



## CITIZENS' WATER ADVISORY COMMITTEE CONSERVATION & EDUCATION SUBCOMMITTEE

3:30 p.m., Wednesday, December 1, 2015  
Director's Conference Room  
Tucson Water, 3<sup>rd</sup> Floor  
310 W. Alameda Street, Tucson, Arizona

### Legal Action Report

#### 1. Call to Order/Roll Call

The meeting was called to order by Chairperson Amy McCoy at 3:43 p.m. Those present and absent were:

##### Members Present:

Amy McCoy	Chairperson, Representative, Ward 2
* Ryan Lee	Representative, Ward 3
Mark Lewis	Representative, Ward 5
Catlow Shipek	Representative, City Manager
Jean McLain	Representative, City Manager

\* Member Lee arrived at 3:45

##### Members Absent:

Placido dos Santos	Representative, City Manager
Mark Murphy	Representative, Mayor

##### Tucson Water Staff Members:

Pat Eisenberg	Chief Engineer
Melodee Loyer	Interim Financial Services Administrator
Fernando Molina	Public Information Supervisor
Daniel Ransom	Water Conservation Supervisor
Candice Rupprecht	Public Information Specialist
Joaquim Delgado	Public Information Specialist
Valerie Herman	Public Information Specialist
Kris LaFleur	Staff Assistant

##### Others Present

Kathryn Hahne	Pima County Cooperative Extension
Kerry Schwarz	Arizona Project WET

- 2. Announcements** – Amy McCoy announced that this would be her last meeting as C&E chairperson, with her CWAC term coming to an end after 8 years. She thanked those present for the opportunity to work with CWAC, and said she looked forward watching the committee's future work.
- 3. Call to Audience** – There were no audience statements.
- 4. Review of November 4, 2015, Legal Action Report and Meeting Minutes** – Member Shipek pointed out an incorrectly noted time for Member Lee's arrival at the meeting. With this correction, Member Lewis moved to approve the Legal Action Report and Meeting

## **Citizen's Water Advisory Committee, Conservation & Education Subcommittee**

Legal Action Report

December 1, 2015

Minutes of November 4, 2015. The motion was seconded by Member McLain and carried by a vote of 5-0.

**5. Monthly Report & Workplan** – Daniel Ransom presented Tucson Water's conservation program report for FY16, through the month of November. He briefly reviewed the C&E FY2016 workplan, indicating progress made and upcoming presentations to the subcommittee.

**6. SmartScape Program Update** – Kathryn Hahne, an assistant horticulture agent with Pima County Cooperative Extension, presented a program update to the subcommittee. Ms. Hahne has overseen the SmartScape program for six years. The SmartScape program promotes efficient irrigation practices in professional and residential settings, and also promotes sustainable landscaping in municipal, commercial, multi-family and private single-family residential settings, with classes available to the public in English and Spanish.

Ms. Hahne fielded and answered questions from members about the type of courses offered by the SmartScape Program and about the methodology used for measuring program results.

**7. Draft C&E Subcommittee Mission Statement** – Chair McCoy led a discussion exploring the mission and goals of the C&E subcommittee. The subcommittee discussed an interest in drafting language for a mission statement, considering it in January, then voting on final language in February to forward to the full CWAC. Members considered the stated purpose of the City's Conservation Fund, and its relation to potential or expanded definitions of water conservation and education. Chair McCoy indicated that she would work on draft language for consideration by the subcommittee at the January meeting.

**8. Review & draft revision of Conservation Fund policies** – Chair McCoy facilitated a discussion among members that explored definitions of water conservation and water efficiency. Members considered a revision of the language and format of Mayor & Council's 1998 Water Policy resolution. Chair McCoy indicated that she would work on draft language for such a revision and return it to the subcommittee for further discussion and possible action.

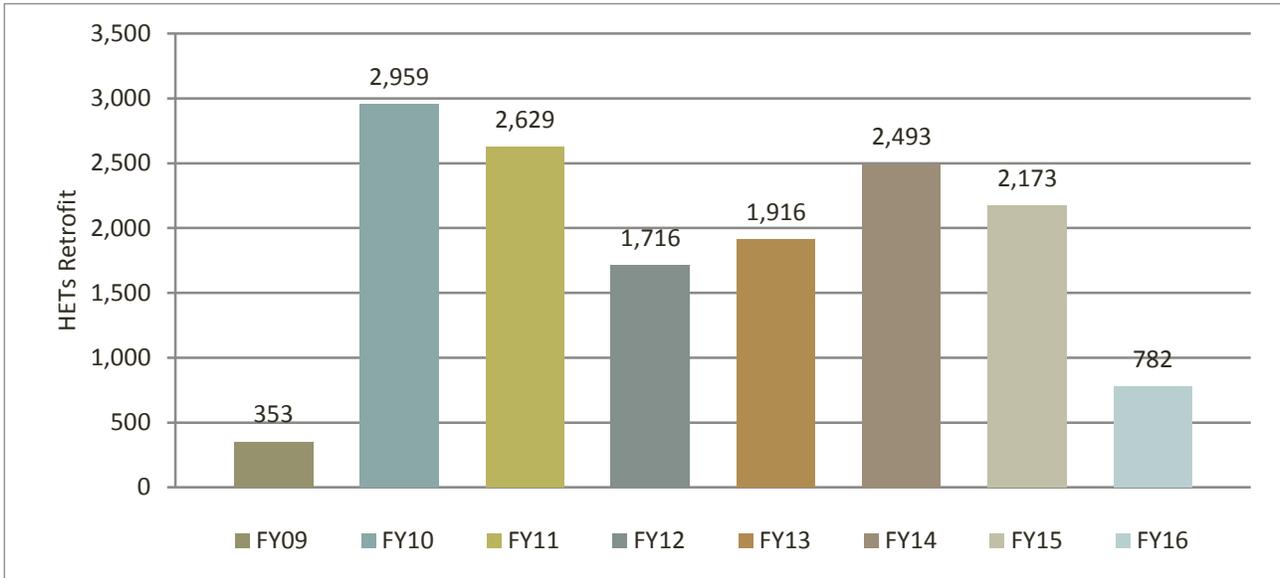
**9. Future Meetings/Agenda Items** – The next C&E subcommittee meeting was set at 3:30 p.m. on January 13, 2016.

**10. Adjournment** – The meeting was adjourned at 5:08 p.m.

Tucson Water  
Incentive Program Implementation  
FY 2015-16 Through November

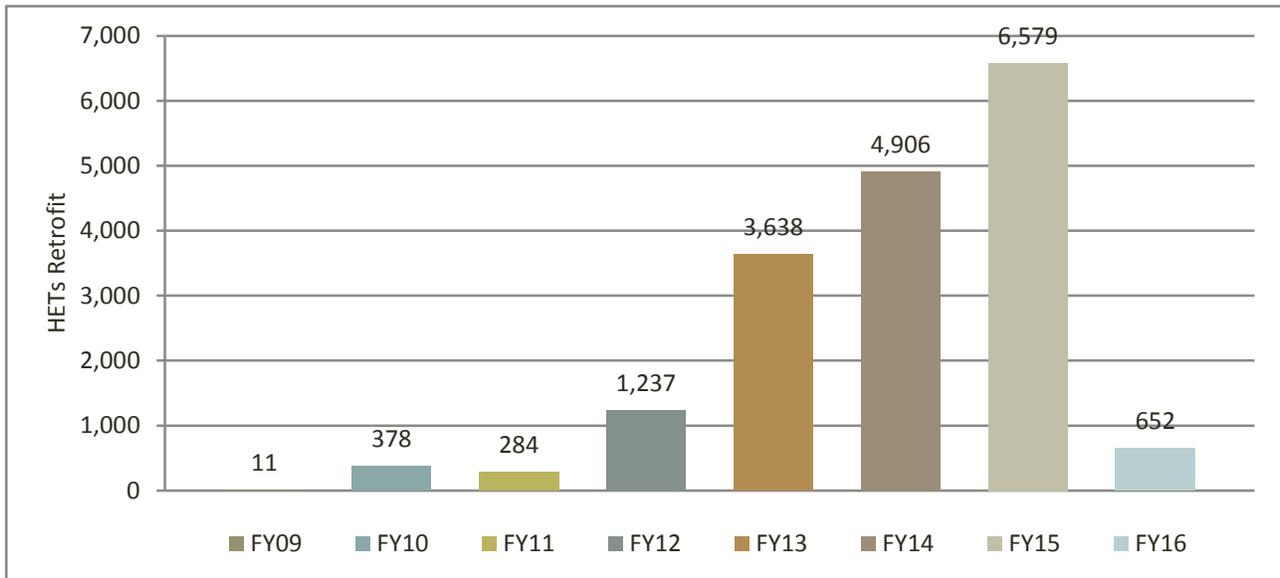
**Single-Family HET Rebate**

	FY 15/16	Cumulative	Start Date: Jul-08
HETs Retrofit:	782	15,021	Staff Labor Hours: 0
Expenditure: <sup>1</sup>	\$ 58,123	\$ 1,232,932	Budget: \$ 200,000
Estimated Gallons Saved:	5,851,315	397,627,533	Percent of Budget: 29%
Estimated Acre-Feet Saved:	18	1,220	



**Multi-Family HET Rebate**

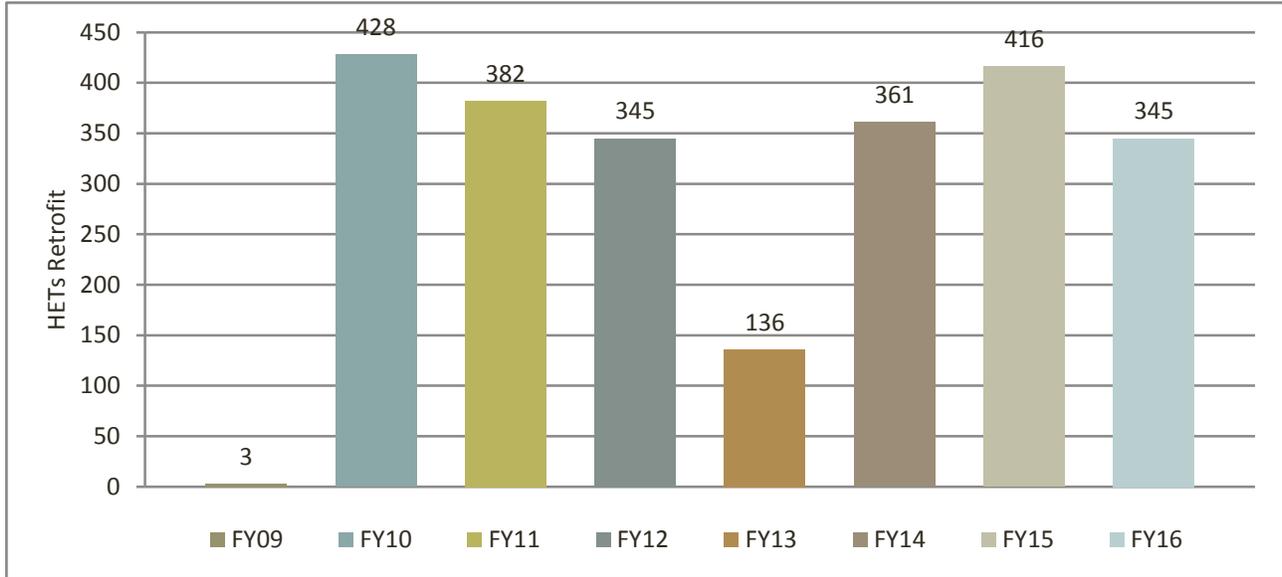
	FY 15/16	Cumulative	Start Date: Jul-08
HETs Retrofit:	652	17,685	Staff Labor Hours: 0
Expenditure: <sup>1</sup>	\$ 48,225	\$ 1,713,320	Budget: \$ 470,000
Estimated Gallons Saved:	4,878,590	269,504,685	Percent of Budget: 10%
Estimated Acre-Feet Saved:	15	827	



Tucson Water  
Incentive Program Implementation  
FY 2015-16 Through November

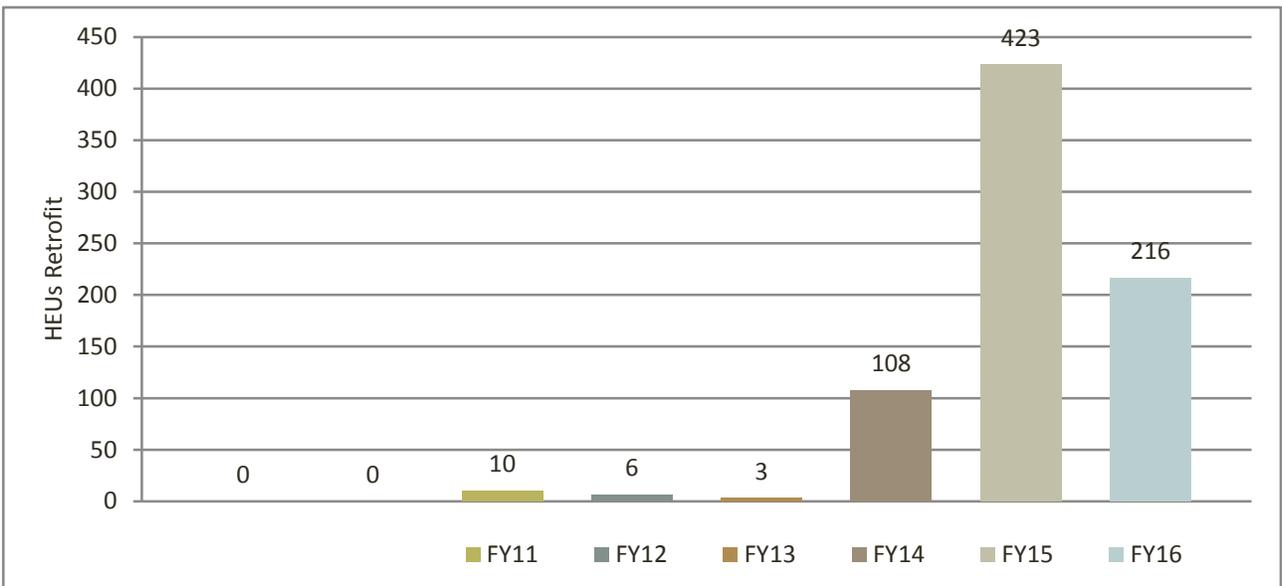
**Commercial HET Rebate**

	FY 15/16	Cumulative	Start Date: Jul-08
HETs Retrofit:	465	2,536	Staff Labor Hours: 0
Expenditure: <sup>1</sup>	\$ 62,550	\$ 237,996	Budget: \$ 60,000
Estimated Gallons Saved:	2,896,275	75,883,500	Percent of Budget: 104%
Estimated Acre-Feet Saved:	9	233	



**High-Efficiency Urinal Rebate**

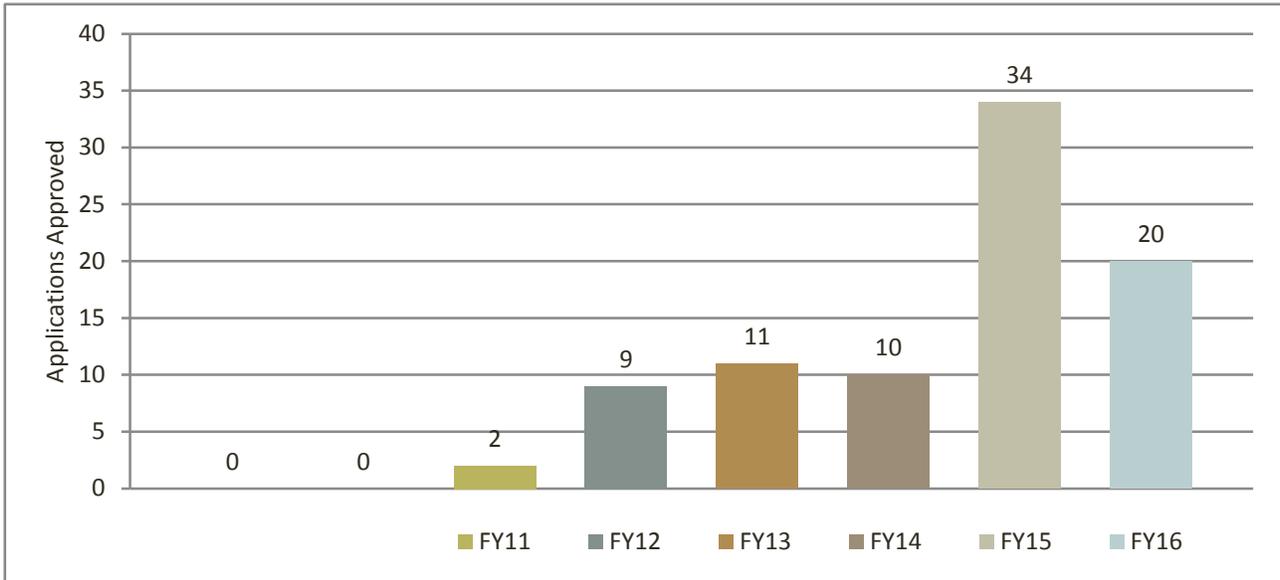
	FY 15/16	Cumulative	Start Date: Jan-11
HEUs Retrofit:	216	766	Staff Labor Hours: 0
Expenditure: <sup>1</sup>	\$ 43,200	\$ 256,000	Budget: \$ 62,500
Estimated Gallons Saved:	1,340,496	4,480,732	Percent of Budget: 69%
Estimated Acre-Feet Saved:	4	14	



Tucson Water  
Incentive Program Implementation  
FY 2015-16 Through November

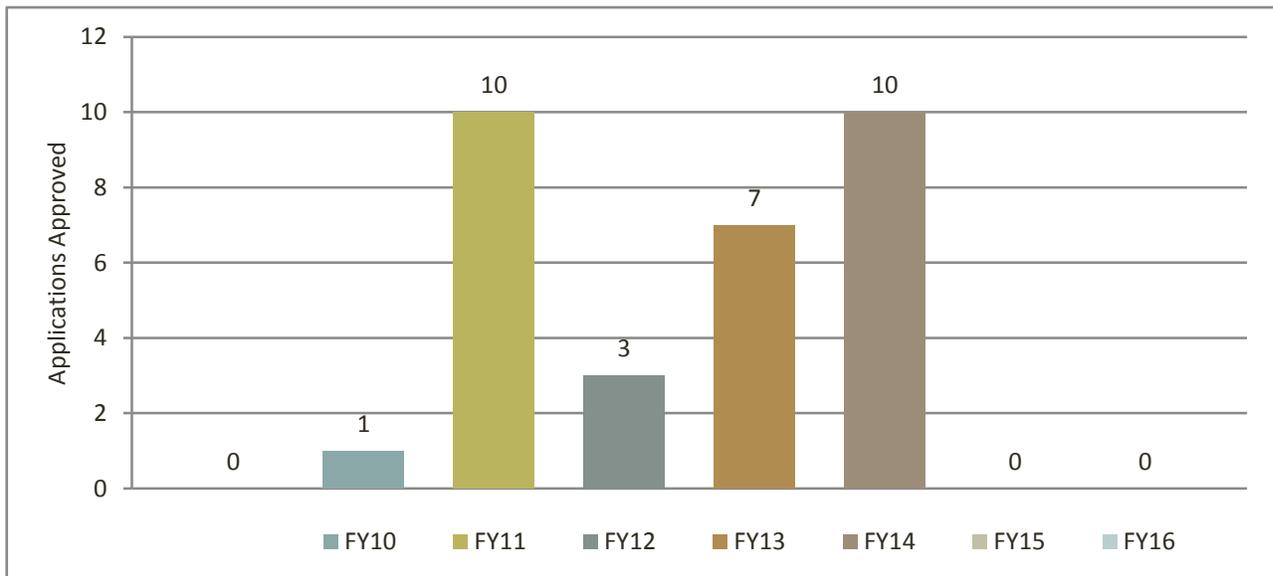
**Gray Water Rebate**

	FY 15/16	Cumulative	Start Date: Jan-11	
Applications Approved:	20	86	Staff Labor Hours:	0
Expenditure: <sup>1</sup>	\$ 8,359	\$ 33,237.61	Budget:	\$ 20,000
Estimated Gallons Saved:	272,300	1,810,795	Percent of Budget:	42%
Estimated Acre-Feet Saved:	1	6		



**Irrigation Efficiency Rebate**

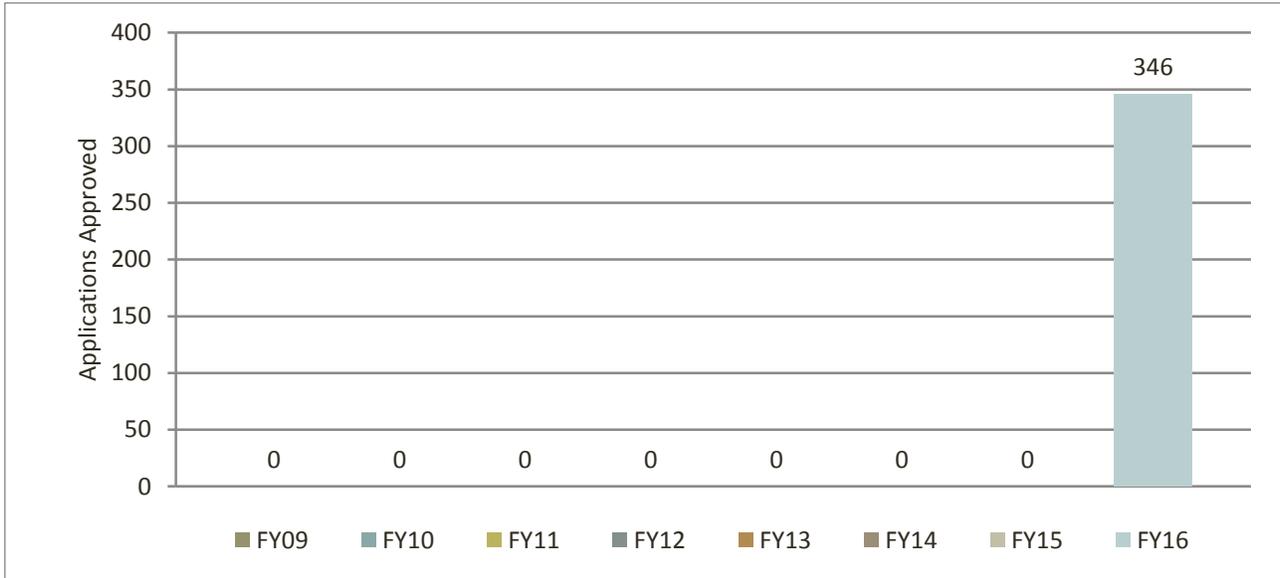
	FY 15/16	Cumulative	Start Date: Jul-08	
Applications Approved:	0	31	Staff Labor Hours:	0
Expenditure: <sup>1</sup>	\$ -	\$ 246,890	Budget:	\$ 45,000
Estimated Gallons Saved:	0	25,064,550	Percent of Budget:	
Estimated Acre-Feet Saved:	0	77		



Tucson Water  
Incentive Program Implementation  
FY 2015-16 Through November

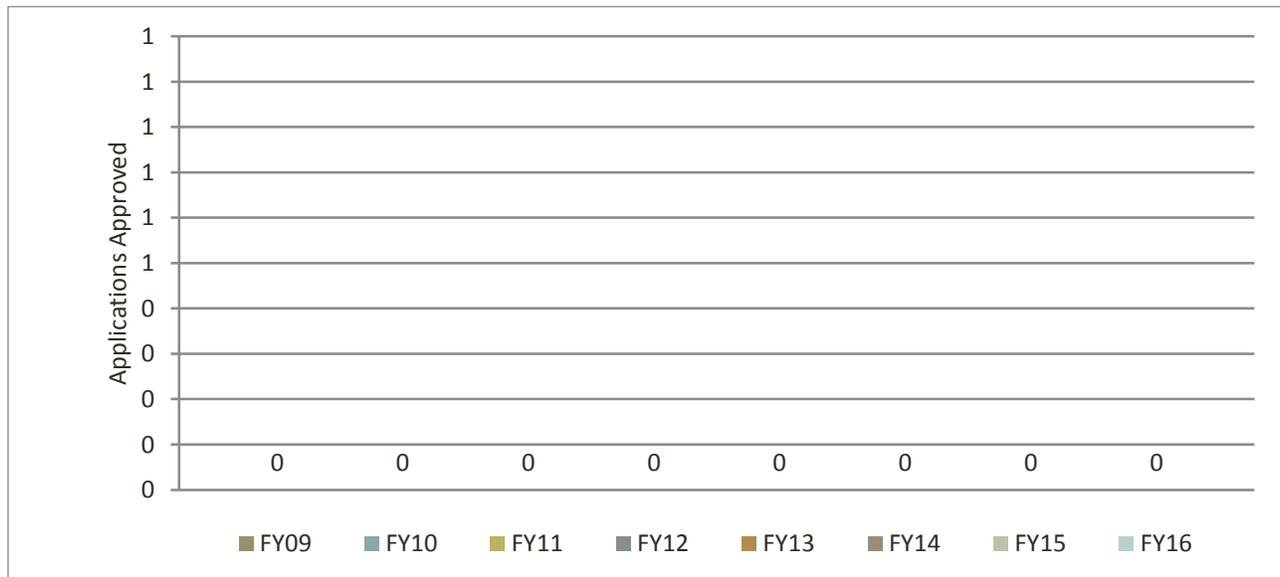
**High-Efficiency Clothes Washer Rebate**

	FY 15/16	Cumulative		Start Date: Aug-15
Applications Approved:	346	346	Staff Labor Hours:	0
Expenditure: <sup>1</sup>	\$ 66,400	\$ 66,400	Budget:	\$ 150,000
Estimated Gallons Saved:	2,436,878	2,436,878	Percent of Budget:	44%
Estimated Acre-Feet Saved:	7	7		



**Commercial Efficiency Upgrade Rebate**

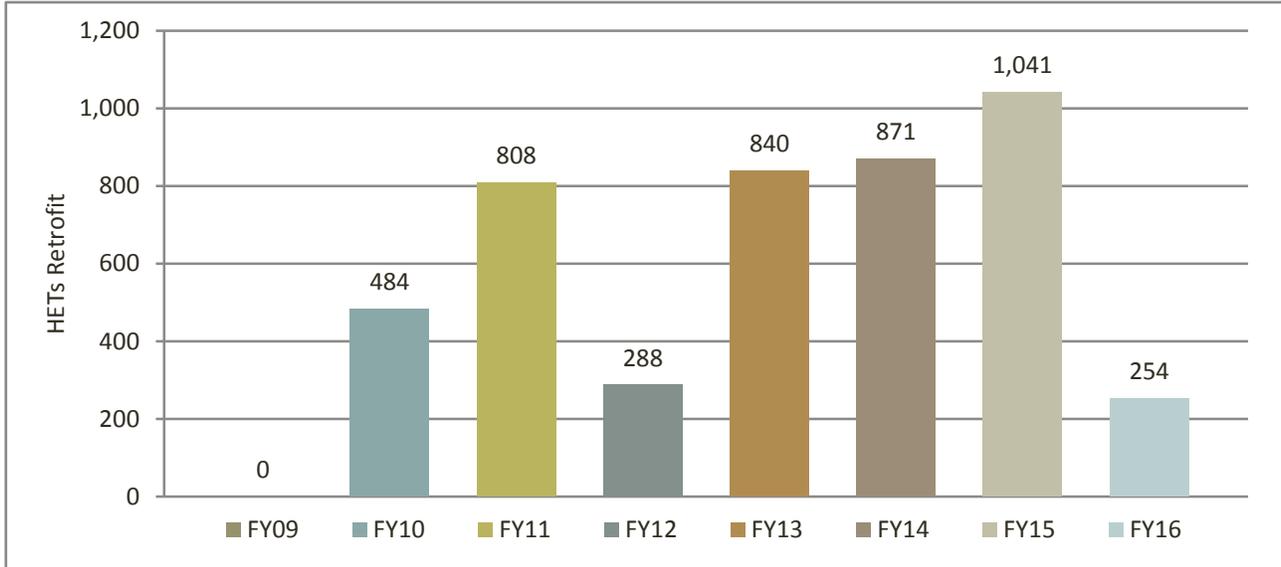
	FY 15/16	Cumulative		Start Date: TBD
Applications Approved:	0	0	Staff Labor Hours:	0
Expenditure: <sup>1</sup>	\$ -	\$ -	Budget:	\$ 85,000
Estimated Gallons Saved:	0	0	Percent of Budget:	
Estimated Acre-Feet Saved:	0	0		



Tucson Water  
Incentive Program Implementation  
FY 2015-16 Through November

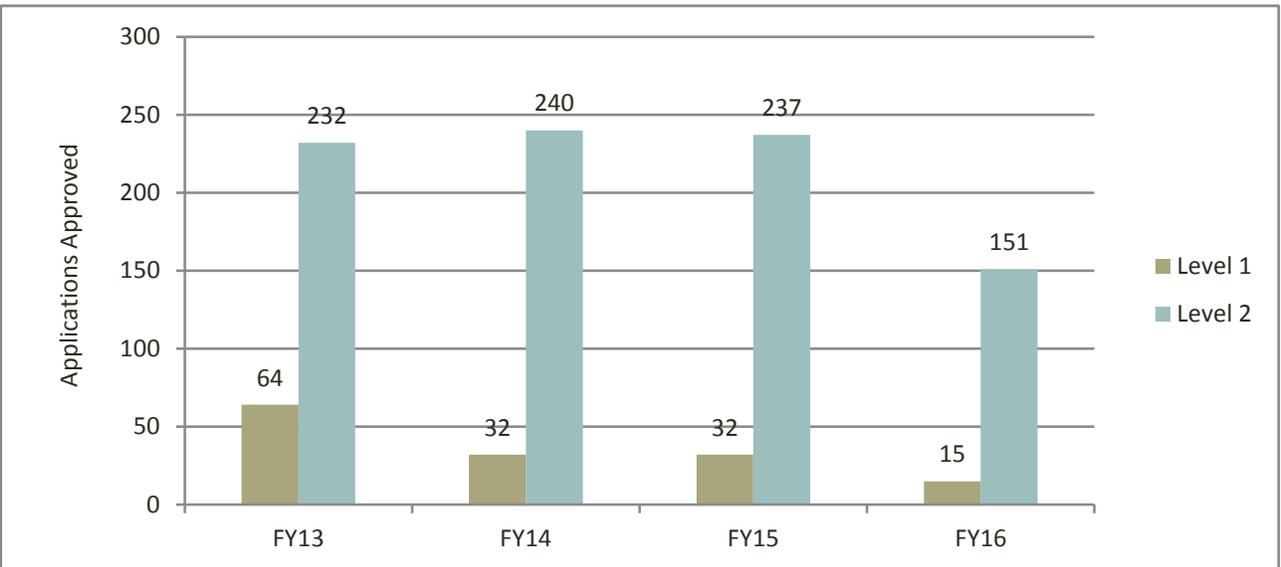
**Low-Income HET Direct Install**

	FY 15/16	Cumulative	Start Date: Oct-09
HETs Retrofit:	254	4,586	Staff Labor Hours: 0
Expenditure: <sup>1</sup>	\$ 91,886	\$ 1,667,829	Budget: <sup>2</sup> \$ 337,000
Estimated Gallons Saved:	2,178,685	114,929,923	Percent of Budget: 27%
Estimated Acre-Feet Saved:	7	353	



**Rainwater Harvesting Rebate**

	FY 15/16	Cumulative	Start Date: Jun-12
Applications Approved:	166	1,003	Staff Labor Hours: 0
Expenditure: <sup>1</sup>	\$ 222,768	\$ 1,253,910	Budget: \$ 375,000
Estimated Gallons Saved:	0	0	Percent of Budget: 59%
Estimated Acre-Feet Saved:	0	0	

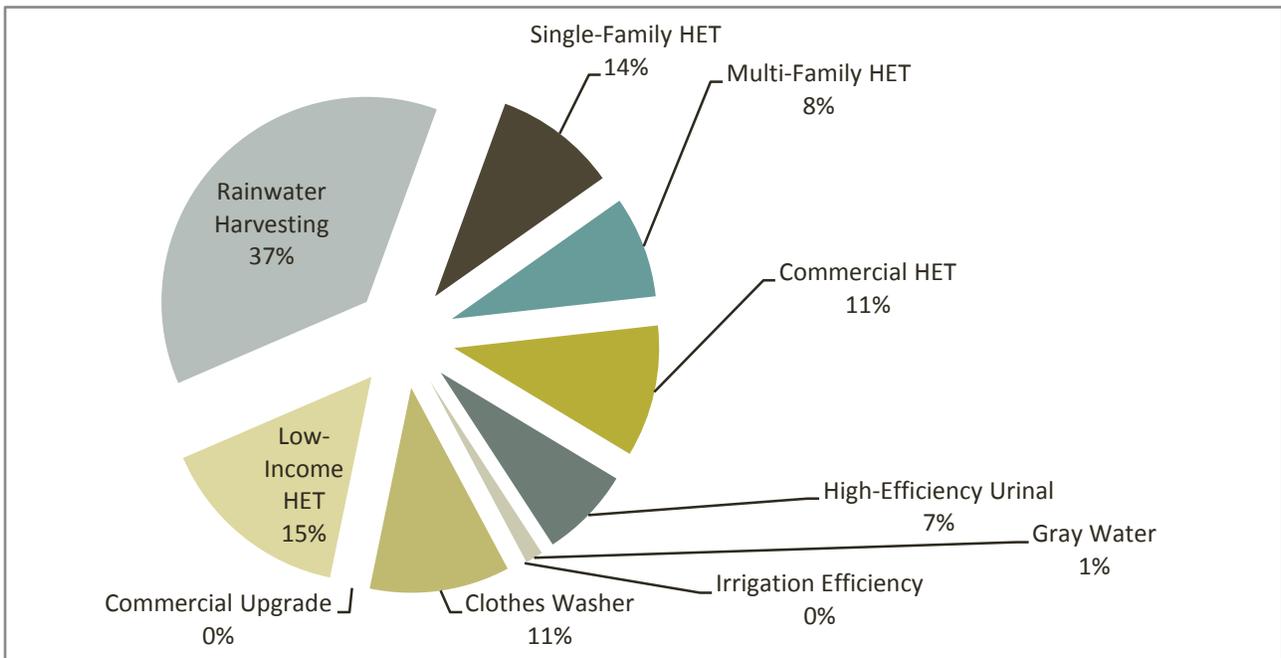


Tucson Water  
Incentive Program Implementation  
FY 2015-16 Through November

**Program Totals**

	FY 15/16	Cumulative		
HETs/HEUs Installed:	2,369	40,594	Staff Labor Hours:	0
Expenditure: <sup>1</sup>	\$ 601,510	\$ 6,708,513	Budget:	\$ 1,804,500
Estimated Gallons Saved:	19,854,539	891,738,595	Percent of Budget:	33%
Estimated Acre-Feet Saved:	61	2,737		

**Expenditures by Program for FY 2015-16**



The numbers and expenditures in this report reflect when the rebate or expenditure is approved and not when paid. This report is an operational report and not intended to reconcile with financial reports.

<sup>1</sup>The expenditure does not include the cost of staff time

<sup>2</sup>The budget for the low-income HET direct install program is combined from two object codes. Toilet installation is categorized in professional services and the cost of the toilet and misc. materials is categorized in materials. All other rebate program expenditures are in the object code for efficiency programs.

**CWAC Conservation and Education Subcommittee  
Three-Year Work Plan, FY16-18**

**FISCAL YEAR 2015-16**

<b>Month</b>	<b>Items for Subcommittee Review</b>	<b>Completion/Approval by CWAC</b>	<b>Program Updates &amp; Presentations (<i>tentative</i>)</b>
<b>September 2015</b>	- FY14-15 Annual Report - FY16-17 Budget Proposal		
<b>October 2015</b>	- Conservation Planning Process	- FY16-17 Budget Proposal	
<b>November 2015</b>		- FY14-15 Annual Report	- SERI Pilot Program update
<b>December 2015</b>			- SmartScape Program Update
<b>January 2016</b>	- FY 15-16 Mid-Year Report		- Project WET Program Update - EEEExchange Program Update
<b>February 2016</b>	- New Program Ideas & Research*	- FY 15-16 Mid-Year Report	- Low-Income Toilet Program (CHSPA) - Conserve2Enhance Program Update
<b>March 2016</b>	- New Program Ideas & Research		- Inter-agency Collaboration (Internal presentation) - Commercial/WaterSmart Business Program Update (Internal presentation)
<b>April 2016</b>	- New Program Ideas & Research - FY16-17 Program Plan		- Zanjero Program Update (Internal presentation)
<b>May 2016</b>	- Five-year Conservation Plan	- FY16-17 Program Plan	
<b>June 2016</b>	- FY17-18 Budget Proposal	- Five-year Conservation Plan	

\*New Program Ideas & Research is a designated 3-month period for CWAC Members & Staff to present new program ideas to be considered for evaluation and development in the next fiscal year to start the following July. All ideas should be presented with baseline research completed on resource needs, savings potential and existing case studies and example programs. All ideas will be analyzed using the AWE Conservation Tracking Tool and final determination of programs will be weighed with Conservation Plan goals. Depending on the number and complexity of new program ideas, additional meetings may be scheduled during this time.

# Building Capacity through Enduring Partnership



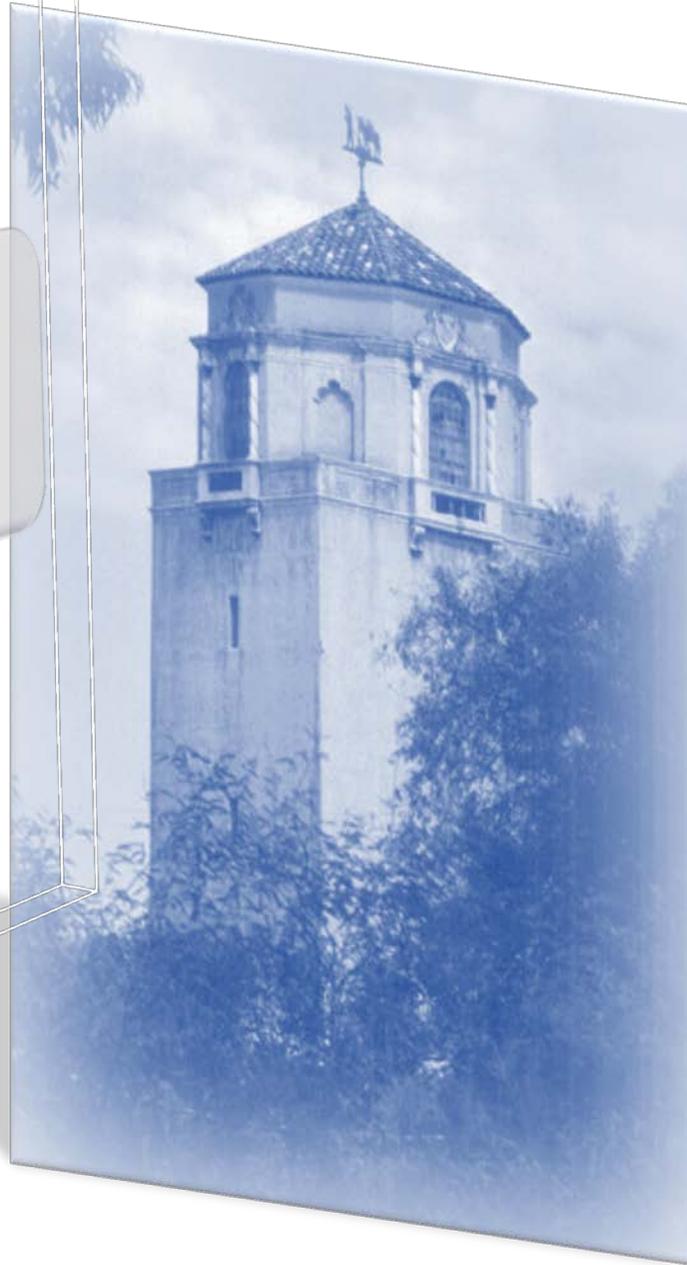
Tucson Water  
Conservation Programs

Groundwater Management  
Act

Xeriscape  
Landscaping and  
Screening  
Regulations

Cooperative  
Extension

Pima SmartScape





## Cooperative Extension

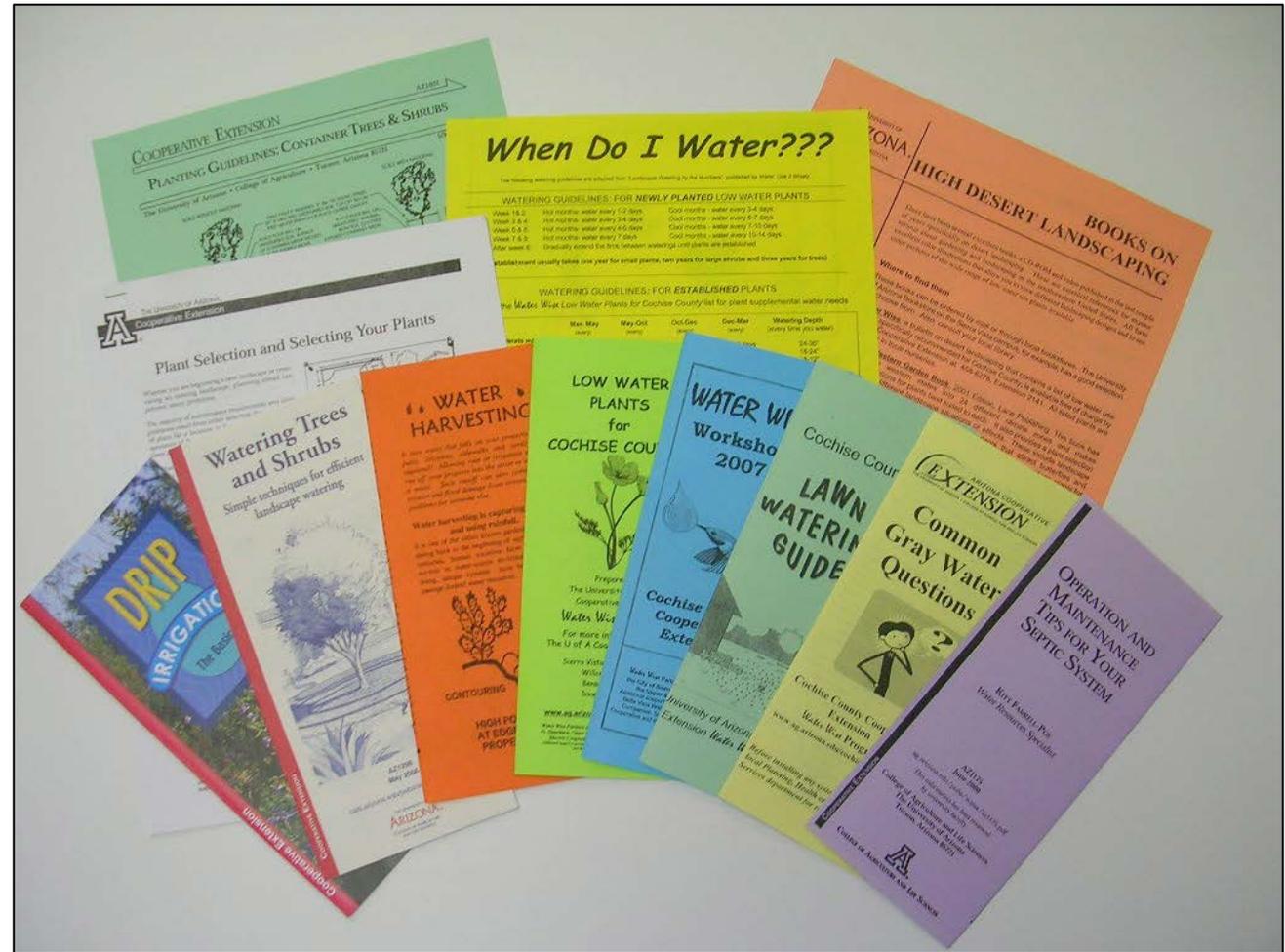
- Improve People's Lives through Science and Research

## Tucson Water

- Water Reliability in a Desert Community

# Community Partners





• "make science useful"





- “bring people together in local communities to solve local problems”



# Program Planning



Impacts: Social, Economy, Environment



# Education



# Pima SmartScape Efficient Irrigation

**Professional**



**Residential**



# Pima SmartScape Sustainable Landscapes

**Multi-Family**



**Municipal**



# Professional Classes



# Residential Classes



**History**

Search:

- Today
- Last 7 days
- August

# Calendar

Posterboard Categories

SEPTEMBER – DECEMBER 2015

**Turf Irrigation Management – Fall, 2015 @ Karsten Turfgrass Research Center** **SEP 24**

Thursday @ 7:30 am – 12:00 pm

The Fall Class focuses on overseeding with rye, mowing, fertilization and weed control. Also includes the basic biology of turfgrass, turfgrass I.D. tips, environmental and [...]

ADDITIONAL (PROFESSIONAL)

**Rainwater Harvesting Incentives Rebate Program – THIS DATE IS FULL @ UA/Pima County Cooperative Extension** **SEP 26**

Saturday @ 9:00 am – 12:00 pm

Join Rainwater Harvesting professional, Lincoln Perino, for a close look at sensible, water-smart (and wallet-smart) rainwater harvesting systems for the home landscape. This informative workshop [...]

REBATE CLASSES

**Irrigation Part 2 – Controllers & Scheduling @ UA/Pima County Cooperative Extension** **SEP 26**

Saturday @ 9:30 am – 11:30 am

Irrigation Controllers and Scheduling – Do you know how to: \* Use your drip irrigation system correctly? \* Determine your landscape's watering needs? \* Create [...]

ADDITIONAL (HOMEOWNER)

**Gray Water Rebate Program @ UA/Pima County Cooperative Extension** **SEP 26**

Saturday @ 1:00 pm – 3:00 pm

Did you know that 1/3 of typical household waste water can be re-used as gray water for landscape plants? If you'd like to participate in [...]

REBATE CLASSES

**Smartscape Español-Orientación/Plantas Suelos y Agua @ UA/Pima County Cooperative Extension** **OCT 1**

Thursday @ 3:00 pm – 6:00 pm

Esta clase es la base para entender la relación entre plantas, suelos y agua y es el cimiento para el curso de Smartscape Profesional Series [...]

**Smartscape Español-Irrigación y Controles (relojes) @ UA/Pima County Cooperative Extension** **OCT 6**

**Pro Training Module – Creating and Maintaining Healthy Landscapes – Oct. 3, 17 & 31 @ UA Pima County Cooperative Extension** **OCT 3**

**Hands-On Landscape Design Series (3-Part Series) – Sept. 30, Oct. 14, Oct. 28 @ UA/Pima County Cooperative Extension** **SEP 30**

Wednesday @ 9:00 am – 12:00 pm

Do you want to design or renovate your landscape? Need some direction about how to start the process or information about plants and

https://www.ag.arizona.edu/pima/smartscape/ai1ec\_event/hands-on-landscape-design-series-3-parts-sept-30-oct-14-oct-28/?instance\_id=1765



# Landscape Plant Palette



# Native and Desert-Adapted Species



# Stormwater Capture



# Rainwater Harvesting

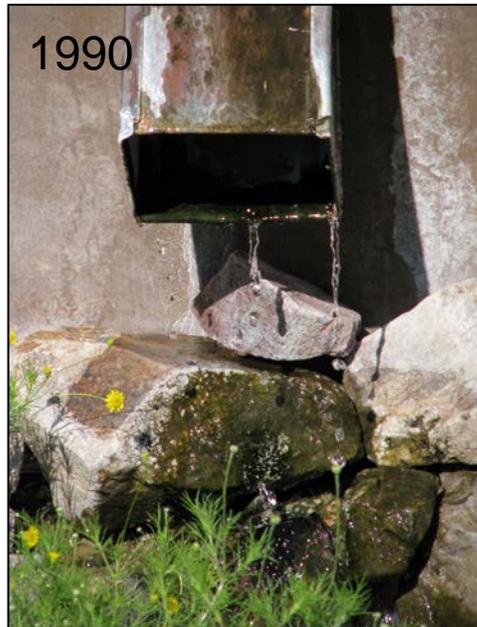


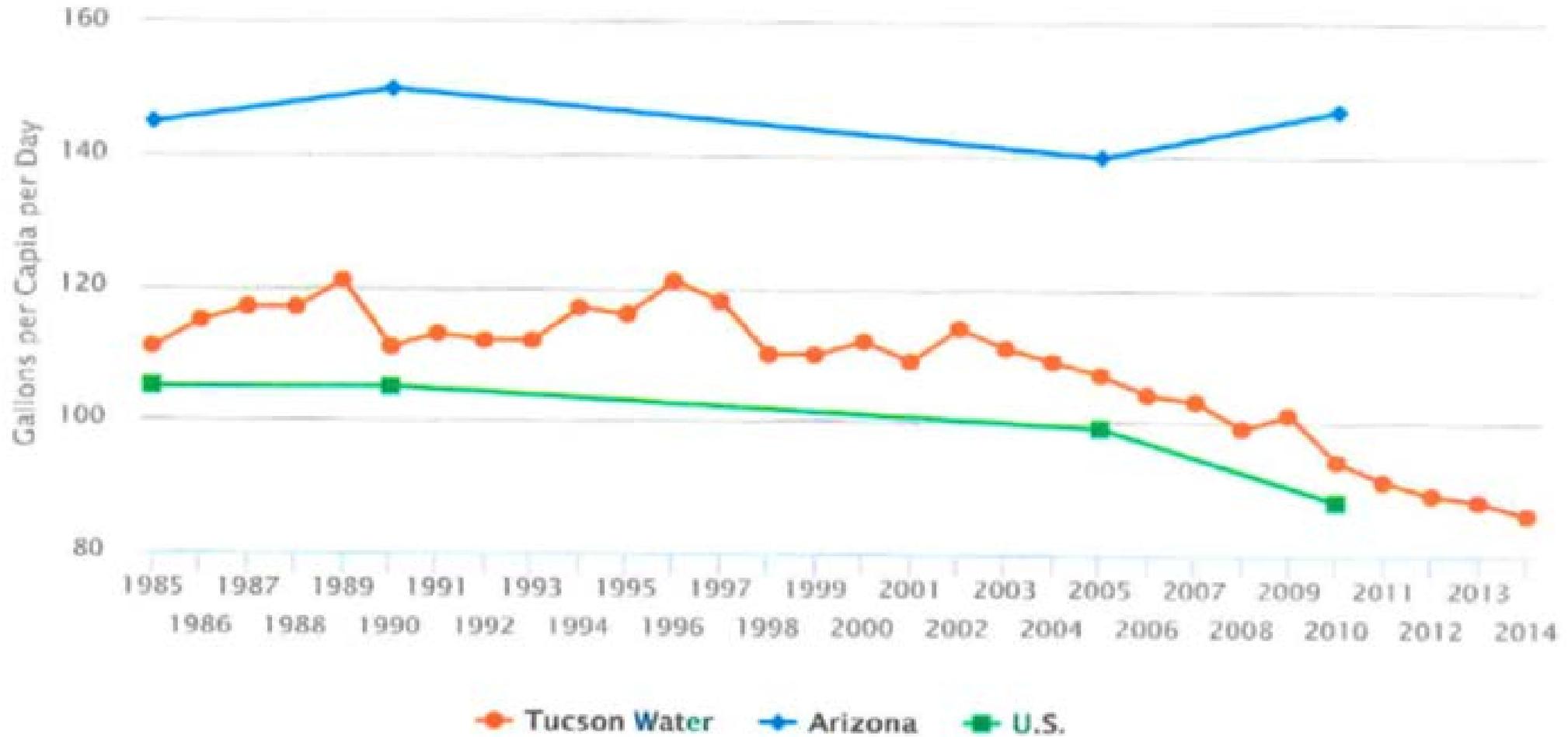
Photo by: Kathryn Hahne



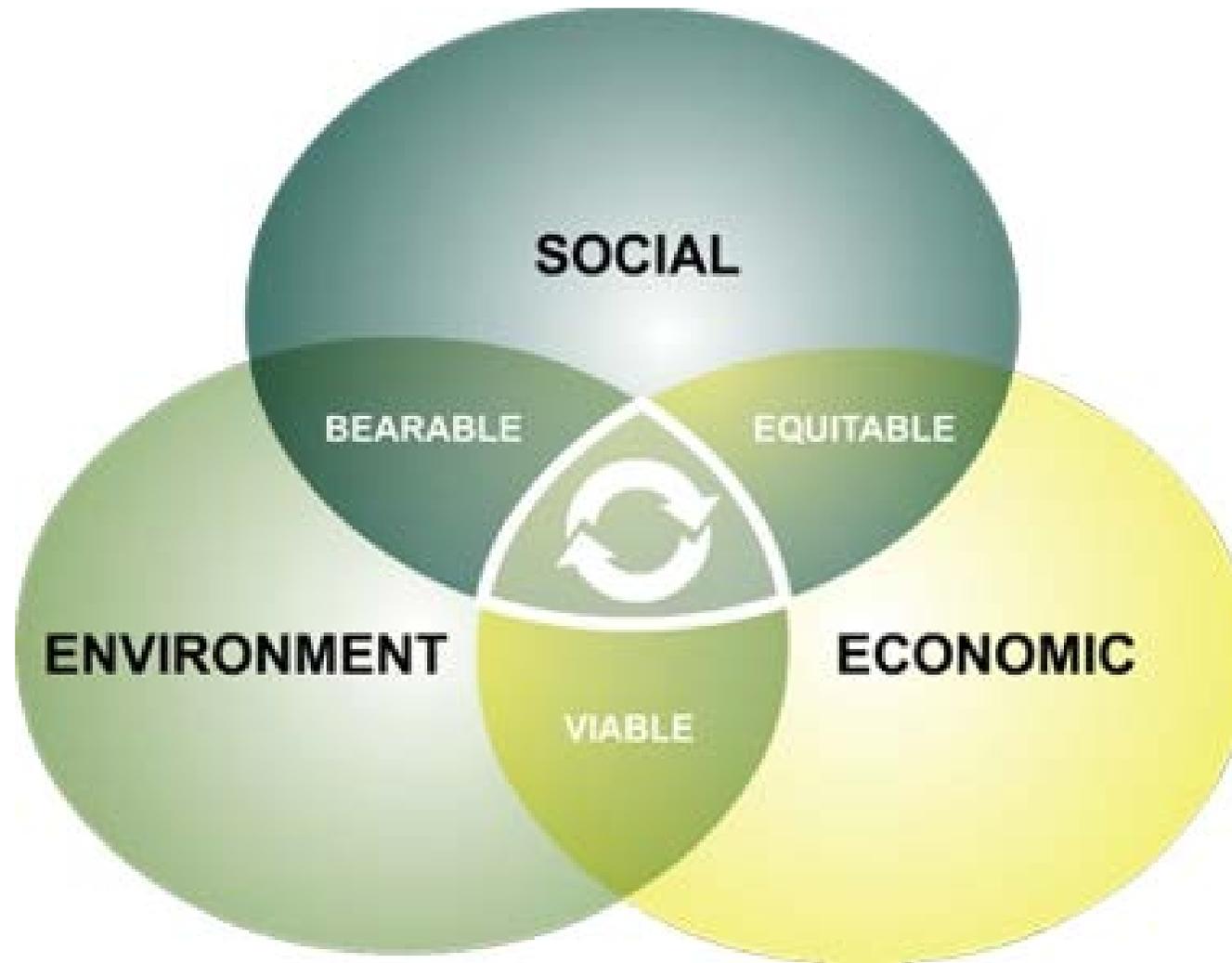
# Landscape Maintenance Practices



### Residential Water Use



# Looking Towards the Future





COLLEGE OF AGRICULTURE  
AND LIFE SCIENCES

COOPERATIVE EXTENSION  
Pima County – SmartScape Program



Enduring partners, long-term benefits



# MAYOR & COUNCIL COMMUNICATION

June 25, 2008

Subject: **Establishment of Water Conservation Program Fund (City-wide and Outside the City)**

Page: 1 of 1

**Issue** – Creation of a restricted Water Conservation Fund by ordinance to segregate monies derived from the new Conservation Fee.

**Recommendation** – The Mayor and Council is respectfully requested to adopt the attached ordinance establishing the Water Conservation Fund.

**Background** – On May 20, 2008, the Mayor and Council adopted new water rates and a Conservation Fee that will go into effect together on July 7, 2008. The Conservation Fee is \$0.03 per Ccf of potable water used, and will be charged to all potable water customers. The fee was established to fund current and new water conservation programs provided by Tucson Water.

**Legal Considerations** – The attached ordinance has been drafted by the City Attorney's Office to establish the Water Conservation Fund.

**Financial Considerations** – As provided in the attached ordinance, this fund is a separate fund consisting of those assets set aside for the purpose of financing water conservation programs within the Tucson Water service area. This fund shall consist of accumulated revenue generated by a Conservation Fee as established by the Mayor and Council and any interest earned thereon, consistent with limits and controls placed on fund interest by other provisions of the City Charter, the City Code, State law and Federal law. The Conservation Fee appears in Section 27-33(4) of the Tucson City code.

The Director of Finance shall be the custodian of all the Water Conservation Program (WCP) fund's assets. Payment from the fund shall be made by the Director of Finance on demands prepared by City staff and authorized by the City Manager or his designee for purposes of funding water conservation programs. Monies in the WCP fund shall be deposited in the City of Tucson's Investment Pool, which is a pool of all City receipts that is invested by the Finance Department to provide interest on those receipts while still allowing liquidity in each fund. Any balance in the WCP fund at the end of any fiscal year shall remain in this fund to be available for future authorized uses. Any shortages in the WCP fund at the end of any fiscal year shall be considered a loan from Tucson Water's Operating Fund (interest charged at the rate earned by the City's Investment Pool). The Director of Finance shall be responsible for maintaining a system of accounts for the funds in accordance with generally accepted accounting principles.

It is estimated that approximately \$1.5 million will be generated by the Conservation Fee in FY 2009.

Respectfully submitted,

  
Karen Masbruch  
Assistant City Manager

KM/jt/Karen Masbruch  
Tucson Water  
mc:Conservation Fund Ord 062508mcc.doc

Ordinance  
JUNE25-08-335

ADOPTED BY THE  
MAYOR AND COUNCIL ON:

---

ORDINANCE NO. 10555

RELATING TO WATER; ESTABLISHING A FUND FOR CITY OF TUCSON WATER CONSERVATION PROGRAMS, DESCRIBING THE SOURCE OF THE FUND'S REVENUES AND ASSETS AND PROVIDING FOR THE ADMINISTRATION OF THE FUND; AND DECLARING AN EMERGENCY.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF TUCSON, ARIZONA, AS FOLLOWS:

SECTION 1. There is hereby established a Water Conservation Program (WCP) Fund.

SECTION 2. This fund is a separate fund consisting of those assets set aside for the purpose of financing water conservation programs within the Tucson Water service area.

SECTION 3. This fund shall consist of accumulated revenue generated by a Conservation Fee as established by the Mayor and Council and any interest earned thereon, consistent with limits and controls placed on fund interest by other provisions of the City Charter, the City Code, State law and Federal law. The Conservation Fee appears in Section 27-33(4) of the Tucson City code.

SECTION 4. The Director of Finance shall be the custodian of all the WCP Fund's assets. Payment from the fund shall be made by the Director of Finance on demands prepared by City staff and authorized by the City Manager

or his designee for purposes of funding water conservation programs. Monies in the Fund shall be deposited in the City of Tucson's Investment Pool. Any balance in the WCP fund at the end of any fiscal year shall remain in this fund to be available for future authorized uses. Any shortages in the WCP Fund at the end of any fiscal year shall be considered a loan from Tucson Water's Operating Fund (interest charged at the rate earned by the City's Investment Pool). The Director of Finance shall be responsible for maintaining a system of accounts for the Funds in accordance with generally accepted accounting principles.

SECTION 5. The various City officers and employees are authorized and directed to perform all acts necessary or desirable to give effect to this ordinance.

SECTION 6. WHEREAS, it is necessary for the preservation of the peace, health and safety of the City of Tucson that this ordinance become immediately effective, an emergency is hereby declared to exist, and this ordinance shall be effective immediately upon its passage and adoption.

PASSED, ADOPTED AND APPROVED by the Mayor and Council of the City of Tucson, Arizona, \_\_\_\_\_.

\_\_\_\_\_  
MAYOR

ATTEST:

\_\_\_\_\_  
CITY CLERK

APPROVED AS TO FORM:

REVIEWED BY:



  
\_\_\_\_\_  
CITY ATTORNEY

  
\_\_\_\_\_  
CITY MANAGER

**Tucson Code established by COT Ordinance #10555**

Sec. 27-33. Monthly potable water service charges.

...

(4) The conservation charge shall be in addition to the service charge and water use charges for all potable water customer classes and apply to all monthly water use at the rate of eight cents (\$0.08) per Ccf.

CITY OF TUCSON

MAYOR AND COUNCIL

WATER  
POLICIES

ADOPTED

JANUARY 26, 1998

RESOLUTION NO. 17929

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## I. DEFINITIONS

A.	<b>ADEQ</b>	Arizona Department of Environmental Quality
B.	<b>ADWR</b>	Arizona Department of Water Resources
C.	<b>A MA</b>	Active Management Area
D.	<b>Applicant</b>	Owner, authorized representative, or corporation requesting service, use and/or construction of Tucson Water facilities
E.	<b>CAP</b>	Central Arizona Project
F.	<b>City</b>	City of Tucson
G.	<b>Cost of Service</b>	Charges for water service shall be made in direct proportion to the cost of securing, developing and delivering water to the Utility's various customer classes.
H.	<b>CWAC</b>	Citizens' Water Advisory Committee
I.	<b>Effluent</b>	The product of a treatment plant, having received primary and/or secondary treatment.
J.	<b>EPA</b>	U.S. Environmental Protection Agency
K.	<b>GWMA</b>	1980 Groundwater Management Act
L.	<b>Hydraulically Connected Riparian Area</b>	An aquatic or terrestrial ecosystem that relies, at least in part, on subsurface water flows.
M.	<b>IGA</b>	Intergovernmental Agreement
N.	<b>Non-potable water</b>	Water not fit for human consumption, such as effluent, reclaimed water and untreated CAP water.
O.	<b>Potable water</b>	Water which meets EPA and ADEQ water drinking water standards
P.	<b>Reclaimed</b>	Effluent receiving post-secondary water treatment.
Q.	<b>Utility</b>	The Tucson Water Department
R.	<b>Water Provider</b>	Private water companies, districts, or municipalities that provide water service.
S.	<b>Tucson Water Department</b>	The City Of Tucson's municipally-owned water utility
T.	<b>Tucson Water Service Area</b>	The lands represented on the service area maps filed annually with the Arizona Department of Water Resources
U.	<b>Waste water</b>	Water which carries waste to a treatment facility through a conveyance system.
V.	<b>Water revenue</b>	Revenue derived from the operations of Tucson Water.
W.	<b>Emergency Supply</b>	A temporary water supply provided by Tucson Water to local private water companies for equipment or system failures and not for the purpose of resolving deficiencies in the system requesting the emergency supply

## II. ASSUMPTIONS

- A. All financing shall be done in accordance with all city, state and federal requirements.
- B. To the extent that conservation programs succeed in reducing demand, capital improvement programs may be deferred and rate increases adjusted accordingly.

## III. POLICIES

### A. Finance

#### 1. Enterprise Basis

- a. The Utility shall be a self-supporting enterprise with all costs associated with the Utility to be funded from revenues derived from the sale of water and other water-related income sources.
- b. An annual average debt service coverage of 1.75 shall be maintained.
- c. Revenues collected in excess of operating needs of the Utility shall be carried forward for future capital bond funding requirements and shall not be transferred to the City's General Fund.
- d. The Utility shall maintain cash reserves adequate for known future obligations plus an allowance for unbudgeted contingencies set at five percent (5%) of revenues from water sales.
- e. Low-income water users living within the City may be supplied a minimum amount of water at reduced rates or other form of subsidized water service at the discretion of Mayor and Council. The cost of this subsidy will be funded from the general fund of the City and not from water rates.

#### 2. Water Rates and Charges

##### a. cost-of-service basis

- (1) Insofar as possible charges for water utility service shall be made on a cost-of-service basis.
- (2) Marginal cost aspects of the water utility will be continually studied by staff and considered as a factor in the making of rates.

- (3) The substitution of effluent and reclaimed water for potable water is an important element in achieving safe yield in the Tucson Basin. Rate setting for effluent shall be in accordance with the following precepts:
  - (a) charges for effluent and reclaimed water shall be based on the cost of service whenever possible;
  - (b) to the extent that charges for effluent and reclaimed water based on cost of service do not provide an adequate price incentive, the price of reclaimed water shall be based on a market value which encourages its use;
  - (c) CWAC shall review and make recommendations and the Mayor and Council shall hold a duly advertised public hearing prior to entering into any agreement to sell reclaimed water to any customer at a rate other than that rate established by ordinance and contained in the Tucson Code.
- (4) In the event that Tucson Water enters into contract with other water providers for treatment and delivery of CAP allocations, the City shall recover its total cost of providing this service.

b. water rate design elements

- (1) Commodity charges shall reflect the costs of service across customer classes and seasons, using rate structure features such as: seasonal rates; isolated areas service charge and reserve fund surcharge.
- (2) Customers shall be charged for fixed and recurring costs of service such as:
  - (a) new connections
  - (b) re-connections
  - (c) meter reading
  - (d) billing
- (3) Rate structures shall be designed so as to encourage water conservation and to control peak demand.
- (4) Water rates and charges shall be reviewed annually and changes in the rate structure shall be implemented so as to avoid sudden and large-scale shifts in water rates.

- (5) Water rates for customers inside and outside the City limits shall be the same within each customer class unless there is reasonable justification based on cost-of-service rate differentials.
- (6) The City shall provide an open process for determination of competitive wholesale water service rates. This process shall include formal participation by the governing bodies of other cities and towns within which wholesale water service may occur.
- (7) The City shall work cooperatively with wholesale water customers to develop rate structures which avoid excessive retail water rate increases in any given year, with appropriate consideration for City policy regarding full cost recovery.
- (8) The City shall work cooperatively with wholesale water customers to establish rate structures which comply with Arizona Corporation Commission requirements.
- (9) With regard to existing agreements for wholesale water service, the City will develop rates consistent with the provisions of the agreements.

### 3. System Development Requirements

- a. All costs of water system facilities necessary to serve a new applicant shall be paid by that applicant.
- b. A provision shall be made to refund that portion of the costs not directly attributable to the development as follows:
  - (1) the cost differential of any oversizing of mains beyond what is required for the applicant shall be refunded by Tucson Water; and
  - (2) properties not financially participating in the construction of certain Tucson Water facilities shall be assessed a charge upon connection. Funds collected shall be reimbursed to the party that financed the original facility installation. The charge shall be updated annually to reflect current construction costs.
- c. Area-specific charges shall be assessed to developments within Tucson Water Service Area where significant capital investment for the importation and distribution of water solely to serve the specific area is required.

#### 4. Service Area Expansion

- a. The City shall not expand its water utility service area into areas not presently served by other providers unless:
  - (1) Costs to existing rate-payers are considered;
  - (2) Water supply factors are considered; and
  - (3) Regional plans are considered.

#### 5. Capital Improvements

- a. Various combinations of revenue, general obligation bonds, tax-secured bonds and water revenues shall be used to finance water capital improvements.
- b. Repayment of the bonds shall be made from water system revenues.
- c. The type of bond financing to be used shall result in the least total cost to rate-payers based on present value.
- d. The term of repayment of debt shall not exceed the useful life of the improvement funded by such debt.
- e. Capital requirements for relocations or other modifications to the water system required to accommodate other public works shall be derived from sources other than the water utility.
- f. Revenues accumulated in any reserve fund shall be set aside for specific purposes, such as water augmentation or water quality projects.

### B. Acquisitions

#### 1. Systems Acquisitions

- a. The City shall purchase other water delivery systems only if such purchase is beneficial to the customers of Tucson Water. Delivery systems whose purchase may contribute to the achievement of Tucson Water's aims should:
  - (1) possess water resources that might have a significant effect on water quality, availability, and supply;
  - (2) be located adjacent to or near the Utility's existing service area; and
  - (3) not raise the cost of providing water to existing customers of the Utility.

- b. The CWAC shall review all potential water system acquisitions and make recommendations to the Mayor and Council.
- c. Whenever Tucson Water supplies water to another water provider, the contract or agreement governing this transaction shall encourage the water provider to implement a program that includes conservation incentives.

## 2. Water Rights Acquisitions & Sales

- a. The City may purchase or sell grandfathered water rights or stored water credits when the Mayor and Council determine the transaction is consistent with short and long-term goals and policies of the City.
- b. Water rights and stored water credits may be considered in price negotiations for reclaimed water and CAP water.

## C. Water Supply, Management and Development

### 1. Water Quality

- a. Tucson Water shall provide all customers water which is safe and palatable, and which meets all primary Federal and State standards, including that all water shall:
  - (1) contain no substance naturally occurring or man-made in amounts that exceed the maximum contaminant level established by the EPA Interim Drinking Water Standards, the Arizona Department of Environmental Quality or the Arizona Department of Health Services
  - (2) meet local standards to protect health and safety in the absence of national or state standards
  - (3) contain no pathogens
  - (4) be tested for contaminants at representative locations throughout the distribution system as appropriate or required by regulatory agencies to apprehend possible health, economic, or environmental threats
- b. All non-potable water use shall be consistent with all local, state, and federal regulations.

- c. Tucson Water shall be responsive and responsible to concerns regarding water quality and will provide the public with timely and accurate information on matters relating to water quality issues.
- d. Tucson Water will fund remediation of groundwater contamination commensurate with its responsibility for the problem.

## 2. Contingency Plans

- a. The Utility shall develop and maintain contingency plans to manage a water loss, shortage, delivery interruption, contamination, severe land subsidence or other water emergency. Any emergency demand reduction strategy will not be based solely on an across-the-board-percentage reduction on historic, residential, commercial or industrial water usage. The emergency conservation measure shall focus on the reduction or elimination of water intensive uses that don't affect public health or safety.
- b. Emergency water supplies shall be provided to local private water companies subject to Tucson Water's ability to meet the demands of its customers.

## 3. Service Area Management

- a. The City shall maintain the right of control of effluent in accordance with adopted IGA's.
- b. Tucson Water shall maintain a 100-year assured water supply in accordance with ADWR assured water supply rules.
- c. The City shall encourage other water providers to participate financially in the regional management of water.
- d. The City shall continue to work cooperatively with all potential CAP water users in Pima County and with all agencies of government to facilitate implementation of the CAP in Pima County.
- e. The City may enter into agreements to treat and deliver CAP water to other water providers to ensure that their CAP allocations are utilized in the Tucson AMA.
- f. The City shall cooperate fully with the ADWR to develop augmentation programs that may include water importation and storage and/or artificial groundwater recharge.
- g. Tucson Water shall cooperate in the planning and implementation of regional recharge programs.

- h. The City shall continue to seek Tucson AMA wide groundwater management through cooperation between water users and agencies of government, including ADWR.
- i. In considering funding projects which are sponsored by entities other than the Tucson Water Department, CWAC shall review the rate impacts and policy implications of participation in the project.
- j. The City of Tucson shall strive to become the sole retail water provider within its corporate boundaries, as they may exist, now or in the future.
- k. The City shall offer to negotiate intergovernmental agreements with other cities and towns governing the provision of new retail water service within the boundaries of those jurisdictions in order to clarify the relationship among the City, the other cities and towns and the affected retail customers.
- l. Where legally and physically feasible, ownership and control of existing Tucson Water retail service facilities within the boundaries of other cities and towns shall be negotiated with those entities. The City shall work in cooperation with those entities to determine fair market value of the facilities.

#### 4. Non-Potable Water

Priority shall be given to the development of treatment capacity and delivery systems for non-potable water. Wherever possible, the use of non-potable water in place of potable water shall be required for landscape irrigation and industrial uses.

- a. The following shall be considered for potential uses of non-potable water:
  - (1) Landscape irrigation and industrial uses
  - (2) Direct recharge
  - (3) Agricultural irrigation and livestock watering
- b. The following priorities, from highest to lowest, are established for utilization of non-potable water:
  - (1) Direct use to replace an existing use of potable water
  - (2) Storage and recovery within the area of hydrologic impact to replace an existing use of potable water
  - (3) Direct use to replace a new use of potable water

- (4) Storage and recovery within the area of hydrologic impact to serve a new use that otherwise would use potable water
- (5) Storage and recovery outside the area of hydrologic impact to replace either an existing or a new use of potable water
- c. Since contractual rights to the use of effluent may result in added value to a user's property, contracts shall recognize that possibility and require waiver by the owner of any such added value in the event of purchase or condemnation of the property by the City through negotiation.
- d. The City shall monitor effluent sales and deliveries by the Pima County Wastewater Management Department to ensure compliance with the sewer system transfer IGA and shall take steps to correct any failure to so conform when necessary.
- e. The potential for using reclaimed water shall be evaluated and included in all new and existing water and land use plans.
- f. Tucson Water shall actively work with new and existing large water users, including golf courses, parks, schools, cemeteries, industrial and multi-family complexes, to provide practical and economic service by the reclaimed water system.
- g. New turf facilities and golf course development shall use effluent or reclaimed water for irrigation purposes.
- h. Any conditions of interim use of potable water shall be made a part of water service agreements and other appropriate contracts to assure prompt action converting to the maximum use of effluent or reclaimed water for irrigation purposes. These conditions shall include, but not be limited to:
  - (1) the date by which the City is required to have its portion of the system in place;
  - (2) requirements for financial participation by the developer in the construction of the project;
  - (3) penalties for non-compliance; and
  - (4) a surcharge equaling 50% of the potable water rate in addition to the regular rates and charges. This surcharge shall not apply when the continued use of potable water is required solely due to deficiencies in the City's system or delays in City construction.

- i. When private development requires reclaimed water service in advance of the City's construction schedule, developers shall work with Tucson Water to formulate a plan of service to be implemented at the sole expense of the developer with facilities to be dedicated to Tucson Water upon completion.
- j. When funding is available, the City will finance or participate in the construction of reclaimed water pipelines in the Tucson Water service area to serve customers whose estimated reclaimed water usage is sufficient to justify pipeline construction on the basis of economic feasibility.
- k. effluent control (IGA)

(1) Effluent use shall be controlled as follows:

- (a) The use of all effluent derived from water developed by the City, including the City's allocation of CAP water, shall be directly controlled by the City.
- (b) Effluent from any County treatment plant derived from water developed by entities other than the City may be controlled by the City on a case-by-case basis through contracts between the City and others subject to applicable conditions to include:
  - i) conditions requested by Pima County in the development of their waste water systems that are consistent with the water management plans and goals of the Tucson AMA.
  - ii) that the use of effluent shall reduce the amount of groundwater which the other party could otherwise lawfully have pumped.
  - iii) that the terms of the contract shall be sufficient to amortize the cost of system improvements.
- (2) The City may only enter a contract with the County under the terms of which the County would control the effluent under conditions mutually agreed upon, with no payment by the County to the City, except for sharing net profits as provided in the Sewer Transfer IGA, when the City:
  - (a) is not using the effluent;
  - (b) has no plans to use the effluent;
  - (c) has no contract with another party for use of effluent;
  - (d) has no plans for entering into a contract with another for the use of the effluent;
  - (e) has no existing or proposed projects which could be negatively impacted.

## 5. Recharge

- a. Groundwater recharge shall be used as a strategy for augmenting the groundwater and for providing long-term operational flexibility to Tucson Water's supply system.
- b. Tucson Water shall develop demonstration projects as required to assess the feasibility of recharging various water sources for operational and long-term storage.
- c. Tucson Water shall fully participate with other agencies to develop programs for water supply augmentation within the Tucson AMA.
- d. The City may provide recharge water only to entities which have the legal authority to store water.

## 6. Wholesale Water Service

- a. Tucson Water shall offer to provide wholesale water service to other retail water providers in the region.
- b. Tucson Water shall offer both interruptible and non-interruptible water service to wholesale customers.
- c. Tucson Water shall be responsible for delivering a specified flow rate at a specified pressure range to the point of delivery to wholesale customers.
- d. Each wholesale customer shall be responsible for all necessary storage and transmission facilities beyond the point of wholesale delivery, unless otherwise provided for in separately negotiated agreements.
- e. Tucson Water shall be responsible for delivering wholesale water in accordance with the primary water quality standards established pursuant to the Federal Safe Drinking Water Act (42 United States Code Sections 300F et seq.) at the point of delivery to the retail water service provider.
- f. Each wholesale customer shall be solely responsible for maintaining water quality within its own retail water distribution system.
- g. Tucson Water shall deliver to a wholesale customer only water which is not debited against a City of Tucson groundwater account established by the Arizona Department of Water Resources.
- h. Central Arizona Project water held under subcontract by any wholesale water customer may be treated and directly delivered or may be stored underground by Tucson Water on behalf of the wholesale customer.
- i. Agreements to treat and deliver or to recharge wholesale customers' CAP water shall be separately negotiated.

## 7. Design Standards

- a. Tucson Water shall utilize its published design criteria for the development of all utility facilities, except when rezoning, neighborhood plans, or other Mayor and Council actions set aesthetic standards for the area that differ from Tucson Water's standard. In these cases, Tucson Water shall work with the City Planning Department, the developer and the neighborhood to design facilities that are consistent with the architectural theme or prevailing landscape type of the area.

## 8. Avra Valley Land

### a. Ground water use, storage, and recovery

- (1) No lands with appurtenant water rights shall be sold.
- (2) City staff shall take all necessary actions to establish, maximize and preserve water rights on lands.
- (3) No users other than Tucson Water shall export any ground water extracted from Tucson Water Avra Valley properties.
- (4) Facilities to store and recover imported water may be constructed on Avra Valley lands.
- (5) Imported water, including CAP and effluent, which is recharged on Avra Valley lands, may be recovered within the area of hydrologic impact.

### b. Land use

- (1) Land use shall:
  - (a) Benefit the Tucson Water Department rate payers
  - (b) Be consistent with all land use requirements and environmental regulations
  - (c) Be undertaken only in conjunction with notice to adjoining property owners and/or a public process to inform area residents of the use
  - (d) To the extent possible, preserve those lands having abundant vegetative cover in their natural state
  - (e) In conjunction with on-site construction, vegetation shall be replaced or restored as part of the project.

c. Leases

- (1) Use shall include all economically reasonable water-saving designs, techniques and equipment.
- (2) The quantity of water to be used as well as other non-monetary benefits to Tucson Water rate payers shall be considered
- (3) Any use shall result in reduction or elimination of the City's maintenance costs.
- (4) Use shall produce significant income to Tucson Water and/or value in excess of the City's cost of contract administration benefiting Tucson Water rate payers.
- (5) In flood-prone areas, uses shall conform to flood plain regulations.
- (6) Lessees shall be responsible for all necessary licenses, permits and all applicable fees and taxes.
- (7) User shall be required to post a bond at the beginning of the lease guaranteeing reclamation and revegetation of the land at lease expiration.
- (8) Where appropriate users shall be required in the lease to construct and/or maintain appropriate fencing.
- (9) Leases shall contain provisions to protect against risk of environmental damage, including groundwater pollution.
- (10) Where appropriate all users shall be required to construct and/or maintain all necessary on-site flood control structures.

9. Protection of Hydraulically-Connected Riparian Areas

a. identification of areas

- (1) the areas on the City's Environmental Resource Zone and Pima County Flood Control District maps shall be subject to the policies described in this section.

b. drilling of new wells

- (1) except under circumstances involving special conditions in which no hydrologic impacts can be identified, Tucson Water shall not drill any new wells inside or within one (1) mile of designated hydraulically-connected riparian areas.

c. operation and evaluation of existing wells

- (1) Tucson Water wells located inside or within one (1) mile of designated hydraulically-connected riparian areas shall be operated so as to preserve these riparian areas
- (2) the feasibility of CAP recharge inside or within one (1) mile of designated hydraulically-connected riparian areas shall be evaluated.

d. preservation through conservation

- (1) Tucson Water shall utilize conservation as a mechanism to reduce the need for local pumping in areas having designated hydraulically-connected riparian habitats.
- (2) Tucson Water shall work with private water companies and private well owners to develop conservation programs to reduce local groundwater pumping in areas having designated hydraulically-connected riparian habitats.

D. Conservation

1. The City of Tucson is required to meet conservation targets as established by the Arizona Department of Water Resources. Conservation program elements, such as public information and education, incentives and ordinances, will be developed and implemented to achieve conservation targets.
2. The City of Tucson will "Lead by Example" by promoting water conservation and environmental aesthetics by applying the principles of Xeriscape to public projects and following adopted regulations.

E. Policy Review Process

1. Policies review

- a. Mayor and Council policies shall be reviewed annually or more frequently as warranted.

2. Long-range plan

- a. The long-range plan, including a comprehensive water conservation program, shall be annually reviewed and revised.

## C&E Member Recommendations: Mission Statement / Review of Conservation Fund Policies

*Input from Member Shipek:*

The definition of water conservation seems to have a limited scope among TW staff and C&E members as purely "demand reduction". The broader definition is "Water conservation refers to the preservation, control and development of water resources, both surface and groundwater, and prevention of pollution." (<https://stats.oecd.org/glossary/detail.asp?ID=2903>)

So a mission/directive for conservation AND Education could incorporate elements of:

- conservation of water supplies
  - demand reduction for infrastructure or long-range security
  - promote use of alternative supplies (rainwater, greywater, stormwater) to reduce burden on potable supplies
- investment of water to improve community health by meeting unmet community needs (social, economic, and environmental)
- education to promote conservation ethic
- education to develop stewardship and connection with water supplies/resources
- set measurable conservation targets to inform long-range planning
- promote groundwater security throughout Tucson Water's service area by managing COT wells (already being done) and promoting conservation among other target area well users (stated in 1998 policy) and/or wheeling alternative waters

*Input from Member Lewis:*

Recommended Amendment to Ordinance 10555:

**SECTION XX.** The use of the Conservation Fund monies shall be limited to programs initialed by Tucson Water which are designed to conserve water and/or improve the quality of life through best practices of water management and/or enhance the viability of the Tucson Water area watershed. No single water conservation program shall consume more than 30% of the available funds in any fiscal year and all programs, in order to qualify for conservation fund monies, must include a meaningful and measurable criteria to determine the programs effectiveness during the pilot phase and throughout its continued implementation. Any/all programs which are to receive funds through the Conservation Fee must be vetted in advance by CWAC and forwarded to M&C for possible adoption. Should a program which is to receive Conservation Fee funding originate from M&C, CWAC shall provide its recommendation back to M&C within 90 days. CWAC shall report the success/status of all programs funded through the Conservation Fee to M&C each year at least 3 months before the new fiscal year and each program must receive M&C approval for continued funding.

*Input from Member Lee:*

**Proposed amendment to Tucson Water Policy, Re: Conservation Fee**

{III.POLICIES, A.Finance} 6. Conservation Fee

a. Pursuant to Tucson Code {Sec. 27-33 (4)} The conservation charge for all potable water customer classes is:

- 1) Established by Mayor and Council for the purpose of financing Water Conservation Programs (WCP) within the Tucson Water service area;
- 2) The Director of Finance is the custodian of WCP funds and assets and WCP monies are deposited in the City of Tucson's Investment Pool.

b. Water Conservation Program design elements

- 1) Support adaptation and reduce risk and/or vulnerability to drivers of water scarcity and drought as related to Tucson's human, built, economic and natural environments;
- 2) Supports conforming to and meeting water conservation goals as outlined by: ADWR; City of Tucson's Plan Tucson 2013; the joint City/County Water Study, "Water & Wastewater Infrastructure, Supply & Planning Study"; CWAC; Mayor and council;
- 3) Emphasis on conservation and education actions related to: green infrastructure; rainwater harvesting and gray water ordinances (e.g. No. 10597, No. 10579); demand management and water-use efficiency (i.e. "soft-path) options; drought and climate variability; Xeriscape; ecosystem service and/or cost-saving benefits that accrue across the Tucson Water service area; and to low-income and/or high-vulnerability communities.