

## City of Safford



### Background

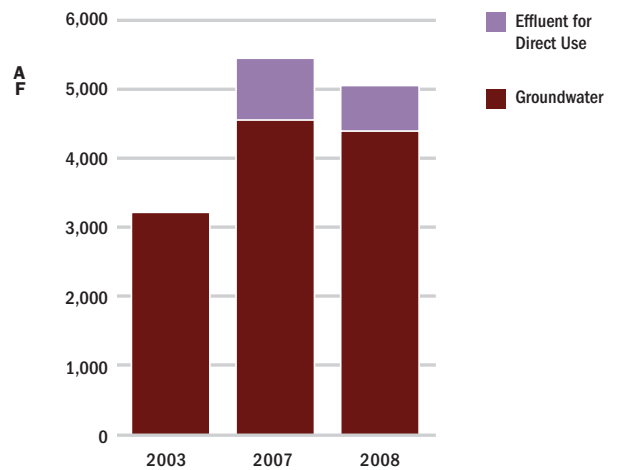
Safford—population 10,094—is the county seat of Graham County in southeastern Arizona.\* The city’s public water utility provides service to residents within the city of Safford, Thatcher, Graham, and surrounding unincorporated areas of the county. The city lies in the Safford Valley, which is carved by the Gila River as it flows westward between the Gila Mountains to the north and the Pinaleno Mountains to the south.

The city of Safford is located in the Basin and Range physiographic province, with average summer high and winter low temperatures of 98.4 and 28.6 degrees (°F), respectively. The city’s average annual precipitation is 9.8 inches.†

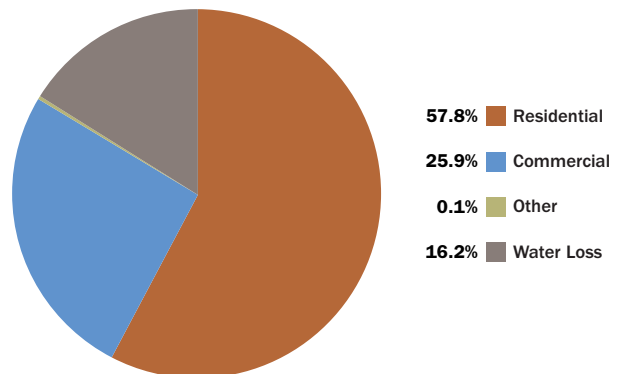
### Water Supply and Deliveries

All of Safford’s water supply is sourced from groundwater, with approximately 75% of supply coming from Bonita Springs. A subsurface collection gallery captures water from the springs, which are considered groundwater and “not under the influence of surface water.” Reclaimed water has been identified as an important water source needed to reduce reliance on additional fresh water sources for future growth, and approximately 14.5% of the total water supplied by the city in 2008 was sourced through reclaimed water. The residential sector receives the majority of water deliveries in Safford, 57.8% of the total in 2008. About one-sixth of total water supplied during this same year was lost.

### SOURCES OF WATER FOR SAFFORD



### 2008 WATER USE IN SAFFORD



\* Arizona Department of Commerce. 2009. *Arizona population estimates, 2009*. Available at: <http://www.azcommerce.com/econinfo/demographics/Population+Estimates.html> (accessed May 5, 2010).

† IDcide Local Information Data Server. Safford, AZ weather. <http://www.idcide.com/weather/az/safford.htm> (accessed April 13, 2010).



## Per Capita

The city of Safford reduced its gallons per capita per day (GPCD) water use from 2007 to 2008 across all metrics: residential (-5.4% change); system-wide potable (-16.5%); and system-wide total (-7.3%).

Safford GPCD			
Per Capita Water Use	2003	2007	2008
Residential <sup>a</sup>	No data	185	175
System-Wide Potable <sup>b</sup>	No data	210	175
System-Wide Total <sup>c</sup>	No data	258	240

<sup>a</sup> Treated water deliveries to residential accounts ÷ service area population  
<sup>b</sup> Total treated water delivered ÷ service area population  
<sup>c</sup> Total raw water from all supply sources + direct effluent use ÷ service area population

## Rate Structure

The city of Safford uses a three-tier inclining block rate for individual residential water accounts.

Usage Per Dwelling Unit	Cost
0–10,000 gallons	\$1.24 per 1,000 gallons
10,001–20,000 gallons	\$1.55 per 1,000 gallons
Over 20,000 gallons	\$1.94 per 1,000 gallons

Single-family residential accounts have a base service fee of \$19.18, which represents 61% of the average customer’s monthly bill for 10,000 gallons. The slope of Safford’s average price curve is -0.0158, indicating that the average price of water decreases as consumption volume increases.

## Conservation Measures

The city of Safford is a Community Water System in the Safford Basin. It produced a water conservation plan as part of its 2006 System Water Plan.

### Customer Rebates

**Water Conservation Refunds** – A portion of the water development fee (not >20%) can be refunded to developers who install landscapes that contain less lawn area and more water-conserving plant material.

### Ordinances/Rules

**Regulation and Limitations on Use of Water** <sup>\*</sup> – The director of the water system may prescribe the hours and days during which water may be used for sprinkling of lawns and grounds.

**Uniform Plumbing Code Adoption** <sup>†</sup> – Safford started adopting the Uniform Plumbing Code in 1994, and has continued updating it to every succeeding edition.

**Refund for Water Conservation** <sup>‡</sup> – In order to encourage voluntary limits on the construction of water features and to encourage the installation of landscapes that contain less lawn area and more water-conserving plant material, all developers are eligible for a refund of a portion of the water development fee, as determined by the city, if their landscaping meets certain requirements established by the city. Such refund will not exceed 20% of the amount of the water development fee that was paid.

**Water Flow Prohibition** <sup>§</sup> – It is unlawful for any person to willfully or negligently permit or cause the escape or flow of water or irrigation water in such quantity as to cause flooding, impede traffic, create a hazardous condition, or cause damage to the public streets.

<sup>\*</sup> SAFFORD, ARIZ., CODE § 13.20.070 (2009).

<sup>†</sup> *Id.* § 15.16.010

<sup>‡</sup> *Id.* § 13.24.070.

<sup>§</sup> *Id.* § 9.08.090.



## Education

**Educational Materials** – Safford promotes water conservation annually through the use of bill stuffers and city newsletters.

**Tradeshows, Conferences, and Events** – The city teaches water conservation every year at the Graham County Fair.

**Project WET** – Safford sponsors and hosts the annual Project WET, a water education and conservation program in collaboration with the University of Arizona. This program teaches all fourth-graders of Graham County principles of water stewardship and conservation.

## Funding for Conservation

In 2008, the city had a conservation budget of about \$25,000, approximately 0.8% of the total water utility's budget. Safford utilizes one half-time employee for water conservation, and spends about \$1.32 per person on conservation programs.

## Water Loss

In 2008, the city recorded 716 AF (233.3 million gallons) of water loss, representing 16% of total supplies. In 2007, Safford reported 3.0% water loss. The high loss in 2008 is attributable to system flushing and flow testing of fire hydrants, which does not occur on a regular basis.

## Supply-Side Efficiency Measures

The city tracks all production and consumption volumes to determine and control water loss. Production well meters are calibrated every five years and whenever production reports are in doubt. Reports of volume of water lost during daily operations and maintenance is included in the service orders of the crews repairing damaged lines.

## Effluent Use

In 2008 Safford utilized all of the 1,123 AF of effluent it generated. Approximately 57% (643 AF) was delivered for direct use, and the remaining 43% (480 AF) was delivered for recharge. As the city continues to produce more effluent, it will rethink beneficial reuse options.