

[SECTION 1: INTRODUCTION]



Thanks to careful planning and continued leadership, Arizona has been successful in the management of its water resources for more than a century. Without the vision and foresight of early Arizonans like Carl Hayden and John Rhodes, we would not have the quality of life that we enjoy today. Following in that tradition of strategic planning and action, Arizona now must face its next challenge in water supply security and management.

As Arizona's 22nd Governor, I have built my policies on my "Four Cornerstones of Reform" to position Arizona as "a magnet for business relocation, and capital formation; a catalyst for the creation of new business and new jobs; a breeding ground for intellectual and educational achievement; a welcome home for future generations of committed Arizonans seeking to build their dreams; and a safe environment where families and individuals can enjoy life without undo fear for their personal safety." The cement that holds this all together is a firm foundation of long-term secure water supplies and a sound water management strategy that attracts and sustains Arizona's economic sectors and provides a stable and predictable environment in which to live.

To ensure Arizona's competitive advantage in the region, I have asked the Director of the Arizona Department of Water Resources to create a Strategic Vision for Water Supply Sustainability that will provide a solid foundation for Arizona's economic growth in its next Century, just as our great leaders did before us.

- ***Governor Janice K. Brewer***





FOREWORD

Arizonans should be proud of our long history of confronting our water supply challenges and successfully meeting the needs of our agricultural, industrial and domestic water users. Arizona has long demonstrated the resolve to take the necessary actions to ensure that sufficient and dependable water supplies are available for its long-term economic stability. While diverse, these actions have shared a common premise of being solution-oriented to meet not only the immediate needs of the state, but more importantly address future challenges the state would face.

Over the last five years, the Arizona Department of Water Resources (ADWR), in partnership with many in Arizona's water community has participated in the development of a comprehensive water supply and demand analysis for Arizona through the Water Resources Development Commission (WRDC). At the same time, ADWR and its partners have also been actively working with the U.S. Bureau of Reclamation (Reclamation) and the other six Colorado River Basin States (Basin States) to identify projected supply and demand imbalances on the entire Colorado River system, culminating in the *Colorado River Basin Water Supply and Demand Study* (Basin Study). Through the work of the WRDC and the Basin Study, we have identified long-term imbalances, which may result if no action is taken. Given the strong growth in the region, particularly in Arizona, these imbalances are not surprising. Even with the recent economic downturn, vibrant economic growth is expected to continue in the southwest. Our challenge is to explore and develop viable solutions to address these projected imbalances.

The process to meet these challenges has already begun on two fronts. First, in cooperation with Reclamation and the Basin States, ADWR (along with several Arizona stakeholders) is actively participating in a process to identify and analyze multiple Basin-wide strategies, including: demand management; reuse of reclaimed or recycled water; the viability of water transfers; alternative water management strategies (e.g., Water Banking in the Upper Basin); watershed management; and importation of water supplies from outside of the Colorado River Basin. Secondly, thanks to the foresight and leadership of Governor Brewer, we have initiated a parallel process within Arizona - starting with the development of this Strategic Vision - that identifies possible strategies and projects similar to those described in the Basin Study. While we will all have a part to play, much of what needs to be done to meet these imbalances is beyond the scope of what any individual may be able to accomplish alone. This Strategic Vision creates the framework for analysis of potential strategies and provides context for maximizing them to address the needs of multiple water uses.

This Strategic Vision for Arizona is the necessary next step in this process. We have completed the initial analysis of the problems we face and have organized the State into solution oriented "Planning Areas." The next logical step is to identify possible strategies to address the imbalances, not just walk away and leave it to individuals, industries and local communities to meet their future water needs in a vacuum. While many of the mechanisms necessary to address our future imbalances are available today, there are still limited supplies. As currently structured, it is largely left to individual entities and communities to try to obtain the supplies and finance the necessary infrastructure to put these to use. Additionally, increased competition for water supplies may lead to much higher costs to water users and rate payers and possible negative impacts to the areas from which supplies are derived. A comprehensive Strategic

Vision that identifies viable strategies will assist all water users in Arizona to come together to address many needs, as opposed to a less constructive and potentially divisive piecemeal approach.

However, just addressing the needs is not enough. As Arizona's policy leaders, we must also identify the priorities of the State in the arena of water development including, whether in-state supplies are to be the limit of Arizona's development, or if we should explore larger-scale importation (new water supplies from outside of Arizona) that has the potential to meet the water demands of multiple water users and secure our state's economy and quality of life into the future. Putting this strategy together gives policy makers an opportunity to comprehensively explore what is possible, and the pros and cons of a combination of efforts, rather than addressing these issues across the state on a project-by-project basis. This Strategic Vision is not intended to be a regulatory tool. Instead, it is intended to serve as a guide for our policy leaders to make informed decisions about: (1) where we want to focus our efforts, (2) if we want to further explore a suite of potential strategies, and (3) the potential economic consequences of action or inaction. The purpose of this Strategic Vision is to help guide Arizona through the coming decades on steps that Arizona can take to secure water supplies to meet current and anticipated demands and provide a stable economy for our future.

*Sandy Fabritz-Whitney
Director
Arizona Department of Water Resources*



EXECUTIVE SUMMARY

The Challenge

For over a century, Arizonans have faced challenges in ensuring that there are sufficient and sustainable water supplies and have successfully developed water supplies for agricultural, industrial and domestic uses. Arizona has aggressively taken the actions necessary to ensure that sufficient and dependable water supplies are available for its long-term economic stability. While diverse, these actions have shared a common premise of being solution-oriented, meeting not only the immediate needs of the State, but more importantly addressing the future challenges Arizonan's would face. Following in that tradition of strategic planning and action, Arizona now must face its next challenge in water supply security and management. We are at the crossroads of having to decide what actions we will take to meet those challenges.

Over the last five years, the Arizona Department of Water Resources (ADWR), in partnership with many in Arizona's water community has participated in the development of a comprehensive water supply and demand analysis for Arizona through the work of the [Water Resources Development Commission \(WRDC\)](#). At the same time, Arizona has also been actively working with the U.S. Bureau of Reclamation ("Reclamation") and the other six Colorado River Basin States (collectively, the "Basin States"), (see *Figure ES-1*) to identify projected supply and demand imbalances on the entire Colorado River system, culminating in the Colorado River Basin Water Supply and Demand Study ("Basin Study"). Through the work of the WRDC and the Basin Study, we have identified a long-term imbalance between available supplies and projected water demands over the next 100 years of up to 3 million acre-feet. Our challenge is to explore viable solutions to address this projected imbalance and initiate the action necessary to develop those solutions.



Figure ES-1. Colorado River Basin Study Area (Reclamation, 2012)

The process to meet these challenges has already begun on two fronts. First, in cooperation with Reclamation and the other Basin States, ADWR (along with several Arizona stakeholders) is actively participating in a process to identify multiple Basin-wide solutions including: demand management; reuse of reclaimed or recycled water; analyzing the viability of water transfers; analysis of alternative water management strategies (e.g., Water Banking in the Upper Basin); watershed management; and importation of water supplies from outside of the Colorado River Basin. Secondly, at the request of Governor Jan Brewer, ADWR has initiated a parallel process within Arizona to develop a Strategic Vision

that identifies possible strategies and projects to pursue to reduce these imbalances. This Strategic Vision creates the framework for analysis of potential strategies and provides context for maximizing them to address the needs of multiple water uses across the State.

This Strategic Vision for Arizona is a necessary first step in this process. We have completed the initial analysis of the challenges faced by Arizonans and have organized the State into twenty-two solution oriented "Planning Areas" (see Figure ES-2). The next logical step is to identify possible strategies to address projected imbalances. While many of the mechanisms necessary to address our future imbalances are available today, there are still limited supplies. A comprehensive Strategic Vision that identifies viable strategies will assist all water users in Arizona to come together to address our needs.



Figure ES-2. Strategic Vision Planning Areas

History

While we reside in what some perceive as a harsh environment, those with great vision and leadership have harnessed the natural resources needed to support a thriving Arizona economy. This vision started well before statehood. First, beginning with the passage of the 1902 National Reclamation Act and the efforts of the Salt River Valley Water User's Association (SRP), over 200,000 acres of private ranching and farm lands in the Phoenix area was pledged as collateral for the construction of Roosevelt Dam in 1903, with a reservoir storage capacity of nearly 1.4 million acre-feet¹ (MAF) (see Figure ES-3). At the same time Central Arizona was harnessing the Salt River, development of the waters of the Colorado River was also taking shape, culminating over 50 years later, after a series of legal and political struggles, in the authorization of the Central Arizona Project (CAP) in 1968 (see Figure ES-4).

For decades Arizona's groundwater supplies were managed through the Court's until 1980, when the Arizona Legislature adopted one of the most comprehensive groundwater management strategies in the U.S. – the 1980 Groundwater Management Act (GMA). The framework of the GMA is intended to protect existing water users and serve new uses with non-groundwater supplies, preserving the groundwater supply as for future shortages. The GMA established a timeline for reduction and elimination of groundwater pumping in certain areas of the State; designating Active Management Areas (AMA) and Irrigation Non-Expansion Areas (INA) to facilitate this process (see Figure ES-5).

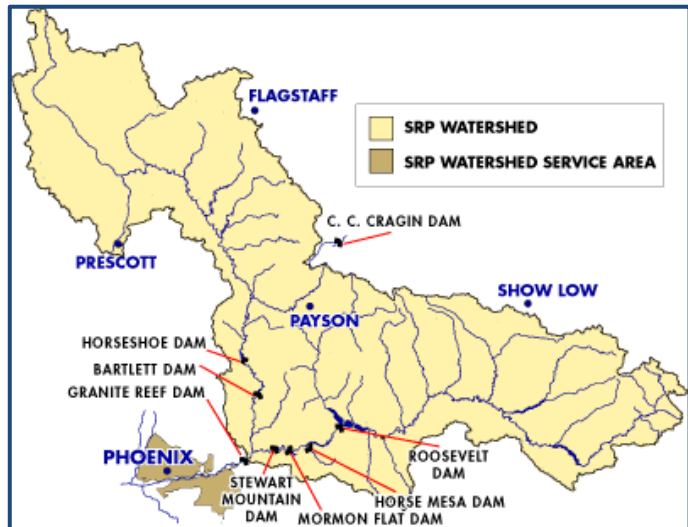


Figure ES-3. Salt River Project Reservoir System and Service Area (Courtesy of SRP)

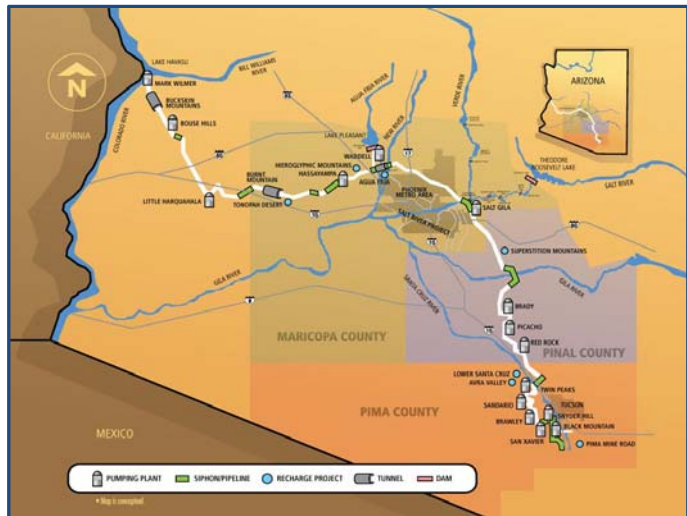


Figure ES-4. Central Arizona Project System (Courtesy of CAP)

¹ From 1989 to 1996, the dam was modified by the US Bureau of Reclamation. In addition to raising the dam's height 77 feet in elevation, the modification included construction of two new spillways, installation of new outlet works, and power plant modifications, increasing its water conservation storage capacity by 20 percent.

Addressing the needs of Arizona's tribal communities was also an important part of Arizona's water management history. The State of Arizona and non-Indian water users have been working for decades to develop equitable distribution of Arizona's water supplies in cooperation with its tribal communities through settlement of these claims.

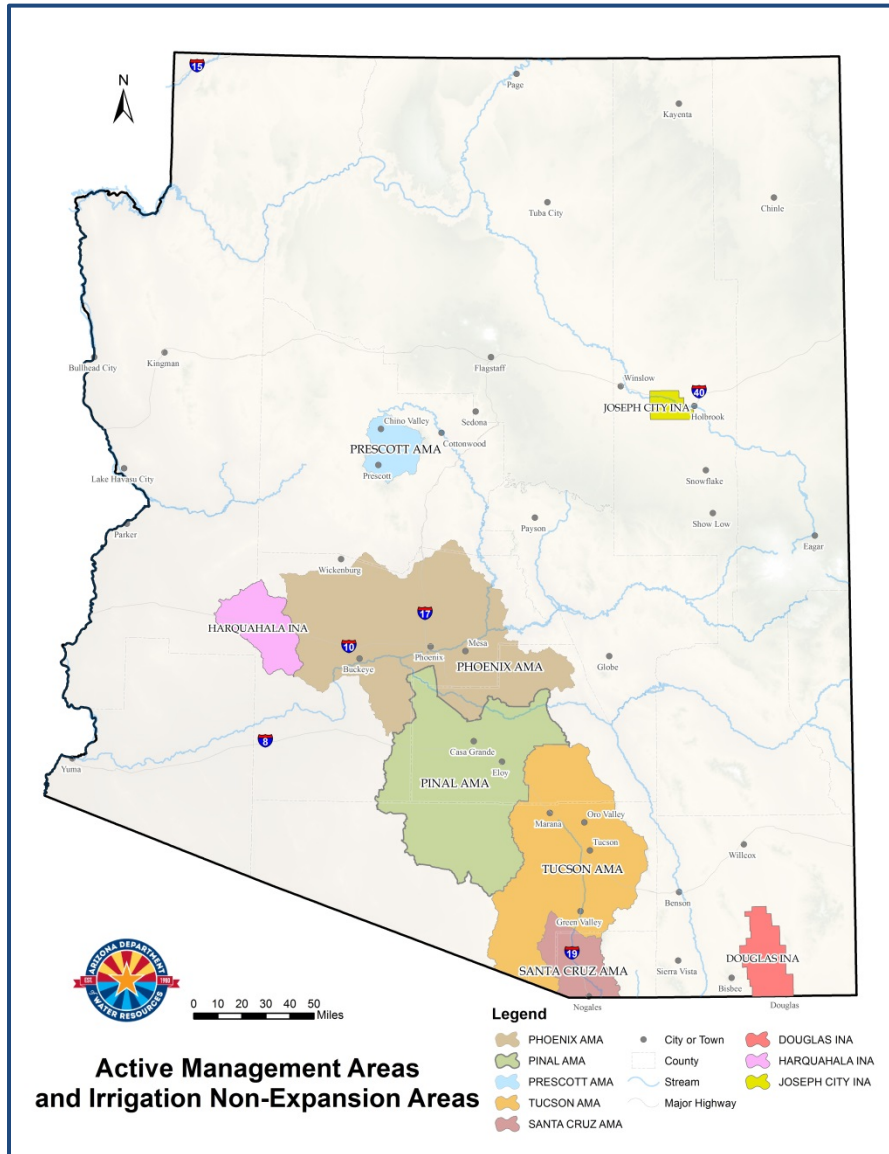


Figure ES-5. Active Management Areas and Irrigation Non-Expansion Areas

Water conservation and reuse of water supplies is the cornerstone of Arizona's water use history. Arizona leads the nation in water conservation and the reuse of treated wastewater (reclaimed water). Water conservation continues to be the foundation of Arizona's water management strategy. The State of Arizona and its citizens have achieved unparalleled water supply improvements through implementation of conservation measures and practices that serve as a model for water managers throughout the world. Since the adoption of the GMA in 1980 and subsequent refinements to its mandatory water conservation requirements, Arizona has seen significant improvement in water use efficiencies, as illustrated in Figure ES-6, below.

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Arizona, along with California, Florida, and Texas, also leads the nation in utilization of reclaimed water². A significant portion of the reclaimed water produced in Arizona is reused for landscape irrigation, agricultural irrigation, power generation, irrigation of parks and schools and artificially recharged into groundwater aquifers. A portion of the reclaimed water is also discharged into the beds of rivers and streams, benefiting the environment by providing habitat for wildlife and adding aesthetic and economic value to Arizona's landscape.

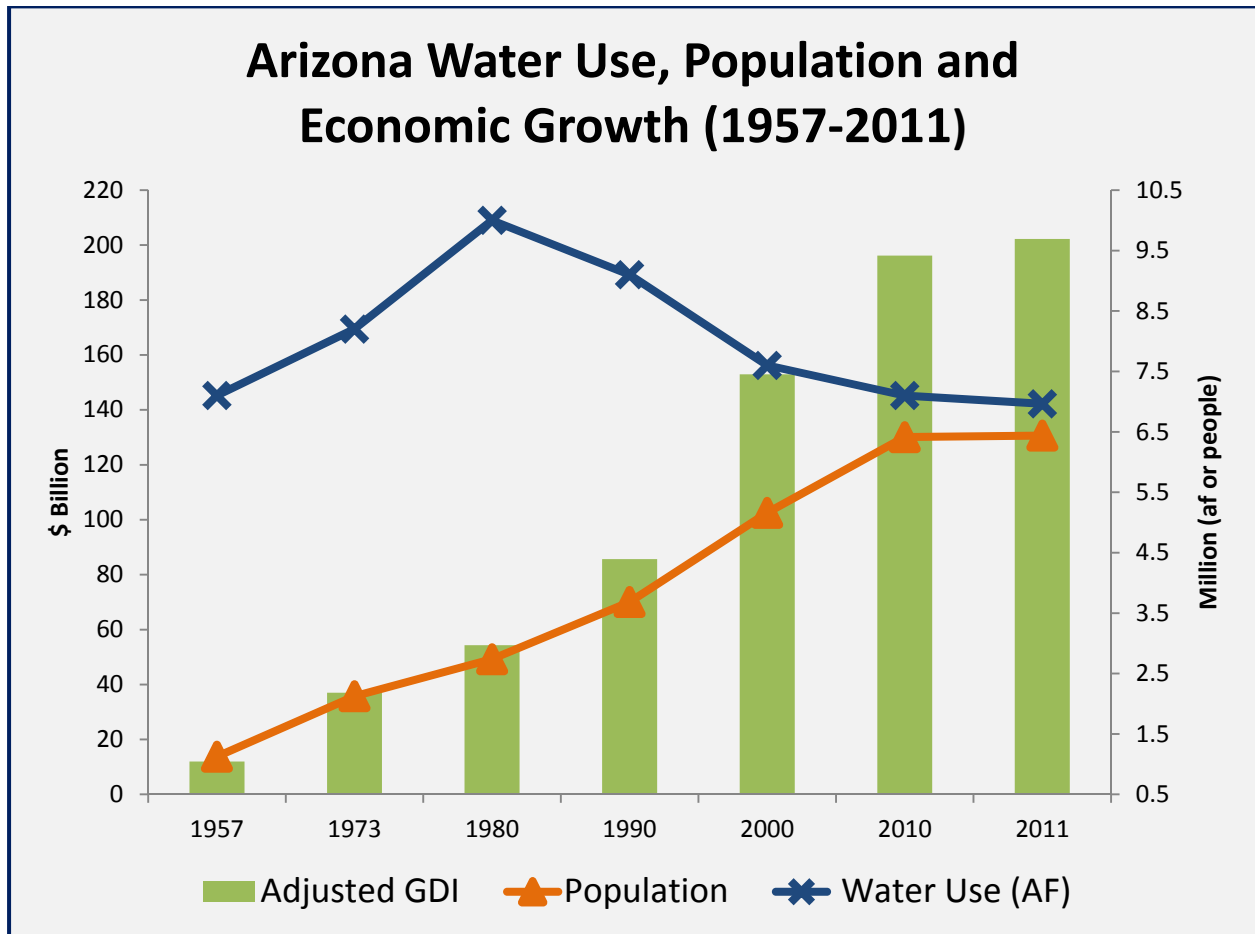


Figure ES-6. Arizona Water Use, Population and Economic Growth 1957 - 2011 (ADWR, 2013)

As development expanded throughout Arizona and as the State moved closer to full utilization of its diverse water portfolio, Arizonans adopted dynamic water management strategies to address the issues they encountered, including [Underground Storage and Recovery](#) and [Water Banking](#) of unused supplies, adoption of [100-year Assured Water Supply Rules](#) for all new development, and the creation of the [Central Arizona Groundwater Replenishment District \(CAGRDR\)](#) to meet the needs of communities without direct access to renewable water supplies.

² Water and Wastes Digest @ <http://www.wwdmag.com/EPA-Releases-Updated-Version-of-Guidelines-for-Water-Reuse-article6636>

The achievements outlined above serve as a guide for future planning as they are the result of strong commitments and significant investments in time and money to realize the benefits of the projects. Establishing and pursuing a vision for water security for future generations of Arizonans must begin well in advance of the need in order to ensure orderly development, avoid economic disruption, and protect the unique and precious environment that we all enjoy. Many of the elements of Arizona's water development history were shaped by creative public/private partnerships. Such arrangements are likely to become more common and necessary, as the federal government's role in water development projects continues to evolve.

Future Water Supplies & Demands

The current challenge facing Arizona is that, although the State has an existing solid water management foundation, water demands driven by future economic development are anticipated to outstrip existing supplies. Additionally, the availability of surface water supplies have been reduced in recent years as drought conditions have been experienced locally and throughout the Colorado River Basin. Questions about future climate conditions add additional uncertainty to our ability to maintain an appropriate balance between demands and supply. Water resource planning efforts are instrumental in the identification and evaluation of these challenges. Arizona has been actively evaluating future water supply and demand conditions for decades.

Every ten years, consistent with State statute, ADWR assesses water supply and demand conditions in each of the State's AMAs, primarily to evaluate the ability to achieve the management goals identified by the Legislature for each AMA under the GMA. In 2009 and 2010, in anticipation of the next Management Plan, ADWR developed a demand and supply assessment for each of the five AMAs to: (1) evaluate its current status and ability to achieve the statutory water management goals for these five areas and (2) to frame the discussions for alternative management strategies needed to meet and [maintain those goals](#). Additionally, ADWR also produced the [Arizona Water Atlas](#) (Atlas) in 2010 providing water-related information on a local, regional and statewide level to frame and support water planning and development efforts. The development of the Atlas also spurred the development of a statewide water resources data repository housed at ADWR, which is continuously updated as water use information is reported and collected. These are on-going efforts that allow both for focus on specific regions of the State and provide past and present water use information.

Since 1980, Arizona has also developed, or partnered in, comprehensive and prospective statewide and multi-state planning efforts (a list of these efforts is identified in Appendix III of the Strategic Vision). More recently, the WRDC was an Arizona-only effort identifying projected future statewide water demands and available water supplies for the next 100 years. Estimates for population growth in Arizona for the years 2035, 2060 and 2110 are 10.5, 13.3 and 18.3 million people, respectively. Annual water demand is expected to grow from current levels of 6.9 MAF to between 8.2 and 8.6 MAF in 2035; between 8.6 and 9.1 MAF in 2060 and between 9.9 and 10.5 million acre-feet per year in 2110.

The Basin Study was developed to define current and future imbalances between projected demands and Colorado River water supply availability in the Colorado River Basin and the adjacent areas that receive water from the Colorado River, through 2060. This extensive study estimated that population within the study area is projected to increase from about 40 million people in 2015 to between 49.4 million and 76.5 million people under the slow growth and a rapid growth scenario, respectively. As a

result of this increased population, and factoring in Mexico's 1.5 MAF 1944 Treaty allotment and losses due to evaporation and system operations, projected demands in the Basin are anticipated to range between 18.1 MAF (slow growth scenario) and 20.4 MAF (rapid growth scenario). Over the past 10 years, the Colorado River's yield has averaged about 15.3 MAF annually. Comparing the median water demand projections to the median water supply projections, the long-term projected Basin-wide imbalance is estimated to be 3.2 MAF by 2060. The actual imbalance may be much larger, or could be slightly smaller, depending on the availability of water and actual growth experienced in the region.

Opportunities & Challenges

Arizona is characterized by widely diverse geographic zones, ranging from forested mountains to arid deserts. These areas have dissimilar climates and precipitation regimes, resulting in great variability in, and accessibility to, surface water supplies. Arizona is also geologically complex, which impacts the availability, quality and accessibility of groundwater supplies. Arizona is also unique in its land ownership patterns. Less than 18 percent of the land within the State is under private ownership. State Trust Land, administered by the Arizona State Land Department (ASLD) comprises almost 13 percent of the land, with the remaining 69 percent in either Federal or Indian ownership (see *Figure ES-7*). This ownership is also often fragmented, with Federal, State, and private land holdings assembled in a "checkerboard" fashion that further complicates the development and execution of comprehensive and cohesive land and water management strategies.

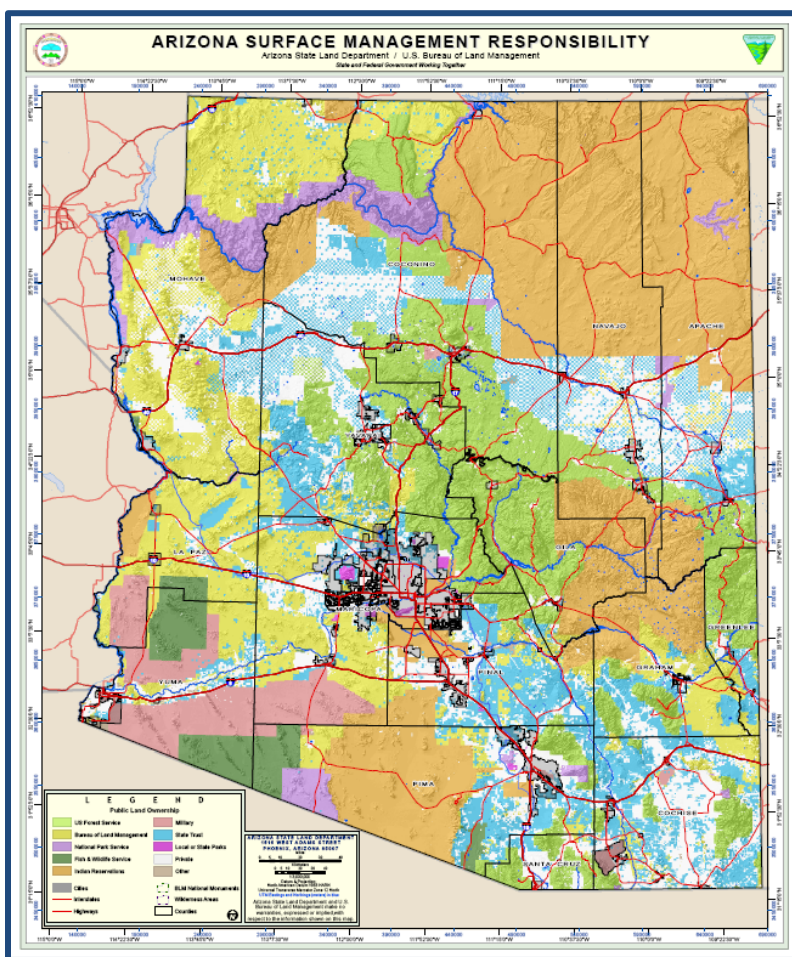


Figure ES-7. Arizona Land Ownership (Courtesy ASLD)

Another factor in the complexity of developing water supplies is the Arizona water law system, a complex mixture of State and federal laws, with groundwater and surface water largely regulated under separate statutes and rules. While the groundwater management system primarily applies inside designated AMAs and INAs, the surface water system (except for Colorado River supplies) is administered statewide. Colorado River supplies are managed in cooperation with the State, but contracts for Colorado River water are initiated through the US Secretary of the Interior and

administered by Reclamation. Reclaimed water is managed under a completely different set of regulations and policies, and its management framework was significantly influenced by case law³. This legal complexity adds to the challenge of ensuring that adequate supplies exist to meet the demands across the state.

Further adding to the legal complexities within the State are the on-going general stream adjudications of the Gila and Little Colorado Rivers. General stream adjudications are judicial proceedings to determine or establish the extent and priority of water rights. The Gila River and the Little Colorado River adjudications were initiated in 1974 and include water uses and claims by both state and federal entities. The State parties include municipalities, mines, utility companies, private water providers, water users' associations, conservation districts, irrigation districts, state agencies and individual water users that rely on water diverted from streams, lakes, springs, stored in reservoirs or stockponds, and withdrawn from wells. Within these proceedings, water rights are also being adjudicated for water uses on Indian reservations and federal lands including military installations, conservation areas, parks and forests, monuments, memorials, and wilderness areas. These water uses may include both surface water (non-Colorado River) and groundwater in certain instances. As of July 2013, there are 83,244 surface water claims in the Gila River Adjudication and 14,522 claims in the Little Colorado River Adjudication. While progress on the adjudication process has been complicated by the diversity of water users and claimants, the State has made significant progress in reducing uncertainty through execution of Indian Settlements resolving in whole or in part 13 of the 22 tribal claims through Court Decrees or negotiations culminating in Congressionally authorized settlements.

Over the next 25 to 100 years, Arizona will need to identify and develop an additional 900,000 to 3.2 MAF of water supplies to meet the projected water demands. While there may be viable local water supplies that have not yet been developed, water supply acquisition and/or importation will be required for some areas of the State to realize their growth potential. Examples of these potential supplies are:

- 1) Non-Indian Agricultural Priority CAP water;
- 2) Reclaimed water/water reuse for which there is not yet delivery or storage infrastructure constructed to put it to direct or indirect use;
- 3) Groundwater in storage (both potable & brackish supplies);
- 4) Water supplies developed from revised watershed management practices;
- 5) Water supplies developed through weather modification;
- 6) Water supplies developed from large-scale or macro rainwater harvesting/stormwater capture; and
- 7) Importation or exchange of new water supplies developed outside of Arizona (e.g., ocean desalination).

Strategic Vision

Arizona could be facing a water supply imbalance between projected demands and water supply availability approaching 1 million acre-feet in the next 25 to 50 years. In many portions of the State, this short term imbalance can likely be solved with enhanced management of locally available water supplies. However, there is still a need to develop the financing to construct the infrastructure

³ *Arizona Public Service Co. v. Long*

necessary to accomplish this. The imbalance is projected to increase by an additional 2.3 MAF by the year 2110. The availability of local water supplies to meet these needs will vary based on the distribution and intensity of the demands throughout each region of the State. The stresses imposed by these imbalances would be experienced by all water using sectors in the State and would likely have undesirable environmental consequences.

Local water supplies may not be sufficient to address these longer term needs and more options must be explored and evaluated, including importation of new water supplies from outside of Arizona. Pursuit of long-term options will require sustained investment and commitment by Arizona's policy and business leaders. In order to avoid economic disruption, these efforts must begin immediately to ensure the long-term solutions are in place in advance of the need and the environment that makes Arizona unique is adequately and appropriately protected.

Regional Strategies

No single strategy can address projected water supply imbalances across the State. Instead a portfolio of strategies needs to be implemented dependent on the needs of each area of the State. It is very important to recognize the uniqueness of the various regions throughout the State and the varying challenges facing those regions. A more thorough regional overview and evaluation of the water supply needs is required for each of the twenty-two "Planning Areas" within Arizona and is contained in Section III of the Strategic Vision. These Planning Areas (*see Figure ES -2*) have been identified based on possible short-term and long-term strategies available to meet the projected water supply imbalances. Table ES-1, below, highlights the portfolio of strategies that have been identified and the applicability to each of the Planning Areas. Many of the necessary planning efforts are well underway in some regions.

Statewide Strategic Priorities

In analyzing all the strategies on a regional basis it became clear that there are specific measures that have widespread potential benefit to all Arizonans. Strategic priorities are identified below which ADWR believes will move Arizona forward through its next century. Additionally, action items have been identified for the first 10 years following the submittal of this report including a requirement for the continued review and update of this report every 10 years.

The identified statewide strategic priorities are:

1) Resolution of Indian and Non-Indian Water Rights Claims

Arizona has been successful in resolving, either in whole or in part, 13 of 22 Indian water rights claims, providing substantial benefits to both Indian and non-Indian water users. However, the general stream adjudications, which began in the 1970s, remain incomplete. Completion of the general stream adjudication will result in the Superior Court issuing a comprehensive final decree of water rights. Until that process is complete, uncertainty regarding the nature, extent and priority of water rights will make it difficult to identify all the strategies necessary for meeting projected water demands. ADWR believes that options need to be developed by the State to accelerate this process. Creation of a Study Committee to develop options in a short time frame could help provide guidance to ADWR so adequate funding can be identified and obtained to complete the necessary technical work to support completion of this process. Development of options could initially focus on conceptualization of water rights administration in a post-adjudicated Arizona. This will streamline the Court and ADWR's effort to

collecting and evaluating only that information what will assist in administering the final water rights decrees.

2) Continued Commitment to Conservation and Expand Reuse of Reclaimed Water

Conservation is the foundation of sustainable water management in our arid State. The continued commitment to using all water supplies as efficiently as possible is necessary to stretch our existing water supplies and has delayed the need to acquire other, more expensive, supplies. Additionally, many non-potable uses are currently being met by reclaimed water including: landscape irrigation of parks and golf courses; agricultural irrigation; and streamflow augmentation benefitting ecosystems. Reclaimed water is produced consistently throughout the year, with limited seasonal fluctuation. Using reclaimed water limits use of potable water for non-potable purposes and saves potable water for drinking water supplies. However, as demands increase and water supplies become more stretched, the need to explore and invest in direct potable reuse for drinking water supplies will become necessary.

3) Expanded Monitoring and Reporting of Water Use

Metering and reporting across the State would serve to support and enhance analysis of current hydrologic conditions. However, monitoring of water use outside of the AMAs and INAs is limited. Data collection is a crucial element of the development of groundwater models, which have proven to be invaluable tools throughout the State in developing more thorough understanding of hydrologic systems and evaluating future conditions and potential impacts of new uses and/or alternative water management strategies.

4) Identifying the Role of In-State Water Transfers

A source of significant controversy across the State, in-State water transfers have been the focus of much debate throughout Arizona's history. A comprehensive analysis of water transfer is needed in Arizona. Evaluation of long-term versus short-term transfers may actually provide insight into how water transfers can be developed to protect or even benefit local communities. Lessons from other western states that have adopted more market-based water right transfer models may be worthy of review as part of this analysis.

5) Supply Importation – Desalination

Importation of water from outside of Arizona will likely be required to allow the State to continue its economic development without water supply limitations. Supplies derived from ocean or sea water desalination can be imported directly into Arizona to meet the water needs of municipal and industrial water users, while at the same time providing aesthetic, recreational and ecological benefits. Alternatively, desalination can be done in partnership with other Colorado River water users in exchange for water from Lake Mead. Potential partners for seawater desalination include higher priority Colorado River entitlement holders in Arizonan and California, the State of California, or Mexico. Projects of this magnitude are expensive and energy intensive, although unit capital and operating costs have significantly reduced as technology has improved and are comparable to water rates in other parts of the country. More importantly, because of the need to identify partners and develop agreements, such projects will require a significant investment of time – up to 20 years to bring to fruition. Because of the time it takes to develop these projects, and the more pressing need for water supplies in certain parts of the State, exploration of this strategy should begin immediately.

6) Develop Financing Mechanism to Support Water Supply Resiliency

The strategies identified above, both statewide and regional, will require capital investment. Some areas of the State need immediate assistance in developing water projects, specifically in portions of rural Arizona. Unfortunately, these are areas where limited populations cannot finance the required water infrastructure. The Water Resources Development Revolving Fund was created by the Arizona State Legislature to provide financial backing for these communities, but has not been funded to date. Seed money for this revolving fund will be very important to meet the immediate needs of rural communities and provide long-term water supply security for many Arizonans.

Financing of large-scale projects is another issue. For many years, the water community has been attempting to develop options for funding water supply acquisition and infrastructure development. These conversations and analyses have largely been conducted in the absence of substantial financial expertise and have achieved limited success. It is time to elevate this conversation and address Arizona's future water supply needs and only Arizona's community, political, and business leaders are capable of garnering financial resources and mechanisms necessary to meet these needs. While the water supply needs may not be immediate, addressing the financing of future large-scale water projects needs to begin as soon as possible to ensure Arizona's industries and citizens have secure water supplies into the future.

10-Year Action Plan Outline

- Legislate Strategic Vision update every 10 years (Year 1)
- Begin Discussions on Ocean Desalination (Year 1)
 - Exchange Options
 - California
 - Mexico
 - Direct 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 current 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)
- Review Legal and Institutional Barriers to Direct Potable Reuse of Reclaimed water – develop and implement plan for resolution (Year 3)
- Review and implementation of Adjudication Study Committee Findings (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)

Table ES-1. Planning Area Strategies

Strategy	Applicable Planning Area(s)*	Supply Limitation	Drought Resiliency	Implementation Challenge	Timeline**	Planning Area Key	
						ID	Name
Reclaimed Water Reuse	1, 3, 5, 6, 9, 14, 15, 17, 18, 19, 20 <i>10, 16</i>	Derivative Supply Increases w/Growth	Yes	Low to Moderate Cost Perception of Direct Use	C/EEP to Short	1	Apache
Conservation	ALL Planning Areas	Potential Limited by Existing Programs	Yes	Low	C/EEP to Short	2	Arizona Strip
Weather Modification	3, 5, 9, 16, 17, 19	Limited	Limited	High NEPA Limited Local Data	Med	3	Basin & Range AMAs
Watershed/Forest Management	1, 3, 5, 9, 14, 16, 17, 18, 19	Limited	Some	High NEPA	Med	4	Bill Williams
Expanded Monitoring & Reporting of Water Use	ALL Planning Areas	N/A Assists in Managing Existing Supplies	N/A	Moderate Consent of Unregulated Parties Required	Short	5	Central Plateau
Resolution of Indian and Non-Indian Water Rights Claims/Settlement Implementation	1, 3, 4, 9, 10, 12, 13, 14, 16, 17, 18, 19, 22 <i>5, 6</i>	N/A Reduces Supply Uncertainty	Supply Dependent	High Uncertain Federal Funding Consensus among Tribal Parties	Med to Long	6	Cochise
Increased Access to Locally Available Groundwater (Potable & Brackish) & Enhanced Recharge	1, 3, 5, 9, 14, 15, 18, 19 <i>4, 10</i>	Moderate Need Additional Studies to confirm	Yes Short Term Drought	Moderate Securing Supplies & ROW Access	Short to Med	7	Colorado River Mainstem – North
Local Water Supply Study – Groundwater System Analysis/Modeling	1, 2, 4, 6, 9, 10, 11, 14, 15, 17, 20, 22 <i>3, 5, 19</i>	N/A Assists in Managing Existing Supplies	Gain Local Knowledge of GW/SW Link	Low - Moderate But Resources and Data Collection Needed	Short to Med	8	Colorado River Mainstem – South
Local Water Supply Management	6, 19	N/A	Supply Dependent	High Need Local Support	Med	9	East Plateau
Firming of Low Priority Colorado River Supplies	3, 7, 20	Limited by Available Resources	Yes	Low - Moderate Existing Authority But Resources Limited	C/EEP to Short	10	Gila Bend
Importation – Instate SW or GW	3, 5, 16, 19	Limited by Available Resources	Supply Dependent	Moderate – High Some GW already avail. Public Opposition Likely	Med to Long	11	Hassayampa/Agua Fria
Importation – Desal Exchange	3, 18, 19 <i>5</i>	Limited by Exchange Opportunities and Infrastructure	Exchange Supplies Limited	High Securing Supplies & ROW NEPA	Long	12	Lower Gila
Importation – Desal Direct Use	3, 18, 19 <i>5</i>	Supply Unlimited Economics will drive capacity	Yes	High Securing Supplies & ROW NEPA	Long	13	Lower San Pedro

Recommended Implementation Schedule:
 C/ EEP = Continuation/Expansion of Existing Programs
 Short = Short-Term (1-5 yrs)
 Med = Medium- Term (5 – 15 yrs)
 Long = Long-Term (> 15 yrs)

* Applicable Planning Area – **BOLD** are areas where strategy is recommended – *Italicized* are areas where strategy could be utilized but not a primary option.

Conclusion

Just as many of Arizona's greatest historic accomplishments have been directly linked to water, Arizona's future success is tethered to how effectively we continue to manage our water resources and develop new water supplies and infrastructure. Yet, our present success cannot sustain Arizona's economic development forever and we must continue to plan and invest in our water resources. The diversity, variability and complexity that are unique to Arizona make developing water supply strategies difficult. In some places, there may be local water supplies that have not yet been developed. However, it is now clear that water supply acquisition and/or importation will be required for some areas of the State to realize their growth potential. While there are local areas that require more immediate action, the State as a whole has the good fortune of not facing an immediate water crisis. Now is the time to begin addressing this challenge by implementing this Strategic Vision for Arizona's water future. **The lack of an immediate problem increases the potential for inaction, running the risk of procrastination and not sufficiently motivating ourselves to plan and invest in our future.** Governor Brewer's foresight in calling for the development of a Strategic Vision for Water Supply Sustainability for Arizona is essential to guide and ensure our economic stability into the next century.