From Beaks to Bills to Basins: Securing our Water Future

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Welcome to Tucson, Arizona
1974 Peak Demand Crisis

- Portions of the service area UNABLE TO MEET DEMANDS due to insufficient well capacity
- Groundwater pumping was 5x natural recharge

Prior to the summer of 1974 the service philosophy of our department was to plan for and meet the unmanaged peak demand requirements of a growing population by increased capital spending for water system expansion.

This experience convinced the Water Department to reassess its original service philosophy.
Monthly water bills to increase about a dollar

By TERRY CORNELIUS
City UA Staff Writer

The average Tucson homeowner can expect to pay about 81 more a month for water this summer and about 58 cents more next winter under new water rates approved by the City Council.

The new rate structure, which took effect yesterday, increases bills for most single-family residences by an average of 5.3 percent annually, based on estimates that a typical homeowner paid $21.32 a month last summer and $21.41 a month this winter for water.

The plan, recommended by the Citizens' Water Advisory Committee and approved yesterday by a 6-1 council vote, provides for a 7.4 percent increase in overall rates among residential and commercial users.

The new rates differ from last year in that they encourage residential water conservation. They provide sharp rate increases for single-family homeowners who use more than 2,000 cubic feet of water during peak summer months.

One hundred cubic feet of water equals about 750 gallons.

A homeowner who uses 3,000 cubic feet during summer months will find his or her bill increasing about 8 percent more than last year — compared to 5.7 percent more if he or she stays below the 2,000 cubic foot mark.

Those same increases would apply to duplex and triplex customers who exceed 3,000 cubic feet during summer months.

Large commercial customers that use 10,000 cubic feet or more a month will begin paying 6 cents, or about 10 percent more, for each 100 cubic feet of water this year, plus an extra 40 cents per 100 cubic feet during peak summer months.

That summer surcharge was 30 cents last year.

Customers who use more than 5 million gallons a month, including the Tucson Unified School District, will experience about the same percentage increase, although the summer surcharge they pay will remain at 47 cents per 100 cubic feet of water.

Councilman Thomas J. Volgy cast the single vote against the new rates, because they did not include a "life-line" or subsistence rate for those unable to pay for basic water service.
Preferences shift...
A typical landscape today

Historically, outdoor water use was 45% of single-family use

Tucson’s GPCD (1980 - 2015)

WAYS WE USE WATER AT HOME 2015

- Outdoor: 27%
- Toilet: 20%
- Faucet: 12%
- Laundry: 16%
- Leaks/Other: 13%
- Shower: 12%
Water Production for the Tucson Water Service Area

Acre-Feet

Year

- Groundwater Production
- TARP
- CAP Production
- Reclaimed Production

Total Potable Water Use at 1985 Level
Planning for Our Water Future

Era of “demand management” and “capital conservation”

60s: Acquired ag land for GW rights (future recharge)

70s: Planned for CO River water & initiated conservation programs

80s: Established Reclaimed Water System

90s: Expanded conservation programs

2000s: Planned storage for CO River water & drought planning

2010s: Rethinking resiliency & alternative supplies

Era of “supply diversification” and “utility efficiency”

Groundwater

Reclaimed Water

Colorado River Water
The Conservation Ethic Sticks And begins to drive new approach to resiliency...
Residential Water Harvesting

- Requires a shift from traditional demand management
- Over 1,200 rebates since 2013 & currently largest $ rebate program
- Significant investment for utility & customers
- Understanding scalable solutions

We find ourselves with an opportunity to re-think how we manage rainwater...
"I want to harvest water because... ___________________"

- The water is free.
- The water is better for my plants.
- I need to deal with a flooding problem.
- I want more shade.
- I want a garden.
- I’m tired of my water bills going up.
- I think it’s the “right” thing to do.
- I don’t think we should depend on water from faraway rivers.

Quality of Life & Community Ethic
Moving toward OneWater

- Expansion of rainwater harvesting program
- Exploration of stormwater opportunities
- Rethinking the role of recycled water
- Persistence with traditional demand management programs
- Drought planning & CO River basin stewardship
Thank You!

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