

ARIZONA'S NEXT CENTURY

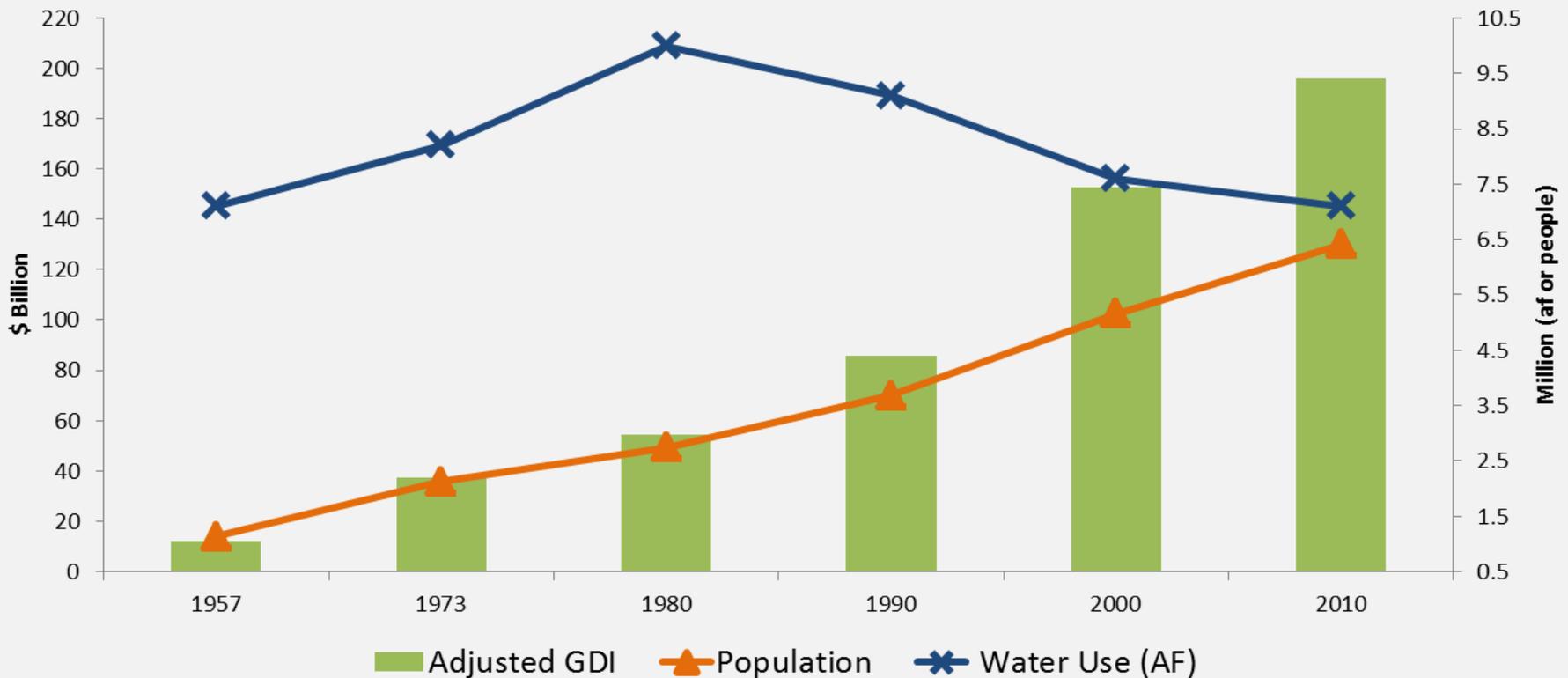
Strategic Vision for Water Supply Sustainability



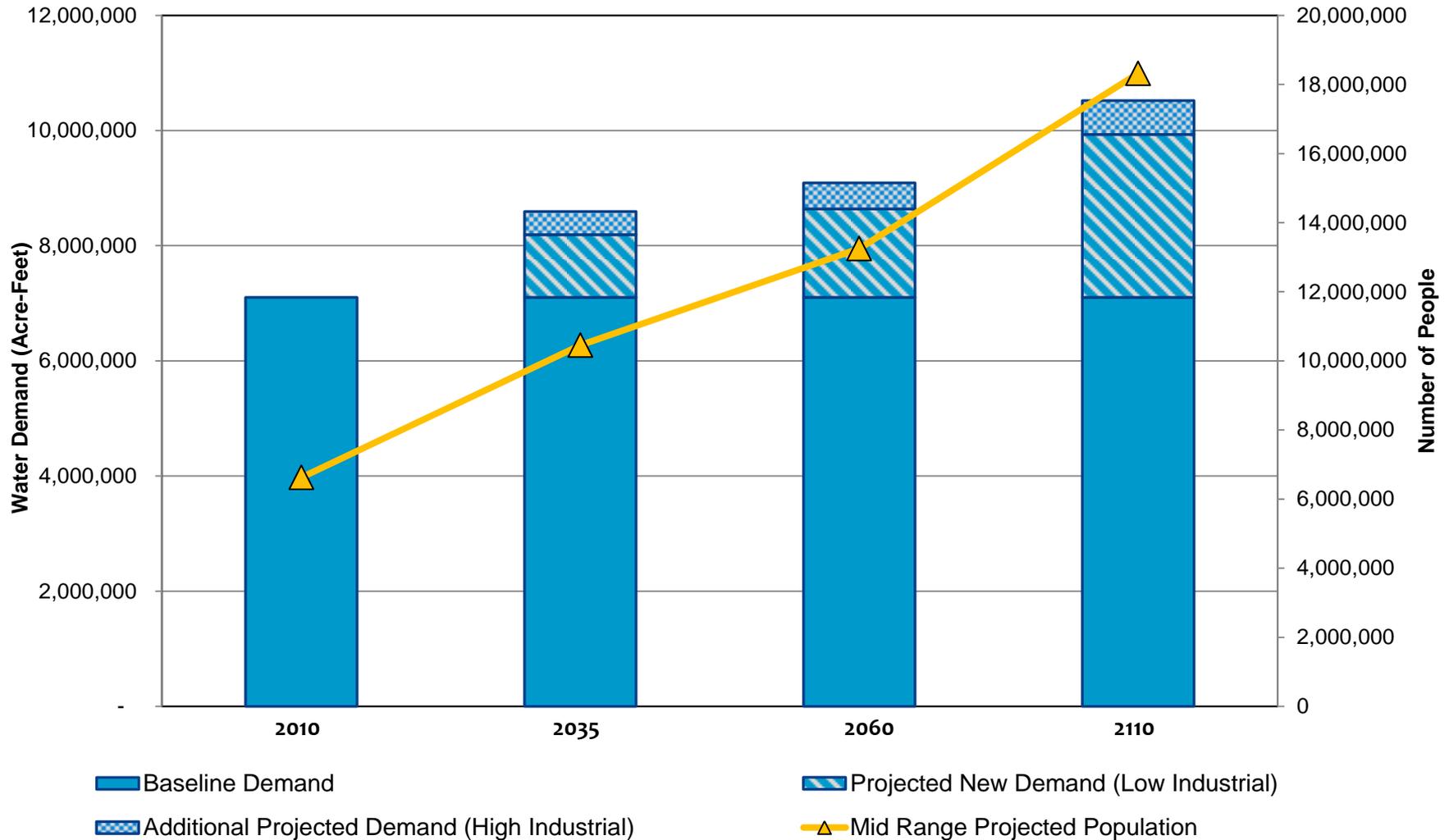
Protecting Arizona's Water Supplies
for
Its Next Century

What We Have Accomplished

*Arizona Water Use, Population
and Economic Growth (1957 – 2010)*



What We Have To Address



What We Are Doing

Arizona Strategic Vision for Water Supply Sustainability

Purpose:

Identify viable strategies to guide Arizona in addressing future water needs, providing a stable economy for our future – for all water users.

- Use existing information (CRBS, WRDC, BRP, Water Atlas, Water Level Monitoring, AMA Assessments...)
- Identify Local Options First
- Identify Priority Strategies



Arizona Strategic Vision

Building on Historic Accomplishments

- * **Salt River Project**
- * **Colorado River Compact & Law of the River**
- * **Central Arizona Project**
- * **Resolution of Tribal Water Rights Claims**
- * **1980 Groundwater Management Act**
 - *National leader in water conservation and water reuse programs within the five Active Management Areas*
- * **Assured and Adequate Water Supply Program**
- * **Recharge and Recovery and Arizona Water Banking Authority**
 - *8.5 million acre-feet in storage for future use*

Arizona Strategic Vision

Identifying Opportunities and Challenges

Water Supply Opportunities

- * Non-Indian Agricultural (NIA) Priority CAP water;
- * Reclaimed Water/Water Reuse;
- * Groundwater in Storage (potable, poor quality & brackish supplies);
- * Water Supply Development:
 - * Revised Watershed Management Practices;
 - * Weather Modification;
 - * Rainwater Harvesting/Stormwater Capture (large-scale or macro); and
- * Importation or Exchange of New Water Supplies Developed Outside of Arizona (e.g., Ocean Desalination)

Arizona Strategic Vision

Identifying Opportunities and Challenges

Challenges

- * **Complex Physical Water Supply Availability**
- * **Land Ownership**
 - * **69% of Lands in Arizona Federally Owned & Managed**
 - * **Federal Reserve Rights**
 - * **Access to Water Supplies and Transmission of Future Water Supplies**
 - * **NEPA/ESA/CWA Compliance**
- * **General Stream Adjudications**
- * **Outstanding Tribal Water Rights Claims**
- * **Complex Water Rights System**

Arizona Strategic Vision

Identification & Analysis of Supply/Demand Imbalances

Water Resources Development Commission (WRDC - 2010)

- * Assessed water demand and available supplies for the next 25, 50 and 100 years (2035, 2060 and 2110).
- * Total statewide demand between 8.1 MAF in 2035 and 10.6 MAF in 2110 (*current demands 6.9 MAF*)
 - * Imbalance between 900,000 AF and 3.2 MAF

Colorado River Basin Water Supply & Demand Study (Basin Study)

- * 2060 Colorado River Basin-Wide Average Imbalance 3.2 MAF
- * 2060 Arizona Imbalance between 242,900 to 1,269,700 acre-feet

WRDC concluded that without proactive and localized water management strategies future water supply and demand imbalances may exist throughout the state, and, therefore, there is a need to acquire additional water supplies and develop infrastructure to access new and existing unused water supplies

Arizona Strategic Vision

* Regional Strategies

- Identification & Analysis of “Planning Areas”

* Statewide Priorities

- Common Strategies Across the State

* Action Plan

- What’s Next?



**Strategic Vision
Planning Areas**

Legend

- City or Town
- Planning Area
- County
- Stream
- Major Highway

Arizona Strategic Vision

Strategic Priorities For Moving Arizona Forward

- * ***Identify Role of In-State Water Transfers***
- * ***Resolution of Federal and Non-Federal Water Rights Claims***
 - General Stream Adjudication
 - Indian Water Rights Settlements
- * ***Continued Commitment to Water Conservation & Reuse of Reclaimed Water*** – Including Direct Potable Reuse
- * ***Comprehensive Statewide Data Collection & Analysis***
 - * Modeling Local Conditions
- * ***Supply Importation - Desalination***
- * ***Funding***
 - Rural Infrastructure
 - Business, Community and State Leader Engagement

Arizona Strategic Vision

In-State Water Transfer Issues

- * ***Groundwater Transfer Prohibition***

- * **Statutory Exemptions**

- * Recognition of Prior Investments (West Basins, City of Mesa Pinal Lands)
 - * Drought Emergencies

- * **Groundwater Rights in AMAs**

- * ***Colorado River Water (Main Stem & CAP - Contract Rights)***

- * **Subject to Sever & Transfer (S&T) Policies**

- * Public Process

- * ***Surface Water***

- * **Statutory Sever & Transfer Process - Consent of Downstream Districts Required**
 - * **General Adjudication Uncertainty - Precludes Market Framework**

- * ***Reclaimed Water***

- * **Treat It = Own It**

Arizona Strategic Vision

Roll Out Process

* *Whistlestop Tour (24 So Far)*

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|---------|----------------------------|--------------------------|
| * GUACs | Watershed Groups | Water Users/Associations |
| * ITCA | IBWC SE AZ Community Forum | Homebuilder Reps |
| * AHS | AZ House & Senate | Chambers of Commerce |

* *Topic Specific Engagement*

* **Desalination**

- | | |
|-----------------------------|-------------------------|
| * Design Build Finance Reps | Mexican Water Officials |
|-----------------------------|-------------------------|

* **Water Transfers**

- | |
|------------------------------------|
| * DCDC Dialogue – ADWR / Yuma Reps |
|------------------------------------|

* **Reuse**

- | | | |
|--------|------------------------|-------|
| * ADEQ | WaterReuse Association | SCAPR |
|--------|------------------------|-------|

* **Adjudication Process**

* **Economic Development/Finance Alternatives**

- | | |
|------------------------------|----------------------------|
| * Arizona Commerce Authority | Private Water Utility Reps |
|------------------------------|----------------------------|

* *Next Steps Planning - Integration*

Conclusions

- * **State of Arizona is not facing an immediate water crisis**
 - * **Some local areas require more immediate action**
- * **Growing statewide imbalance between water supplies and demand projected in the next 25 years**
- * **Lack of an immediate problem increases the potential for inaction, running the risk of procrastinating and not motivating ourselves to plan and invest in our future**
- * **Arizona's future success is tethered to how well we continue to manage our water resources and develop new water supplies and infrastructure**
- * **Arizona needs a continuing Strategic Vision for Water Supply Sustainability to guide its economic stability through the next century**

Arizona Strategic Vision

Ten Year Action Plan

- * **Legislate Strategic Vision update every 10 years (Year 1)**
- * **Begin Discussions on Ocean Desalination (Year 1)**
 - Exchange Options (California & Mexico)
 - Direct Delivery Options (Mexico)
- * **Resolve ADOT Right-of-Way Issues for Utilities (Year 1)**
- * **Establish Adjudication Study Committee (Year 1)**
- * **Begin Discussions on Water Development Financing (Year 2)**
 - Immediate Needs for Water Resources Development Revolving Fund for rural Arizona
 - Long-Term Needs for Large-Scale water importation projects
- * **Remove statutory limitation (A.R.S. § 45-801.01(22)) on the ability to receive long-term storage credits for recharging reclaimed water beyond 2024 (Year 2)**

Arizona Strategic Vision

Ten Year Action Plan *(cont.)*

- * **Review and implementation of Adjudication Study Committee Findings** (Year 3)
- * **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)
- * **Begin discussions with New Mexico on an Interstate Cooperative Program for Watershed Management/Weather Modification in the Upper Gila Watershed** (Year 4)
- * **Resolve Remaining Indian Settlements** (Year 1 - 10)
- * **Resolve General stream Adjudication** (Year 5 - 10)

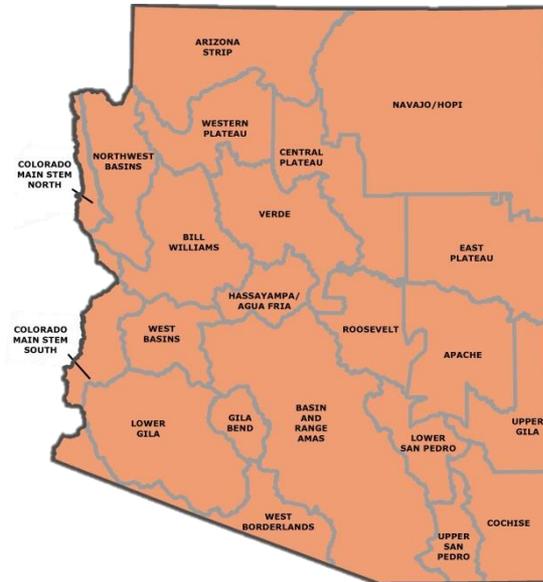
Arizona Strategic Vision

Regional Strategies

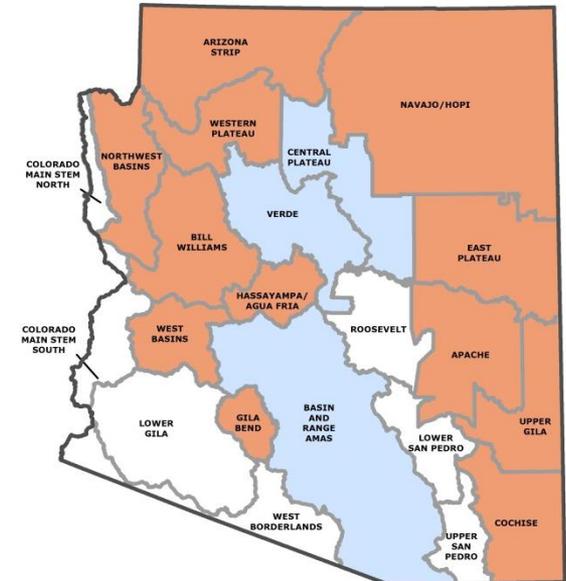
Continued Commitment to Water Conservation



Expanded Monitoring & Reporting of Water Use



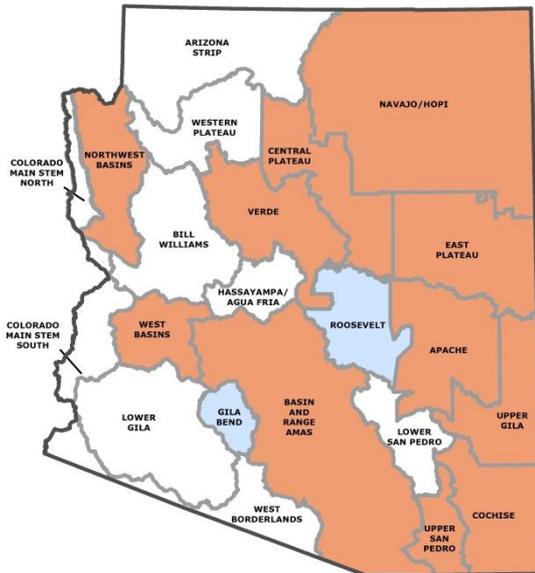
Local Water Supply Study Groundwater System Analysis/Modeling



Arizona Strategic Vision

Regional Strategies (cont.)

Increased Direct & Indirect Use of Reclaimed Water



Increased Access to Locally Available Potable & Brackish Groundwater and Enhanced Recharge



Local Water Management



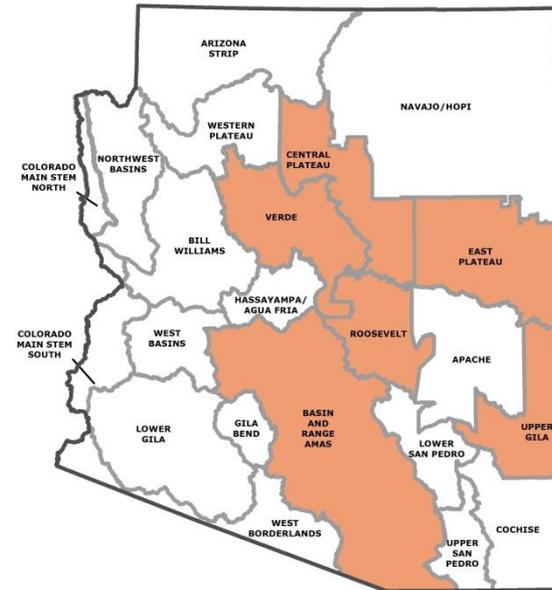
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Regional Strategies *(cont.)*

Forest & Watershed Management



Weather Modification



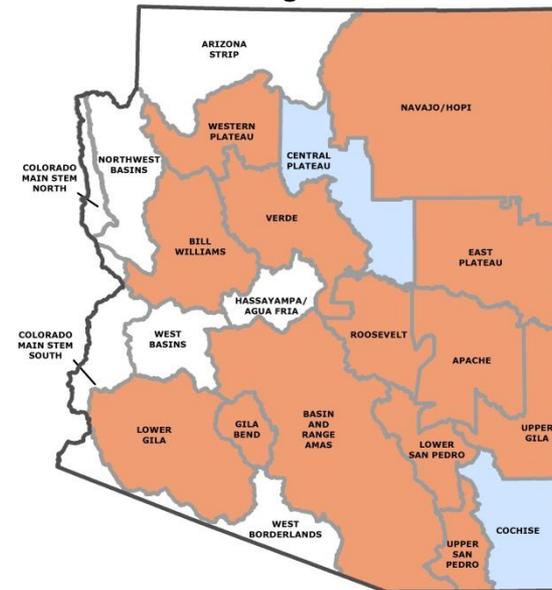
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Regional Strategies (cont.)

Firming of Low Priority Colorado River Supplies



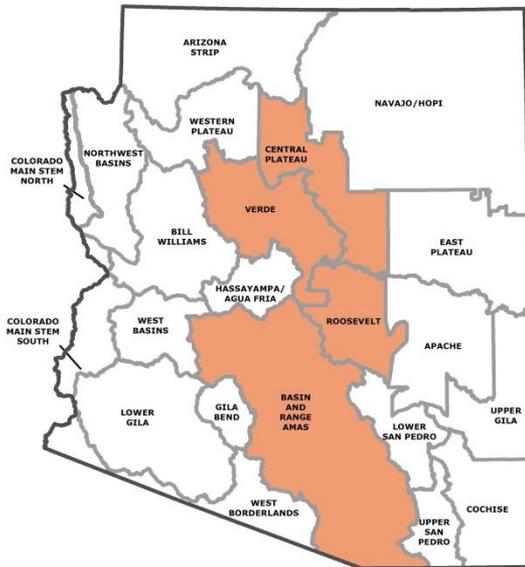
Resolution of Federal & Non-Federal Water Rights Claims



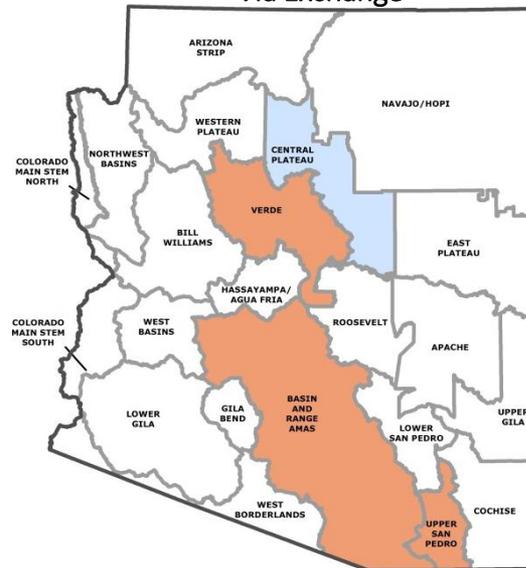
Arizona Strategic Vision

Regional Strategies (cont.)

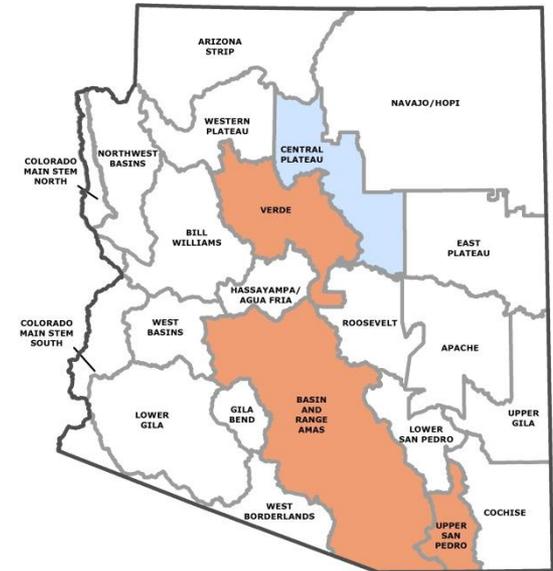
Importation of
In-State Surface Water
or Groundwater



Importation of
Desalinated Water
Via Exchange



Importation of
Desalinated Water
Direct Use



Arizona Strategic Vision for Water Supply Sustainability

Questions?

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