A Community Conversation About Water

Climate Change, Water, and Resiliency

Welcome!

Today's Agenda:

* Where Our Water Comes From
* Challenges to Future Water Supply
* City Water Conservation Program
* Lunch
* Ongoing Water Conservation Programs
* Development & the City Waterbank
* Collaborating to Conserve Water – Panel Discussion
* Adjourn

Schedule of Upcoming Events

Residential Water
Saturday, March 2nd 10:00 am – 2:00 pm
Main Library – Downtown (Community Room)

Commercial & Industrial Water Efficiency Solutions
Thursday, April 11th 5:00 pm – 7:00 pm
University of Art & Design (Community Room)

Facing Climate Change & Drought
Saturday, April 13th 11:00 am – 1:00 pm
Southside Library (Community Room)

Community Collaborations & Partnerships
Saturday, May 11th 10:00 am – 12:00 pm
Genoveva Chavez Community Center (Community Room)

Where Our Water Comes From

Stephen Wiman, Water Conservation Committee

Andrew Erdmann, Water Conservation Specialist
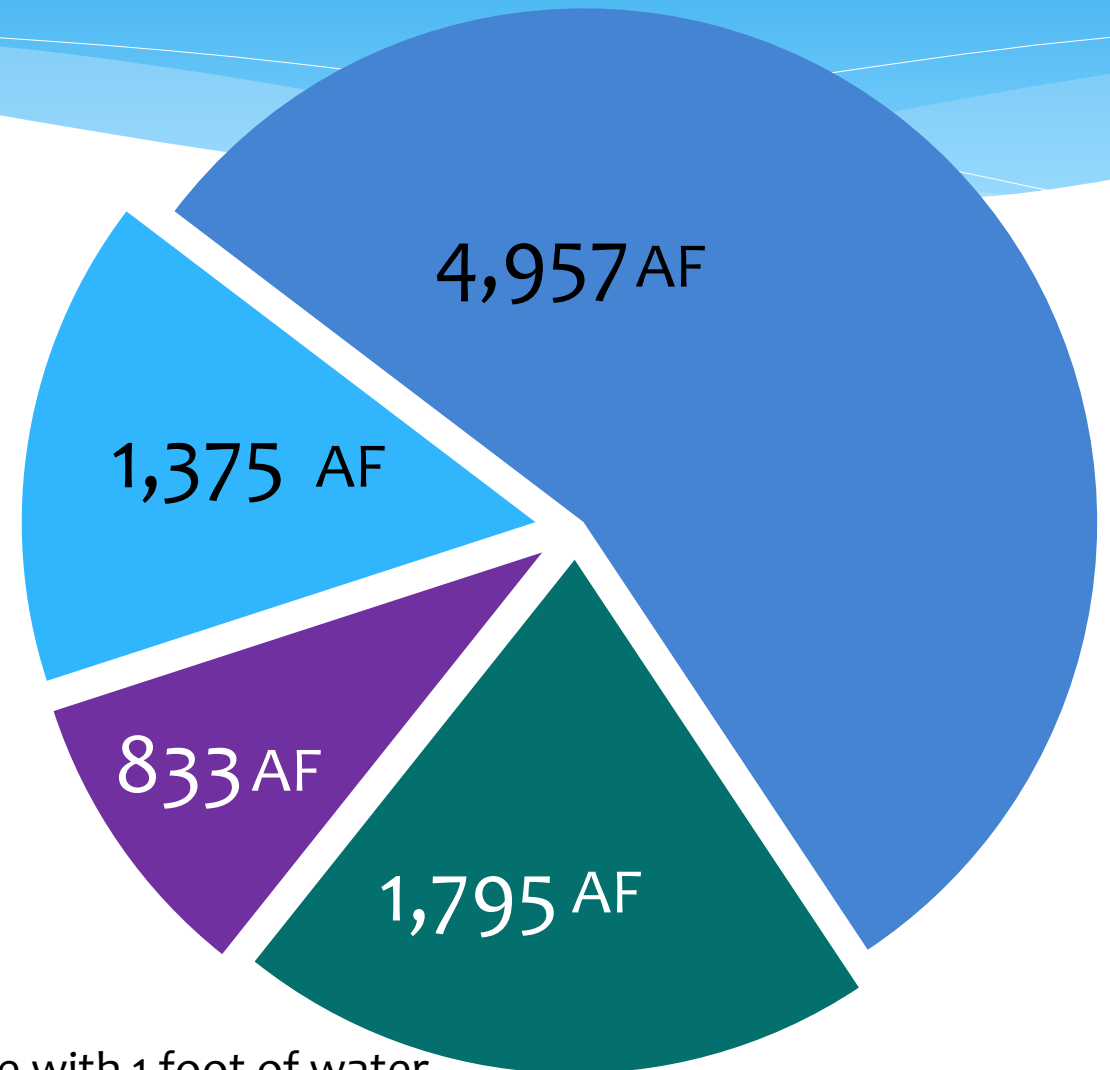
2018 Water Production by Source

- **Total Production = 8,960 acre-feet* (AF)**

Surface Water
- **San Juan – Chama**
- **Santa Fe River**

Groundwater
- **Buckman Well Field**
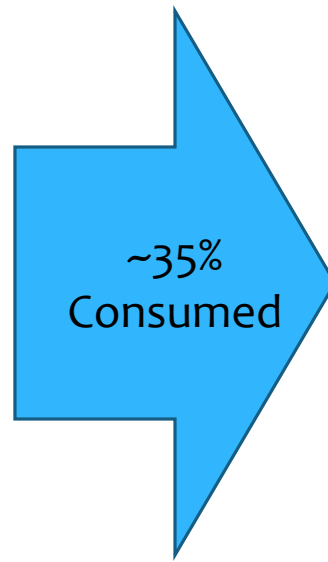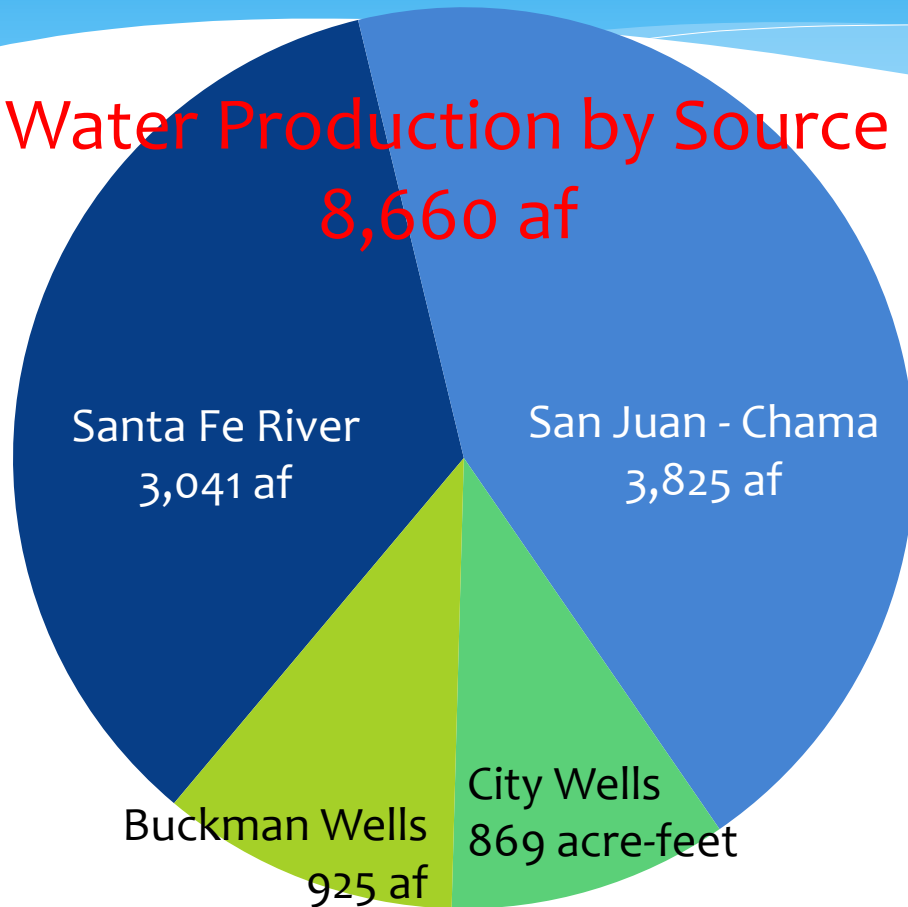- **City Well Field**

4,957 AF

1,375 AF

833 AF

1,795 AF

*1 acre-foot (AF) = 325,851 gallons = enough to cover an acre with 1 foot of water

Domestic Wells in Santa Fe

* 3 types
  * Pre-basin = wells drilled before the Office of the State Engineer "declared" the Santa Fe Basin
  * OSE permit only wells = governed by OSE permit only; normally restricted to 3 acre-feet per year (977,553 gallons)
  * City Permitted = wells with both OSE permits & City permits; restricted to 0.25 acre-feet per year (81,463 gallons)

* City Regulation
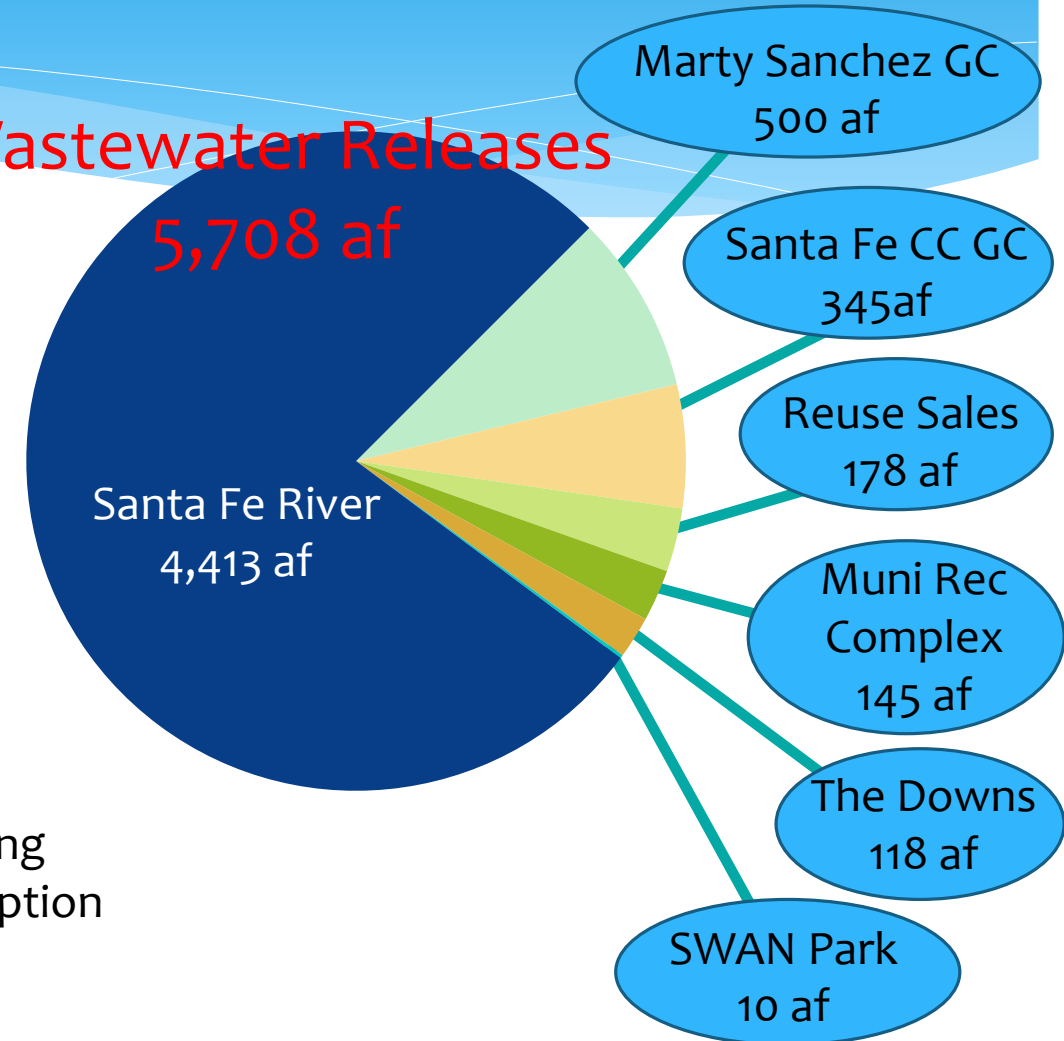 * Backflow preventers
  * Outdoor watering restrictions

Wastewater Effluent Reuse (2016 Data)

Water Production by Source
8,660 af

- Santa Fe River 3,041 af
- San Juan - Chama 3,825 af
- Buckman Wells 925 af
- City Wells 869 acre-feet

~35% Consumed
- Outdoor Watering
- Human Consumption

Wastewater Releases
5,708 af

- Santa Fe River 4,413 af

- Marty Sanchez GC 500 af
- Santa Fe CC GC 345af
- Reuse Sales 178 af
- Muni Rec Complex 145 af
- The Downs 118 af
- SWAN Park 10 af

Distribution, Rates & Rate Structure

1. ~80,000 water customers
2. 4 sources of supply & 2 Water Treatment Plants -
   - Santa Fe River
   - San Juan – Chama
   - City Wells
   - Buckman Wells
3. More than 500 miles of transmission and distribution lines
4. 33 million gallons of in-system tank storage
5. ~32,000 water meters
   - Tested regularly per EPA compliance
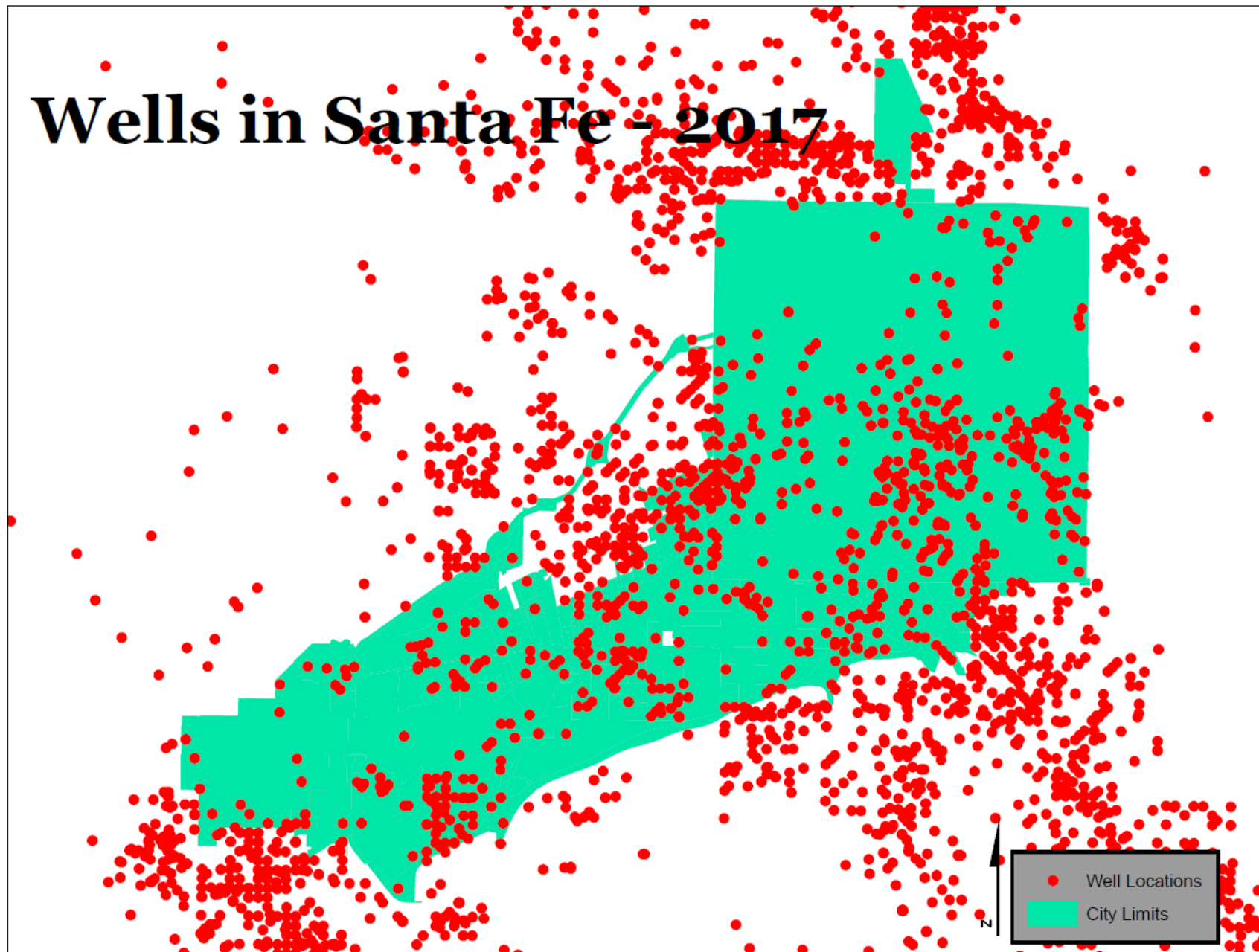6. Wastewater Treatment Plant

Challenges to the Water Supply

Surface Water Challenges
* Bureau of Reclamation Basin Study – Climate Change
  * Reduction of Surface Water Sources by ~30%

Groundwater Challenges
* Toxic Pollutants
* Septic Systems
* Domestic Wells
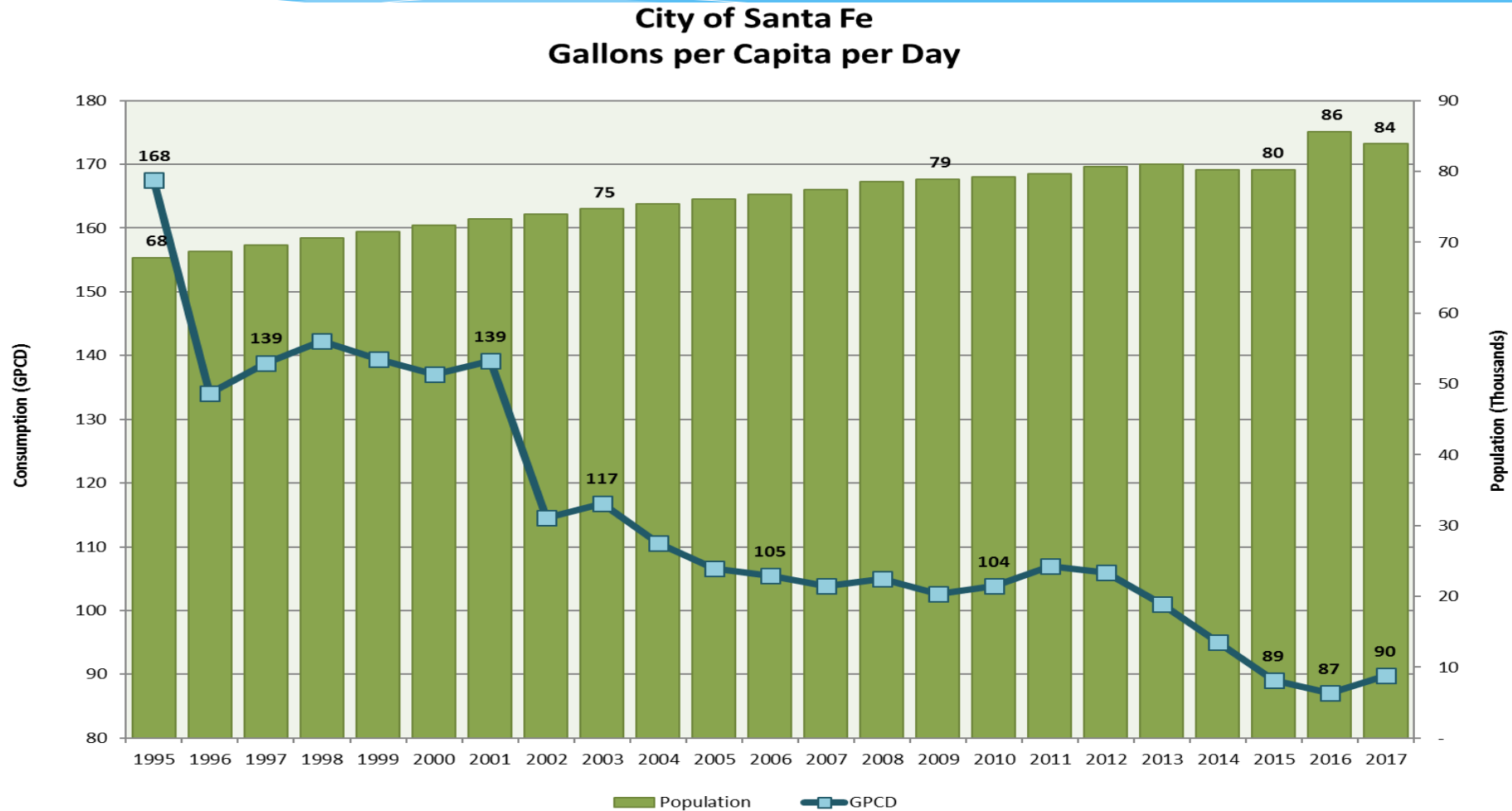
Wells in Santa Fe - 2017

Challenges to the Water Supply: Growth

- Increases in water demand are tied to growth
  - Population Growth within the city
  - Expansion of the water service area

- Growth estimates are based on past growth rates and the local expert is UNM
  - Current projections are higher than we have been experiencing since 2008
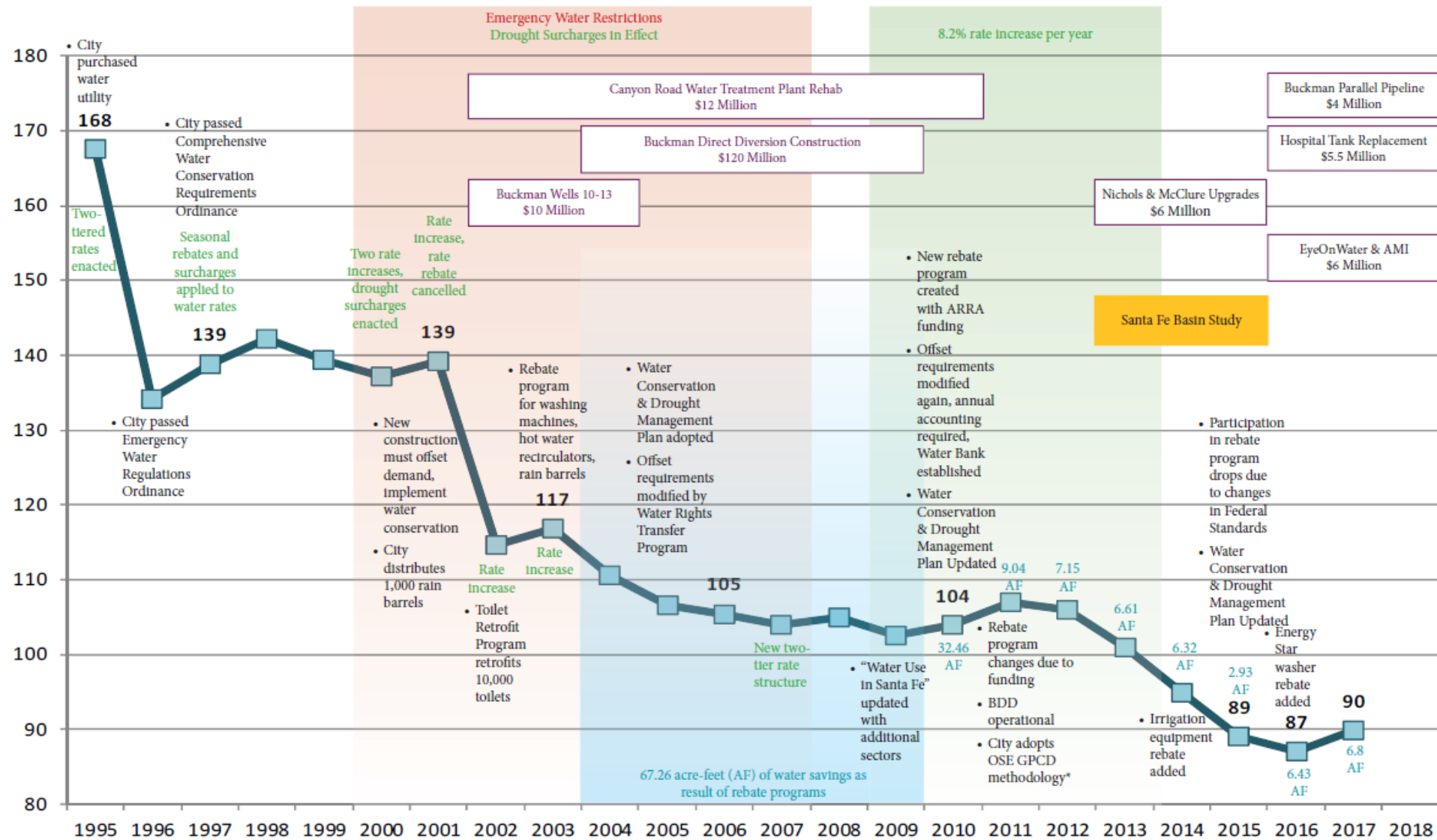 - New projections should be coming soon from UNM

Water Conservation in Santa Fe

Christine Chavez, Water Conservation Manager
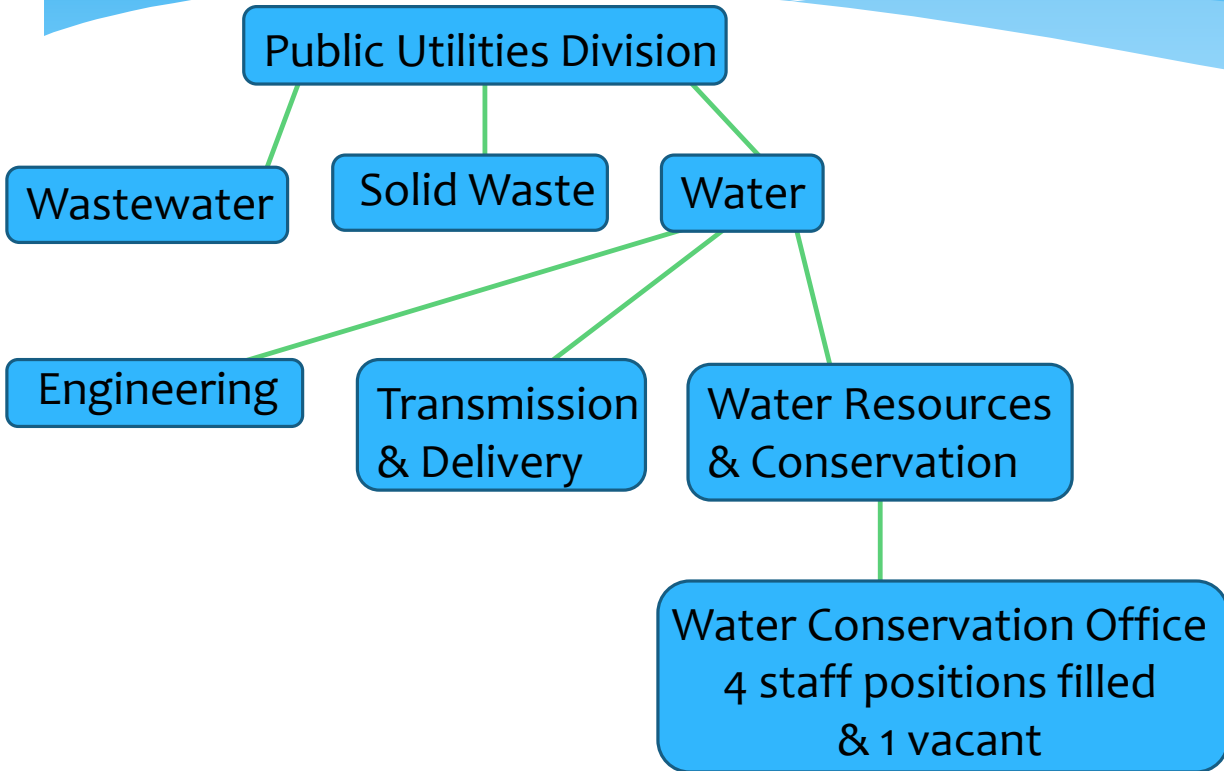
City Policies Lead to Significant Conservation

City of Santa Fe
Gallons per Capita per Day

Gallons per Capita per Day

Water Conservation Program

Public Utilities Division

Wastewater

Solid Waste

Water

Engineering

Transmission & Delivery

Water Resources & Conservation

Water Conservation Office
4 staff positions filled
& 1 vacant

Conservation Programs

- Rebate Program
  - Residential
  - commercial

- Enforcement

- Education
  - Passport
  - Passport Expansion

- Public Outreach

Santa Fe's Rebate Program

Residential

* High Efficiency Toilets
* EnergyStar Dishwashers
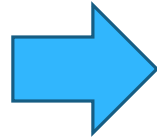* EnergyStar & CCE Tier II Clothes Washers

Commercial

* High Efficiency Toilets & Urinals
* Design-You-Own

Outdoor

– WaterSense Rain Sensor/Soil Moisture Sensor
– Irrigation Efficiency Evaluation
– Laundry to Landscape Gray Water System
– Rain Barrels
– Cisterns

Water Conservation Scorecard

Set Annual Goals → Develop Performance Indicators & Track Performance → Conservation Committee Evaluates Success, Scores the Program, & Updates Goals for the Following Year

Program	Status	Key Performance Indicators for 2018	Accomplishments	no progress	some progress	significant progress
Education Initiative (Passport Program) *A collaboration of several city entities to educate 4th grade students on where our water comes from, how it is treated, where wastewater goes and how it is treated and recycled, and how recycling and energy play a role*	Ongoing Program	● 15 classes participating ● More robust assessment ● Transition from Common Core to Next Gen Science Standards ● Add poster contest component	● Goal met ● 63% increase in knowledge between pre- and post-test ● Aligned with Next Generation Math & Science goals			✓
Expand Passport Program to 5th Grade	New Program	● Encourage/track participation of Passport Program students	● Mission Accomplished			✓
Children's Water Fiesta *A long-standing program which will be expanded and incorporated into the Education Initiative, above*	Ongoing Program	● Increase attendance from 650 to 850 students ● Obtain greater feedback/assessment from teachers ● Develop tie-in activity ● Develop additional presentation activities, including improvement of peer-to-peer activities presented by high school students	● Attendance goal met ● Improved feedback process goal met ● Still Working on the Tie-in Activity ● Successful peer-to-peer process ● Next year's goals = performance and measurement instead of attendance		✓	

Water Conservation Scorecard

2018 Accomplishments

* Education Initiative (Passport Program)
* Children's Water Fiesta
* Irrigation Equipment Rebate
* Restaurant Pilot Program
* Continuous Flow Program

2019 New Goals

* Align with Sustainability Initiatives
  * Neighborhood scale conservation project
* Expand participation in Eye on Water
* Roll-Out restaurant rebate program
* Collaborated with SFCC to Offer Irrigation Training
* Pilot Programs

The Conservation Committee

* Community Volunteers
* 2 Year Commitment
* Monthly Meetings
* LOOKING FOR NEW COMMITTEE MEMBERS!

Development & the City Water Bank

Andrew Erdmann, Water Conservation Specialist

The Santa Fe Water Bank

Purpose:

1. To track water conservation and water rights acquisition, and

2. To allocate conserved and acquired water to development projects to ensure that the city has adequate water to meet new demands as they are created.

Water Bank Process

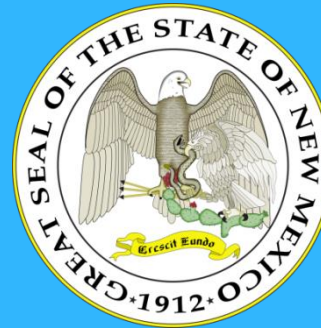Builder Brings Proposed Project to Land Use Department

→

City Staff Determine or Approve Water Budget.

→

Small Water Budgets can purchase water directly from the waterbank

→

Large Water Budgets have to bring state recognized water rights to the city

→

Building Permit Issued Once the Water Budget has been accounted for with a transfer of banked water to a city account.

Water Budget & Project Type Determine Thresholds

Project Type	Water Budget
Commercial	5 acre-feet
Mixed Use	7.5 acre-feet
Residential	10 acre-feet

Below Threshold

Above Threshold

Can purchase banked water from the City
- Conservation Rebate Program
  - using conserved water to account for demand increases for development, growth can happen without increasing the City's water footprint.
- Toilet Retrofit Credits

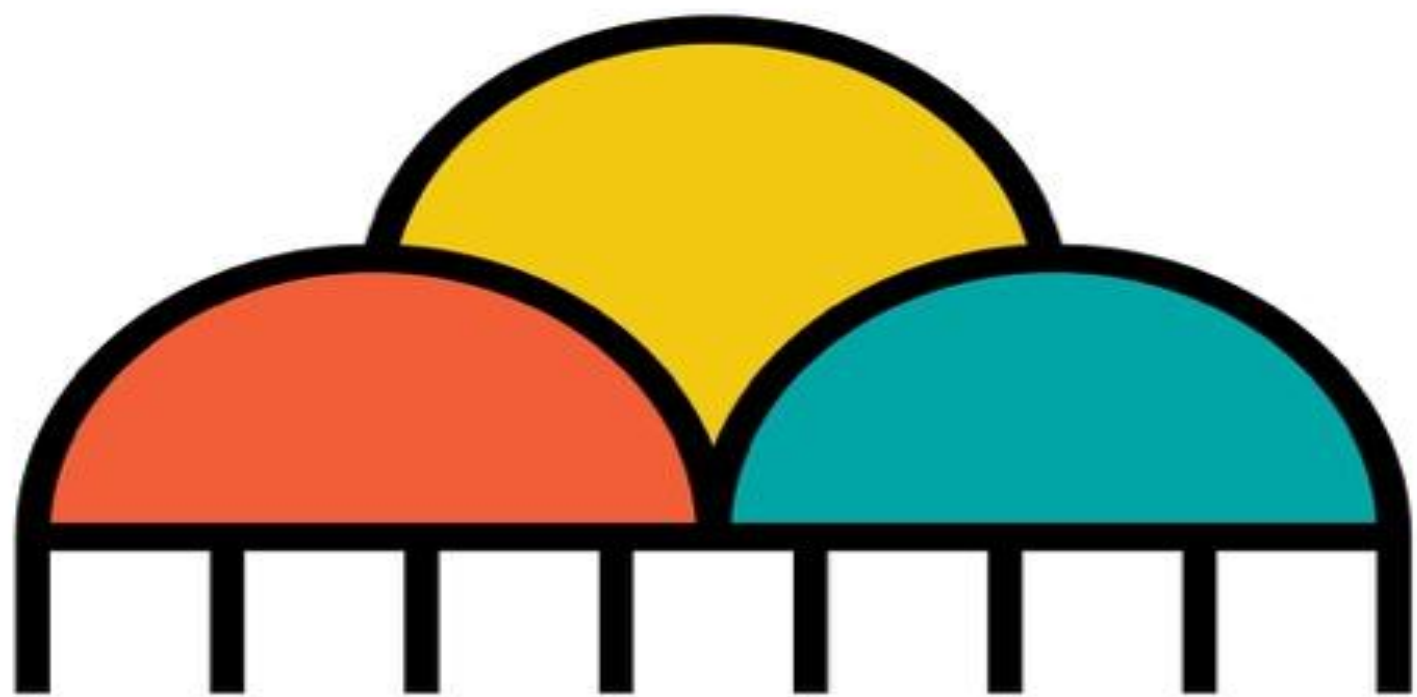Requires State Issued pre-1907 Middle Rio Grande Water Rights
- Onerous, time consuming, expensive
- Increases the City's ability to pump the Buckman Well Field

What's in the Water Bank?
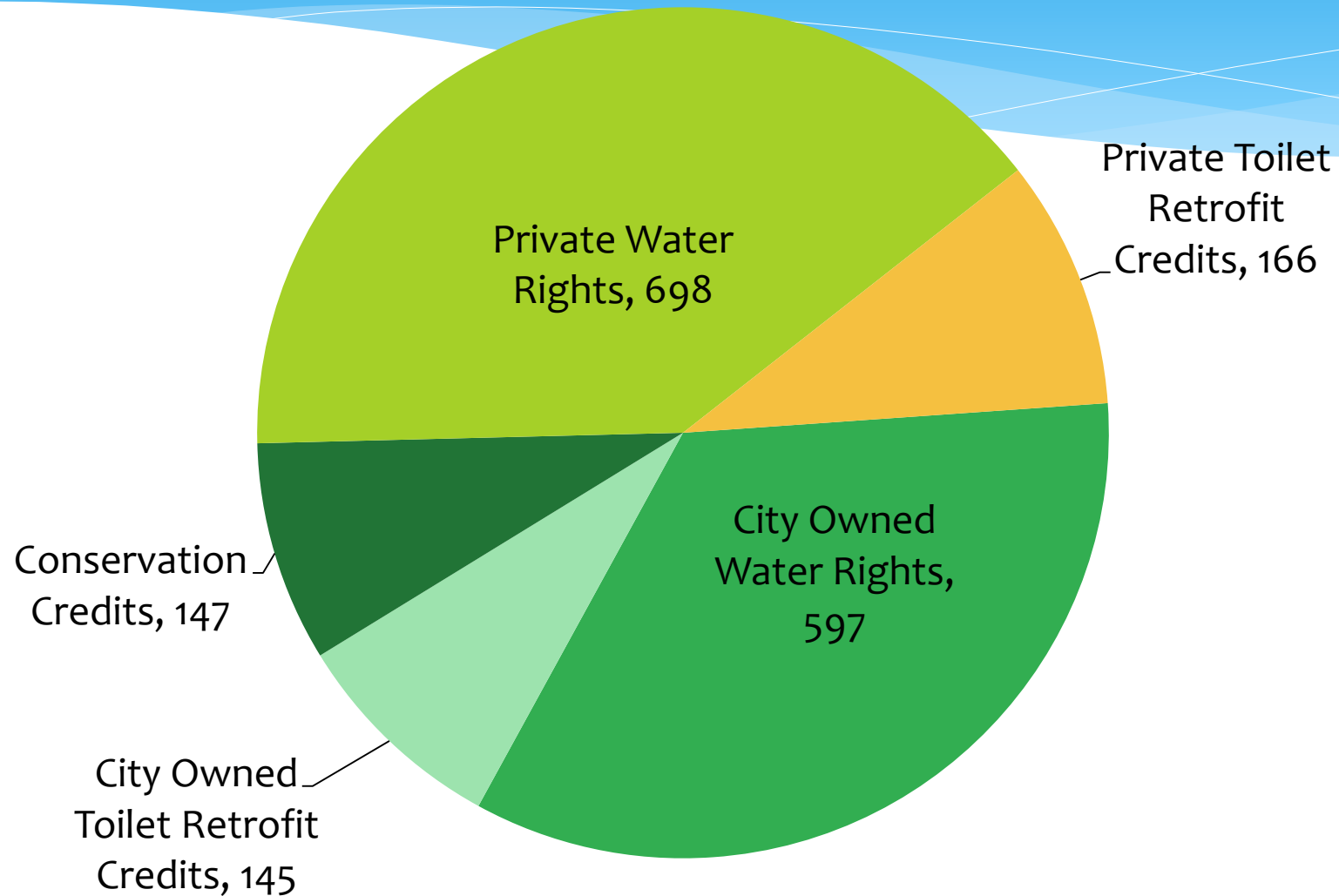
Collaborations

* Santa Fe County – Claudia Borchert, director of sustainability

* Green Chamber of Commerce – Glenn Schiffbauer

* Santa Fe Watershed Association – Andy Otto, director

* Santa Fe Community College – Amanda Hatherly

save water
SANTA FE