

# This presentation premiered at WaterSmart Innovations

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



# Communicating Water-Energy Nexus in Public Outreach Programs



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# Background



- Largest W. Valley city @ 240,000 population
- 1986 Established Water Conservation Office
- 1996 4-acre Xeriscape Garden established
- 2010 Obtained two federal grants
- 2010 Transitioned from WC Office to Conservation and Sustainable Living (CSL)
- 2011 Awarded Valley Forward 1<sup>st</sup> place *Crescordia* in Environmental Excellence in Public Education

**Sustain community interest / action**

# **Community-based Program Development**

## **Assessing Barriers and Benefits**

- Focus groups
- Pre and post tests
- Surveys
- Take home water (energy) audits
- Incentives



# Funding

- **Grants**
  - DOE -EECBG
  - BOR (2)
- **Partnerships**
  - SRP / APS energy providers
  - Shade Tree Programs
  - Event sponsors
  - Volunteers
  - Teacher kit donations
- **CSL budget**



**Devices funded by the Energy Efficiency & Conservation Block Grant (EECBG) Program**

# Water Watchers Discovery Stations



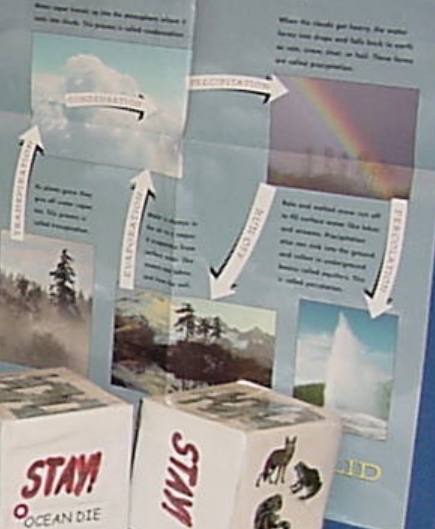


There are a number of ways



## THE HYDROLOGIC CYCLE

Water is all around us in one form or another, constantly moving, constantly changing.



Water Saver Bingo



Water Pollution Activity

Earth's Water Distribution Activity

Groundwater Activity

RIVERS



Water Cycle Activity

Desert Plant and Animal Adaptations Activity

The Life Box

Cultural Celebrations of Water Activity



# Focus Groups – DOE grant

## Teachers

- Provide materials / resupply
- STEM – based lessons
- Make examples locally relevant
- Help them with the technical presentations



# Teacher Training









# Teacher's Fair





# Watt Watchers Discovery Stations







Watt Watchers Discovery Station



# Az Sci-tech Event STEM



# Focus groups - homeowners

- Go where they are
- Educate youth
- Make installation easy
- Connect water/energy with \$
  - 1,000 gallons water for showers
  - Cost of water is < \$3
  - Cost to heat water \$20

# Resources for homeowners

- Energy web page
- “How to” installation videos
- Efficiency rebates
- Solar rebates
- Kill-a-watts
- “Ask the Pro” events





# DIY homeowners

“give me something I can do”



DIY Kit

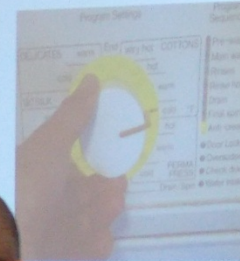


# Simple Savings Classes





## Consejos Para Su Lavadora



- Utilice la configuración de agua fría para lavar la ropa— esto le puede ahorrar asta \$63 al año.
- Lave solamente cuando tenga una carga completa.
- Limpie el filtro de pelusa de su secadora después de cada uso.
- Actualizar a una lavadora y secadora de alta eficiencia (He).





# Neighborhood HOA event







# Our Valley's Water Story:

## *From Watershed to Showerhead*


**March 29 • 9 a.m.–noon**

**Glendale Main Library  
5959 W. Brown St.  
Glendale, AZ 85302**

**FREE!**



### **Get to know your Arizona water:**

- 
- 💧 Learn about our water supply, drought and water conservation.
  - 💧 Get water conservation tips for your home.
  - 💧 Receive a FREE low-water-use red yucca plant.
  - 💧 Receive FREE energy- and water-saving devices.\*

*\*Attendees will receive a high-efficiency showerhead, a four-pack of CFLs and a programmable thermostat funded by the Energy Efficiency and Conservation Block Grant Program.*

*This program is brought to you by:*



**Glendale Water Services**  
Reliability • Quality • Value

# Solar Day





# Switch for Savings

Compare your old incandescent bulb to ENERGY STAR CFLs.



CFLs and Mercury: The Facts

Energy Tips and Rebates

aps

# Energy Tips and Rebates A Green Choice is an Easy Choice



# Choosing a lightbulb is a

Lighting Facts		Per Bulb
Brightness	800 lumens	
Estimated Yearly Energy Cost	\$1.69	
<small>Based on 3 hourly 110-volt. Cost depends on rates and use.</small>		
Life	7 years	
<small>Based on 3 hourly</small>		
Light Appearance		
Energy Used	14 watts	
<small>Contains Mercury For more on clean-up and safe disposal, visit aps.gov/ef</small>		

aps offers discounts on many styles of energy-efficient lightbulbs. One near you, and to create a handy CFL shopping list.





# Ask the Experts







Incentives



# Glendale Xeriscape Garden

## Tree Trail / Shade Tree Program





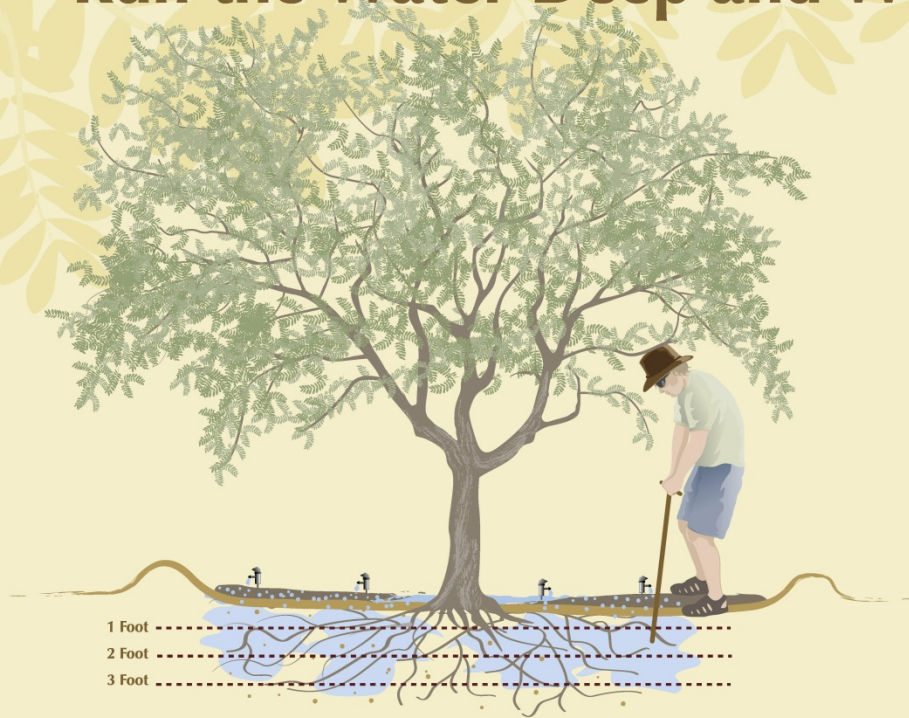


Tree Trail



# Signage, videos & web page

## Run the Water Deep and Wide



### Water the entire root zone

- Water until the water reaches 2 to 3 feet deep
- Push a soil probe into the ground after you water to help you determine how deeply you're watering



- Water your tree at the dripline or edge of the tree's canopy where rainwater naturally sheds

Learn more about watering your trees at [www.glendaleaz.com/trees](http://www.glendaleaz.com/trees)







Glendale  
treestrail

Welcome to our

Tree  
**Planting**  
Demonstration

City of Glendale  
Conservation and Sustainable Living







I can't wait to  
read about  
desert tees!





# Shade Tree Program



## Drop Cut (3 Cut Method)

- Most common
- Helps prevent bearing bark
- Branch falls clear of stub



CLACK















# Garden Festival





# Green Festival



## Glendale green festival

**Saturday, March 31, 2012**

Glendale Main Library & Xeriscape Demonstration  
Garden (5959 W. Brown Street • Glendale, AZ)

Noon to 4:00 p.m.

### Free Gardening Classes:

#### In AUDITORIUM

Composting  
12:30 to 1:30 pm

#### Vegetable Gardening

1:30 am to 2:30 pm

Growing Herbs  
2:30 to 3:30 pm

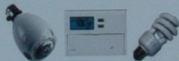
Presented by the  
Valley Permaculture  
Alliance

### Free Energy Devices\*

Pick up YOUR FREE

- Programmable thermostat
- 4-pack of CFL
- High-efficiency Showerhead

\*Free devices for the first  
500 Glendale residents



### GREEN ZONE

Don't miss the  
GREEN ZONE

Over 30 green businesses

Learn about:

Water Conservation

Energy Efficiency

Recycling

Gardening

Alternative Transportation

Green-Living Insights

### PRESENTED BY:

City of Glendale Conservation & Sustainable Living Program and partners



Printed on recycled content paper









City of Glendale

Glendale Water Service

Reliability • Quality • Value



GLENDALE



Water  
Provided by the  
Oasis Water Campus

Drinking Water:  
The Original and Essential  
Hydration Source

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Oasis Water Campus

Drinking Water:  
The Original and Essential  
Hydration Source

We Provide Your Water



## A BRIGHTER FUTURE

### Energy Education & Community Outreach



More than 3,000 residents, students, and their families received the following efficiency devices:

**10,000 Compact Fluorescent Lights**  
Reducing annual pollutants by the equivalent of:

- Emissions from 664 vehicles
- CO<sub>2</sub> emissions from 477 homes



**2,500 Programmable Thermostats**  
Reducing annual pollutants by the equivalent of:

- Emissions from 1,799 vehicles
- CO<sub>2</sub> emissions from 1,293 homes

**2,500 High Efficiency Showerheads**  
Saving energy and water, the annual equivalent of:

- 63 million gallons of water
- Heating 230 homes



Energy Matters was funded through the Energy Efficiency Conservation Block Grant program (EECBG).  
For more details:  
[www.glendaleaz.com/energyprograms](http://www.glendaleaz.com/energyprograms)









# Save money on home energy costs.

It pays to make your home more energy efficient.  
APS offers many rebates to upgrade or repair  
common problem areas in your home.



Special financing is available on select repairs and upgrades. For more information on how to apply for these rebates and other energy-saving tips, visit [aps.com/greenchoice](http://aps.com/greenchoice)

Rebates are subject to change. These programs are funded by APS customers and are approved by the Arizona Corporation Commission.











## Are Energy Vampires in YOUR Home?



**STOP**  
energy vampires

• Unplug ap  
when not i  
Departme  
experience  
for about 4  
used in an e

• Use po  
appl  
plugg  
chargi



Delivering more th  
wer.™







Renewable Energy for All

Water-Saving Showerhead  
4.0 gpm (max flow)  
2.5 gpm (min flow)  
Total Gallons: 10  
4.0 gpm (max flow)  
2.5 gpm (min flow)

Water-Saving Showerhead  
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THE DESERT.



ENERGY EFFICIENT



ergy, water & environment  
ING WISELY IN THE DESERT.





# Free Water-Wise Publications

A few of our many free publications that will assist you with your water-efficient landscape:



## Design a Landscape

Use these ideas and instructions to create a beautiful landscape that will thrive in the Arizona Desert.



## Choose the Right Plants

Select the best plants from our Sonoran Desert region to create an attractive, water-efficient landscape.

## Keep Your





# Keys to Success

- Determine barriers and benefits
- Start small and build on your success
- Seek out grants and alternative funding sources
- Find strength in numbers
  - Find partners with benefits (resources)
  - Multiply your efforts with volunteers
- Share your success stories
  - If you don't, who will?





Be ready to harvest!

