

# This presentation premiered at WaterSmart Innovations

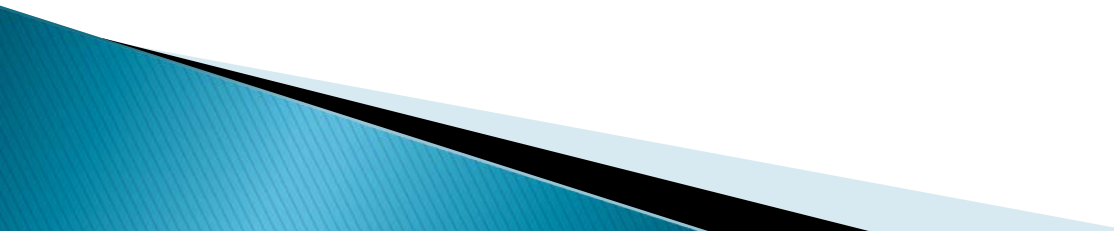
[watersmartinnovations.com](http://watersmartinnovations.com)



# Water Smart Classes

## Produce Substantial Savings in Albuquerque

Presented by Richard Chapman  
October, 2012

- ▶ **Program initiated by Katherine Yuhas,  
Water Conservation Officer for the Albuquerque  
Bernalillo County Water Utility Authority  
(ABCWUA)**
  - ▶ **Smart Use, LLC is a contractor to the ABCWUA  
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# ABCWUA Water Conservation Accomplishments

- ▶ **Reduced Gallons Per Capita Per Day (GPCD) by over 40% since 1995 (From 250 to less than slightly less than 150)**
- ▶ **Met the 150 GPCD goal 3 years early saving an extra 3 billion gallons**
- ▶ **Recognized by National Geographic Magazine and Time Magazine For Water Conservation Achievements. The only US City recognized in coverage of programs around the world.**
- ▶ **Multi-faceted array of rebates and incentives as well as an aggressively tiered rate structure**
- ▶ **Reduced large irrigation water use by over 10% since 2004 despite increases in irrigated areas**

# SUMMARY OF WATER SMART CLASSES

- ▶ There are two one hour classes offered: " Water Smart " and "Basic Drip"
- ▶ The Water Authority provides a \$20 water bill credit for attending the "Water Smart Class"
- ▶ The ABCWUA studied the 2007 – 2010 class attendees to learn program results : Savings increased each year and by 2010 class attendees saved more than 52,000 gallons/yr.
- ▶ About 6,000 people have attended classes provided by the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) since 2007, with about 1500 in 2012.
- ▶ Interest is increasing each year and the results are also increasing each year
- ▶ The classes are designed to provide practical information designed to help residents learn irrigation basic principles, how to easily determine their own water needs, and how to recognize obstacles to irrigation efficiency, and the confidence to pursue water savings.

# “Water Smart ” & “Basic Drip” Classes

## Water Smart Landscape Irrigation Class”

- Overview of Water Conservation program, goals, successes, and rebates
- Basic Irrigation Guide for the Albuquerque area – plant types and tips
- Typical irrigation problems that decrease water efficiency and how to fix those problems
- How to follow the bell curve associated with local area plant types
  - Follow the ABCWUA’s suggested 1-2-3-2-1 program
- Determining how much water your specific landscape needs
  - Four methods:
    - Suggested default irrigation schedules
    - Catch can readings (tuna or cat food cans)
    - Find the float – experiment by reducing times
    - Use the WEB site [www.watersmart.us](http://www.watersmart.us) to calculate an irrigation schedule
- Technology improvements related to irrigation water delivery systems
  - Better heads – slow watering, matched precipitation, upgrades
  - Better drip system components – helps balance water delivery
  - Greatly improved irrigation controllers, easier to program, add sensors, set seasonal settings, and to obtain weather information

## ▶ Basic Drip Class

- ▶ The Drip Class provides information on the basics of drip systems, internet sources, the ABCWUA Xeriscape booklet, and hands on orientation to drip system components.

# 2007 – 2010 Program Results

- **ABCWUA studied the first 4 years (2007-2010)** – how many attended, cost of program, GIS mapping of the households represented.
- **Determined water savings** per class year and the average home savings
- **Subtracted reductions** the entire community had achieved
- **2010 class attendees saved an average of over 52,000 gallons/yr**
- **This program had the highest water savings and cost benefit of any other ABCWUA rebate/credit, program such as toilet rebates.**
- About **6,000 people have attended classes** since 2007, with about 1500 in 2012.
- **Interest is increasing** each year and the **results are also improving each year.**

# Water Smart Attendees

Year	Water Smart Class Rebates	# Water Smart Classes	Average Attendees	Water Smart Class Attendees
2007	781	12	81	976
2008	1,471	12	153	1,839
2009	383	14	34	475
2010	468	7	84	585
2011	332	5	83	415
2012	1,105	6	230	1,381
Total	4,540	56	101	5,675



# Drip Class Attendees

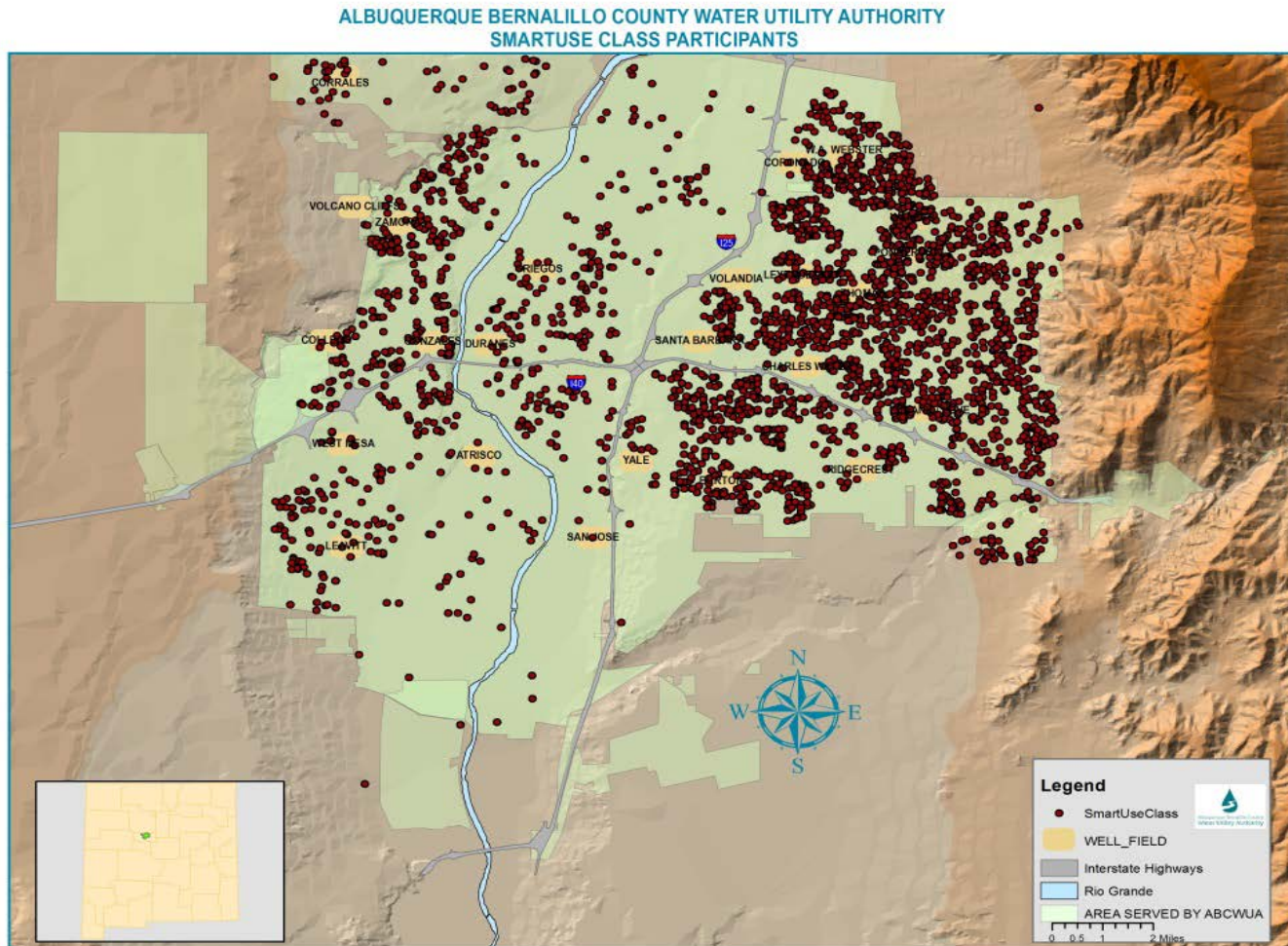
<b>Year</b>	<b># Drip Classes</b>	<b>Average Drip Class Attendees</b>	<b>Drip Class Attendees -</b>
<b>2007</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2008</b>	<b>4</b>	<b>45</b>	<b>180</b>
<b>2009</b>	<b>3</b>	<b>41</b>	<b>124</b>
<b>2010</b>	<b>4</b>	<b>47</b>	<b>186</b>
<b>2011</b>	<b>4</b>	<b>57</b>	<b>227</b>
<b>2012</b>	<b>4</b>	<b>88</b>	<b>350</b>
<b>Total</b>	<b>19</b>	<b>59</b>	<b>1,117</b>

# Program Results

## Annual Gallons Saved from "Water Smart and/or Drip" ABCWUA Water Efficiency Classes

Year	2007	2008	2009	2010	All
Rebates (Households)	781	1471	383	468	3,103
Gallons Saved	1,706,188	5,663,108	11,962,016	24,557,588	43,888,900
Average Home Gallons Saved	2,185	3,850	31,232	52,473	14,144

# MAP OF PARTICIPATING HOUSEHOLDS



ALBUQUERQUE, NEW MEXICO

# Why Are These Classes So Effective?

- ▶ **Rebate (\$20 credit) and short class duration make it popular**
- ▶ **Increased water rates & seasonal surcharges**
- ▶ **Classes are designed to cover key concepts; most common problems are explained**
- ▶ **Concepts are presented in the most practical terms**
- ▶ **Attendees are encouraged to ask questions and there is often good discussion even with large classes**
- ▶ **The goal is to give residents the confidence to put concepts into practice and save water**

WINTER		START		SPRING		SUMMER		FALL		END		WINTER	
Jan Feb		March		April May		June July Aug		Sept Oct		Nov		Dec	
Only water if very dry winter		Start to water & then taper up				Hottest Months – most water		Cooler nights – taper down				Only water if very dry winter	
Only if needed*		1 x /wk		2 x / wk		3 times per week		2 x / wk		1 x /wk		Only if needed *	
5-10 minutes*		15 Minutes		Minutes: Apr = 15, May =20		20 minutes		Minutes: Sep = 20, Oct = 15		10 Minutes		5-10 minutes*	
5-10 minutes*		12 Minutes		Minutes: Apr = 12, May =16		16 minutes		Minutes: Sep = 16, Oct = 12		8 Minutes		5-10 minutes*	

**Cool Season Lawns (Blue Grass)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
Inches Needed	0.6	0.9	1.3	2.5	4.1	5.8	6.6	5.8	4	2.3	0.8	0.4	35
Seasonal Setting	9%	14%	20%	38%	63%	88%	100%	88%	61%	35%	13%	6%	N/A
Percent of Total	2%	3%	4%	7%	12%	17%	19%	17%	11%	7%	2%	1%	100%
# of run times	*	*	*	2/wk	2/wk	3/wk	3/wk	3/wk	2/wk	2/wk	*	*	* If needed

### Catch Can Test

To know how long it takes your irrigation system to deliver .5" you should conduct a catch can test. This can be done simply with a tuna can or soup can, a watch or timer, and a ruler. On a non windy day, place an empty can in an area near the middle of your lawn, but not within two feet of a sprinkler head, then run your system for 20 minutes. Use the ruler to measure the amount of water (precipitation) in the can. **If it is .5" then 20 minutes is a good amount of time to run your system during the warmest months. If the amount in the can is more than .5", then your watering run should be less than 20 minutes, and with less than .5" more time is needed.** You can use more cans to learn even more about the efficiency of your system. Ideally, you want to see the same amount of water in all of your cans (Uniform distribution). **If you don't find them within about .2 between the highest and lowest of six or more cans then your system is not working properly and should be fixed before you proceed with these watering schedule calculations.** Use the table below to adjust your runtime to produce .5"

Inches in Can	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	In 20 minutes
Run Time To Use	40	27	20	16	14	12	10	Your zone run time



