

Southwest Drought and Human Health Workshop
February 27, 2020



Preparing for and managing drought





Pima County Drought Response Program

History

Local Impacts

Program Elements

Local Drought Impact
Group

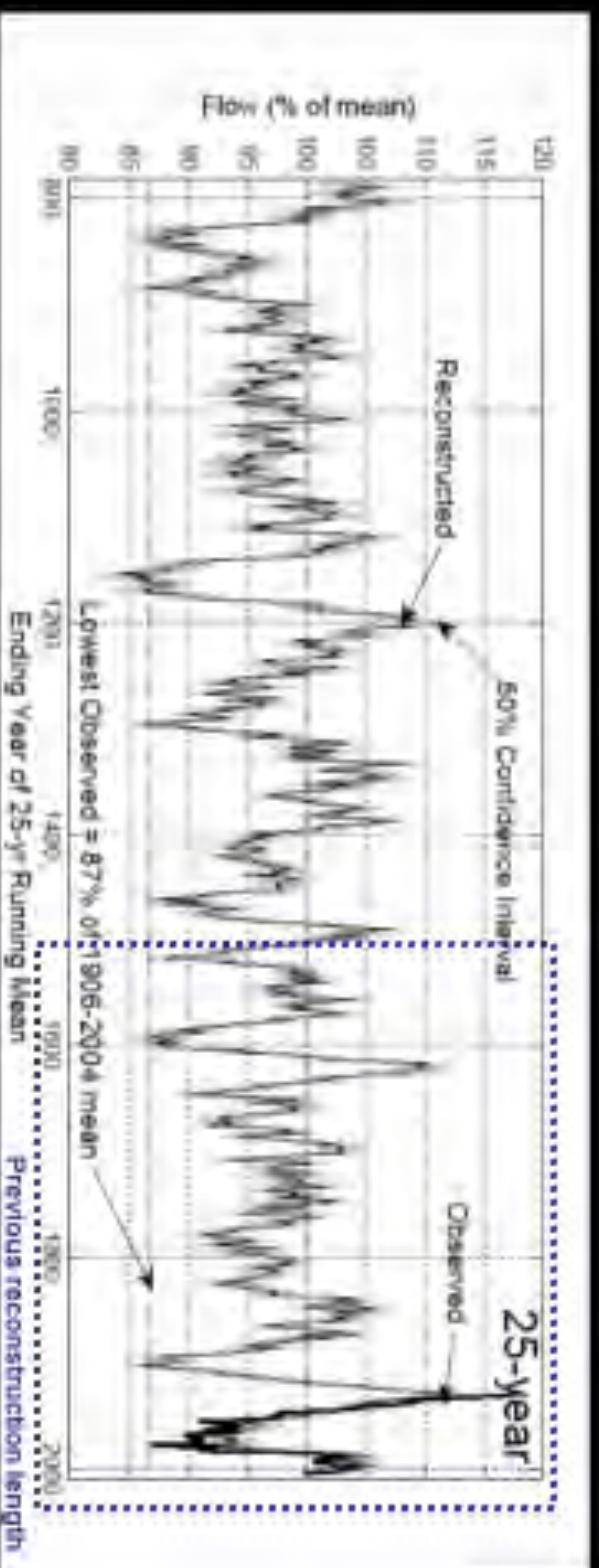
Connection with
Community

2007: The Year of Drought Action



- Interim Guidelines for Colorado River Operations
- Drought in 7th Year
- ADWR Drought Preparedness Plan
- Pima County Drought Management Program
- Stage One Declaration

Reconstruction of Colorado River at Lees Ferry, AD 762 - 2005



25-yr running means of reconstructed and observed annual flow of the Colorado River at Lees Ferry, expressed as percentage of the 1906-2004 observed mean (Meko et al., 2007). Drought History of the Southwest Reconstructed from Tree Rings, Connie Woodhouse, School of Geography and Development and Laboratory of Tree-Ring Research, University of Arizona. Presented to Pima County LDG, January 12, 2011

About Pima County

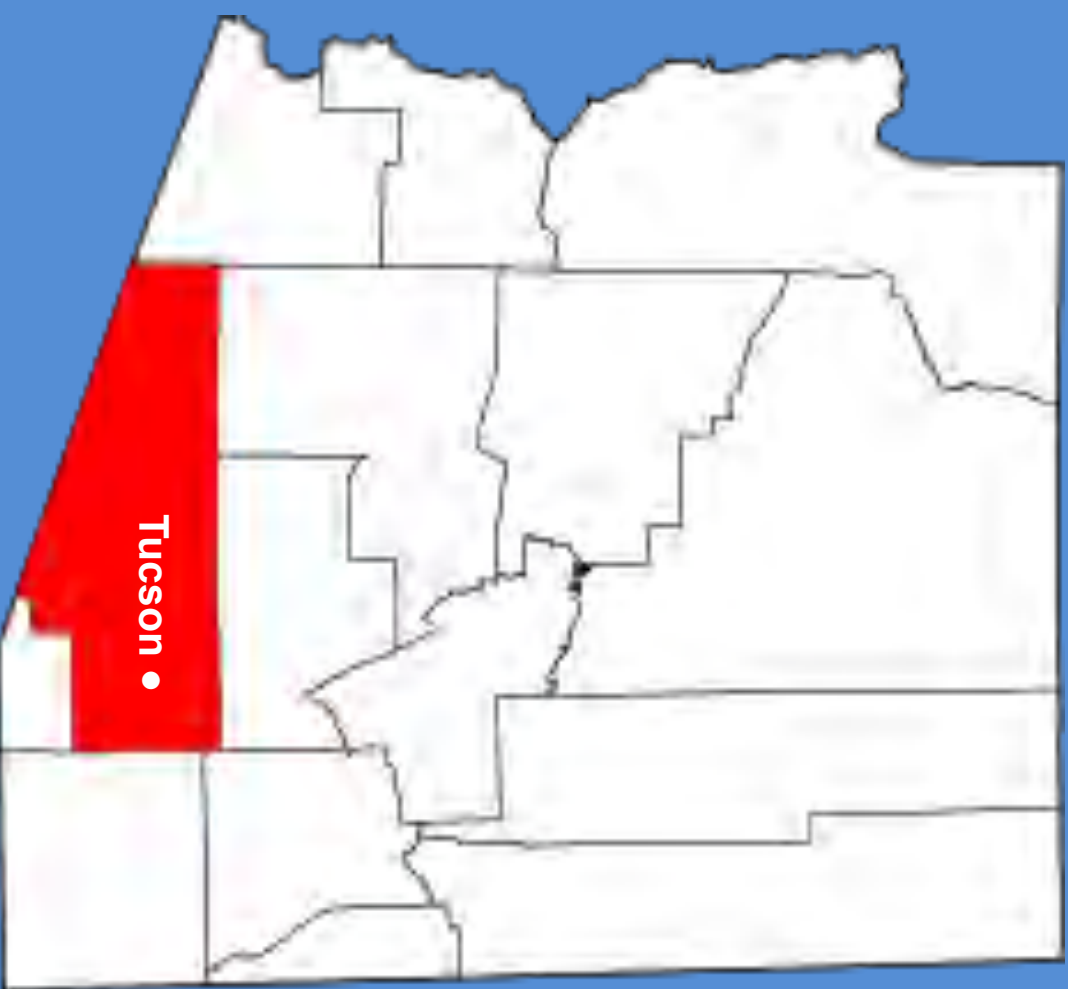
Population 1 million

Unincorporated pop 360,000

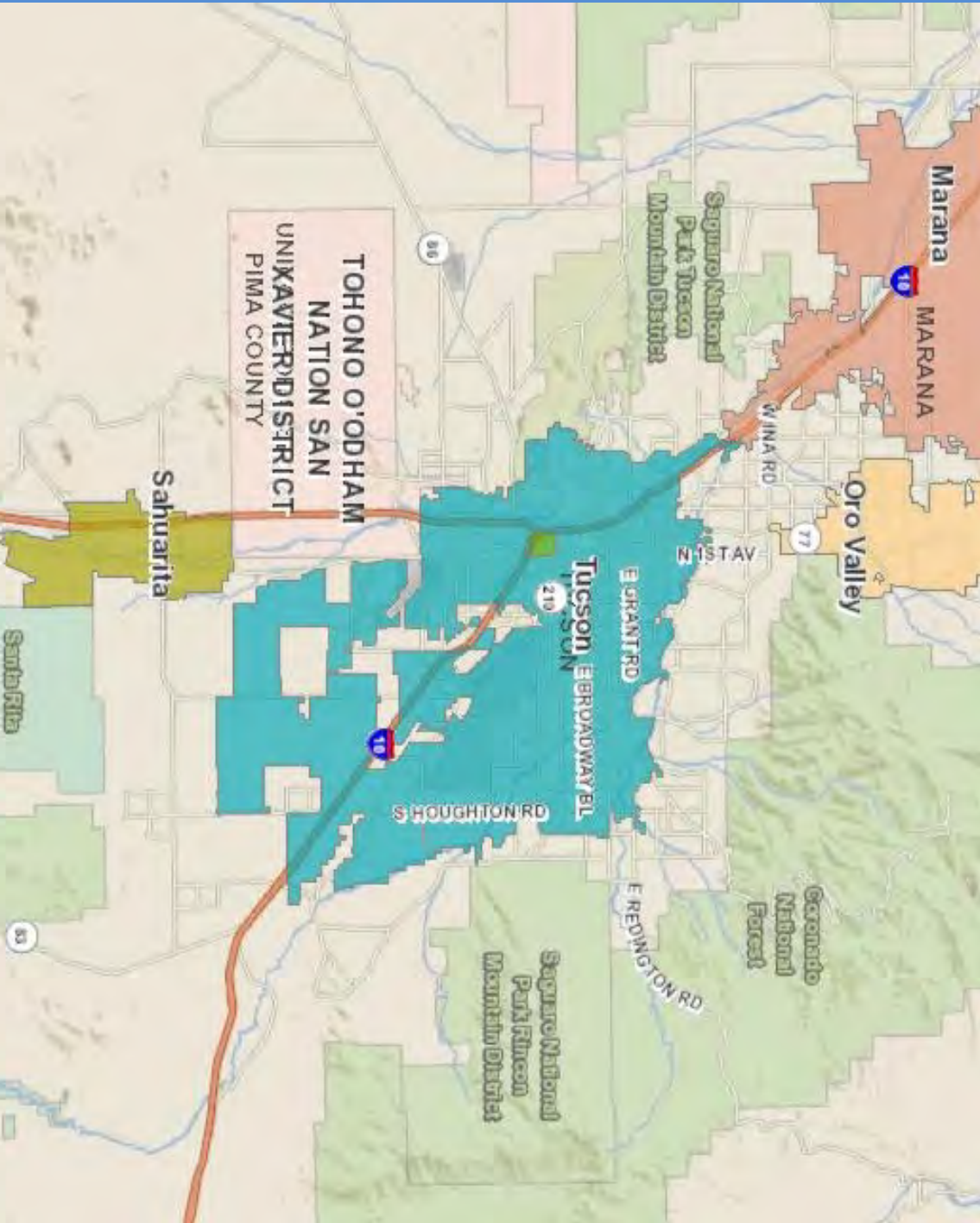
11.59" Annual Rainfall

70.3°F Ave Yearly Temp

Range 32°F to 110°F



Pima County Jurisdictions



Drought and Climate Impacts

Environment

- Streamflow
- Riparian Habitat
- Wildlife
- Wildfires

Economic

- Agriculture
- Ranching
- Recreation, Tourism & Sports

Water Supply

- Groundwater Wells
- Water Service
- Peak Demand
- Energy

Human

- Vectors
- Vulnerable Populations
- Health
- Air Quality
- Quality of Life

Effects of Hot Drought on Water



Evaporation



Evapotranspiration



Sublimation

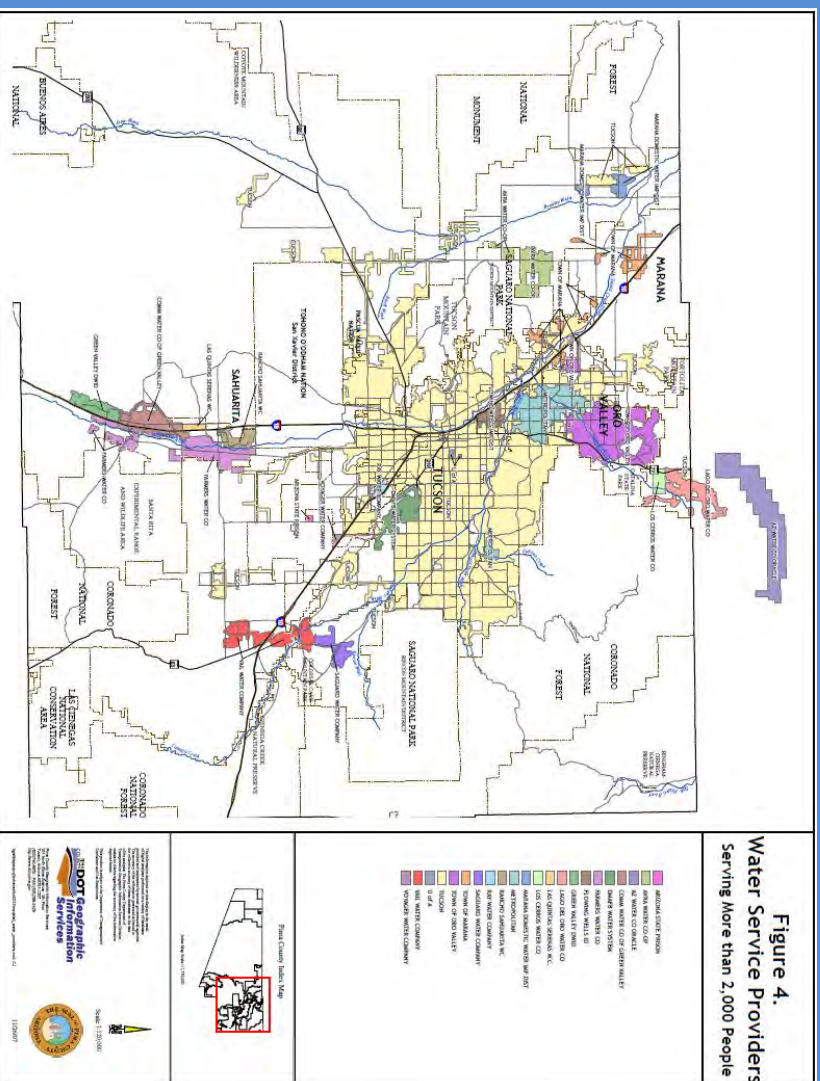
Municipal Water Supply

Sources: Groundwater, CAP, Reclaimed

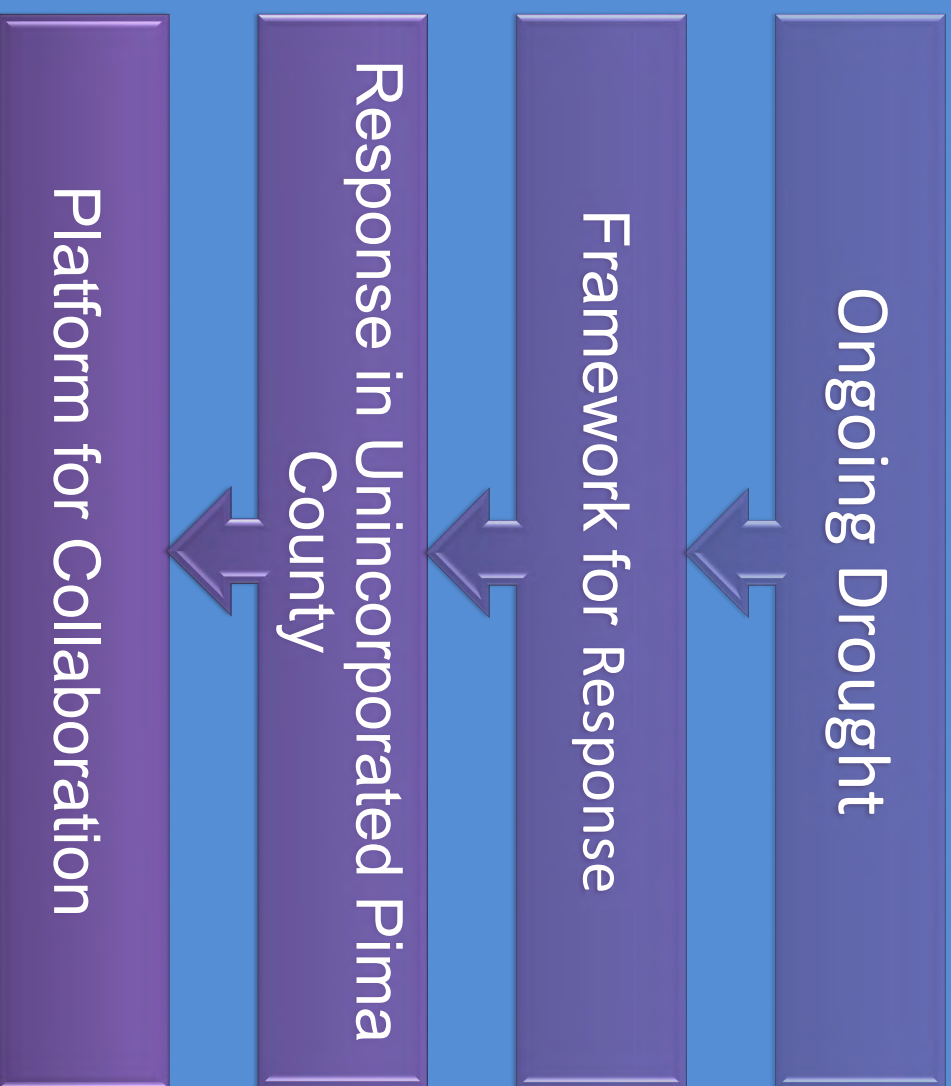
6 Major Water Providers

5 Domestic Water Improvement Districts

Co-ops, private water companies, private wells



Drivers for Pima County Drought Management



Drought Response Plan

- **Pima County Code 8.70**
 - **Four Drought Stages**
 - **Declared by Board of Supervisors**
 - **Establishes Monitoring Group (LDIG)**
 - **Water Wasting Prohibitions**
- **Updated in 2014**

Local Drought Impact Group

- ▶ Meets Bi-Monthly
- ▶ Review Drought Status
- ▶ Drought Impacts
- ▶ Coordinate Drought
Declarations and Responses
- ▶ Posted Public Meetings
- ▶ Water Providers, NWS, USGS,
ADWR, Interested Parties



Drought Stages

Stage 1 Alert

- Moderate to Severe

Stage 2 Warning

- Severe to Extreme

Stage 3 Emergency

- Extreme to Exceptional

Stage 4 Crisis

- Exceptional

Drought Responses

Stage 1

- Voluntary Conservation

Stage 2

- Stage 1+ Irrigation Restrictions
- Water Only on Request
- No Misters
- No Public Fountains
- Car Washing with Nozzle Only
- No Turf Overseeding

Stage 3

- Stage 2+ No Filling New Residential Pools
- Car Washing only with Recirculation
- No Pool Refilling except to Top Off

Stage 4

- Stage 3+ Only Tree and Shrub Irrigation
- No Filling New Pools
- No Car Washing
- No Street Cleaning
- No Potable Water for Construction

Water Wasting Provisions

Allowing Water to Leave a Property

Failing to Repair Water Leaks

Washing Driveways, Sidewalks, Parking Areas with Open Hose or Spray Nozzle (Residential Exempt)

Connection With Community

- Local Drought Impact Group
- Posted as Public Meetings
- Materials On Line
- Notices to over 50
- Search: Drought Management Pima County

Challenges and Opportunities

- Participation
- Sector Impacts
- Drought Fatigue
- Climate Change
versus Drought
- NWS, ADWR, CAP
- Annual Report
- Water Conservation
Message
- Collaboration



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