

**Upper Gila River Watershed &  
Watershed Partnership  
Presented to the  
State Wide Advisory Group  
And  
the Arizona Department of Water Resources**



The Gila Watershed Partnership, formed in 1992, addresses the whole watershed regardless of political constraints, governmental regions, or state affiliation.



# Our Mission



To improve Watershed health and water quality of the Upper Gila River. Through locally led efforts to ensure a safe sustainable water supply for future generations





# Our Goals

To conserve natural resources

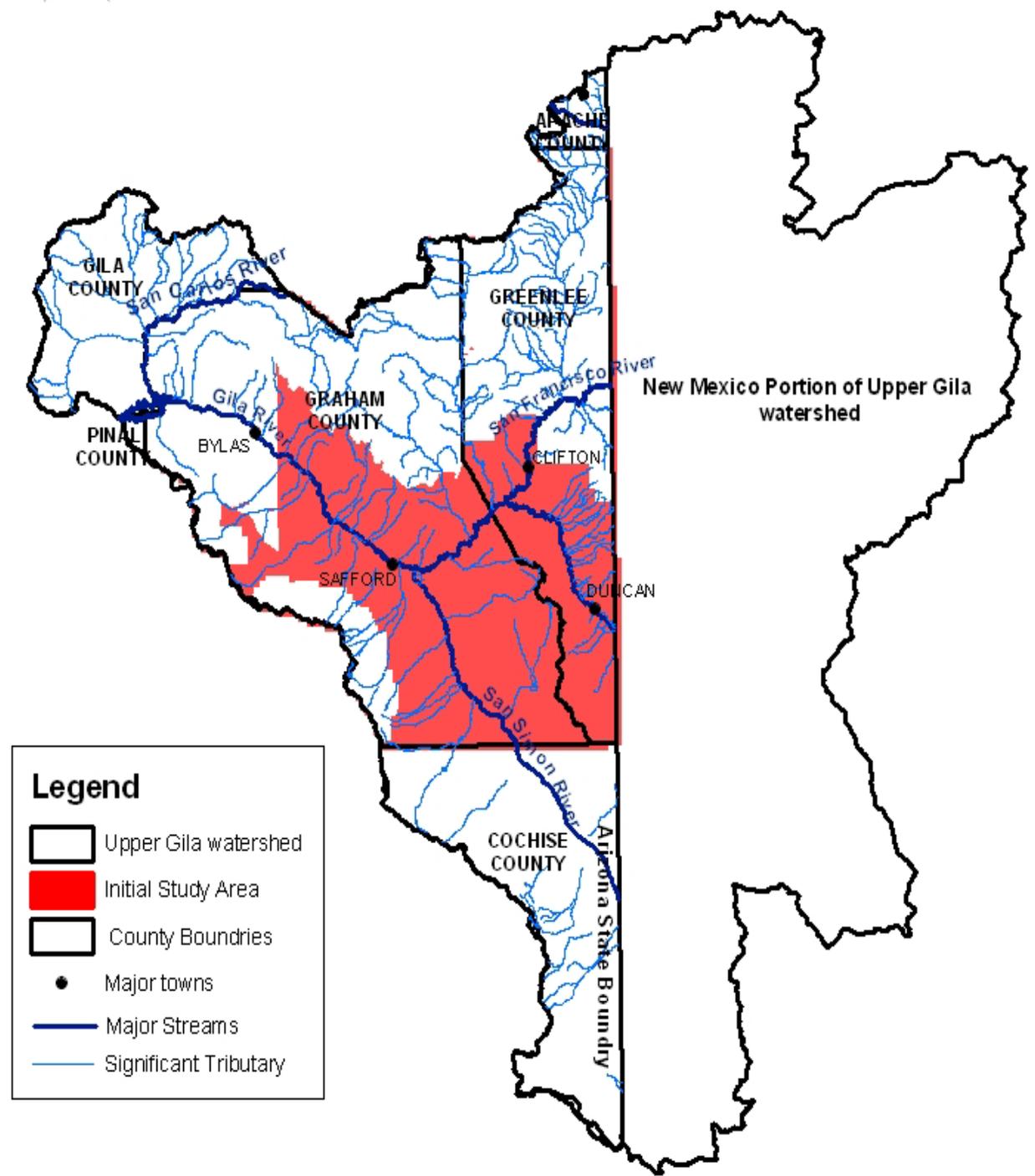
Enhance the environment

Maintain or improve the local economy

Increase recreational opportunities

Plan and act to avoid and minimize damage  
from storms, floods and other natural  
disasters

The Upper Gila Watershed is located in Arizona and New Mexico, and includes Graham, Greenlee and portions of four other counties.



# Regional Water Resource Problems

- Drought
- Declining higher elevation water sources..  
Warning of things to come..??
- Invasive Non-Native Trees (Weeds) ...Tamarisk
- Water Quality... Arsenic, Fluoride, Turbidity, Salinity
- Explosive growth and new development water demand
- Lack of above ground potable water storage
- Most new water sources will require some kind of treatment, which increases to cost to deliver
- Old infrastructure in need of replacement
- Lack of \$\$\$'s to address these issues

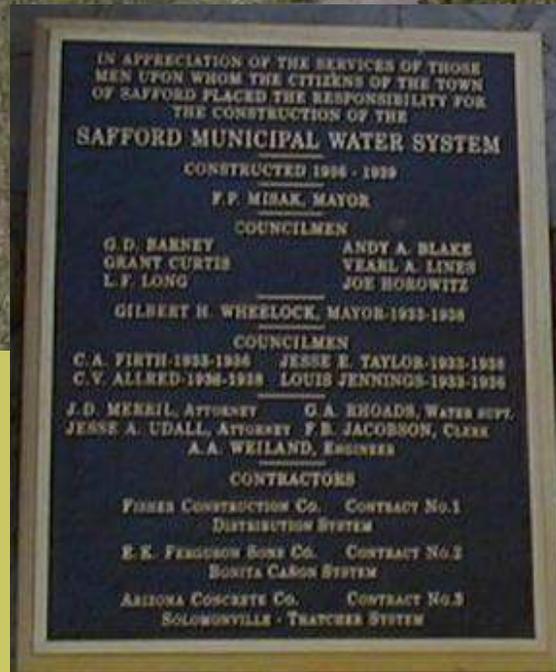
# Drought:

With little or no rain and less than average snow pack in the mountains that feed the watershed we are seeing our higher elevation water levels decline substantially and some lower basin ground water wells are showing signs of decline



# Bonita Creek Gravity Pipeline

## The Vision of early Gila Valley Residents



# The 1939 Bonita Creek Vision

This sweet water system was first built in 1939 with 18 miles of 10" pipe from the gravity infiltration gallery.

System upgraded in 1950-51 to 16 inch pipe for three miles and then split the original 10" pipe with the addition of a new 12" pipe extending the North leg 21 miles on the North side of the Gila River

After the flood of 1993 which wiped out the gallery and much of the first three miles of pipe, the system was rebuilt, the infiltration gallery was lowered 22 feet below the surface and secured in hopes of surviving the next event. The pipe was upsized to 24" for the first 2500'.

This water system produces 2100 GPM 24-7 and was thought it would provide all of Safford's water needs forever.

The Reality.....

We have seen a 17' decline in water level at the gallery this year alone and have had to supplement the flow with a downstream well to maintain the 2100 GPM

This is the sign of things to come!!!!!!.....



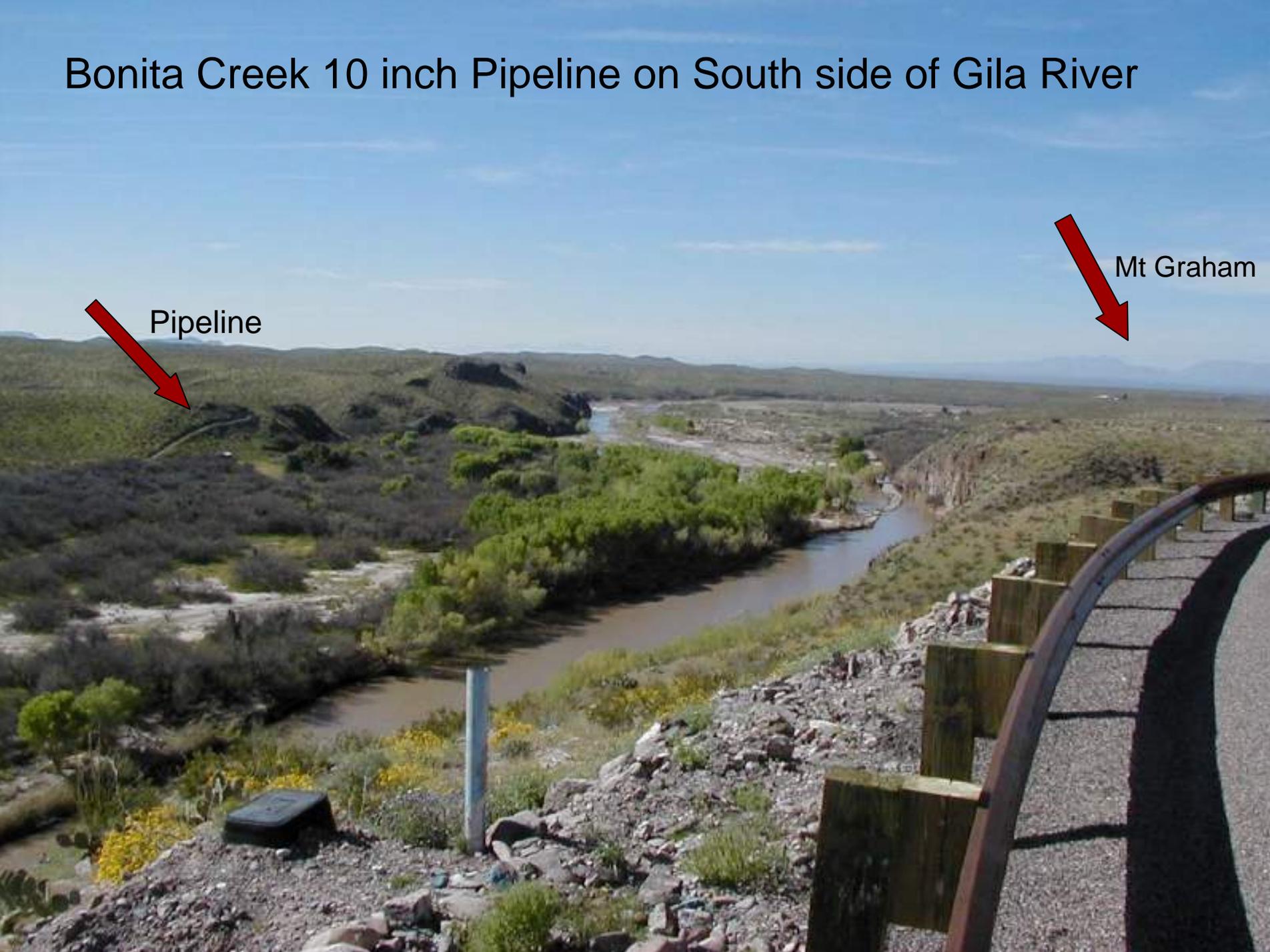
Bonita Creek  
Canyon  
Graham County  
Arizona







# Bonita Creek 10 inch Pipeline on South side of Gila River



Pipeline

Mt Graham

# Invasive Non Native Species



The Tamarisk or “Salt Cedar” is a **Terrorist**  
and should be treated as such...

In the upper Gila River Watershed this  
Non- Native weed consumes  
over **1,000 times** the Municipal water  
demand for Graham and Greenlee County  
**combined!!**

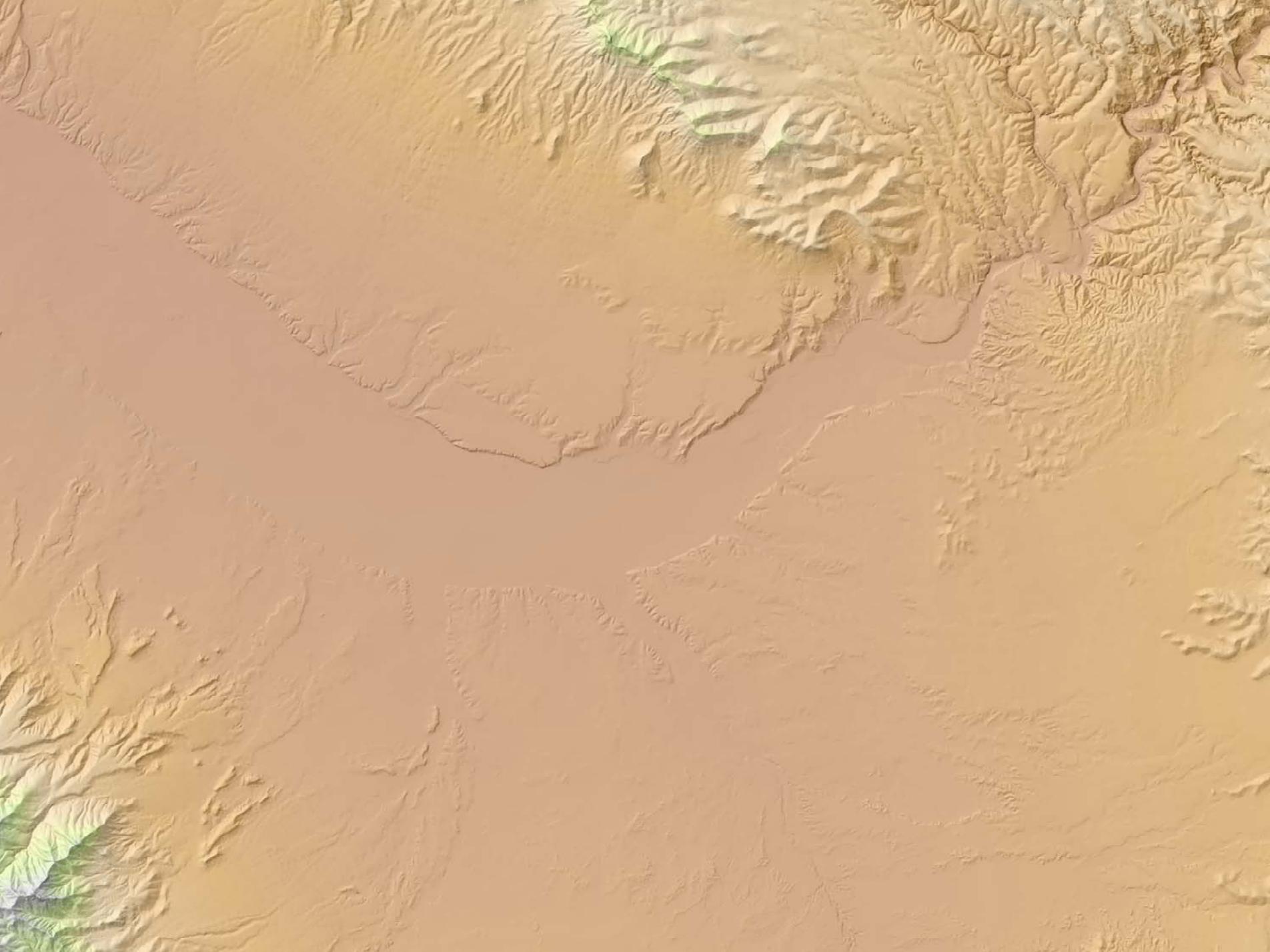
Personally .. I think this is a problem worthy  
of a State wide long term solution

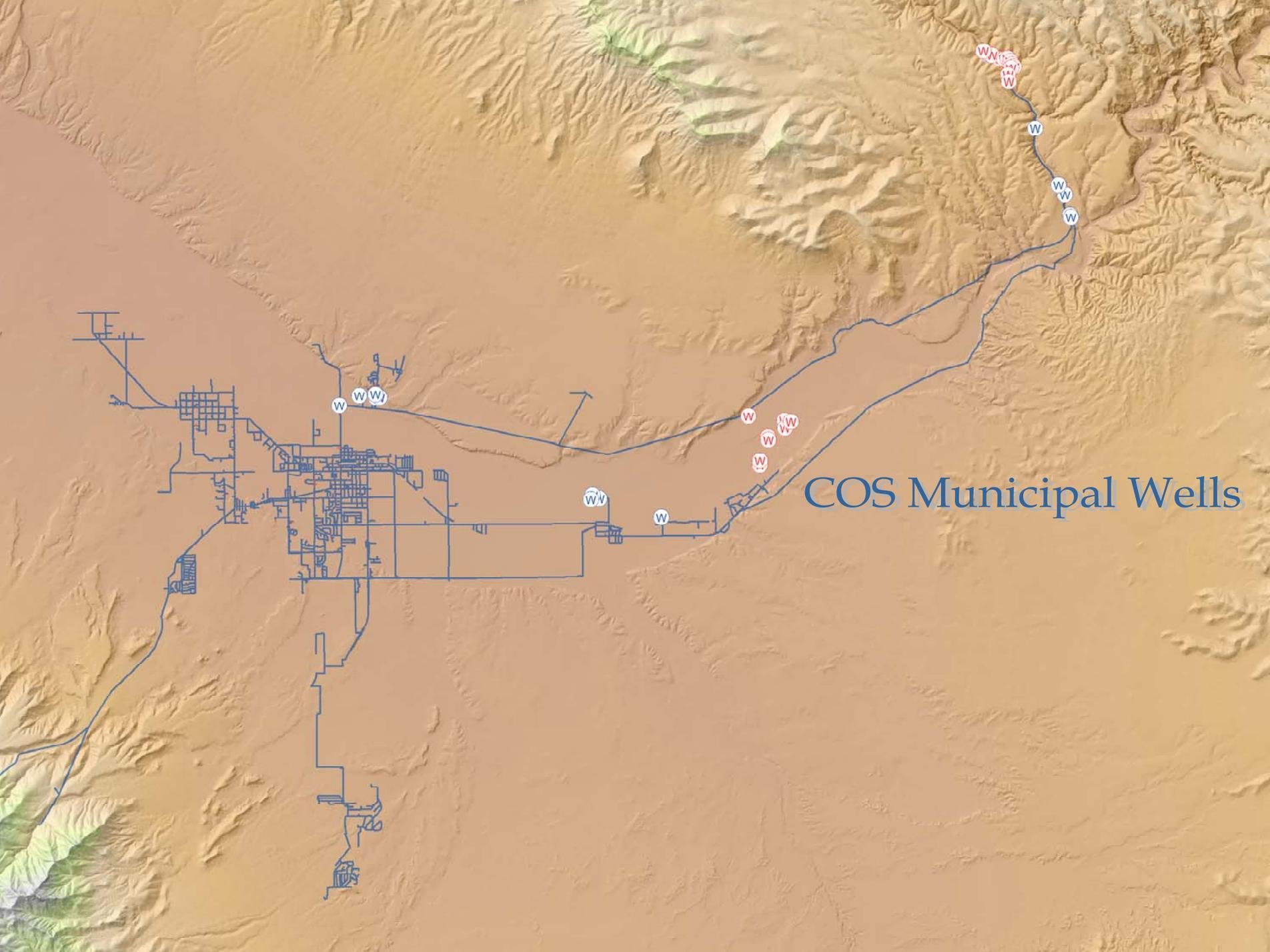


Critical Habitat????????

We are not convinced!!

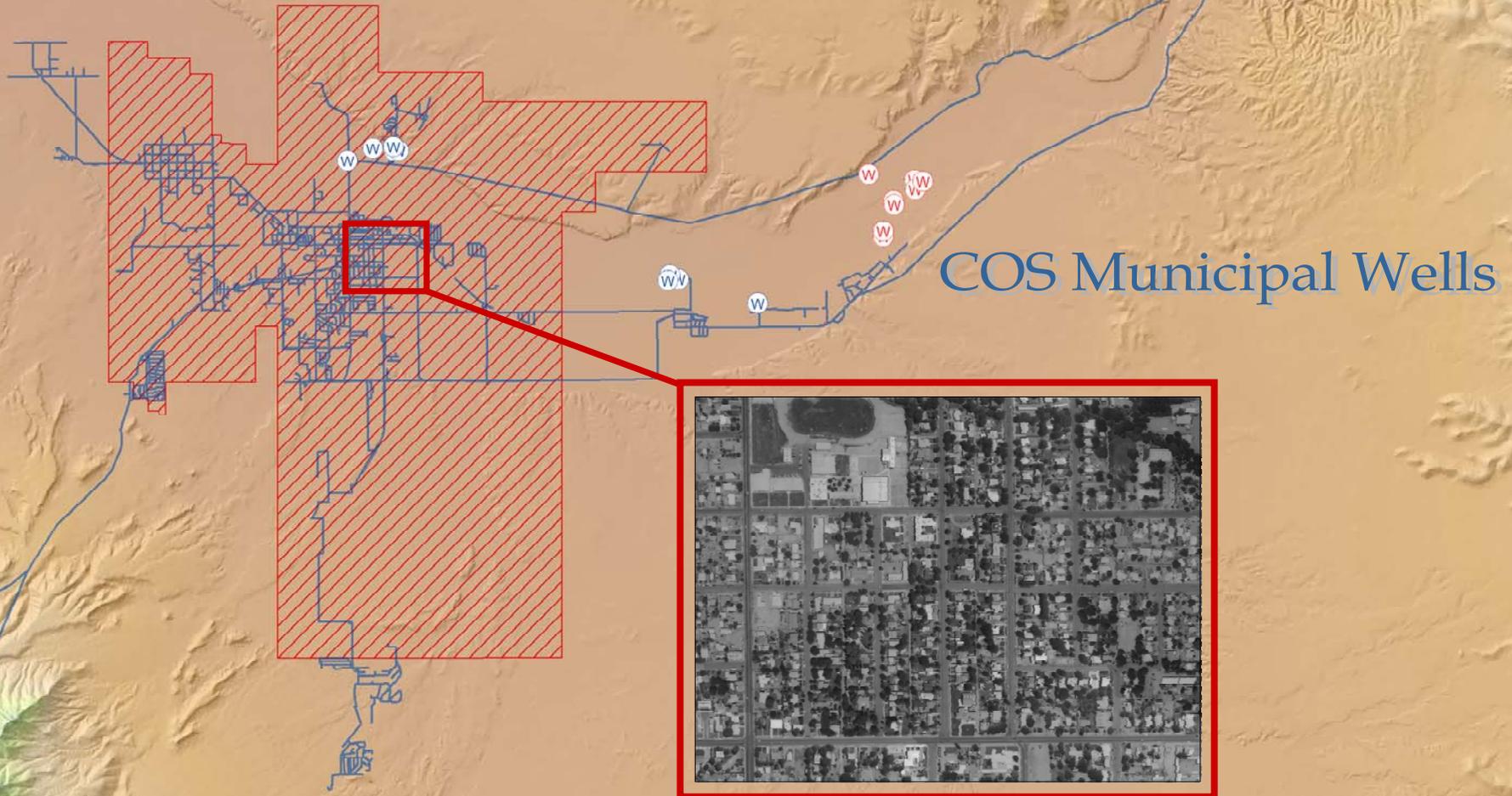






COS Municipal Wells

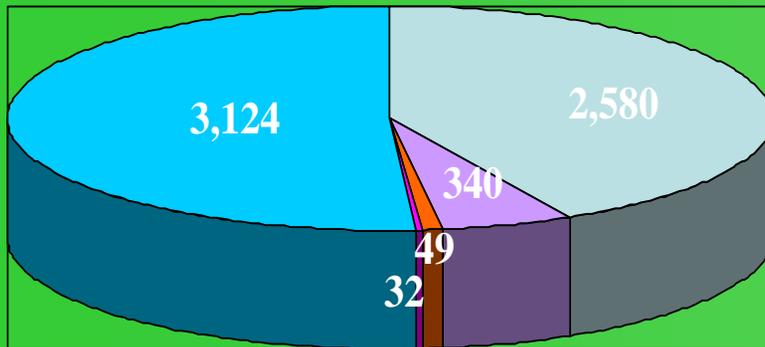
# Critical Human Habitat



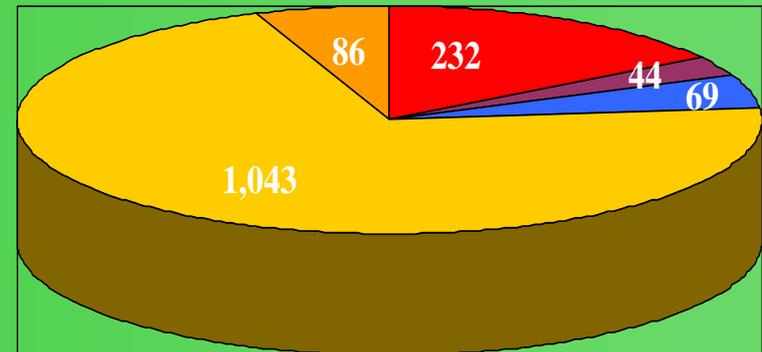
Water **Demand** for the upper  
Gila watershed.

# Municipal Water Demand (In Acre-Feet)

Graham County - 6,125 Total



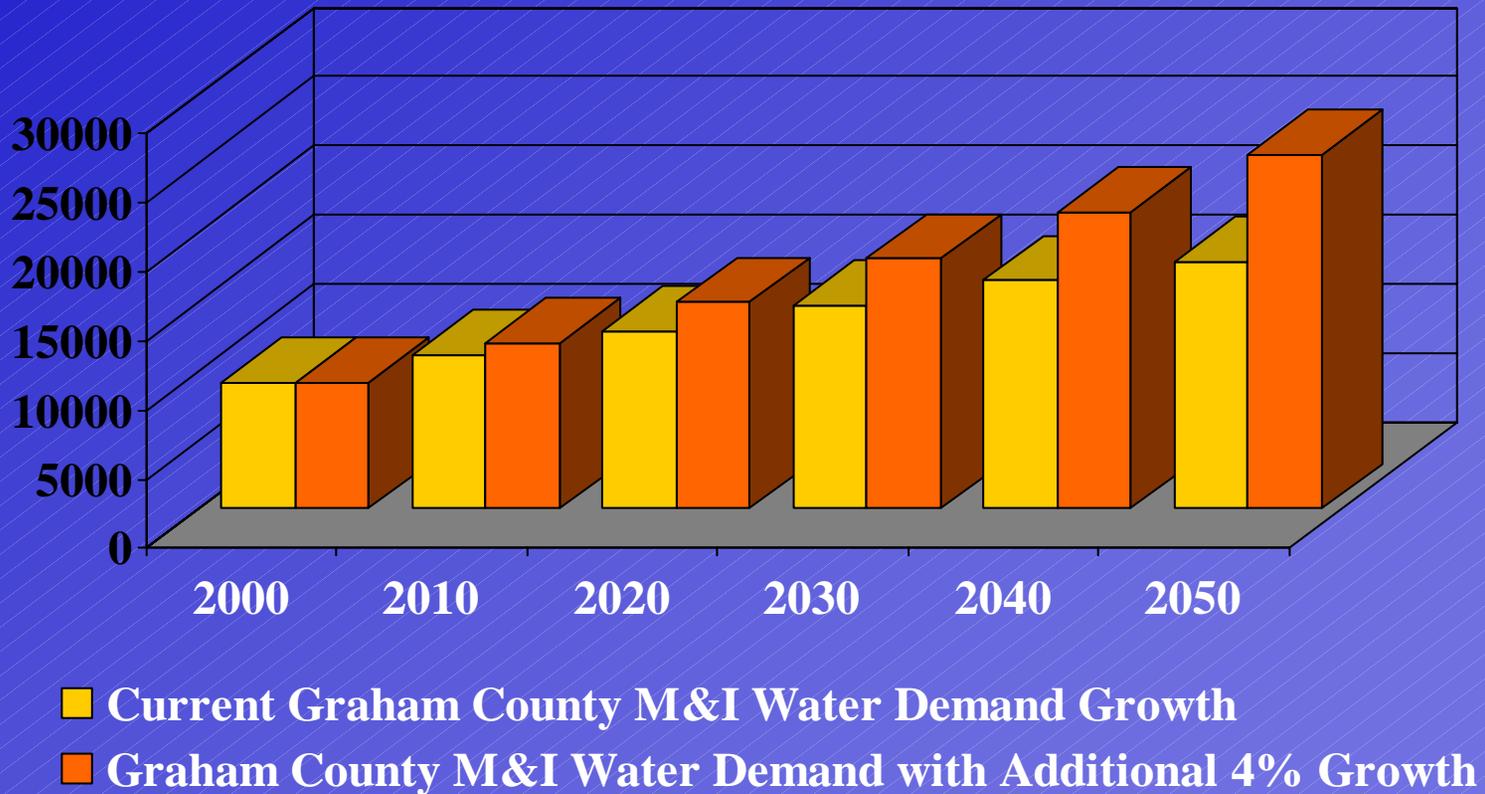
Greenlee County – 1,473 Total



- City of Safford Utilities
- Graham County Utilities Residential
- Eden Water Company
- Ash Creek Water Company
- Private Wells

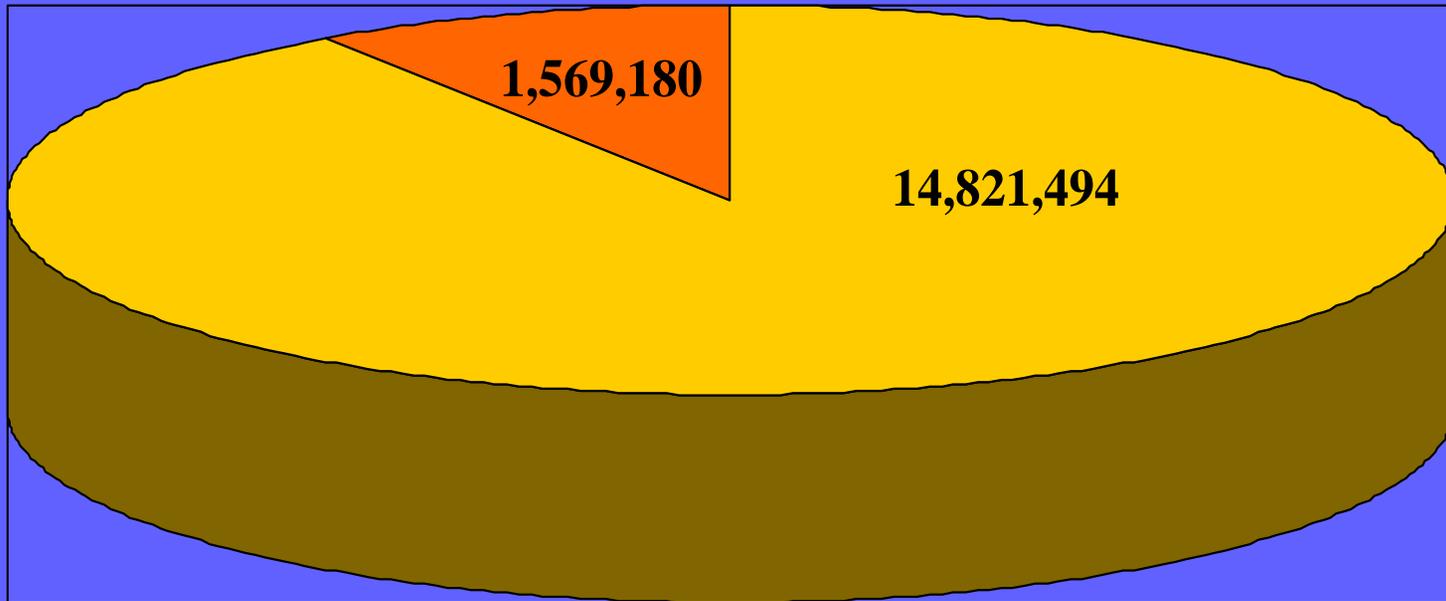
- Duncan Valley Water
- Loma Linda
- Verde Lee
- Morenci Water
- Private Wells

# Graham County M&I Water Demand Projection Possibilities



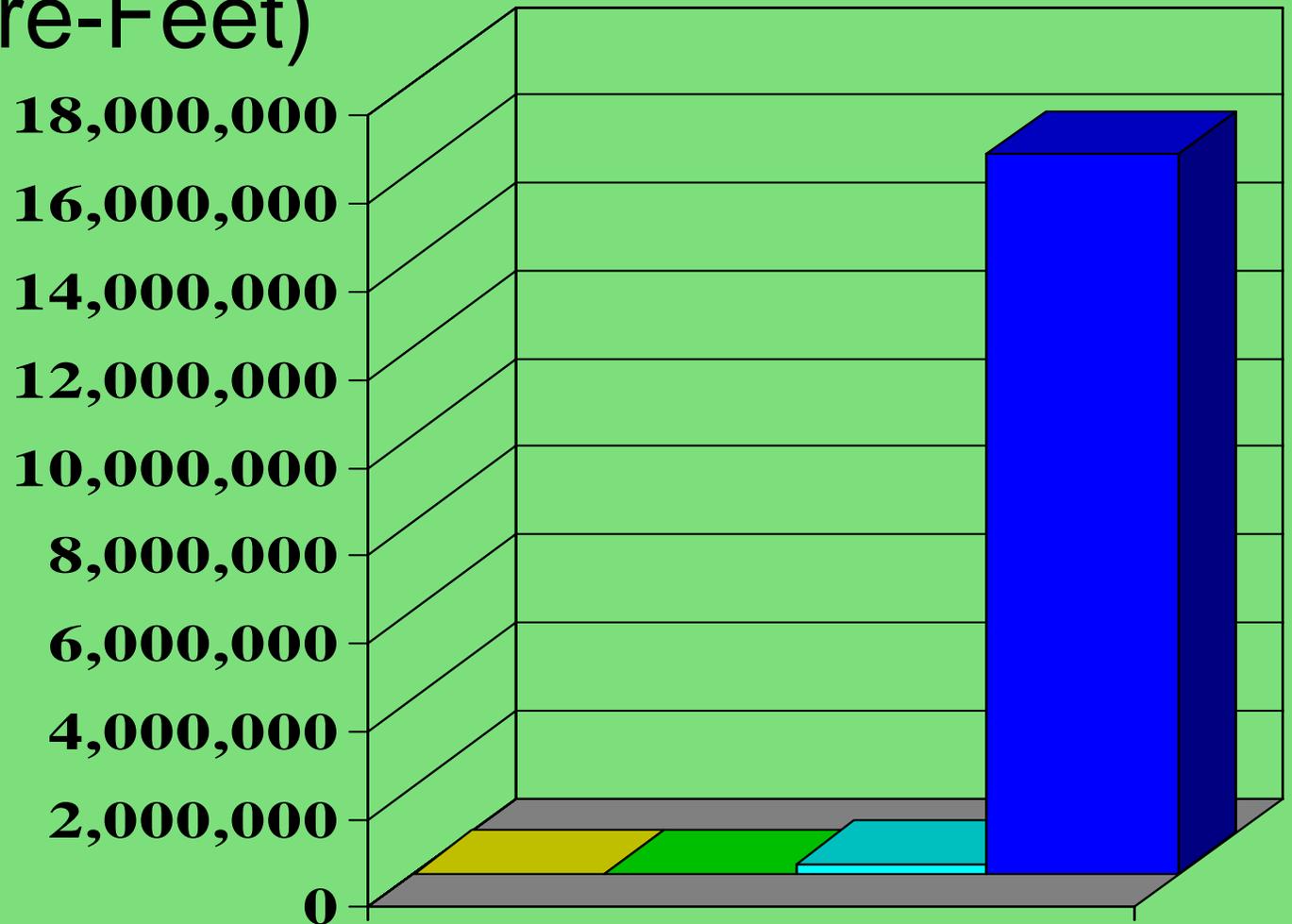
# Riparian Water Demand

## 16,390,674 Total Acre-Feet



■ Mesquite, Strand, Tamarisk ■ Mixed Broadleaf, Cottonwood Willow

# Total Water Demand for Year 2000 (In Acre-Feet)



■ Municipal ■ Industrial ■ Agricultural ■ Riparian

# Water Supply for the upper Gila Watershed

- Water supply for this region seems to be more than adequate..... Today!! By comparison to some, the Gila Valley is quite fortunate
- We are currently using  $\frac{1}{2}$  of the water we have allocated to us... and we are receiving 1 to 1 credit for discharge into the Gila River from the City's Reclamation Plant. But if projections are correct we will need to develop additional supply sources outside the area of allocation by 2020 or be processing every drop of the Valley's water through the reclamation plant to add the amount processed back into our water budget.
- We are actively searching for these new sources now in anticipation of the projected need.
- The Gila Watershed Partnership is in the process of gathering information to complete the **Supply** study to accompany the **Demand** study already completed

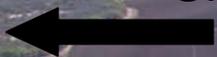
# Actions Taken, or to be Taken, to Address Regional Water Issues

- Regional Water Planning – not just a local issue anymore
- Regionalize Water Reclamation Plant.. In order to reclaim or reuse you must collect and treat
- Discharge / Recharge
- Beneficial reuse of reclaimed water and gray water
- Voluntary conservation
- “Not so voluntary” or “Hit ‘em where it hurts” conservation... through Rates and water replacement / impact fees
- Educational outreach to school children and adult users
- Research and exploration for new sources.
- Investigation into new treatment technologies.
- Lobby State and Federal Law makers to fund research and projects
- Lobby legislators to change State Land disposal process



Gila River

Gila River



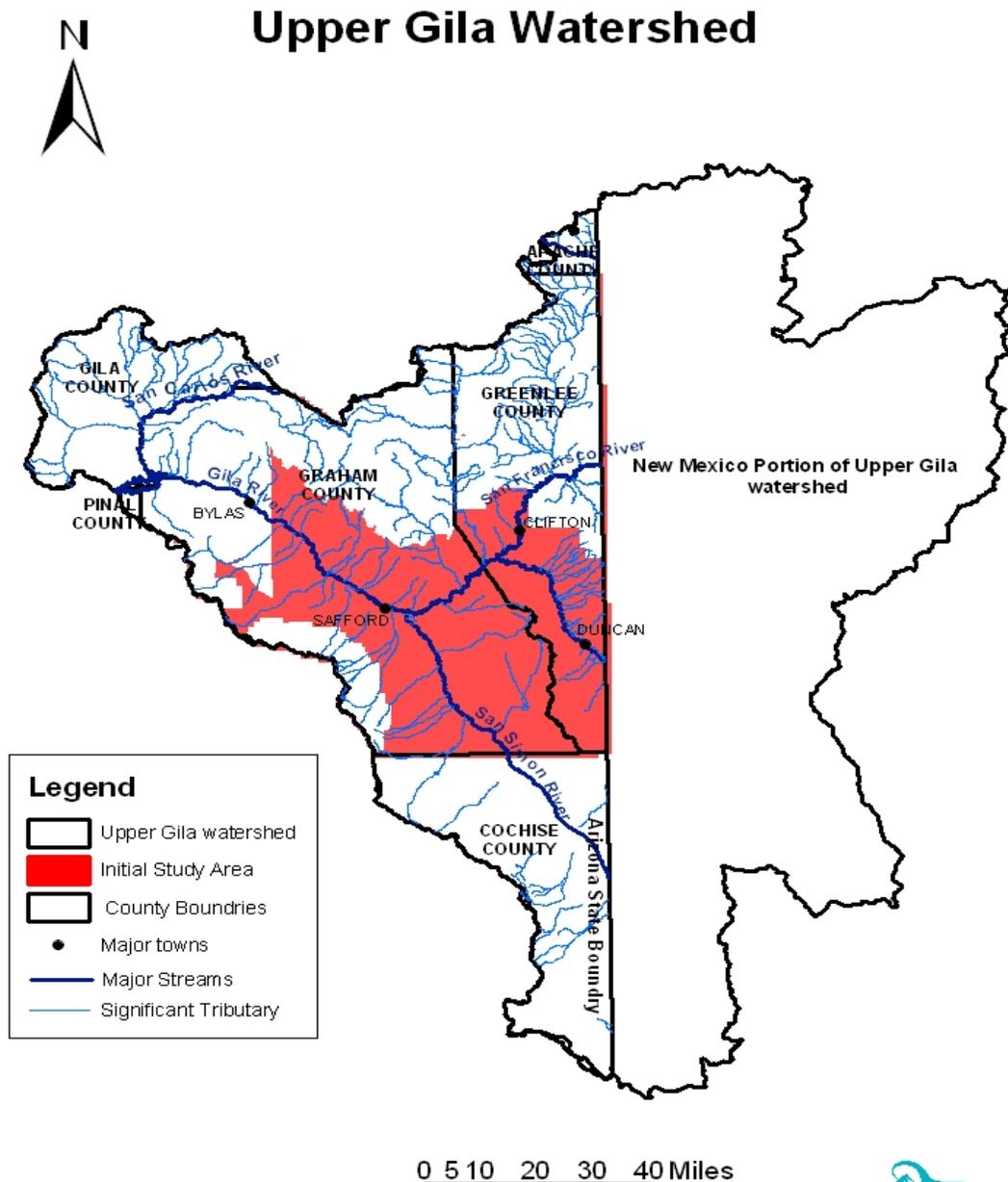
City of Safford



# Watershed Planning

Through the efforts of the many Government agency and Local partners actively involved with The Gila Watershed Partnership we have much of the expertise and resources to gather real information to better manage this precious limited resource and plan for future generations. The only real limitation is \$\$\$\$'s

# Initial Study Area



# Obstacles to Overcome to Address Identified Water Issues

- Political territorialism ... Personal Political agenda
- Lack of information..... Hydrologic and Geologic
- Level the playing field and monitor all exempt wells
- Lack of funding support at all levels .....If this were oil we were talking about, we would have spent the \$\$'s and we would know exactly how much we have, the quality of it and where it was located!!!! This commodity is worth the same effort!
- Lack of education of the issues.... At all levels.
- Assured water supply waivers for developers
- FUNDING... \$\$\$\$\$\$ FUNDING...

Q. What do water users want from water providers

A. **WATER.. Safe and Sustainable**

Q. What do Municipal water providers need to meet the needs of the public?

A. **Common Sense Regulatory Requirements** that take into account the financial burden of private and municipal public water systems in meeting the regulations.... and funding to assist with coming into compliance.

Changes in the State Land disposal process to eliminate the public / auction process for acquisition of State Trust land and water for municipalities. We cannot compete with private money to purchase water for the citizens we serve. We do not mind paying fair market value but we cannot survive a bidding war.

- Q. What do Local and County Governments and other public organizations need to address these identified water issues.
- A. State and Federal support and general Legislation that recognizes the critical nature of water issues and identify funding streams to support them.
1. S.W.A.G. Necessary in bringing these issues to the legislature with credibility
  2. Specific Legislation that addresses funding for comprehensive aquifer and basin ground water supply study, assistance in necessary planning, and mandatory monitoring of exempt wells outside established Active Management Areas.
  3. Legislation that appropriates sustainable funding for watershed groups that demonstrate active participation in the mission of watershed preservation and that identifies benchmarks for watershed groups to achieve to receive levels of appropriated funding.
  4. Financial incentives and assistance programs for treatment and use of lesser quality water and effluent.
  5. Make available low interest loans for infrastructure renewal / replacement that can be available in less than 120 days.
  6. Mandatory assured 100 year water supply specific to each development outside public or municipal water service areas, with NO waivers or exceptions

# Why is all of this important... to all of us?



Every decision we make about our water affects not only the environment, but also our jobs, our homes, our lifestyle, our culture, and most importantly ... Future Generations

# Thank you!!!

## From



And The

