, multi-family customers, and non-residential customers. The number of customer classifications will be a function of the capability of the existing utility billing system. The number of categories needs to be adequate to insure equity between customers, but limited in number to insure rates are easily administered and understood by the public.

Allocation of Costs

Annual costs for operation, maintenance, and system improvements will be categorized and allocated to one of the following cost functions: water supply, transmission, distribution, treatment, storage and customer costs (billing, meter reading, administration, etc.). Different customers place different demands on the water system, so it will be critical to adequately determine costs by function.

Allocation of Costs to Customer Service Characteristics

The functionalized costs will be allocated to the different service characteristics. The result of this process will be the determination of unit

costs of capacity for the various functions within the water utility; for example, base, maximum day, peak hour, meter and customer costs.

Determination of Revenue Requirements by Class

The revenue requirements for each customer category will be determined by multiplying the unit cost of capacity by the respective customer demands for each customer class. The resulting product of the multiplication is the revenue requirement for each customer classification.

Rate Design

The final step in the rate study will be the design of equitable rates for all customers. Rates will be designed to incorporate a minimum fixed charge and a volumetric (or variable) charge for the amount of water used during a 30-day billing period. Rates will insure recovery of the utility's revenue requirements without risk of shortage resulting from weather or greater than anticipated water use reductions. With input from the City Council, rates will address the community's desire for equity, ease of administration, customer understanding and acceptance, conservation, sufficiency, and stability. The City will advertise and hold a 60-day public review period for its customers to provide feedback on the water rate study.

Conservation rates will be presented for consideration. At a minimum, the following conservation measures will be considered: seasonal rates, increasing block rates. With one or more of these options implemented, customers will have a greater incentive to conserve.

The rate study is scheduled for completion during the latter half of 2012, so it can be adopted in 2013. Results of the rate study will be documented and presented in a final report (15 copies anticipated). A copy of the Excel spreadsheet model developed during preparation of the Dacono Water Rate Study will be provided upon project completion.

The grant monies will be used toward the completion of the rate study, which we believe will help Dacono meet their water-savings goals mentioned previously.

4. **Proposed Project Schedule.**

Table 4 – Proposed Project Schedule

Task	Date
Grant application submitted to CWCB for approval	1/20/2012
CWCB approves grant and issues PO	3/1/2012
Kick-off Meeting with City staff	3/12/2012
Submit 50% progress report to CWCB	6/1/2012
Submit 75% progress report to CWCB	7/13/2012
Submit draft rate study to City staff	8/17/2012
Staff provides comments to CWS	8/24/2012
Present draft study to Council	9/10/2012
Public comment period (60 days)	9/11 - 11/10
Incorporate comments and present final study	11/26/2012

5. **Project Budget**. See attached Table 5.

6. **List all funding sources**. See attached Table 5.

7. The City intends to use the grant money for completion of a 2012 Water Rate Study. The study will help the City achieve the water-savings goals outlined in their 2011 Water Conservation Plan through an adjustment of their water rates.

   "The City Council of Dacono is committed to water resource sustainability and water conservation. The City intends to do its part to preserve water for future generations. Both staff and the Council understand the needs and benefits to implement long-term water conservation measures. This 2012 Water Rate Study is a large step for us toward water conservation. We are committed to complete a 2012 Water Rate Study, which will evaluate conservation rates, for the grant money requested."

Charles Sigman, *Mayor*

Table 4 - Project Schedule
2012 Dacono Rate Study

Task	Date
Grant application submitted to CWCB for approval	1/6/2012
CWCB approves grant and issues PO	4/24/2012
CWS makes general rate study presentation to Council	5/14/2012
Submit 50% progress report to CWCB	7/20/2012
Submit 75% progress report to CWCB	8/24/2012
Submit draft rate study to City staff	9/14/2012
Staff provides comments to CWS	9/21/2012
Present draft study to Council	10/8/2012
Public comment period (60 days)	10/9 - 12/8
Incorporate comments and present final study	12/21/2012

Table 5 - Project Fee Estimate
2012 Dacono Rate Study

	CWS				WCG		City of Dacono Staff (In-Kind)										
	Steve Nguyen		Kim Frick		Webb Jones		AJ Euckert		Kelly Stroh		Jon Rabas		Sue Trosper				
TASKS	HOURS $150	SUB TOTAL	HOURS $110	SUB TOTAL	HOURS $120	SUB TOTAL	HOURS $66.43	SUB TOTAL	HOURS $47.78	SUB TOTAL	HOURS $46.75	SUB TOTAL	HOURS $26.00	SUB TOTAL	Total	City Cash Contribution	CWCB Grant Request
Kick-off meeting and presentation	2	$300	2	$220	2	$240	2	$133	2	$96	2	$94		$0	$1,082		$760
Determine Revenue Requirements	20	$3,000	20	$2,200	20	$2,400	20	$1,329	40	$1,911	20	$935		$0	$11,775	$400	$7,200
Determine Customer Classes and Water Usage Characteristics	12	$1,800	8	$880	14	$1,680	2	$133	2	$96	4	$187	20	$520	$5,295	$400	$3,960
Allocation of Costs and Determination of Unit Costs of Capacity	8	$1,200	4	$440	10	$1,200	4	$266	4	$191	4	$187		$0	$3,484	$400	$2,440
Determination of Revenue Requirements by Class	4	$600	4	$440	12	$1,440	4	$266	4	$191	4	$187		$0	$3,124	$400	$2,080
Rate Design	8	$1,200	8	$880	16	$1,920	2	$133	8	$382	8	$374		$0	$4,889	$400	$3,600
Report preparation	4	$600	4	$440	29	$3,480	2	$133	2	$96	2	$94		$0	$4,842		$4,520
50% progress report	1	$150	2	$220		$0		$0		$0		$0		$0	$370		$370
75% progress report	1	$150	2	$220		$0		$0		$0		$0		$0	$370		$370
Project Meetings - 3 x 3 hrs/mtg	9	$1,350	15	$1,650	9	$1,080	9	$598	9	$430	9	$421	9	$234	$5,763		$4,080
Public Comment Period Coordination	1	$150	12	$1,320		$0	4	$266	8	$382	4	$187		$0	$2,305		$1,470
Final Presentation	4	$600	2	$220	4	$480	4	$266	8	$382	4	$187		$0	$2,135		$1,300
Project Management - monthly invoicing	10	$1,500		$0		$0									$1,500		$1,500
Reproduction of Reports - 15 copies x $80/copy + 3 hours x $60/hr															$1,380		$1,380
Travel - 5 meetings x $0.556/mi x 72 mi															$200		$200
Total	**84**	**$12,600**	**83**	**$9,130**	**116**	**$13,920**	**53**	**$3,521**	**87**	**$4,157**	**61**	**$2,852**	**29**	**$754**	**$48,514**	**$2,000**	**$35,230**