

# Grant Application to Colorado Water Conservation Board

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## **Applicant: Town of Windsor, Colorado**

### *Residential Water Audit Kit Program*

**Request:** Asking \$14,058 from CWCB to help fund \$18,744.00 water conservation public outreach and education project

**Match:** Total \$4,686 ( \$2,892 Cash & \$1,794 In-kind service)

**Contact:** Lindsey Blomberg, Management Assistant  
[lblomberg@windsorgov.com](mailto:lblomberg@windsorgov.com)  
(970) 674-2416

- Lindsey provided an update of the 2008 Water Conservation Plan to staff and the Windsor Town Board in August, 2011. She analyzed what implementation projects had been carried out from the original 2009-11 schedule and drafted a recommendation of projects to begin in 2012 including the residential water audit kit program. Lindsey is very familiar with the Windsor Water Conservation Plan and will be writing the grant application as well as administering the water audit kit program. She is also in charge of developing the water conservation webpage on the Town website and updating it regularly.

Terry Walker, Director of Public Works  
[twalker@windsorgov.com](mailto:twalker@windsorgov.com)  
(970) 674-5416

- Terry was the lead staff person during the development of the 2008 Water Conservation Plan and has been responsible for the water saving projects that have been implemented since the adoption of the plan. He will be responsible for oversight of the residential water audit kit program and coordinating with Lindsey on any issues.

## **Project Overview**

The Town of Windsor adopted a Water Conservation Plan in February, 2009 after a 60-day public review period. The goal of the plan is to save 2,876 Acre Feet or 12% of overall water use in a ten

year period from 2008-2017. The plan created an implementation schedule for 2009-2011 that included several water saving measures and programs. The implementation schedule was put together contingent on available resources including staff time, budget constraints, and grant availability. Since the adoption of the water conservation plan, several water saving measures have been implemented including residential and park meter replacements, a leak detection and repair program, water rate changes, a xeriscape demonstration garden and classes, and inserting educational pamphlets in customer water bills.

To continue carrying out the water conservation plan, the Town is going to focus on public outreach and education. Residential customers are the highest-users in the approximate 25 square mile service area of the Town so a focus on residential water savings will have a greater impact on the overall water savings goal. A portion of Windsor residents that live in Larimer County are served by Fort Collins-Loveland Water District and are not included in the water use reports in this grant application. However, Windsor would like to make sure that everyone in the Town of Windsor, regardless of their water provider, has an opportunity to acquire a residential water audit kit for their home if they desire.

The residential water audit kit program will reach out to several residential water customers in Windsor and help them become more conscientious when it comes to inside and outside water use. The water audit kits will contain several appliances to retrofit outdated home and garden water appliances such as spray nozzles for the yard, aerators for both kitchen and bathroom sinks, and water saving showerheads. They also contain water education tools like moisture meters for the yard or garden, leak detection tablets, and other resources that will educate residents on how to conserve water and save money on their water bills.

Before the program opens to the entire community, Town staff will put together a list of the top 1,000 highest residential water users so those homes can be targeted. Older homes are likely to have less efficient appliances and would benefit more from the kits than homes in newly developed neighborhoods. The targeted water customers would have the opportunity to request a kit, either online or by filling out and returning the request form in their water bill, before other Windsor residents. Depending on the response from the targeted residents, any remaining kits would then be marketed to the entire community including Windsor residents served by Fort Collins-Loveland Water District. When residents pick up their water kits at Town Hall or the Public Works facility they will be required to provide their utility billing account number and allow staff to monitor their water usage over a 15 month period to track any savings and evaluate the effectiveness of the program. Additionally, surveys will be included in the water bills of the residents who choose to participate reminding them to install their water saving kits one month after the program begins. At the conclusion of the program period, another survey will be distributed asking participating residents to personally evaluate the program. We will provide water usage data to the user showing their consumption trend and an estimate of water saved using the water efficient appliances. Staff chose a 15-month period to give time for the program to start up and to give time to residents to install the appliances, test for leaks, and make any repairs.

### 3. Submittal Requirements

a. Identification of retail water delivery

i. Retail delivery data spread sheet attached 07.25.2012

b.

2011				2008			
Total 2011 consumption				Total 2008 consumption			
	cubic feet	gallons	AF		cubic feet	gallons	AF
in town residential	41,474,483.91	310,229,139.64	952.06	in town residential	41,876,126.00	313,233,422.48	961.28
in town business	5,526,050.30	41,334,856.28	126.85	in town business	5,787,863.00	43,293,215.24	132.86
in town industrial	8,947,458.37	66,926,988.64	205.39	in town industrial	9,645,451.00	72,147,973.48	221.41
in town school	784,672.59	5,869,351.00	18.01	in town school	900,154.00	6,733,151.92	20.66
in town church	292,366.31	2,186,900.00	6.71	in town church	310,787.00	2,324,686.76	7.13
out of town residential	91,171.66	681,964.00	2.09	out of town residential	134,677.00	1,007,383.96	3.09
out of town business	16,487.76	123,328.48	0.38	out of town business	70,486.00	527,235.28	1.62
out of town church	5,398.34	40,379.56	0.12	out of town church	3,439.00	25,723.72	0.08
residential dual system	13,834,417.05	103,481,439.52	317.57	residential dual system	12,015,937.00	89,879,208.76	275.83
business dual system	589,048.22	4,406,080.68	13.52	business dual system	497,909.00	3,724,359.32	11.43
landscape only	6,200,016.08	46,376,120.28	142.32	landscape only	4,946,089.00	36,996,745.72	113.54
Total	77,761,570.60	581,656,548.08	1,785.04	Total	76,188,918.00	569,893,106.64	1,748.94
2010				2007			
Total 2010 consumption				Total 2007 consumption			
in town residential	43,759,699.00	327,322,548.52	1,004.51	in town residential	45,990,932	344,012,171.36	1,055.73
in town business	5,436,243.00	40,663,097.64	124.79	in town business	62,601,24	46,825,727.52	143.70
in town industrial	8,904,670.00	66,606,931.60	204.41	in town industrial	8907326	66,626,798.48	204.47
in town school	764,582.00	5,719,073.36	17.55	in town school	1227402	9,180,966.96	28.18
in town church	298,032.00	2,229,279.36	6.84	in town church	341369	2,553,440.12	7.84
out of town residential	80,714.00	603,740.72	1.85	out of town residential	125136	936,017.28	2.87
out of town business	28,738.00	214,960.24	0.66	out of town business	35828	267,993.44	0.82
out of town church	2,891.00	21,624.68	0.07	out of town church	17646	131,992.08	0.41
residential dual system	13,322,638.00	99,653,332.24	305.82	residential dual system	11979887	89,609,554.76	275.00
business dual system	578,139.00	4,324,479.72	13.27	business dual system	511351	3,824,905.48	11.74
landscape only	5,984,326.00	44,762,758.48	137.37	landscape only	7771978	58,134,395.44	178.41
Total	79,160,672.00	592,121,826.56	1,817.15	Total	83168979	622,103,962.92	1,909.16
2009				Source: Surface water			
Total 2009 consumption							
in town residential	36,758,048.00	274,950,199.04	843.79				
in town business	5,498,383.00	41,127,904.84	126.22				
in town industrial	8,499,719.00	63,577,898.12	195.11				
in town school	829,449.00	6,204,278.52	19.04				
in town church	309,458.00	2,314,745.84	7.10				
out of town residential	108,766.00	813,569.68	2.50				
out of town business	60,840.00	455,083.20	1.40				
out of town church	2,790.00	20,869.20	0.06				
residential dual system	12,407,294.00	92,806,559.12	284.81				
business dual system	542,332.00	4,056,643.36	12.45				
landscape only	5,086,560.00	38,047,468.80	116.76				
Total	70,103,639.00	524,375,219.72	1,609.25				

Year	Average Daily Consumption (gallons)	Water Use (gpcd)
2007	306.7	111.1
2008	276.8	100.3
2009	239.4	86.7
2010	291.7	105.7
2011	276.8	100.3

Calculation: Avg Daily Consumption/ 2.76 (avg household)

- ii. Population for the last 5 years, current year, and 10 year projection served by the entity

<b>POPULATION AND HOUSING POPULATION TRENDS</b>			
Actual Population for the years 1960-2010			
Year	Population	# Change	% Change
1960	1,509	--	--
1970	1,564	+55	+3.6%
1980	4,277	+2,713	+173.5%
1990	5,062	+785	+18.4%
2000	9,896	+4,834	+95.5%
2010	18,644	+8,748	+88.4%
Source: Windsor Comprehensive Plans 1960 – 2006; US Census April 1, 2010			

<b>POPULATION</b>			
Population as of April 1, 2010: <b>18,644</b>			
Population Projections* 2015-2030:			
2015	2020	2025	2030
20,584	22,727	25,092	27,704
Source: 2010 Census April 1, 2010 *Based on 2% projected annual growth rate per 11/18/09 amendment to Table 7 of the <i>2006 Update of the 2002 Comprehensive Plan</i> .			

- iii. Estimated water savings goal to be achieved through implementation of the plan in AF and as a percentage

- i. **12% of projected water use or 2,876 AF of water savings by 2017**

**iv. Estimated savings from Residential Water Audit Kit program**

- i. The Town of Windsor 2008 Water Conservation Plan, put together by Clearwater Solutions, provided a savings estimate of the Residential Water Audit Kit program. The annual water use per residential tap was 182,477 gallons and Clearwater Solutions estimated that customers using the audit kits would save 5,474 gallons per year. The overall goal of the conservation plan is to save 12% of water by 2017 and the audit kits were projected to save about 37.6 million gallons of water over the planning period or about 4% of our total savings goal. This estimate assumes that by 2017 20% of residential customers would be using the residential audit kits. One caveat to this estimate is the audit kits that Clearwater proposed included mostly water efficiency testing tools like sprinkler testing cones, surveys and leak detection tablets. The items included in the audit kits that we would like to provide to our customers include water-saving appliances so that customers can retrofit their kitchens, bathrooms, and outdoor water fixtures. The kits also include the testing tools like leak detection tablets and outdoor moisture meters. Providing the audit kits with both testing tools and retrofit items will likely produce a higher savings percentage.

**v. Estimate of water savings realized in the past 5 years**

<b>Water Conservation Plan Program/Measure</b>	<b>Year Started</b>	<b>Estimated Annual Savings (AF)</b>	<b>Annual Savings as % of 10 year savings goal</b>	<b>% of Savings Goal realized over last 5 years</b>
Leak Detection	2008	48.85	1.698%	6.79%
Non Potable Meters at Parks	2009	12.32	0.429%	1.29%
Meter Replacement Program	2009	24.42	0.849%	2.55%
Town Hall Building upgrades	2010	0.07	0.003%	0.01%
Watering Restrictions	2003	41.47	1.442%	7.21%
Water Rate Structure Change	2011	44.24	1.538%	3.08%
School Education Program	2009	7.86	0.273%	0.82%
Xeriscape Garden Demo & Classes	2010	10.67	0.371%	0.74%
Waste Water Ordinance	2006	12.21	0.425%	2.12%
<b>Totals</b>		<b>202.11</b>	<b>7.028%</b>	<b>24.60%</b>





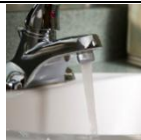



*c. Indicate how grant program monies will be spent*

The total projected cost of the program is \$17,500.00. Updated 07.25.2012: \$18,744

There will be a small cost associated with printing the materials to include in the water bills for marketing and request forms as well as any follow up materials for evaluation. All printing will be done in house.

The program will be managed in house by Lindsey Blomberg and Terry Walker. Also one utility billing employee will assist with the high user targeting, bill stuffing and the evaluation information.

The majority of the grant program money will be spent on the purchase of 1,000 residential audit kits from AM Conservation Group. The shipping costs have been quoted at \$450.00 by AM Conservation Group. Each kit has been quoted at \$16.50 which includes customized labeling, packaging and the following water savings appliances/resources:

1. Water Saving Hose Nozzle		5. Dish Squeegee	
2. 2.0 gpm Chrome Showerhead		6. Toilet Tummy	
3. 1 Bath Faucet Aerator		7. Leak Detection Tablets	
4. 1 Kitchen Faucet Aerator		8. Outdoor Moisture Meters	

d. *How activities will be monitored to estimate actual water savings*

The customers who request an audit kit will be asked for their utility bill account number so that staff will be able to track and monitor the savings throughout the 15 month period. After the final month of the program staff will provide the consumption trend to the customer to show any savings that may have been attributed to the audit kit contents. It is also our hope that customers who choose to receive an audit kit will also become more educated on the benefits of water conservation and in turn become more conscientious of water use in general producing further savings.

#### **4. Submittal requirements for public and private entities:**

**a. *Identify groups that will be included in the education and outreach efforts of this project***

The education and outreach efforts will be conducted by several Town employees. Terry Walker, Director of Public Works, has been involved in water conservation planning and implementation since 2008 and will be responsible for oversight of the residential water audit kit program. Also, the Public Works facility will be a pick up location for the audit kits if residents choose to pick them up. For customers who are unable to pick up audit kits for themselves, there is a possibility that water meter reading staff will be able to deliver the kits towards the end of the month.

Town Hall will also serve as a pick up location for the audit kits. The printing and water bill stuffing will be carried out by staff and any resident questions/concerns will be referred to Lindsey Blomberg, Management Assistant.

Fort Collins-Loveland Water District is also going to participate in the program. Pamphlets will be sent out in water bills of the customers that live in Windsor (after the 1000 top water users are targeted).

**b. *The Goals of the Residential Water Audit Kit Program***

**1. Public Education**

Educating residents is an essential component to successful implementation of any water conservation plan. It is especially important in Windsor because of the high cost of water sales, both to the Town and the Town's customers, in comparison to other municipalities in the region.

**2. Community Involvement**

The Town has implemented several water savings measures but there have not been many programs that reach out to residents and directly involve them in conserving water.

**3. Water Savings**

With Windsor's largest water customer being the residential category, it is imperative that this customer class be targeted for substantial water savings. Even if customers decide not to get a residential water audit kit, the water bill pamphlets will make residents more aware of water conservation.

**c. *Specific activities and tasks to be funded by the Water Efficiency Grant Program monies:*** The purchase of the residential audit kits will be funded by the Water Efficiency Program money.

## 5. Project Scope of Work

Updated Timeline/Scope of Work/Detailed Budget as of: 07.25.2012

Date	Action	Funding Source		CWCB Grant
		In-Kind Contribution		
8/27/12	Send information about Residential Water Audit Kit Program to 1000 customers through water bills. Also promote program on Town website.	Lindsey-5 hrs	\$85	
		Terry-2 hrs	\$98	
		Utility Billing Specialist- 5 hrs	\$90	
		Printing	\$25	
		Total	\$298	
9/7/12	Purchase Audit Kits (AM Conservation quote-1000 kits = \$16,500; 2 week shipping = \$450)	Cash Contribution- \$2,892		\$14,058
9/14/12	Residents pick up water kits at Town Hall and Public Works shop. Provide water account number for tracking purposes	Lindsey- 3 hrs	\$51	
		Printing	\$25	
		Total	\$76	
9/14/12	Send reminder in water bills to those customers who signed up to install appliances.	Lindsey-2 hrs	\$34	
		Printing	\$25	
		Total	\$59	
10/2012-10/13	Monthly tracking of water usage for program participants	Utility Billing Specialist-12 hrs	\$216	
		Lindsey-24 hrs	\$408	
		Total	\$624	
3/2013	50% progress report	Lindsey- 3hrs	\$51	
		Terry- 1 hr	\$49	
		Total	\$100	
8/2013	75% progress report	Lindsey- 3 hrs	\$51	
		Terry- 1 hr	\$49	
		Total	\$100	
10/2013	Evaluation of program. Follow up with program participants. Report to CWCB	Lindsey- 10 hrs	\$170	
		Terry- 5 hrs	\$245	
		Utility Billing Specialist- 4 hrs	\$72	
		Printing	\$50	
		Total	\$537	
		In Kind Contribution Total	\$1,794	



<b>Town of Windsor Cash Contribution</b>	<b>\$2,892</b>
<b>25% Match total</b>	<b>\$4,686</b>
<b>Grant Request Total</b>	<b>\$14,058</b>
<b>Project Total</b>	<b>\$18,744</b>

**Detailed Budget- As of 8.6.2012**

Tasks	Windsor Staff - In Kind						CWCB Grant Request	Cash Contribution	Total Project Cost
	Lindsey		Terry		Michelle				
	HOURS \$17		HOURS \$49		HOURS \$18				
1.0- Market Audit Kit Program	5		2		5		0	0	\$273
2.0 Purchase Audit Kits	0		0		0		\$14,058	\$2,892	\$16,950
3.0 Distribute Kits to Residents	3		0		0		0	0	\$51
4.0 Send Reminders to program participants	2		0		0		0	0	\$34
5.0 Track Water Usage of program participants	24		0		12		0	0	\$624
6.0 Progress Reports	6		2		0				\$200
7.0 Surveys/ Evaluation	10		5		4				\$487
Total	50	\$850	9	\$441	21	\$378	\$14,058	\$2,892	\$18,619

\*Printing not included in this budget (+\$125.00)

## Timeline

Date	Action
8/27/12	Send information about Residential Water Audit Kit Program to 1000 customers through water bills. Also promote program on Town website.
9/7/12	Purchase Audit Kits (AM Conservation quote-1000 kits = \$16,500; 2 week shipping = \$450)
9/14/12	Residents pick up water kits at Town Hall and Public Works shop. Provide water account number for tracking purposes
9/14/12	Send reminder in water bills to those customers who signed up to install appliances.
10/2012-10/13	Monthly tracking of water usage for program participants
3/2013	50% progress report
8/2013	75% progress report
10/2013	Evaluation of program. Follow up with program participants. Report to CWCB

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

\_\_\_\_\_  
Kelly Arnold, Town Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Dean Moyer, Director of Finance

\_\_\_\_\_  
Date