

ARIZONA WATER REUSE 2015 SYMPOSIUM ANNUAL MEETING

Arizona's Water Resources: Challenges Moving Forward

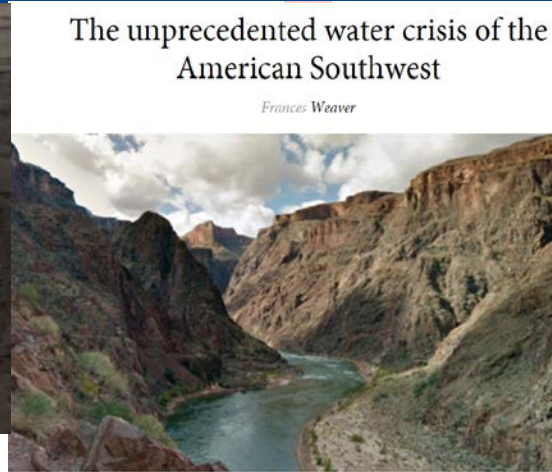
July 28, 2015

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Arizona Department of Water Resources



Water: Front Page News Coverage



Officials Unprepared for Southwest's Unfolding Water Crisis



The New York Times | <http://nyti.ms/1IQPtDa>

U.S.

Arizona Cities Could Face Cutbacks in Water From Colorado River, Officials Say

By MICHAEL WINES JUNE 17, 2014

Western US water crisis worse than thought

Nasa study finds dramatic loss of underground water in Colorado River Basin



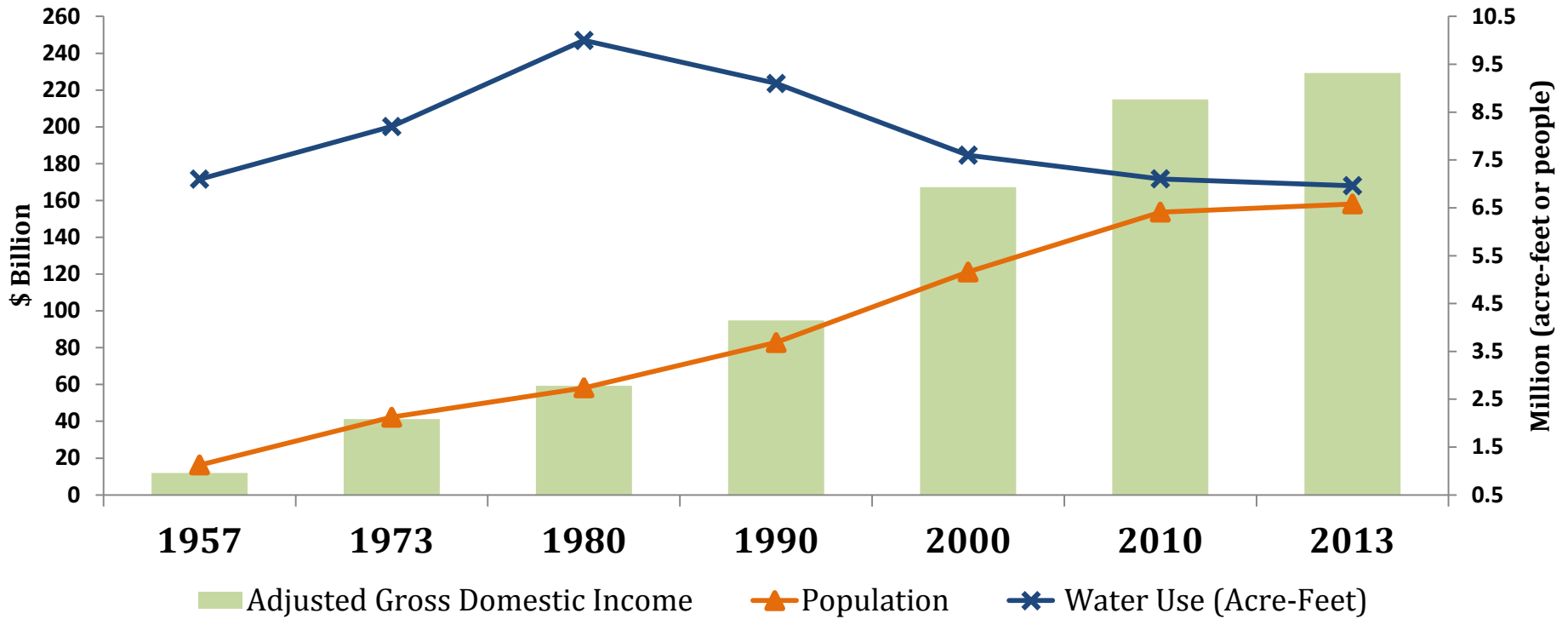
Why is Arizona not in a crisis? We've evolved.

- **Salt River Project 1904**
- **Yuma Irrigation Districts**
- **Colorado River Compact 1922**
- **Arizona v. California 1963**
- **Central Arizona Project 1968-1996**
- **Groundwater Management Act of 1980 & Amendments**
 - **Creation of Arizona Department of Water Resources**
 - **Mandatory Water Conservation Requirements**
 - **Drought Preparedness Plan Requirements**
 - **Assured Water Supply Program**
 - **Underground Storage and Recovery Program & Arizona Water Banking Authority**
 - 9.0 MAF stored for future use



Arizona's Water Management Story

Water Use, Population and Economic Growth (1957 - 2013)



Year	Total Water Use (in million acre-feet)	Population (in millions)	Gross Domestic Income (in billions)
1957	7.1maf	1.1	\$11.99
2013	7maf	6.58	\$229.34
Change from 1957-2013	-0.1%	472%	1752%

So...What are the “Real” Issues?

Arizona is not in a crisis, but does face some short, medium and long-term challenges

Driving Forces

- 15 year ongoing drought
- Population and economic growth will increase demand for water

Short-term Challenges

- Risks to Colorado River Supply
 - Shortage on the Colorado River System is likely
 - 0% Probability in 2016
 - 47% Probability in 2017
 - Recurring Lower Basin Annual Deficit



Medium-term Challenges

- Water resources in rural areas of the state are more stressed
 - Primary water source is groundwater
 - Lack of groundwater regulation
 - Lack of groundwater data
 - Rural areas lack the resources to address their issues

Long-term Challenges

- Growing statewide imbalance between existing water supplies and demand projected in the next 25 years and 50 years

Arizona's Efforts to Address Long-term Challenges

Strategic Vision for Water Supply Sustainability

Purpose: *Identify strategies to help address Arizona's future water needs and provide a stable economy for the future.*

Findings: *Ultimately, the State of Arizona is not facing an immediate water crisis. Projected growing statewide imbalance between 900,000 and 3.2 MAF over the next 25 to 100 years.*

- **Strategic Priorities Identified:**

- Resolution of Indian and Non-Indian Water Rights Claims
- Watershed/Forest Management
- Weather Modification
- Expand Reuse of Reclaimed Water
- Enhanced Stormwater Recharge
- Water Management
- Importation of New Water Supplies

Future of Water Reuse in Arizona

Strategic Vision for Water Supply Sustainability

- Full utilization of reclaimed water has the potential to reduce future water supply imbalances by more than 50 percent by the year 2110.
- Continuation/Expansion of existing reclaimed water use programs identified as a strategy for 13 planning areas
 - Current volume of reclaimed water supplies available to meet demands is over 500,000AF
 - 2035 - estimated volume is approximately 745,000AF
 - 2060 - estimated volume is approximately 935,000AF
 - 2110 - estimated Volume is approximately 1.3 MAF

Water Reuse Challenges

Water Reuse Challenges

- **Public Perception** - Overcome the “gross factor” associated with direct potable reuse
- **Capital Investment** - Significant investments will need to be made
- **Legal Barriers** – Direct potable reuse

Water Reuse Action Plan Items

- Review legal and institutional barriers to direct potable reuse of reclaimed water – develop and implement plan for resolution (Year 3)
- Develop and begin implementation of direct potable reuse of reclaimed water - public perception campaign (Year 4)

Questions?

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PROTECTING
ARIZONA'S WATER SUPPLIES
for **ITS NEXT CENTURY**