

# Communicating the Reclaimed Water Message



**Blue Ribbon Panel – Public Perceptions Working Group**  
Presented by Karen Dotson  
Backflow Prevention/Reclaimed Water Program Coordinator  
Tucson Water, Tucson, Arizona



# Tucson, Arizona



TUCSON WATER DEPARTMENT, TUCSON, ARIZONA



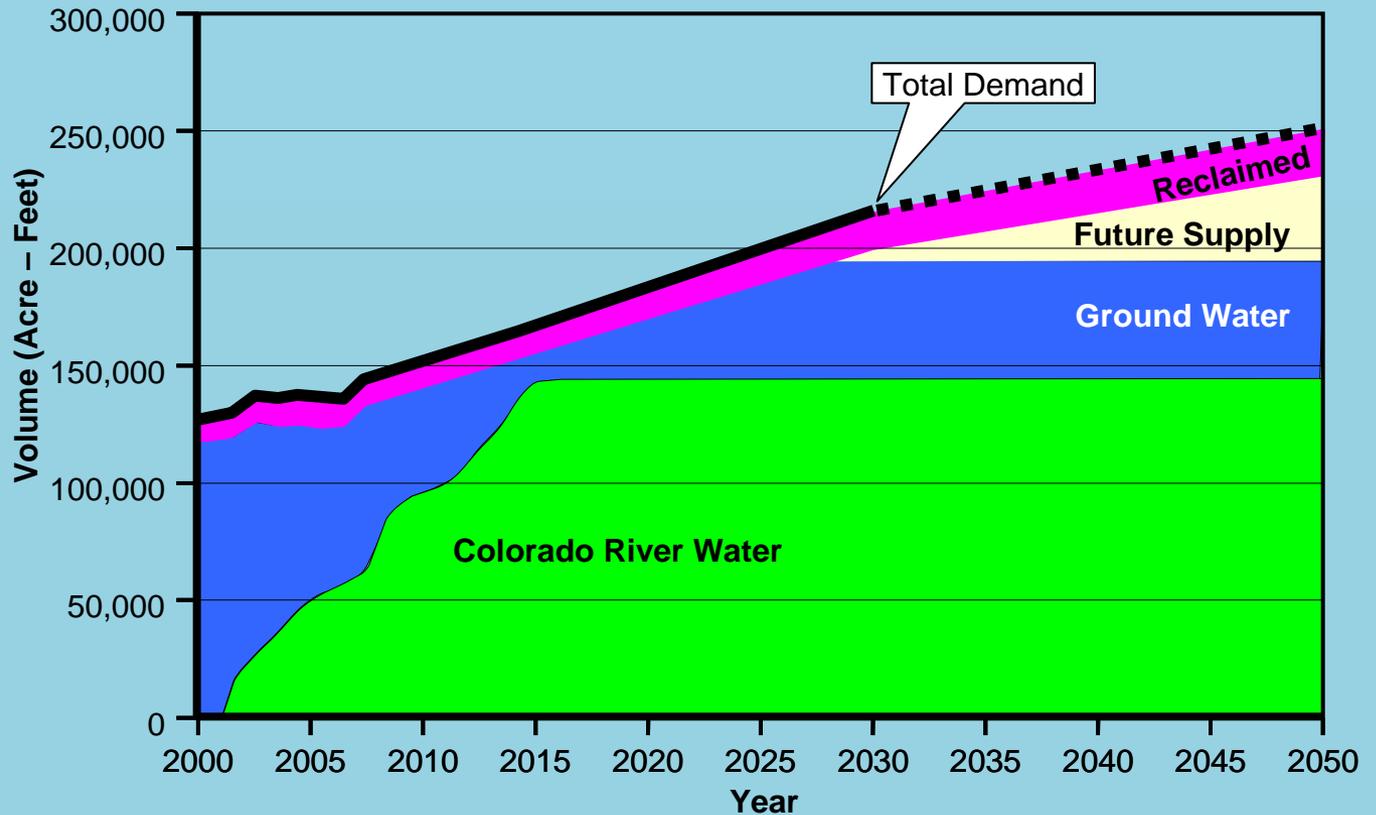
# How Does Tucson Communicate the Reclaimed Water Message?

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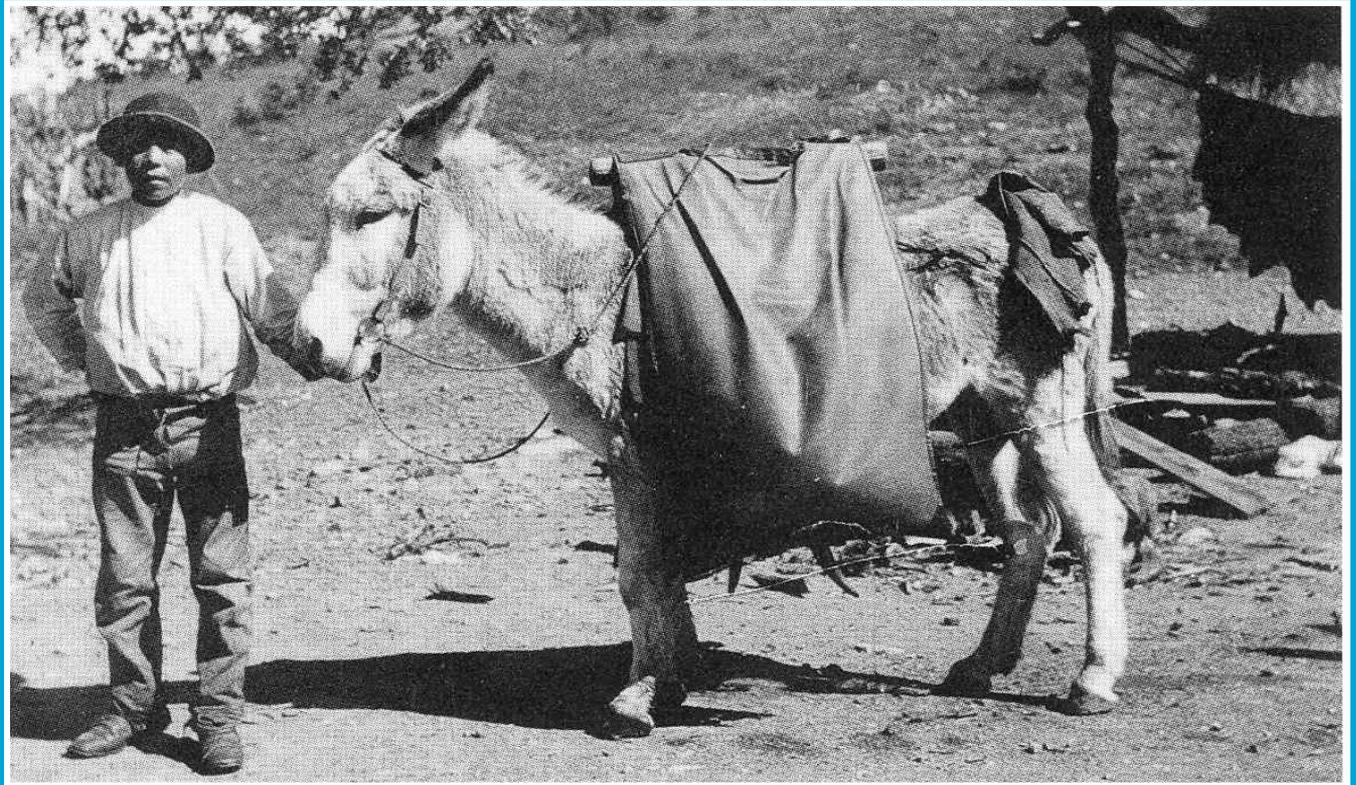
- By putting reclaimed water into the “context” of the total water supply - talking to the community about current & future water supply issues
- By operating a 24/7 reclaimed water system – delivering irrigation water for 27 years
- By making the community aware of the reclaimed water system - providing various types of informational materials and programs



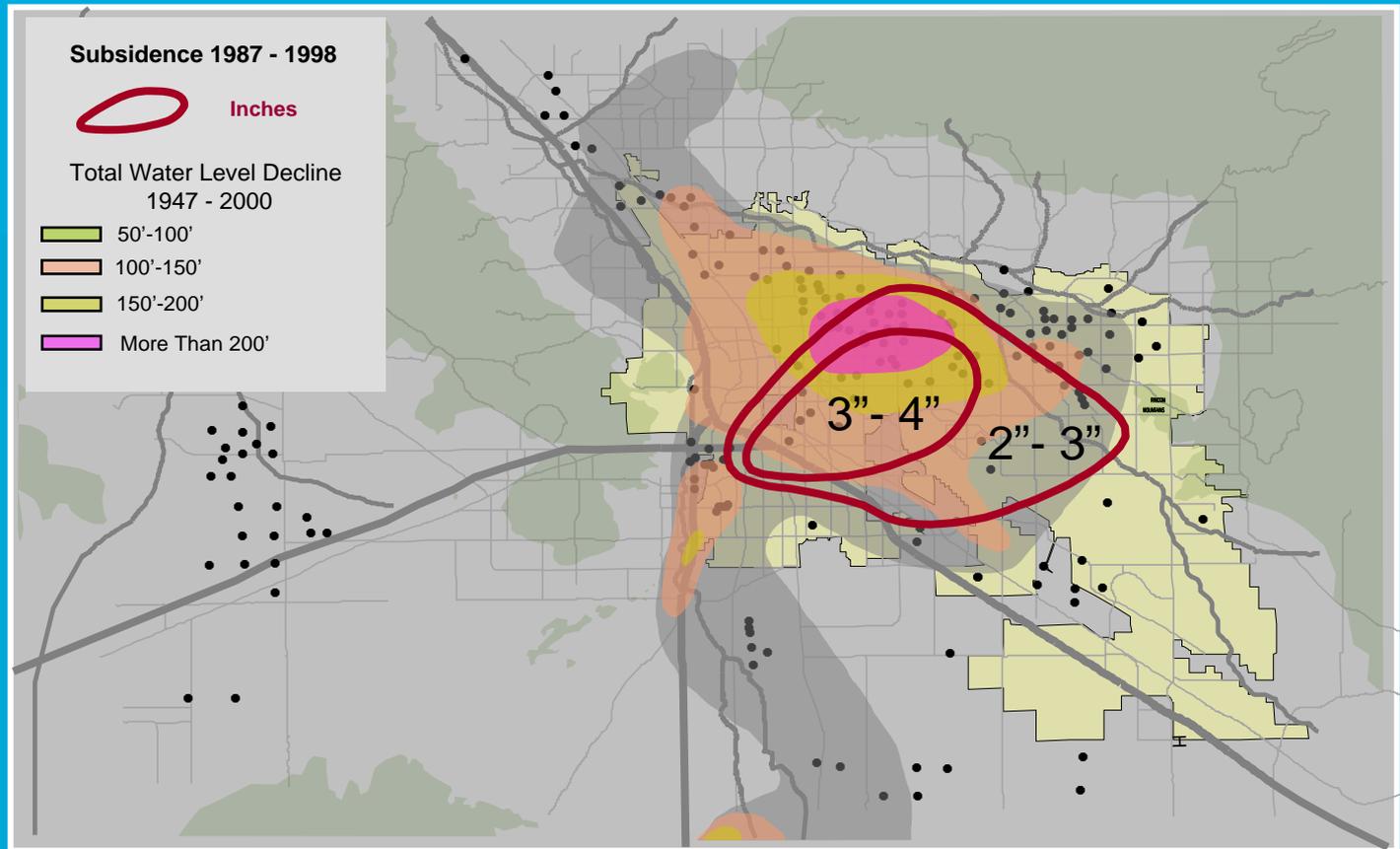
# Reclaimed Water as Part of the Long-range Water Supply Plan



# A Long History of Water Awareness



# Water Level Decline & Subsidence



# Effluent – Yesterday & Today

- Yesterday - Disposal challenge
- Today - Resource opportunity



# Resource Alternatives for Wastewater



Booster Pumps at Tucson Water Reclaimed Water Production Facility

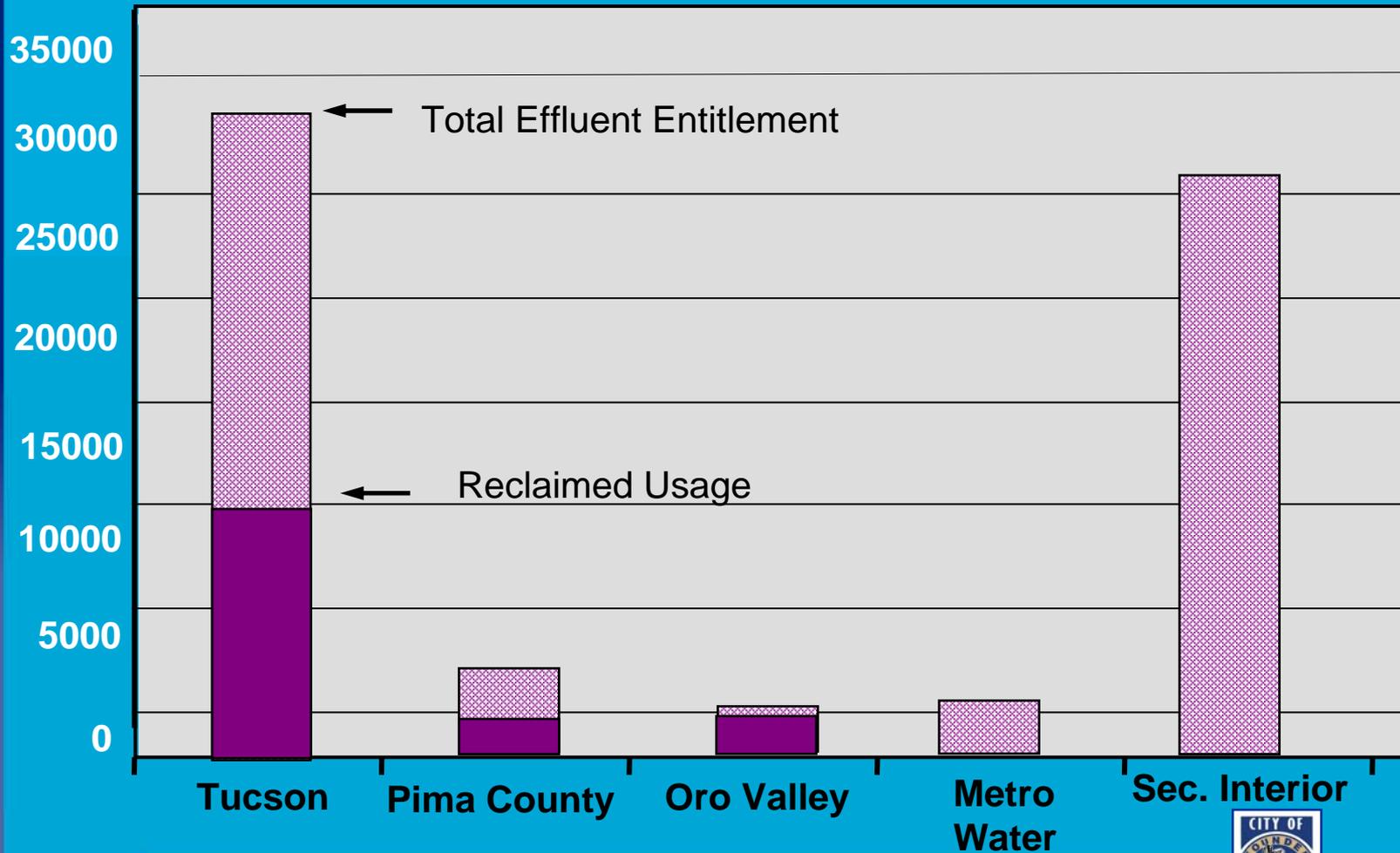
- Reclaimed water system
- Aquifer augmentation
- Environmental restoration & habitat creation



Secondary Effluent Recharge Basins



# Metropolitan Effluent Entitlement (acre-feet/year)



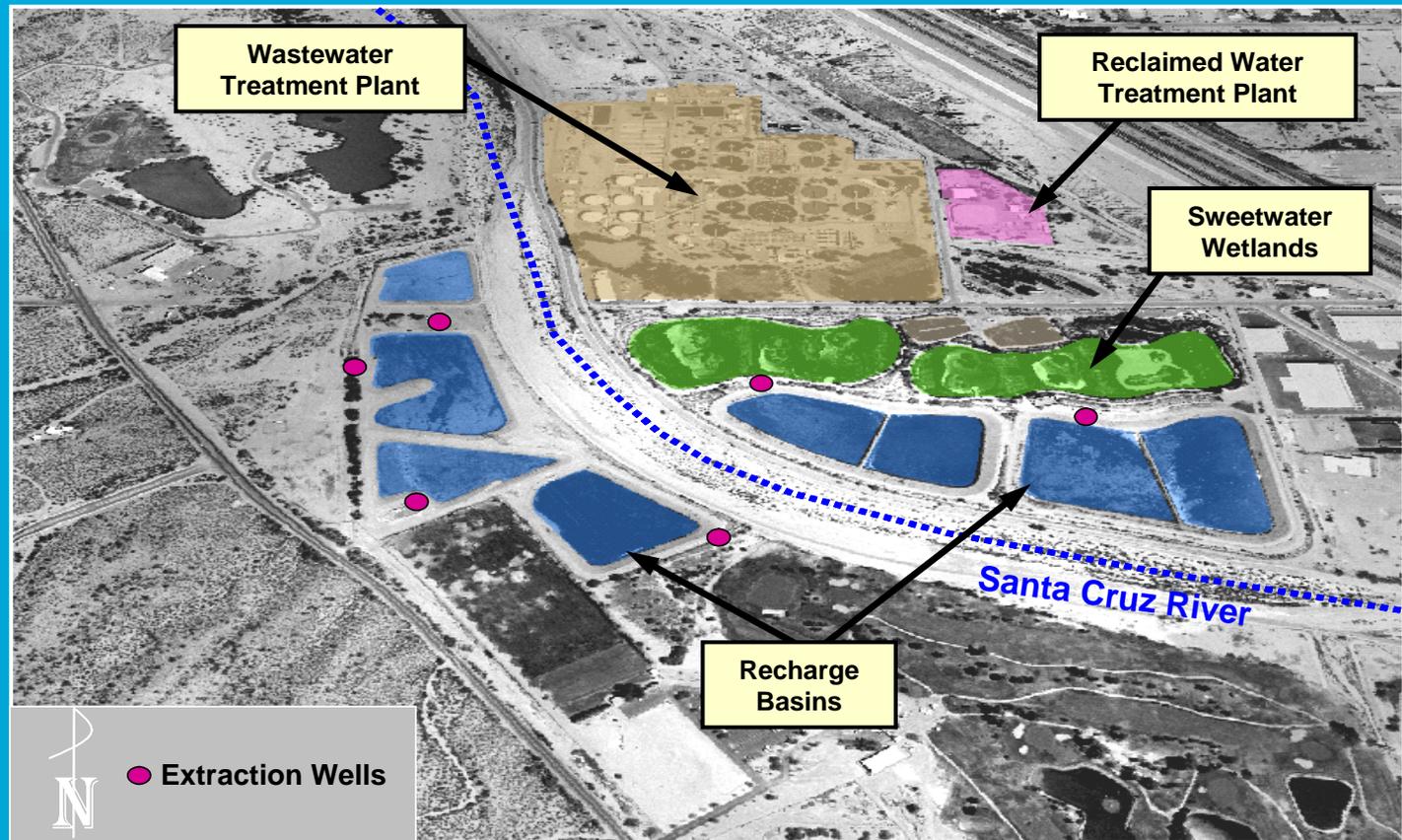
# Operating Tucson's Reclaimed Water System



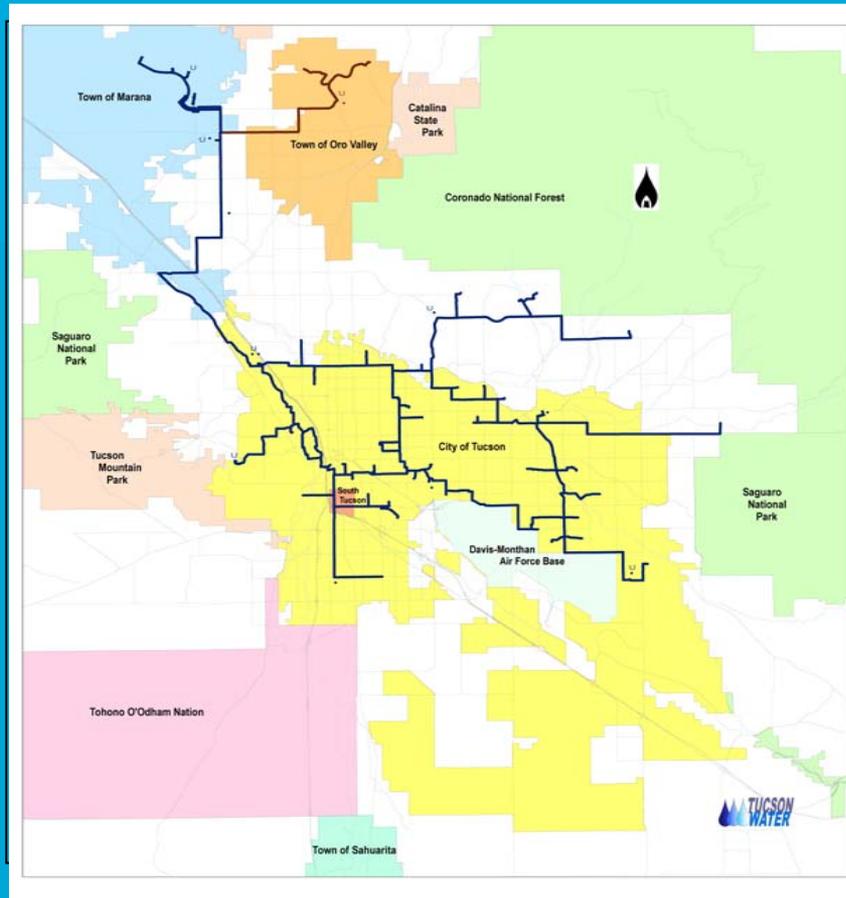
University of Arizona Football Stadium is irrigated with Reclaimed Water



# Reclaimed Water Production



# Reclaimed Water Distribution System



## Pipelines

- 160 miles

## Peak Day

- 29 MGD

## System Pressure

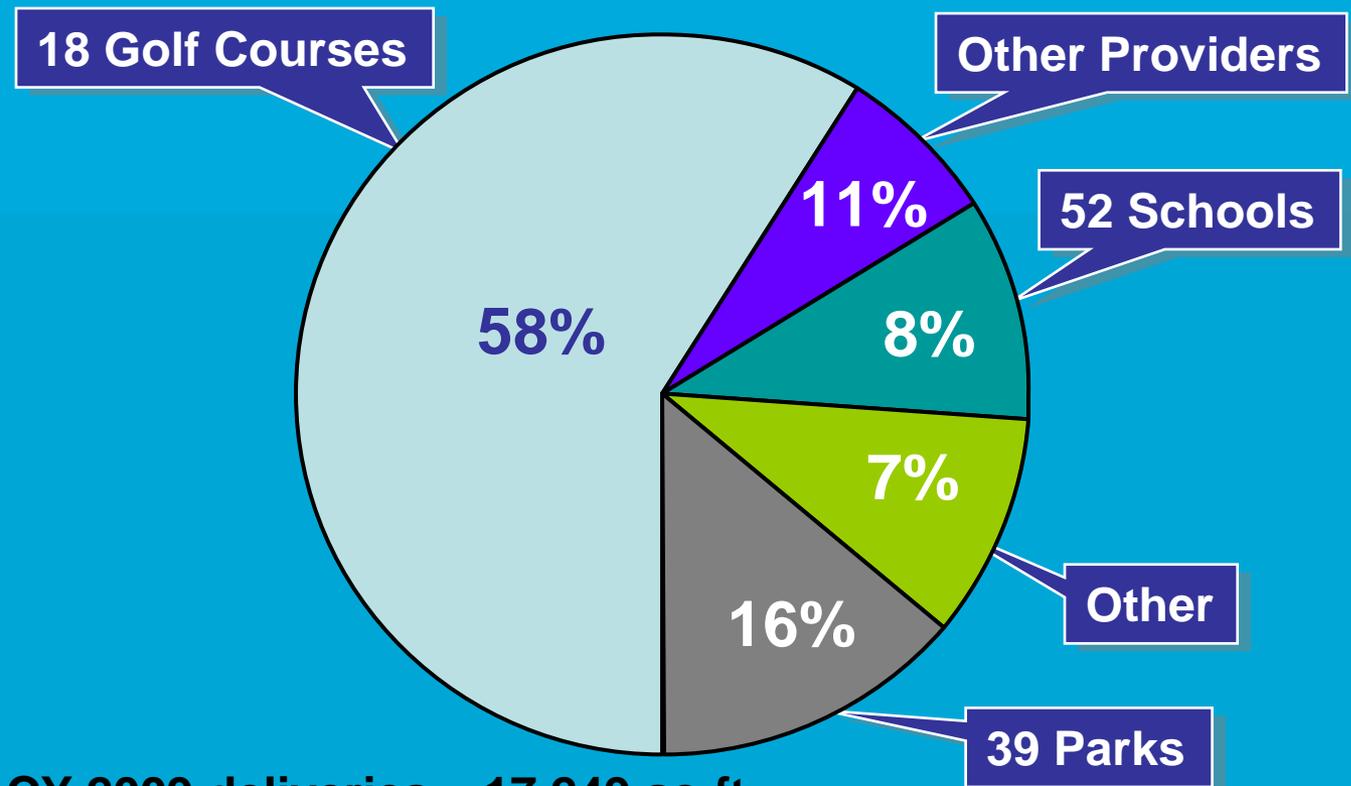
- 200+ - 10 psi

## 2009 Deliveries

- 17,000+ acre-feet  
(enough water for 106,000 people for one year)



# Annual Reclaimed Use by Customer Category



CY 2009 deliveries – 17,249 ac-ft



# Community Awareness



# Purple – the Reclaimed Water Color



Pantone #512

Specified by Uniform Plumbing Code & in ADEQ regulations for various pipes, appurtenances & signs

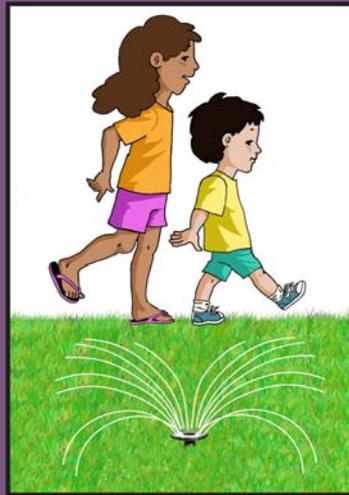


# Reclaimed Water Logo



# Identifying Reclaimed Water Pipes & Appurtenances

We're using water wisely  
by irrigating with  
reclaimed water



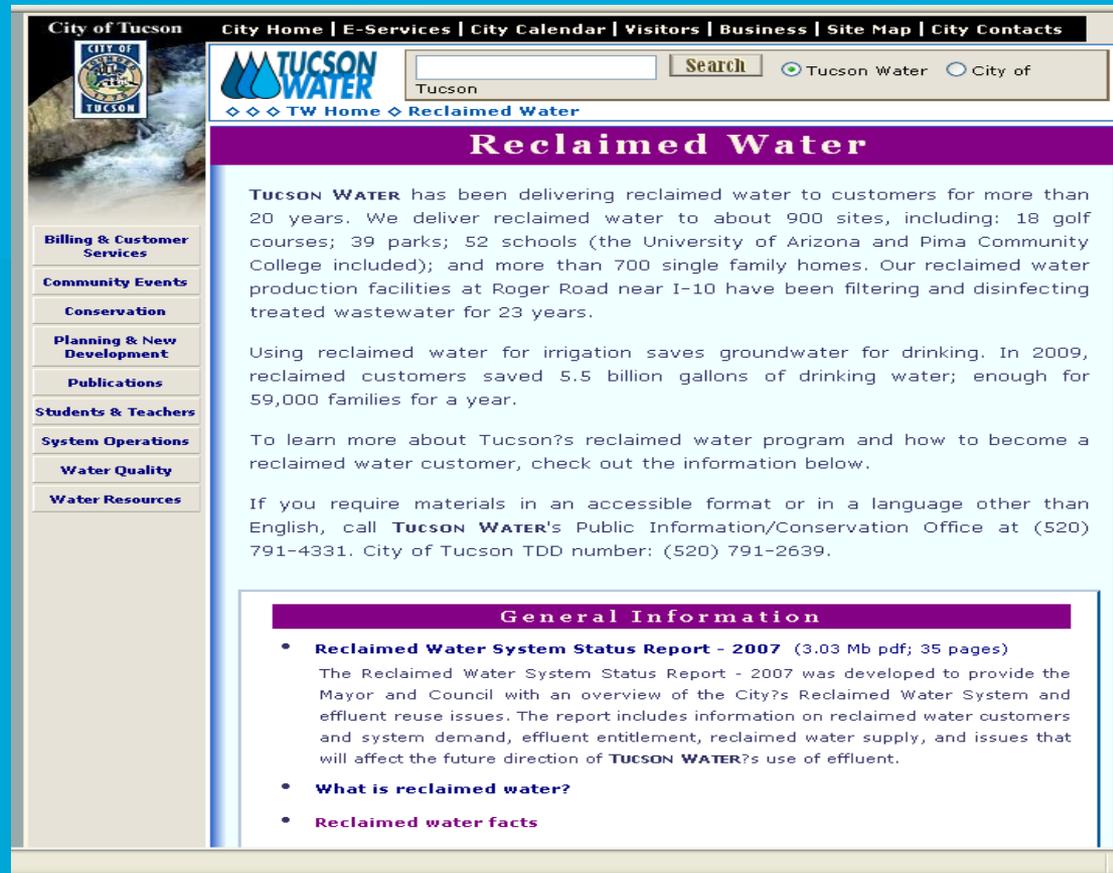
Please Don't Drink the Water  
From the Sprinklers

 TUCSON  
WATER  
791-2650

Por Favor, No Beba  
el Agua del Aspersor



# Reclaimed Water Website (www.tucsonaz.gov/water/reclaimed)



City of Tucson City Home | E-Services | City Calendar | Visitors | Business | Site Map | City Contacts

     Tucson Water  City of Tucson

◆◆◆ TW Home ◆ Reclaimed Water

## Reclaimed Water

**TUCSON WATER** has been delivering reclaimed water to customers for more than 20 years. We deliver reclaimed water to about 900 sites, including: 18 golf courses; 39 parks; 52 schools (the University of Arizona and Pima Community College included); and more than 700 single family homes. Our reclaimed water production facilities at Roger Road near I-10 have been filtering and disinfecting treated wastewater for 23 years.

Using reclaimed water for irrigation saves groundwater for drinking. In 2009, reclaimed customers saved 5.5 billion gallons of drinking water; enough for 59,000 families for a year.

To learn more about Tucson's reclaimed water program and how to become a reclaimed water customer, check out the information below.

If you require materials in an accessible format or in a language other than English, call **TUCSON WATER's** Public Information/Conservation Office at (520) 791-4331. City of Tucson TDD number: (520) 791-2639.

### General Information

- **Reclaimed Water System Status Report - 2007** (3.03 Mb pdf; 35 pages)  
The Reclaimed Water System Status Report - 2007 was developed to provide the Mayor and Council with an overview of the City's Reclaimed Water System and effluent reuse issues. The report includes information on reclaimed water customers and system demand, effluent entitlement, reclaimed water supply, and issues that will affect the future direction of **TUCSON WATER's** use of effluent.
- **What is reclaimed water?**
- **Reclaimed water facts**



# Reclaimed Water Display

A portable display board showcases Tucson's reclaimed water system at public meetings & conferences



<h3>Reclaimed Water Customers</h3> <p><b>Reclaimed Water Customers</b></p> <p>At this time, reclaimed water is used primarily for irrigation. Annually, golf courses use 58% of the reclaimed water delivered to customers.</p> <p><b>Reclaimed System Use</b></p> <p><b>Reclaimed Water Systems</b></p>	<h3>All About Reclaimed Water</h3> <p><b>Tucson, Arizona</b></p> <p>The City of Tucson is located in the northern semi-arid reaches of the Sonoran Desert in eastern Pima County, Arizona and receives only about 11 inches of rain a year.</p> <p><b>Projected Demand and Resources</b></p> <p><b>Production Facilities</b></p> <p><b>Reclaimed Water Systems</b></p>	<h3>Cross-Connection Dye Testing</h3> <p><b>Cross-Connection Identification</b></p> <p>Complete separation of the potable and reclaimed water systems is essential to protect the public health and safety. A dye test makes cross connections easy to find.</p> <p><b>Dye Test Results</b></p>
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# Reclaimed Water Customer Newsletter

A newsletter is sent to all reclaimed water customers once a year



Email: [TW\\_reclaimed@tucsonaz.gov](mailto:TW_reclaimed@tucsonaz.gov) Printed on recycled paper Winter 2010

Reclaimed  
Water's Wonderful Website

[www.tucsonaz.gov/water/reclaimed.htm](http://www.tucsonaz.gov/water/reclaimed.htm)

**Tucson Water's Reclaimed Website**  
is fun as well as informative. If you have never visited our site, this newsletter will introduce you to some of the helpful information you can expect to find there.

Enjoy the newsletter, and visit our website soon!

  
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City of Tucson TTY number: 791-2639



**RECLAIMED WATER ONLINE:** Contact Information, Water Quality Information, Printable Forms, Brochures

TUCSON WATER • P.O. BOX 27210 • TUCSON, AZ 85726-7210 • (520) 791-2650

520-791-2650 [www.tucsonaz.gov/water/reclaimed.htm](http://www.tucsonaz.gov/water/reclaimed.htm) Page 1

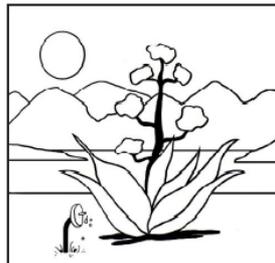


# Reclaimed Water School Program

Special materials are provided to schools



## Reclaimed Water...Help Spread the News!



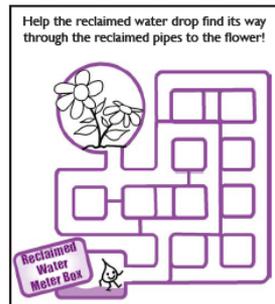
Reclaimed Water is Used to Water Plants

R  
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Please Don't Drink the Water From the Sprinklers

Look for Signs on the Fence



Help the reclaimed water drop find its way through the reclaimed pipes to the flower!

It's an Irrigation System That's New to Us

W  
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Future Generations Won't Have to Pay



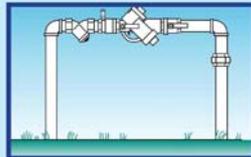
# Tours - Sweetwater Wetlands



# Surveys

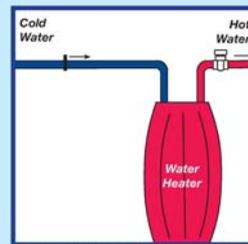
## RECLAIMED WATER AND BACKFLOW PREVENTION

Reclaimed water is highly treated wastewater that Tucson Water delivers to some residential customers for turf and ornamental landscape irrigation. Because reclaimed water is not treated to drinking water standards, it cannot be allowed to enter the public drinking water system. The Arizona Department of Environmental Quality (ADEQ) requires all sites having reclaimed water and Tucson Water drinking water service to have a backflow prevention assembly on the drinking water service.



*Reduced pressure backflow prevention assembly*

A reduced pressure principle backflow prevention assembly protects the public drinking water system. In the event that the reclaimed water and drinking water systems are inter-connected, the backflow prevention assembly prevents reclaimed water from being drawn into the public drinking water system.



*Water heater may expand without a thermal expansion tank*

### Thermal Expansion

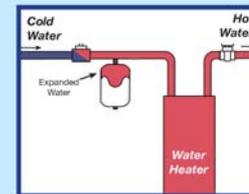
Owners and occupants of sites that have backflow prevention assemblies need to be aware that additional plumbing adjustments may be required to prevent thermal expansion damage. When a backflow prevention assembly is installed, a "closed" plumbing system is created.

This means that any increased pressure caused by the expansion of heated water from the hot water tank or attic pipes heated by the sun has no where to escape.

This can lead to serious consequences such as a ruptured or distorted hot water tank or a collapsed flue within the tank which can lead to the releases of toxic gases, such as carbon monoxide.

A small tank, called a thermal expansion tank, is usually installed near the hot water tank. The thermal expansion tank has a built-in bladder that absorbs any excess pressure and then gradually releases it back into the plumbing system. The Uniform Plumbing Code requires all plumbing systems that are classified as "closed" systems to install thermal expansion tanks.

To ensure that your home is safe, ask a qualified plumber about thermal expansion protection.



*Water heater with a thermal expansion tank*

Backflow prevention assemblies must be tested annually and kept in good working order. For more information about backflow protection go to [www.tucsonaz.gov/water/backflow](http://www.tucsonaz.gov/water/backflow)

This information piece was developed in response to a UA survey that identified lack of understanding of the need for backflow prevention among reclaimed water customers



# Other Information

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- Cross-connection specialists with reclaimed water training
- Customer forums
- Videos



# Reclaimed Water Song



5<sup>th</sup> graders wrote a reclaimed water song that they sang at the dedication of their school's new reclaimed water irrigation system



# Questions?

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**Tucson, Arizona, USA**

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**Karen.dotson@tucsonaz.gov**

**<http://www.tucsonaz.gov/water>**

